ANNAI WOMEN'S COLLEGE, KARUR

Fundamentals of Information Technology

(P16MC24T)

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CONTENT

FUNDAMENTALS OF INFORMATION TECHNOLOGY

Internal Assessment: Theory – 15 Marks; Practical – 10 Marks

University Examinations : Theory- 45 Marks ; Practical - 30 Marks.

Examination Duration : Theory 2 Hours ; Practical 2 Hours

Objective : To enable the students to acquire knowledge in computers, Information Technology and to develop skills in Computerized Accounting System both theory and in practical.

(Theory & Practical) (Theory 45 Marks)

UNIT I

Introduction to Computers – Classification of Computers – Generations of Computer – Memory Units – Auxiliary Storage Devices – Input and Output Devices - Computer Software – Operating System – Programming Languages.

UNIT II

Fundamentals of Computerized Accounting – Computerized Accounting Vs Manual Accounting - Procedure for Creating a new company – Groups Creation - Ledger Creation.

UNIT III

Vouchers creations – Payment voucher – Receipts voucher – Sales voucher – Purchase voucher – Journal voucher – Contra voucher.

(PRACTICAL – 30 Marks)

UNIT IV

Creation of a new company – Groups Creation – Multiple Groups and Single Groups - Creation of ledgers – Multiple Ledgers and Single Ledgers.

UNIT V

Vouchers creations – Voucher entry – Payment vouchers – Receipt vouchers – Sales vouchers – Purchase vouchers – Journal voucher and Contra vouchers.

I – UNIT
FUNDAMENTALS OF INFORMATION TECHNOLOGY

WHAT IS A COMPUTER?

In a laymans language, a computer is a fast calculating device that can perform arithmetic operations. Although the computer was originally invented mainly for doing high speed and accurate calculations, it is not just a calculating device. The computer can perform any kind of work involving arithmetic and logical operations on data. It gets the data through an input device, processes it as per the instructions given and gives the information as an output. We can define computer as follows:

Definition

A computer is a fast electronic device that processes the input data according to the instructions given by the programmer/user and provides the desired information as an output.

IMPORTANCE OF COMPUTERS (MAN VS. MACHINE)

Computers play a vital role for processing of data in an organization. Computer: help in processing the volumes of data efficiently and accurately within a short time. A computer has the following characteristics which make it so important for an organization:

1. Fast:

A computer is so fast that it can perform the given task (arithmetical or logical) in few seconds as compared to man who can spend many months for doing the same task. A computer can process millions of instructions per second.

2. Accurate:

While doing calculations, a computer is more accurate than man can make mistakes in calculations but a computer does not make mistakes, if it is provided accurate instructions.

3. Diligence:

A computer does not suffer from the human traits of tiredness and boredom. Man will be tired and bored while doing millions of calculations but a computer, being a machine, does this job very efficiently and without any tiredness and boredom.

4. High Memory:

A computer has much more memory or storage capacity than human being. It can store millions of data and instructions, which can be retrieved and recalled even after a number of years. This is not possible in case of human brain.

5. No Intelligence:

A computer is a machine and obviously has no intelligence of its own. Each and every instruction must be given to the computer for doing a task. Man has an intelligence and it is the man who invented computer and gives it all the instructions and logic to work. A computer cannot take decisions on its own and it is the main drawback of computer.

CLASSIFICATION OF COMPUTERS

The classification of computers is based on the following three criteria:

(a) According to Purpose
(b) According to Technology used
(c) According to size and Capacity

According to Purpose

According to the utilization of computer for different uses, computers are of following two types:

1. General Purpose Computers:

Computers that follow instructions for general requirements such as sales analysis, financial accounting, invoicing, inventory, management information etc. are called General Purpose Computers. Almost all computers used in offices for commercial, educational and other applications are general purpose computers.

2. Special Purpose Computers:

Computers designed from scratch to perform special tasks like scientific applications and research, weather forecasting, space applications, medical diagnostics etc. are called Special Purpose Computers.

According to Technology Used

According to the technology used, computers are of following three types:

1. Analog Computers:

Analog computers are special purpose computers that represent and store data in continuously varying physical quantities such as current, voltage or frequency. These computers are programmed for measuring physical quantities like pressure, temperature, speed etc. and to perform computations on these measurements. Analog computers are mainly used for scientific and engineering applications. Some of the examples of analog computers are given below:

(i) Thermometer:

It is a simple analog computer used to measure temperature. In thermometer, the mercury moves up or down as the temperature varies.

(ii) Speedometer:

Car's speedometer is another example of analog computer where the position of the needle on the dial represents the speed of the car.

2. Digital Computers:

Digital computers are mainly general purpose computers that represent and store data in discrete quantities or numbers. In these computers, all processing is done in terms of numeric representation (Binary Digits) of data and information. Although the user enter data in decimal or character form, it is converted into binary digits (0's and l's). Almost all the computers used nowadays are digital computers and we will discuss the detailed working and components of these computers in subsequent sections of this unit.

3. Hybrid Computers:

Hybrid computers incorporate the technology of both analog and digital computers. These computers store and process analog signals which have been converted into discrete numbers using analog-to-digital converters. They can also convert the digital numbers into analog signals or physical properties using digital-to-analog converters. Hybrid computers are mainly used in artificial intelligence (robotics) and computer aided manufacturing (e.g. process control).

According to Size and Capacity

According to the size and memory/storage capacity, computers are of following four types:

1. Supercomputer:

Supercomputer is the biggest and fastest computer, which is mainly designed for complex scientific applications. It has many CPUs (Central Processing Units - main part of computer) which operate in parallel to make it as a fastest computer.

2. Mainframe Computer:

Mainframe computers are very large and fast computers but smaller and slower than supercomputers. These are used in a centralized location where many terminals (input/output devices) are connected with one CPU and thus, allow different users to share the single CPU. They have a very high memory (several hundred Megabytes) and can support thousands of users.

3. Minicomputer:

Minicomputers are medium-scale, smaller and generally slower than mainframe computers. Like mainframes, they have many terminals which are connected with one CPU and can support many users. The cost of minicomputer is very less as compared to mainframe. Therefore, it is mainly used in applications where processing can be distributed among several minicomputers rather than using a mainframe computer.

Some of the examples of minicomputers are PDP-1, IBM AS/400 and DEC Micro VAX.

IBM AS/400, which is actually a midicomputer (computer with performance between a mainframe and minicomputer) is becoming very popular among minicomputers.

4. Microcomputer:

A microcomputer is the smallest digital computer, which uses a microprocessor as its CPU. Microprocessor is a single chip (Integrated Circuit) CPU. Microcomputer is popularly called as Personal Computer (PC). It can be used both as a stand-alone machine and a terminal in a multi-user environment. Microcomputers are becoming very popular nowadays due to very high processing power and memory. Today, a powerful microcomputer may be used as a substitute for mini or mainframe computer. Microcomputers are either of desktop or portable model. Portable computers can be carried from one place to another. Some of the models are called as laptops while others as notebook computers. Notebook computers are smaller, lighter and costlier than laptops. Desktop computers fit on a desktop and are used widely in offices and homes.

A computer system has following three main components:

(a) Input/Output Unit

(b)Central Processing Unit

(c) Memory Unit

Input/Output Unit

We know that the computer is a machine that processes the input data according to given set of instructions and gives the output. Before a computer does processing, it must be given data and instructions. After processing, the output must be displayed or printed by the computer. The unit used for getting the data and instructions into the computer and displaying or printing output is known as an Input/Output Unit (I/O Unit).

The Input Unit is used to enter data and instructions into a computer. There are many peripheral devices which are used as input/output units for the computer. The most common form of input device is known as a terminal. A terminal has a electronic typewriter like device, called keyboard along with a display screen, called Visual Display Unit (VDU) or monitor. Keyboard is the main input device while monitor can be considered both as an input as well as an output device. There are some other common input devices like mouse, punched card, tape, joystick, scanner, modem etc., which are explained in later part of this unit. Monitor, printer and plotter are the main peripheral devices used as output units for the computer.

Central Processing Unit

Central Processing Unit (CPU) is the main component or "brain" of a computer, which performs all the processing of input data. Its function is to fetch, examine and then execute the instructions stored in main memory of computer. In microcomputers, the CPU is built on a single chip or Integrated Circuit (IC) and is called as Microprocessor. The CPU consists of following distinct parts:

1. Arithmetic Logic Unit (ALU):

The arithmetic and logic unit of CPU is responsible for all arithmetic operations like addition, subtraction, multiplication and division as well as logical operations such as less than, equal to and greater than. Actually, all calculations and comparisons are performed in the arithmetic logic unit.

2. Control Unit (CU):

The control unit is responsible for controlling the transfer of data and instructions among other units of computer. It is considered as a "Central Nervous System" of computer, as it manages and coordinates all the units of computer. It obtains the instructions from the memory, interprets them and directs the operation of the computer. It also performs the physical data transfer between memory and the peripheral device.

3. Registers:

Registers are the small high speed circuits (memory locations) which are used to store data, instructions and memory addresses (memory location numbers), when ALU performs arithmetic and logical operations. Registers can store one word of data (1 word = 2 bytes & 1 byte = 8 bit; details of BITS and BYTES are discussed in later part of this unit) until it is overwritten by another word. Depending on the processor's capability, the number and type of registers vary from one CPU to another. Registers can be divided into six categories viz. General Purpose Registers, Pointer Registers, Segment Registers, Index Registers, Flags Registers and Instruction. Pointer Registers, depending upon their function. The detailed functions of each and every register is beyond the scope of this book.

4. Buses:

Data is stored as a unit of eight bits (BIT stands for Binary Digit i.e. (0 or 1) in a register. Each bit is transferred from one register to another by means of a separate wire. This group of eight wires, which is used as a common way to transfer data between registers is known as a bus. In general terms, bus is a connection between two components to transmit signal between them. Bus can be of three major types viz. Data Bus, Control Bus and Address Bus. The data bus is used to move data, address bus to move address or memory location and control bus to send control signals between various components of a computer.

5. Clock:

Clock is another important component of CPU, which measures and allocates a fixed time slot for processing each and every micro-operation (smallest functional operation). In simple terms, CPU is allocated one or more clock cycles to complete a micro-operation. CPU executes the instructions in synchronization with the clock pulse. The clock speed of CPU is measured in terms of Mega Hertz (MHz) or Millions of Cycles per second. The clock speed of CPU varies from one model to another in the range 4.77 MHZ (in 8088 processor) to 66 MHz (in Pentium) CPU speed is also specified in terms of Millions of Instructions Per Second (MIPS) or Million of Floating Point Operations Per Second (MFLOPS).

Memory Unit

Memory Unit is that component of a computer system, which is used to store the data, instructions and information before, during and after the processing by ALU. It is actually a work area (physically a collection of integrated circuits) within the computer, where the CPU stores the data and instructions. It is also known as a Main/Primary/Internal Memory. It is of following three types:

(a) Read Only Memory (ROM pronounced as “Ra-om”)

(b) Random Access Memory (RAM pronounced as "R-aem")

(c) Complementary Metal Oxide Semiconductor Memory (CMOS)

(a) Read Only Memory:

Read Only Memory is an essential component of the memory unit. We know that the computer, being a machine, itself has no intelligence or memory and requires the instructions which are given by man. Whenever the computer is switched on, it searches for the required instructions. The memory, which has these essential instructions, is known as Read Only Memory (ROM). This memory is permanent and is not erased when system is switched off. As appears with its name, it is read type of memory i.e. it can be read only and not be written by user/programmer.

The memory capacity of ROM varies from 64 KB to 256 KB (1 Kilobyte = 1024 bytes) depending on the model of computer.

ROM contains a number of programs (set of instructions). The most important program of ROM is the Basic Input Output System (BIOS, pronounced as "bye-os") which activates the hardware (physical components of computer) such as keyboard, monitor, floppy disk etc. in communicating with the system and application software (set of instructions or programs).

Types of ROM: There are many types of ROM available for microcomputers like Mask ROM, PROM, EPROM, EEPROM and EAPROM.

(b) Random Access Memory:

Random Access Memory (RAM) is another important component of Memory Unit. It is used to store the data and instructions during the Definitions execution of programme. Contrary to ROM, RAM is temporary and is erased when computer is switched off. RAM is a read/write type of memory and, thus can be read and written by user/programmer. As it is possible to randomly use any location of this memory, therefore, this memory is known as random access memory. The memory capacity of RAM varies from 640 KB to several megabytes (1 Megabyte = 1024 KB) with different models of Pc.

Types of RAM:

There are two types of RAM used in PCs - Dynamic and Static RAM.

(c) Complementary Metal Oxide Semiconductor Memory:

Complementary Metal Oxide Semiconductor (CMOS) memory is used to store the system configuration, date, time and other important data. When computer is switched on, BIOS matches the information of CMOS with the peripheral devices and displays error in case of mismatching.

INPUT DEVICES

Input devices are used to input data, information and instructions into the RAM, The common input devices of a PC are described below

Keyboard:

Keyboard (similar to a typewriter) is the main input device of computer. It contains 3 types of - alphanumeric keys, special keys and function keys. When a key is pressed, an electronic signal is produced. This signal is detected by a keyboard encoder that sends a binary code corresponding to the key pressed to the Cpu. There are many types of keyboards but 101 Keys Keyboard is the most popular one.

Mouse:

Mouse (similar to a mouse) is another important input device. It is a pointing device used to move cursor, draw sketches/diagrams, selecting a text/object/menu item etc. on monitor screen while working on windows (graphics based operating environment of computer). Mouse is a small, palm size box containing 3 buttons and a ball underneath, which senses the movement of the mouse and sends the corresponding signals to CPU on pressing the buttons.

Trackball:

A trackball looks like a mouse, as the roller is on the top with selection buttons on the side. It is again a pointing device used to move the cursor and works like a mouse.

Light Pen:

Light pen (similar to a pen) is a pointing device which is used to select a displayed menu item or draw pictures on the monitor screen. It consists of a photocell and an optical system placed in a small tube. When its tip is moved over the monitor screen and pen button is pressed, its photocell sensing element detects the screen location and sends the corresponding signal to the CPU.

Touch Screen:

Touch screen is sensitive to human fingers. Using this device, the user can point to a selection on the screen instead of pressing keys.

Joystick:

Joystick is also a pointing device which is used to move cursor position on a monitor screen. It is mainly used in Computer Aided Designing (CAD) and playing computer games.

Digitiser:

Digitiser is used to create drawings and pictures using a digitiser tablet by a process called digitising. Digitising is a process by which graphic representations are converted into digital data. The user makes contact with the flat digitiser tablet with a pen- like stylus. As the stylus is connected to the tablet by a wire, the traced image is stored in RAM and displayed on monitor.

Scanner:

Scanner is mainly used in Desktop Publishing (DTP) applications. Scanner is used for digitising images such as photographs, forms, documents etc. into computer memory. Some scanners can also read text by converting them to digital code. These scanners are very useful for converting the typed pages into word-processing files. Graphics scanners convert a printed image into video image without converting it to digital code.

Optical Mark Reader (OMR):

It is a special type of optical scanner used to recognize the type of mark made by pen or pencil. It is used where one out of a few alternatives is to be selected and marked. It is specially used for checking the answer sheets of examination having multiple choice questions.

Optical Character Reader (OCR):

It is also an optical scanner, which is capable of detecting alphanumeric characters typed or printed on paper using an OCR font. OCR devices are used for large volume applications like reading of passenger tickets, computer printed bills of credit card companies and reading of ZIP codes in postal services.

Bar Code Reader:

This device is an optical scanner used for reading bar-coded data (data in form of light and dark lines). Bar-coded data is generally used in labelling goods, numbering the books or encoding ID or A/c numbers.

Magnetic Ink Character Recognition (MICR):

is used to recognize the magnetically- charged characters, mainly found on bank cheques. MICR is used by the banking industry for the processing of cheques. A special equipment is used to encode, decode and process the cheques.

Voice-Input Devices:

These devices can recognize the human voice. They seem to be very useful but are not popular due to storage of limited vocabularies and variations in way of pronouncing words by different persons.

OUTPUT DEVICES

Output devices are hardware components which are used to display or print the processed information. The common output devices are described below

Monitor:

Visual Display Unit (VDU), commonly called as monitor is the main output device of computer. It consists of a Cathode Ray Tube (CRT), which displays characters as an output. It forms images from tiny dots, called pixels, that are arranged in a rectangular form. The sharpness of the image (screen resolution) depends upon the number of the pixels.

Types of Monitors:

There are different kinds of monitors depending upon the number of pixels. Depending upon the resolution, monitors can be classified as follows:

(a) CGA (Color Graphics Adapter) .

(b) MDA (Monochrome Display Adapter).
(c) HGA (Hercules Graphics Adapter)
(d) EGA (Enhanced Graphics Adapter)
(e) VGA (Video Graphics Adapter)
(f) SVGA (Super VGA)

Depending upon color of display, monitors can be classified as Monochrome (with single color black/white display) and Color (with all colors display) Monitors.

Printer:

Printer is the most important output device, which is used to print information on papers. Printers are essential for getting output of any computer based application.

Types of Printers:

Printers can be broadly categorized into two types.
Passbook Printer
Dot Matrix Printer
Portable Inkjet Printer
Inkjet Printer
Window Laser Printer
Line Printer
Laser Printer
A3 Laser Printer
Drum Plotter
Pen
Controls
Drum
Paper
Flatbed
Flatbed Plotter

Impact Printers:

The printers that print the characters by striking against the ribbon and onto the paper, are called Impact Printers. These printers are of two types

(i) **Character Printers:**

These printers print one character at a time. These printers are again of two types Daisy Wheel and Dot Matrix Printers. Daisy Wheel Printers these printers print the characters by a mechanism that uses a plastic or metal hub with spokes, called daisy wheel. The characters are embossed on the radiating spokes and printed by striking these spokes against the ribbon and paper. Daisy Wheel printers give a good quality but they are expensive than Dot Matrix printers. Dot Matrix Printers these printers print the characters by putting dots onto the paper. They do not give better printing quality than daisy wheel printers, but are faster in speed. The printing speed of a dot matrix printer can be upto 360 cps (characters per second). They are widely used with microcomputers in most of the offices.

(ii) Line Printers:

These printers print one line at a time. Their printing speed is much more than character printers. They are again of two types Drum Printers and Chain Printers. Drum Printers these printers print the line by a rotating drum having a ring of characters for each print position. The hammers strike each character of the drum simultaneously, so that entire line is printed for one full rotation of the drum. These printers are also called as Barrel Printers. The printouts obtained from these printers, have even character spacing but uneven line height. Chain Printers these printers print the line by a rotating chain having ring characters for each print position. Their printing mechanism is similar to drum printers. The printouts obtained from these printers, have uneven character spacing but even
line height.

(b) Non-Impact Printers:

The printers that print the characters without striking against the ribbon and onto the paper, are called Non-Impact Printers. These printers print a complete page at a time, therefore, also called as Page Printers. Page printers are of three types

(i) Laser Printers:

These printers look and work like photocopiers. They are based on laser technology, which is the latest development in high speed and best quality printing. In these printers, a laser beam is used to write the image on a paper. First, the image is formed by electrically charged thousands of dots on a paper by laser beam. Then, the paper is sprayed with a toner having the opposite charge and is passed over a heated roller to make the image permanent.

Laser printers are very popular and have become an essential part of Desk Top Publishing (DTP). Although laser printers are costlier than dot matrix, they are generally preferred in all offices due to their best quality of printing. There are many models of laser printers depending upon the speed and number of dots printed. The latest model of laser printer is 1200 DPI (Dots Per Inch), which can print 10 pages/ minute. Some high speed laser printers give a speed of upto 100 pages/minute.

(ii) Inkjet Printers:

These printers print the characters by spraying the paper with electrically charged ink. These printers give better quality than character printers but not better than laser printers. They are cheaper than laser printers, hence used widely in many offices. They also offer an option of using color cartridges for multi-color printing.

(iii) Thermal Printers:

These printers print the characters by melting a waxbased ink off a ribbon onto a special heat sensitive paper. They give letter-quality printing but are relatively expensive in maintenance than other printers.

Plotter:

Plotter is an important output device, used to print high quality graphics and drawings. Although the graphics can be printed on printers, the resolution of such printing is limited on printers. Plotters are generally used for printing/drawing graphical images such as charts, drawings, maps etc. of engineering and scientific applications. Some important types of plotters are discussed below:

(i) Flatbed Plotters:

These plotters print the graphical images by moving the pen on stationary flat surface material. They produce very accurate drawings.

(ii) Drum Plotters:

These plotters print the graphical images by moving both the pen and the drum having paper. They do not produce as accurate drawings as printed by flat bed plotters.

(iii) Inkjet Plotters:

These plotters use inkjets in place of pens. They are faster than flatbed plotters and can print multi-colored large drawings.

STORAGE DEVICES

In preceding part of this unit, we have discussed about the primary memory of computer. Primary memory (especially RAM) stores the data, instructions and informations temporarily during processing by CPU. When computer is switched off, this memory gets erased. How does a computer store the data, information and software permanently, so that they can be retrieved whenever required? Certainly, there must be some storage devices in computer. Now, we will discuss about different Storage Devices, sometimes also called as Secondary Memory Devices.

There are many storage devices used with microcomputers.

(i) Winchester Disk (Hard Disk):

Winchester Disk is the most common storage device of present day microcomputers. It is popularly called as Hard Disk Drive (HDD) or sometimes as Fixed Disk Drive. It is fixed inside the computer and is not easily removable. It is used for storing the software and data inside computer. It is known as 'Winchester Disk', probably because this drive was first made by IBM at Hursley Laboratory, located near Winchester in England. Winchester Disk consists of one or more disk platters, an access mechanism and read/ write heads which are sealed in a case. Hard disk size depends upon the disk platter's diameter. There are many different platter sizes (such as 51/2, 31/2 , 21/2 inch etc.). The 31/2 inch size platter is common with PCs and 21/2 inch with laptop/ portable computers. Read/ write head is used to write any information on the disk surface or to read it back. There are different types of hard disks depending upon their storage capacities. Storage capacities of hard disks range from 10 MB to 6.3 GB, but 4.3 GB are nowadays a common part of Pentium computers

(ii) Floppy Disk:

Floppy Disk (FD) is another common storage device which is small, flexible and easily removable. It is made of a plastic disk coated with magnetic material, which is sealed inside a square plastic jacket. It is called as 'Floppy' because it is soft having flexible physical property. Data can be written on or read from this floppy by a drive, called Floppy Disk Drive (FDD), which is fixed inside the computer.

(iii) Compact Disk:

Compact Disk (CD) is the latest storage device, used to store data, information and software, which can be read only and not be changed or erased. It is an optical read only memory, made up of a resin. Therefore, it is actually called as Compact Disk Read Only Memory (CD-ROM). However, the information is stored on CDs by using an expensive drive, called CD-ROM drive. Nowadays compact disks are very popular storage devices for microcomputers because a large number of software including multimedia, audio and graphics software are available only on these disks. Compact Disks can store a large volume of data (upto 680 MB), which is almost same a storage capacity of 630 MB Hard Disk. WORM (Write Once Read Many) is a type of compact disk which can be recorded only once and not erased. It can store more data than CD-ROM, generally measured in gigabytes.

(iv) Magnetic Tape:

Magnetic tape is the oldest storage device available for microcomputers. It is generally used to store a large volume of data that is needed to be sequentially accessed and processed. The tape is made up of a plastic ribbon coated with an iron-oxide material, which can be magnetized. The data stored on tape can be read as well as erased and written again. Magnetic tape is a sequential access storage device, hence it is not possible to read the data randomly or directly. Therefore, magnetic tapes are suitable only for storing data for backups and batch mode applications and not for on-line applications. On the other hand, magnetic disks (floppy and hard disks), which are discussed above, are considered best storage devices for on-line applications.

(v) Video Disk:

Video disk is used to store text, video and audio data. It is widely used for training applications as it can be played like a phonograph record.

(vi) Magneto Optical Drive:

Magneto Optical (MO) drive is the latest of all storage devices. This drive uses both a laser and an electromagnet to record data on a removable cartridge. The surface of the cartridge contains tiny embedded magnets The unique feature of MO drive is that it has a very high storage capacity. Although MO drive is costlier and slower than HDD, it has a long life and is more reliable.

(vii) DVD ROM/RAM Disk:

DVD ROM and DVD RAM disks are optical disks having a storage capacity of 4.7 GB and 5.2 GB respectively. These disks are becoming the next generation's new standard for

higher capacity removable media. They are ideal for storage of huge amount of information required for multimedia applications. One can put 133 minutes of high quality of video with digital sound on a DVD RAM Disk.

Cards

Cards are the printed circuit boards used to hold the chips (integrated circuits). There are many types of cards used in PC, the important ones are Video Card, Sound Card, I/O Card, Controller Card and Memory Card. Video card (Display Card) generates the text and graphic images for monitor while sound card generates the sound. Pentium computers, generally, use a PCI (Peripheral Component Interconnect) video card to speed up graphics. I/O Card provides a place for connecting mouse and printer. Cables of hard disk and floppy disk are connected to controller cards. Memory Card provides a place for memory chips.

Ports and Cords

Besides the important hardware discussed above, the computer has several components which are used as pathway for flow of data. The rear of a PC has many empty holes or external sockets called ports or connectors. There are many types of ports in a PC, the most

CLASSIFICATION OF SOFTWARE

Software are broadly classified into following two types:

(a) System Software

(b) Application Software

System Software

Software, which are required to control the working of hardware and aid in effective execution of a general user's applications are called system software. These software perform a variety of functions like file editing, storage management, resource accounting, I/O management, database management, etc. Some of the examples of system software are DOS (Disk Operating System), Windows, BASIC, COBOL and PC TOOLS. These software are developed by System Programmers.

Types of System Software

System software can be further categorized into following three types:

(i) System Management Software

(Operating Systems, DBMS, Operating Environments)

(ii) System Development Software

(Language Translators, Application Generators, CASE Tools)

(iii) System Software Utilities

Application Software

Software which are required for general and special purpose applications like database management, word processing, accounting etc. are called as application software. Some of the examples of application software are dBASE, Word Star, Tally etc. Application software are developed using system software by Application Programmers.

Notes:

An Uninterrupted Power Supply (UPS) keeps the computer running for few minutes even when the electricity supply goes off. UPS is not a part of computer and is purchased separately. It is optional but mostly preferred to CVT (Constant Voltage Transformer) and is always recommended for computerised applications like MIS.

(i) General Purpose Application Software

(Database Management Packages, Word Processors, Spreadsheets, Office Automation Packages)

(ii) Special Purpose Application Software

(Desktop Publishing, Multimedia, Business Applications)

GENERATION OF COMPUTERS

The computer evolved as a result of man's search for a fast and accurate calculating device. Abacus was the first manual calculating device, which was invented in Asia many centuries ago. In 1617, John Napier, a scottish mathematician invented a mechanical calculator called the 'Napier's bones'. Thereafter, many kinds of computers have been designed and built during the evolution of the modern digital computer. In order to provide a framework for the growth of computer industry, the computer era has been referred in terms of generations. Computers are classified into following six types based on their historical advancement and electronic components used.

Zeroth Generation Computers

The zeroth generation of computers (1642-1946) was marked by the invention of mainly mechanical computers. Pascaline was the first mechanical device, invented by Blaise Pascal, a French mathematician in 1642. In 1822, Charles Babbage, an English mathematician, designed a machine called Difference Engine to compute tables of numbers for naval navigation. Later on, in the year 1834, Babbage attempted to build a digital computer, called Analytical Engine.

The analytical engine had all the parts of a modern computer, i.e.; it had four components the store (memory unit), the mill (computation unit), the punched card reader (input unit) and the punched/printed output (output unit). As all basic parts of modern computers were thought out by Charles Babbage, he is known as Father of Computers. In later years, Herman Hollerith invented a machine for doing counting for 1880 US census, which was called the Tabulating Machine. In 1944, Howard A. Eiken invented first American general purpose electro-mechanical computer, called Mark I and later on its successor, Mark II. The Zeroth generation of computers or the era of mechanical computers ended in 1946 when vacuum tubes were invented.

First Generation Computers

The first generation of computers (1946-1954) was marked by the use of vacuum tubes or valves for their basic electronic component. Although these computers were faster than earlier mechanical devices, they had many disadvantages. First of all, they were very large in size. They consumed too much power and generated too much heat, when used for even short duration of time. They were very unreliable and broke down frequently. They required regular maintenance and their components had also to be assembled manually. The first generation of computers became out-dated, when in 1954, the Philco Corporation developed transistors that can be used in place of vacuum tubes.

Examples:

ENIAC (Electronic Numerical Integrator and Calculator) It was the first electronic computer using vacuum tubes. - 1946

EDSAC (Electronic Delay Storage Automatic Calculator) It was the first stored-program computer. - 1949

EDVAC (Electronic Discrete Variable Automatic Computer) It was successor of EDSAC. - 1951

IAS machine (Princeton's Institute of Advanced Studies) It was a new version of the EDVAC, built by von Neumann. - 1952

The basic design of IAS machine is now known as von Neumann machine, which had five basic parts the memory, the arithmetic logic unit, the program control unit, the input and the output unit.

Second Generation Computers

The second generation of computers (1954-64) was marked by the use of transistors in place of vacuum tubes. Transistors had a number of advantages over the vacuum tubes. As transistors were made from pieces of silicon, they were more compact than vacuum tubes. The second generation computers, therefore, were smaller in size and less heat generated than first

generation computers. Although they were slightly faster and more reliable than earlier computers, they also had many disadvantages. They had limited storage capacity, consumed more power and were also relatively slow in performance. Like first generation computers, they also required regular maintenance and their components had also to be assembled manually. Manual assembly of components was very expensive and later many attempts were made to reduce such manual assembly. It was in 1964, when it was discovered that a number of transistors could be sealed up into a tiny package, called an Integrated Circuit (IC) or a Chip. Second generation computers became out-dated after the invention of ICs.

Examples:

PDP-l, developed by DEC was the first minicomputer.

NCR 304 (National Cash Register), was first all-transistorized computer.

Third Generation Computers

The third generation of computers (1964-1980) was marked by the use of Integrated Circuits (ICs) in place of transistors. ICs were more compact than transistors, as hundreds of transistors could be put on a single small circuit. These computers removed many drawbacks of second generation computers. The third generation computers were even smaller in size which generated less heat and required very less power as compared to earlier two generation of computers. These computers required less human labor at the assembly stage. Although, third generation computers were faster and more reliable, they also had a few disadvantages.

They still had less storage capacity, relatively slower performance and thus could not fulfill the requirements of the users and programmers. The third generation computers became out-dated around the year 1978 when it was found that thousands of ICs could be integrated onto a single chip, called LSI (Large Scale Integration).

Examples:

IBM 360, developed by IBM in 1964 was the first product line designed as a family.

PDP-8, developed by DEC in 1965 was the first mass-market minicomputer.

PDP-ll, developed by DEC in 1970 was the first highly successful minicomputer.

CRAY-l, developed by Cray in 1974 was the first supercomputer.

VAX, developed by DEC in 1978 was the first super minicomputer.

Fourth Generation Computers

The fourth generation of computers (1978-till date) was marked by use of Large Scale Integrated (LSI) circuits in place of ICs. As thousands of ICs could be put onto a single circuit, so LSI circuits are still more compact than ICs. In 1978, it was found that millions of components could be packed onto a single circuit known as Very Large Scale Integration (VLSI). VLSI is the latest technology of computer that led to the development of the popular Personal Computers (PCs), also called as Microcomputers.

All present day computers belong to the fourth generation of computers. These computers are very powerful having a high memory and a fast processing speed. Today's PCs are even more powerful than mainframe computers. Although fourth generation computers offer too many advantages to users, the major drawback of these computers is that they have no intelligence on their own. Scientists are now trying to remove this drawback by making computers which would have artificial intelligence.

Examples:

IBM PC, developed in 1981 was the first industry standard personal computer, having Intel 8088 memory chip.

IBM PC/AT, developed in 1982 was the first advanced technology PC, having Intel 80286 memory chip.

386, developed in 1985, had Intel 80386 memory chip.

CRAY-2, developed in 1985, was the fourth generation supercomputer.

486, developed in 1989, had Intel 80486 memory chip.

Pentium, developed in 1995, has pentium (80586) memory chip.

Fifth Generation Computers

The fifth generation computers (Tomorrow's computers) are still under research and development stage. These computers would have artificial intelligence. They will use ULSI (Ultra Large Scale Integration) chips in place of VLSI chips. One ULSI chip contains millions of components on a single IC. The most important feature of fifth generation computers is that they will use an intelligent software. This software will enable the user to tell computer 'What to do' and not 'How to do' by using intelligent programming and knowledge-based problem solving techniques. So, the programmers or users would not be required to give each and every instruction to the computer for solving a problem. These computers will also have user interface in form of speech in natural languages.

Example:

Yet to develop but ROBOTS have few features of fifth generation computers.

COMPUTER LANGUAGES

One man communicates with another in a language, which another man can understand. Similarly, man communicates with computer in a language, which machine can understand. This language which consists of a set of commands, understandable by computer directly or after translating, is known as Computer Programming Language. There are many types of computer languages, which can be categorized into following four types

(a) Low-level Languages (First and Second Generation Languages);
(b) High-level Languages (Third Generation Languages);
(c) User-Friendly Languages (Fourth Generation Languages);
(d) Object Oriented Languages (Fifth Generation Languages).
(a) Low-level Languages:

In early days of computers, only those languages were used for programming, which could be directly executed on computer.

(a) Low-level Languages:

Languages, which computer can understand directly and are machine dependent, are called low-level languages. For example, Machine Language and Assembly Language are two important low-level languages. Machine language is the oldest and most difficult of all the languages. It is also known as First Generation Language. In machine language, all the instructions are given to computer in binary digits, and hence are directly understood by the computer. On the other hand, assembly language is easier than machine language, and is known as Second Generation Language. In assembly language, instructions are given using mnemonic operation codes (such as ADD, MUL etc.)
instead of binary digits.

Low-level languages are used for development of system software. As they are not used for applications development, managers or application programmers do not need to learn these languages.

(b) High-level Languages:

Development of applications using low level languages requires a deep understanding of the hardware. In order to facilitate the programmers to write programs without knowing the internal details of computer components, many languages were developed. These languages use common English words and are translated into low-level languages before processing by the computer. These languages which computer cannot understand directly and are not machine dependent, are called High-Level Languages (HLL). These languages are also known as Third Generation Languages. Some of the common high-level languages are

(i) BASIC (Beginners All Purpose Symbolic Instruction Code);
(ii) COBOL (Common Business Oriented Language);
(iii) FOR TRAN (Formula Translator);
(iv) PASCAL (Name of a Scientist);
(v) C (it does not stand for anything).

These languages were widely used for applications development, but most of them are outdated nowadays due to popularization of 4GLs.

(c) User-friendly Languages:

Although high-level languages are simpler to codify than low-level languages, they still require a lot of time to learn their programming syntax. Hence, these languages are beyond the reach of many computer users (including MIS professionals), who do not want expertise in programming. Therefore, a new category of languages have been developed which are user-friendly, very easy to codify and simplest to learn. These languages are called as User-friendly Languages and popularly known as 4GLs (Fourth Generation Languages). Some of the common 4GLs are dBASE, Foxbase, Foxpro, MS Access, Oracle, Sybase and Ingres.

(d) Object-oriented Languages:

We have discussed that the object-oriented programming is the latest approach in programming. The languages which are based on Object- Oriented Programming (OOP) approach, are called as Object Oriented Languages. They may be classified into Fifth Generation Languages. Object Oriented Languages are specially useful for development of GUI (Graphical User Interface) applications.

These languages also offer a unique feature of Reusable Code. Some of the popular object-oriented languages are Smalltalk, C++ and Object COBOL, Object Pascal, Simula,

Eiffel, Java & Visual J++. C++ and Visual J++ are widely used nowadays for development of windows-based applications.

BASIC (Beginner's All Purpose Used for all purposes (Commercial, Scientific, Educational, Graphics Symbolic etc.) by beginners. Instruction Code)

COBOL (Common Business Mainly .used for development of commercial Oriented Language) applications on all types Computers.

FORTRAN (Formula Translator) Used for development of scientific (mathematical) applications.

PASCAL (Name of a Scientist) Used for both commercial and scientific applications.

C (No full form) Very powerful language for development of both system and application software.

LANGUAGE TRANSLATORS

Regardless of the programming language used (except machine language), the symbolic instructions have to be translated into a form, that can be executed by computer. The software, which convert the codes of other languages into machine code, are collectively called as Language Translators.

Types of Language Translators

Language Translators are categorized into three types

(a) Assemblers:

Assemblers translate the assembly language code (source program) into machine language code (object program). After assembling, a linker program is used to convert the object program into an executable program. The Microsoft Assembler Program (MASM) and Borland Turbo Assembler Program (TASM) are two popular assemblers. Assemblers are used mainly in development of system software.

(b) Interpreters:

Instructions of a high-level language are coded in many statements. At the time of their execution, they are converted into machine code statement by statement, by using system software, called Interpreters. For example, programs written in BASIC language are executed by using BASIC A or GWBASIC interpreters. Programs written in some fourth generation languages, like dBASE III plus are also executed using dBASE interpreter. There are certain disadvantages of interpreters. As instructions are translated and executed simultaneously using

interpreters, they are very slow for executing large programs. Hence, interpreters are not suitable for most of applications development.

(c) Compilers:

In contrast to interpreters, compilers provide faster execution speed. Compilers do not translate and execute the instructions at the same Time. They translate the entire program (source code) into machine code (object code). Using linker, the object code is converted into executable code. Compilers are widely used in translating codes of high level languages (e.g. COBOL, FORTRAN, PASCAL, Turbo/ Quick BASIC, Turbo/ Microsoft C etc.) and fourth generation languages (dBASE IV, Foxpro etc.). As compared to interpreters or assemblers, they are preferred in development of application software.

KEYWORDS

ALU: Arithmetic Logic Unit of a computer which is used to perform arithmetic and logic operations.

Assembler: A program which translates an assembly language program to its machine language equivalent.

Assembly Language: A low-level language for programming a computer in which mnemonics are used to code operations and alphanumeric symbols are used for addresses.

Cache Memory: A small high speed memory which is used to temporarily store a portion of a program or data from the main memory. The processor retrieves instructions or data from the cache memory. Instruction and data caching speeds up computation.

Chain Printer: A printer in which the characters to be printed are embossed on a chain or a band. The chain is fashioned as a loop and print heads are activated to print specified characters.

Communication Channel: A medium through which (electric) signal are transmitted and received.

Compiler: A system program to translate a high level language program to machine language.

Computer: This is a machine which executes an algorithm stored in its memory to process data fed to it and produces the required results.

Control Bus: A set of wires used to transmit signals to control the operation of various units of a computer.

CPU: Central processing unit of a computer. It consists of circuits to perform arithmetic and logic and also has circuits to control and co-ordinate the functioning of the memory and I/O units of a computer.

Data Entry Unit: A system which a keyboard to enter data and a magnetic medium such as a floppy disk to store the entered data.

Data (Digital Audio Tape): User 4 mm wide magnetic tape in a cartridge to store around 4 GB of data (1994).

Digital Channel: A communication medium through which information in binary (digital) form is transmitted.

Disk Memory: A back up or peripheral memory in which information is stored as magnetized spots on the surface of disks coated with magnetic material. In hard disks the disks are not flexible. In floppy disks the disks is a circular platter made of flexible magnetic coated plastic sheet.

Floppy Disk: A circular magnetic disk made of flexible plastic sheet coated with magnetic material.

Fourth Generation: Fourth Generation computers:- Computers built between 1975 and now. They use large scale integrated circuits, semiconductor memories and powerful high level languages and operating systems.

High Level Languages: Computer language in which each statement is translated into many machine language statements.

I C: Integrated circuit. An electronic circuit fabricated on a single chip of silicon.
Input Unit: A part of a computer used to feed programs and data.
Joy Stick: A stick mounted on a spherical ball which moves in a socket. Used to more the cursor on the screen of a display device.
Laptop: A portable computer which weighs around 2 kg and runs all PC applications.
It used a liquid crystal display and is usable by the person while traveling.
Light Pen: A pen shaped devices which has a lens assembly. It is pointed towards an image displayed on a cathode ray screen. It picks up the right and determines the position of the picture element picked up.
Machine Language: A language which users numeric codes to represent operations and numeric addresses of operands. Each model of a computer has a unique machine language.
Memory: An organized collection of cells used and programs in a computer.
Microcomputer: A computer which is fabricated using a microprocessor, and other integrated circuits, namely, a ROM, RAM and I/O interface chips.
Output Unit: A unit of a computer used to print or display computed results.
Printer: An output unit to print the results of computation. Line printers print one full line at a time using a character, chain or drum. Character printer print one character at a time serially.
Processor: A unit of a computer which interprets instructions, executes them using arithmetic and logic circuits and controls the operation of all the other units of the computer (also known as CPU).
RAM: Random Access memory. A memory used as the main memory of a computer in which the time to retrieve stored information is independent of the address where it is stored.
ROM: Read only Memory. A memory in which information is permanently written. The information can be read quickly but not change.
Second Generation Computer: Computer built during the period 1956-65 which used transistors in CPU, magnetic core main memories and high level language FORTRAN and COBOL for programming.
Software: Programs for a computer.
System Software: General programs written for a computer. These programs written for a computer. These programs provide the environment to facilitate the writing of application programs. Third-generation Computer -Computer built between 1966 and 1975 which used integrated circuits in CPU, high speed magnetic core main memories, powerful high level languages and saw the advent of time sharing operating system.
VDU: A Video Display Unit. An I/O device which consists of a television tube for presenting outputs and a keyboard for entering inputs.
Volatile Memory: A memory in which the information stored is lost unless energy is continuously fed to it.

II – UNIT

Fundamentals of Computerized Accounting – Computerized Accounting Vs Manual Accounting – Procedure for creating a new company – Groups Creation – Ledger Creation.

Computerised Accounting

Transaction processing system (TPS) is the first stage of computerised accounting system. The purpose of any TPS is to record, process, validate and store transactions that occur in various functional areas of a business for subsequent retrieval and usage. TPS involves following steps in processing a transaction: Data Entry , Data Validation, Processing and Revalidation, Storage, Information and Reporting.

It is one of the transaction processing systems which is concerned with financial transactions only. When a system contains only human resources it is called manual system; when it uses only computer resources, it is called computerised system and when it uses both human and computer resources, it is called computer-based system. These steps can be explained with an example making use of Automatic Teller Machine (ATM) facility by a Bank-Customer.

1. Data Entry : Processing presumes data entry. A bank customer operates an ATM facility to make a withdrawal. The actions taken by the customer constitute data which is processed after validation by the computerised personal banking system.

2. Data Validation : It ensures the accuracy and reliability of input data by comparing the same with some predefined standards or known data. This validation is made by the 'Error Detection' and 'Error Correction' procedures. The control mechanism, wherein actual input data is compared with predetermined norm is meant to detect errors while error correction procedures make suggestions for entering correct data input. The Personal Identification Number (PIN) of the customer is validated with the known data. If it is incorrect, a suggestion is made to indicate the PIN is invalid. Once the PIN is validated, the amount of withdrawal being made is also checked to ensure that it does not exceed a pre- specified limit of withdrawal.

3. Processing and Revalidation : The processing of data occurs almost instantaneously in case of Online Transaction Processing (OLTP) provided a valid data has been fed to the system. This is called check input validity. Revalidation occurs to ensure that the transaction in terms of delivery of money by ATM has been duly completed. This is called check output validity.

4. Storage : Processed actions, as described above, result into financial transaction data i.e. withdrawal of money by a particular customer, are stored in transaction database of computerized personal banking system. This makes it absolutely clear that only valid transactions are stored in the database.

5. Information : The stored data is processed making use of the Query facility to produce desired information.

6. Reporting : Reports can be prepared on the basis of the required information content according to the decision usefulness of the report.

NEED AND REQUIREMENTS OF COMPUTERSIED ACCOUNTING

The need for computerised accounting arises from advantages of speed, accuracy and lower cost of handling the business transactions.

l. Numerous Transactions

The computerised accounting system is capable of handling large number of transactions with speed and accuracy.

2. Instant Reporting

The computerised accounting system is capable of offering quick and quality reporting because of its speed and accuracy.

3. Reduction in paper work

A manual accounting system requires large physical storage space to keep accounting records/books and vouchers/ documents. The requirement of stationery and books of accounts along with vouchers and documents is directly dependent on the volume of transactions beyond a certain point. There is a dire need to reduce the paper work and dispense with large volumes of books of accounts. This can be achieved by introducing computerised accounting system.

4. Flexible reporting

The reporting is flexible in computerised accounting system as compared to manual accounting system. The reports of a manual accounting system reveal balances of accounts on periodic basis while computerised accounting system is capable of generating reports of any balance as when required and for any duration which is within the accounting period.

5. Accounting Queries

There are accounting queries which are based on some external parameters. For example, a query to identify customers who have not made the payments within the permissible credit period can be easily answered by using the structured query language (SQL) support of database technology in the computerised accounting system. But such an exercise in a manual accounting system is quite difficult and expensive in terms of manpower used. It will still be worse in case the credit period is changed.

6. On-line facility

Computerised accounting system offers online facility to store and process transaction data so as to retrieve information to generate and view financial reports.

7. Scalability

Computerised accounting system are fully equipped with handling the growing transactions of a fast growing business enterprise. The requirement of additional manpower in Accounts department is restricted to only the data operators for storing additional vouchers. There is
absolutely no additional cost of processing additional transaction data.

8. Accuracy

The information content of reports generated by the computerised accounting system is accurate and therefore quite reliable for decision- making. In a manual accounting system the reports and information are likely to be distorted, inaccurate and therefore cannot be relied upon. It is so because it is being processed by many people, especially when the number of transactions to be processed to produce such information and report is quite large.

9. Security

Under manual accounting system it is very difficult to secure such information because it is open to inspection by any eyes dealing with the books of accounts. However, in computerised accounting system only the authorised users are permitted to have access to accounting data. Security provided by the computerised accounting system is far superior compared to any security offered by the manual accounting system.

Basic requirements of the computerised accounting system

The basic requirements of any computerised accounting system are the followings:

l. Accounting framework

It is the application environment of the computerised accounting system. A healthy accounting framework in terms of accounting principles, coding and grouping structure is a pre-condition for any computerised accounting system.

2. Operating procedure

A well-conceived and designed operating procedure blended with suitable operating environment of the enterprise is necessary to work with the computerised accounting system.
The computerised accounting is one of the database-oriented applications wherein the transaction data is stored in well- organized database. The user operates on such database using the required interface and also takes the required reports by suitable transformations of stored

data into information. Therefore, the fundamentals of computerised accounting include all the basic requirements of any database-oriented application in computers.

On the basis of the discussions, these are the following differences between manual accounting and computerised accounting

Point of Difference	Manual Accounting	Computerised Accounting
1.Recording	Recording of financial transactions is through books of original entry	Data content of these transactions is stored in well designed data base.
2.Classification	Transactions recorded in the books of original entry are further classified by posting them into ledger accounts. This results in transaction data duplicity	No such data duplications is made. In order to produce ledger accounts the stored transaction data is processed to appear as classified so that same is presented in the form of report.
3.Summarising	Transactions are summarised to produce trial balance by is not necessary condition for trial balance.	The generation of ledger accounts is not necessary condition for ascertaining the balances of various accounts.
4.Adjusting	Adjusting entries are made entries to adhere to the principle of matching.	There is nothing like making to adhere to the principle of adjusting entries for errors and rectifications.
5.Financial	The preparation of financial statements statements is independent of producing the trial balance.	The preparation of financial statements assumes the availability of trial balance.

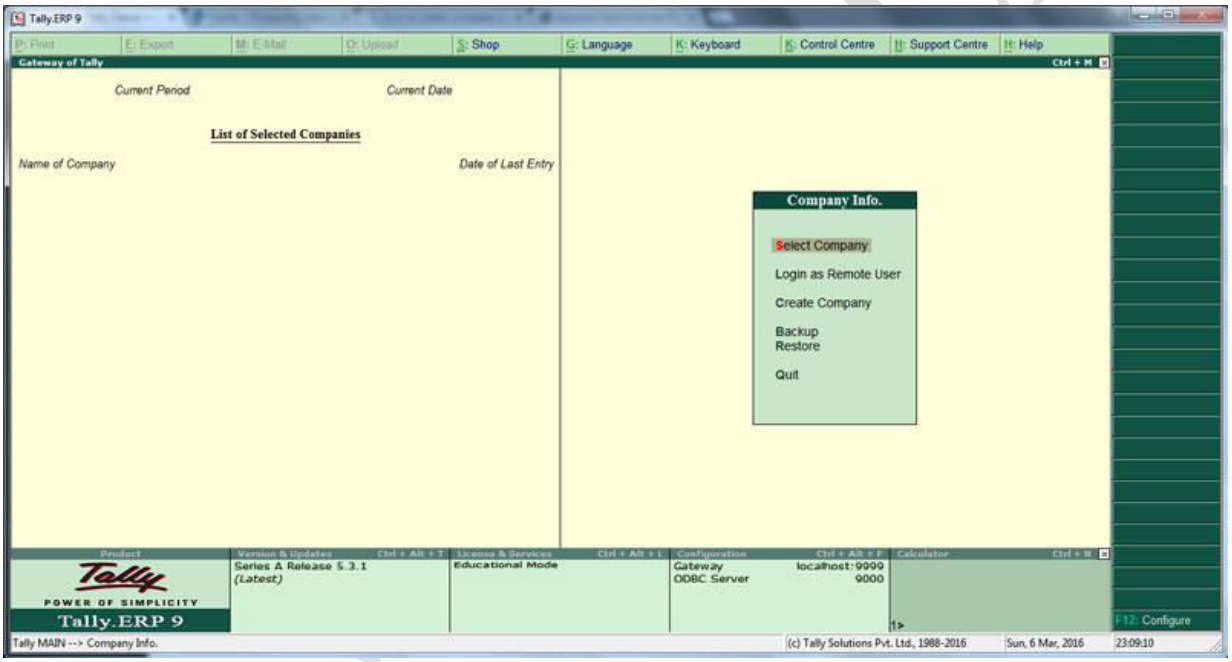
To start accounting with tally the first and foremost thing you should know is , how to create company in tally ERP9 .For users operating multiple business can create several companies in Tally erp 9 software at single cost. Nowadays Tally erp 9 has outgrown from the concept just an accounting software. it helps you for better statutory compliance by updating statutory files available at tally solution website.You can operate tally remotely using tally.net features, process payroll and many more features are updating regularly by tally solutions.

Quick Guide to create company

1. Open Tally Software by double clicking on the Tally.ERP 9 icon.
2. If you are opening Tally ERP 9,First time after installation, you will be landed to a menu called **company info** menu. (If you are in Gateway of Tally Press **Alt+F3** to get that menu).
3. Select **Create Company** option in the menu and press enter key.
4. The screen displayed in-front of you is **company creation screen.**
5. Type the name of the company ,address,Financial year begins and all other details asked by the creation screen.
6. Press Enter Key, Finally the program will ask you the confirmation to Save ,**Yes or No.**
7. To save and create company do Press Enter Key, Press Y Key or click on Yes.The program will create a company and you will be entered into it.

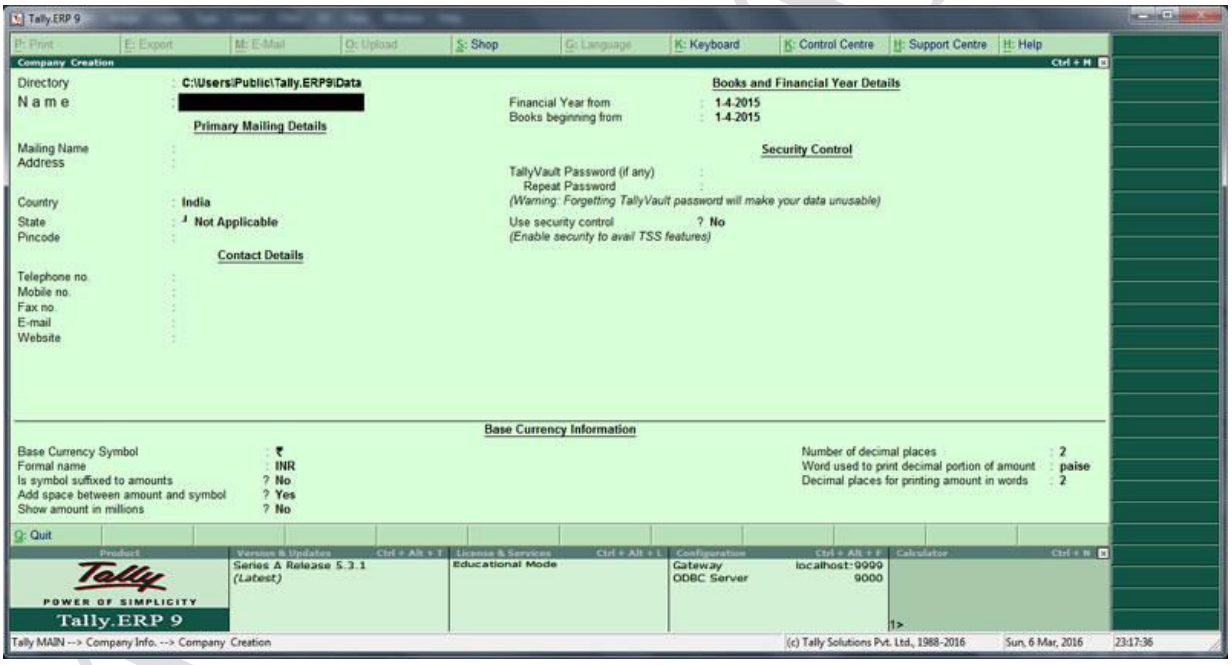
How to create company in Tally ERP9? an elaborate tutorial
Lets start from the very beginning.
Step I
Double click on tally icon from your desktop.

If you are using Tally first time after installation, will have a screen like below, Inside company info menu on the right side of the screen like below.



Step II
You are in company info menu. Now, How to create company in Tally erp9?. To do that Select Create company from the menu and Hit Enter Key.

Company creation screen will be displayed.



In this company creation screen, you should enter all the details of the company. Let us explain each section separately.

Directory: Directory means the data storage location. This is the place where tally store all data you entered in tally ERP9. By default the data storage will be inside the installation folder. You can change it at your desired location by typing it manually. For example D: Tally data

Here are a couple of hand-picked articles to help you to learn more about data management in Tally ERP9.

- Data management in Tally ERP9
- How to back up tally data?
- How to restore tally back up?

Name	:	Type the name of the company in this field for Example:ABC Ltd
Address	:	This is the place where we can enter the address of the company
Country	:	Select the country from the list in which your business exist
State	:	Select the state in which you want to comply statute
Pincode	:	Pincode of the location where your company office exists
Telephone	:	Enter telephone number
Mobile No	:	Enter mobile number
Fax No	:	Fax No if exists
Email	:	Enter your official communication mail id
Website	:	Enter website address if exists

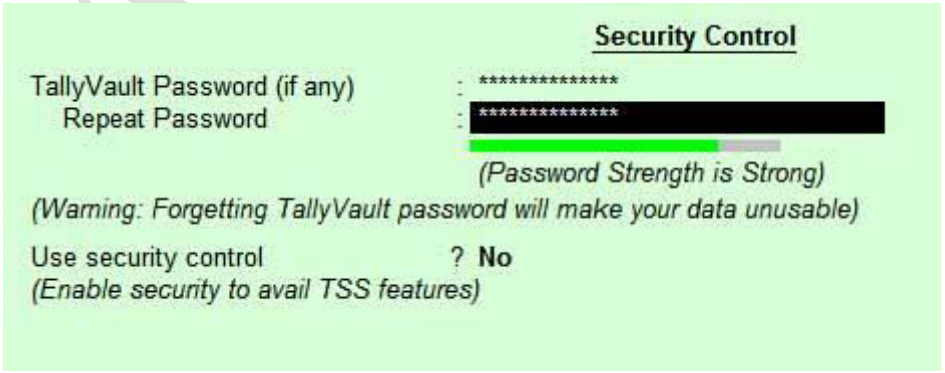
Book and financial Year Details.

Financial year from: Type financial year in which you want create a company. suppose you may be starting company on September 01 2016, You should enter the financial year from as 01.04.2016 .
Book beginning from: Most of the company have a book beginning date same as financial year starting date.But may differ for companies

- Which are starting in the middle of the financial year.
- Companies which are migrating from Manual Accounting to Tally ERP9 some where in the middle of the financial year.

Security Control In Tally ERP9 at company creation screen.

Tally vault password: This is for security purpose, By enabling this,Tally ERP9 Convert tally data in to encrypted format. Encryption means convert data from recognised format to unrecognised format.
For example : Your password is – tally123@ system will encrypt this password something like @54gh$%hf4&*$$$#. The benefit is that, It is very difficult to read the data even if our data is stolen.
By entering Tally Vault password you can prevent unauthorized access of company data.



Now in Latest Tally ERP9,There is a password strength indicator, which will help you to set a strong password. Red colour indicate a weaker password where as peach orange colour : fair, Yellow is good and Green colour indicates a strong password.

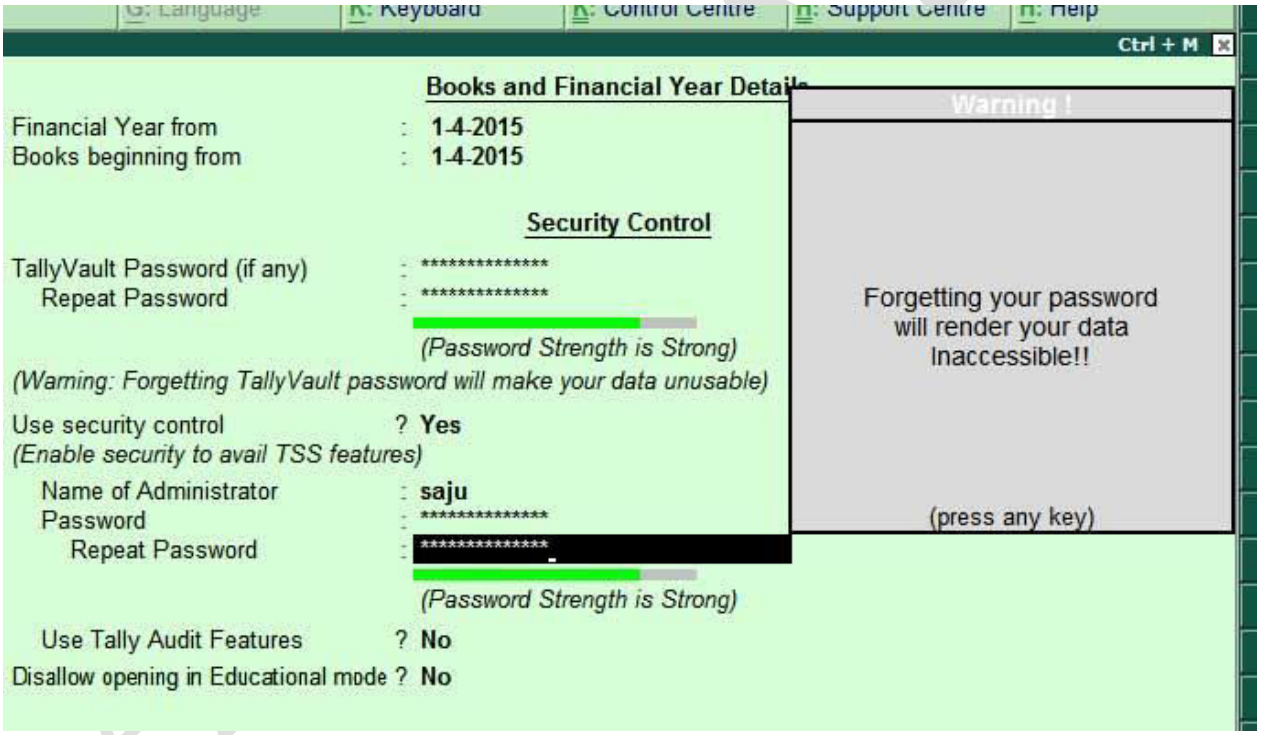
Keep the password in writing in a safe place to prevent future password lost . You will have to enter this password each time you open company.
Be careful , forgetting your password , you will not be able to use tally data.
Use Security control: By enabling this you will get a complete control over your data, You can assign users for specific purposes, for example

- You can assign data entry operators who can access only voucher entry screens.
- You can assign billing clerks who can access only Sales invoice voucher
- You can assign Financial managers who can access financial data's and reports as the administrator control his access.

In this section you will be asked administrator name and password. Tally will give you a warning message'Forgetting your password will render your data inaccessible!!',before moving onto next option see below image.

To know more about security control features in Tally ERP9, read this article.

- Security control in tally ERP9



Use Tally Audit Features: By enabling this option, the administrator will have the privilege of an auditor, He can track the changes made by users.

Disallow opening in Educational Mode: You cannot open the company if the program is in educational mode.as we all know Tally is freely available for educational purposes,in which you can enter transactions only in first and last date of every month.

Base currency information in Company creation screen.

This is the currency information Screen,Almost all field are auto filled and can make changes if required.The following fields are available in this section.

Base Currency Symbol: This the currency symbol of the country you have selected.No need to change it if you are using the same currency for accounting.

Formal Name: This is the formal name of the currency you are using.

Is symbol Suffixed to amounts: asking whether currency symbol is required prior to amount like $45

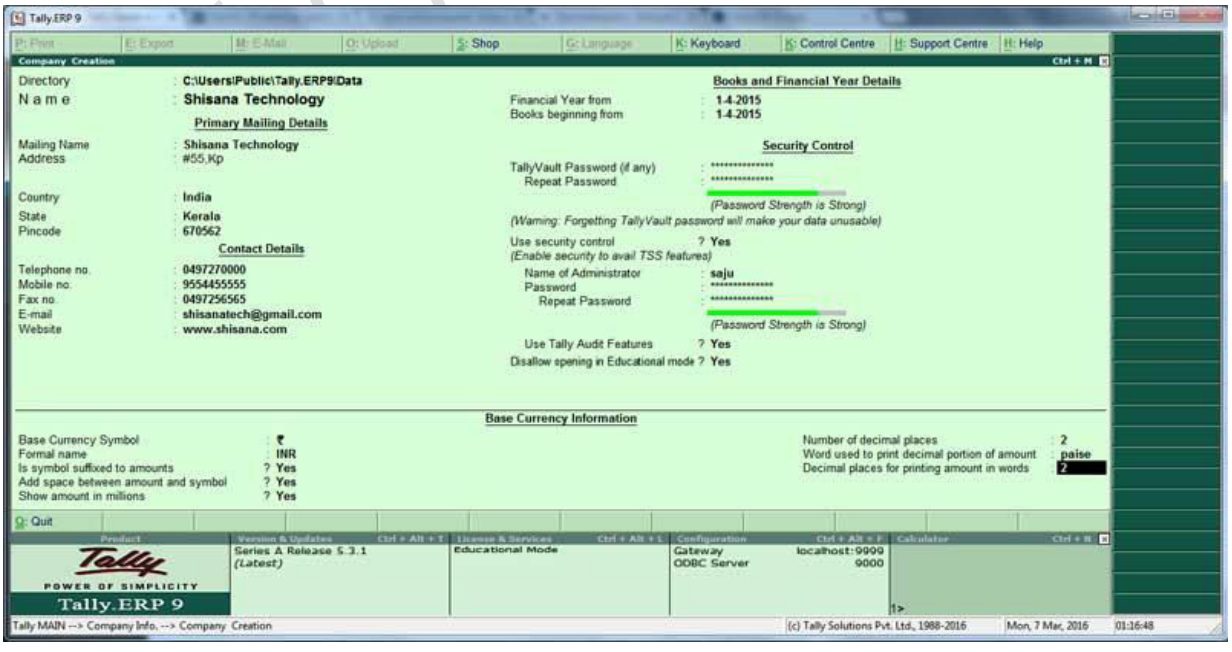
Add space between Amount and symbol: This is like $ 45, a space in between currency symbol and amount.

Show Amount in millions: if you set this option Yes ,Tally will display amount in millions ,That is in Balance sheet or other report, Amount for example 10000000 will be shown as 10. one million is equals 1000000.

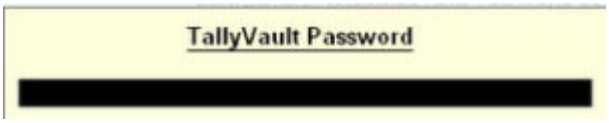
Number of decimal place: Usually 2 decimal places are using, for using Paisa in Indian currency we use 2 decimal place like Rs 99.99 ,Ninety nine rupees ninety nine Paisa.

Word used to print decimal portion of amount: This is used in printing , in Indian currency decimal portion is said to be Paisa. Set it as per your formal name of decimal value in your currency. .For USD it is cents.Hundred cents make one dollar.

Decimal place for printing amount in words: If you set this option 1 in Indian currency, When printing 75 Paisa. prints seventy Paisa. if you set 2 then it will print second fraction like seventy five Paisa.



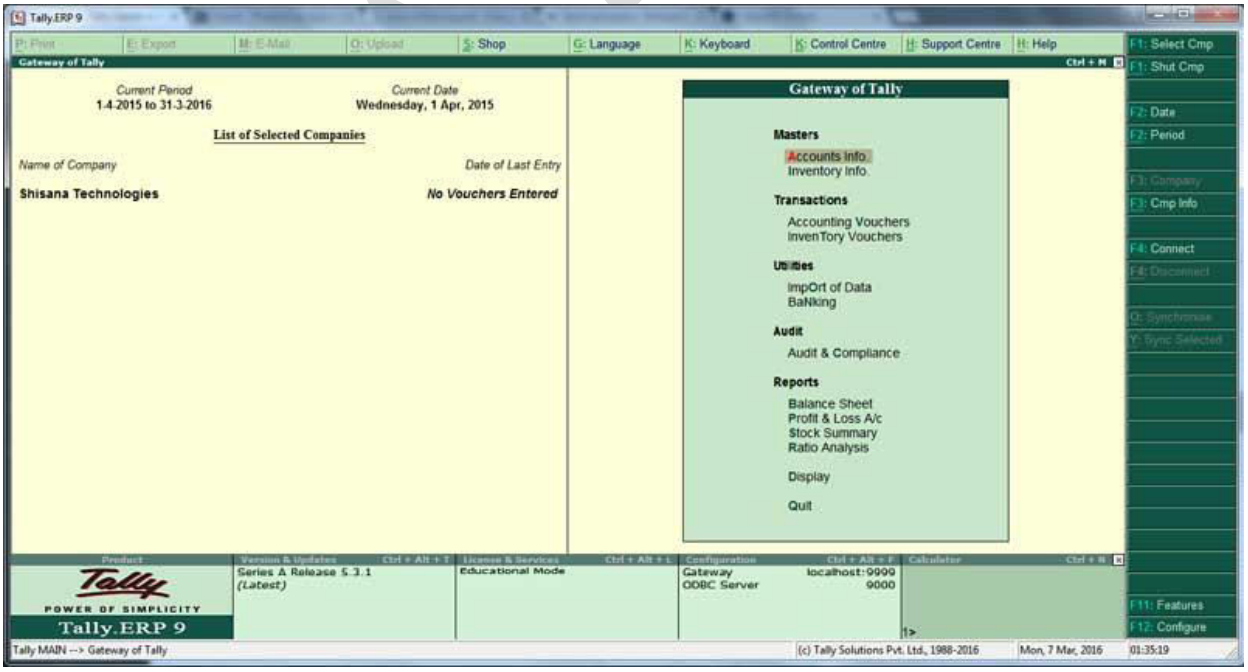
Step:3
Accept the screen. If you have entered all details tally vault password will be asked. Enter Tally Vault Password here.



You will be asked user name password you have entered in security control. Enter that as well.

Tally ERP9 will create a company and direct you to the Menu Gateway of Tally Where you can create masters and enter transactions.
Know more about masters and voucher entry here.

- How to create ledger in tally?
- How to create group in tally?
- How to create stock item in tally?
- How to create stock group in tally ERP9?



On the left side you can see the current period, current date, Name of the company, Name of last Entry etc. Just under Name of the company you can see the name of the newly created company in boldface. This means that listed company is loaded.

On the right hand side of the screen, there is menus where you can create company masters and enter transactions.

A quick guide on how to create group in tally erp 9.

1. Go to Gateway of Tally> Accounts Info> Groups > Create (Under single group)
2. Now you are in Group creation screen, Type the name of the group.
3. Select Suitable group in the field 'Under'
4. Press Enter and save, You are done.

In this session we will learn how to create group in Tally ERP 9,also how to edit & delete. Group helps us to grouping and manage similar nature of ledgers. For example A company has 25 loan account from various Financial Institutions. We put all loans under **Loans liability**. This will help us to understand the total of all loans pending at glance.You can get printout of all account together in a sheet. If you need more details like loans from banks and loans from private institutions.Then again we will create **sub groups** under **Loans and liability**.

In short grouping helps us for better reporting thre are 34 predefined groups are there in Tally ERP 9. Some of them are Bank Accounts Current Asset Secured Loan, Indirect Expense etc. Apart from these pre defined Groups tally allow us to create under these main groups.

Also Read: How to create stock group in tally ERP9.

A quick guide on how to create group in tally ERP9

Here is a quick guide for those who are aware of the concept of group in tally ERP9 and just want to the path to create it. Beginners please read elaborate tutorial following this quick guide.

Read this: How to create Group in advance mode

1. Go to Gateway of Tally>Accounts Info>Groups>Create (Under single group)
2. Now you are in Group creation screen. Type the name of the group
3. Select suitable group in the field Under
4. Press Enter and save, you are done.

Refer: List ledgers and suitable group for Tally Users

What is Group concept?

Lets understand this concept of group with the following example:ABC Ltd had four sale team

Team	Selling area
A	North
B	East
C	South
D	West

Salesmen of each area require Debtors list or outstanding statement of the particular area every week to get know dues from them. In such case Debtors of each area can be grouped .The report based on that group is easily available from tally. There is no requirement for segregation from complete debtors list. detailed explanation will follow this lesson.

Recommend Reading : How to delete Group in tally erp 9

What is an account group in tally?

Ledgers of similar nature are bring together is called group. A Ledger can be grouped at the time of its creation. it can be edited or changed later.

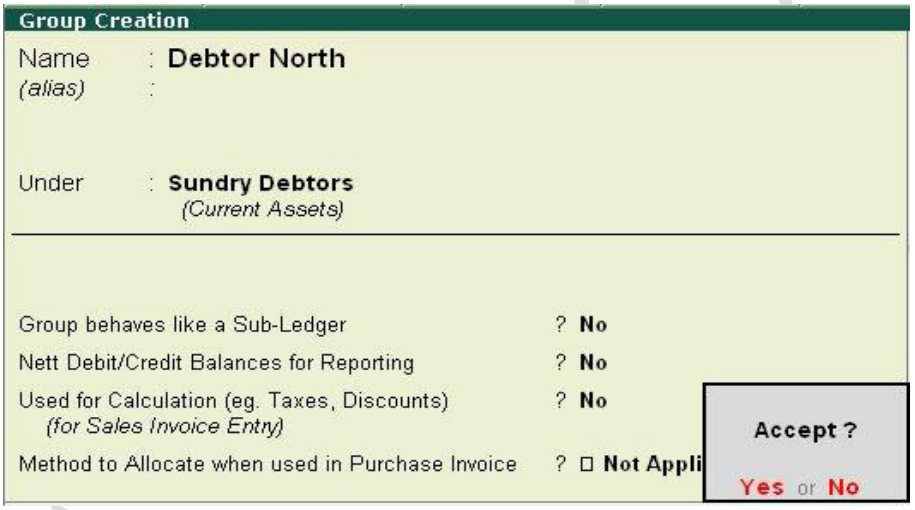
How to create group in tally erp 9

Let's create it for the above example in this manner

Team	Selling area	Group Name
A	North	Debotr North
B	East	Debtor East
C	South	Debtor South
D	West	Debtor West

As we are going to create group for debtors or customers the main group is Sundry Debtors.

Go to **Gateway of tally>>Accounts info>>Groups>>Create (under single mode)**

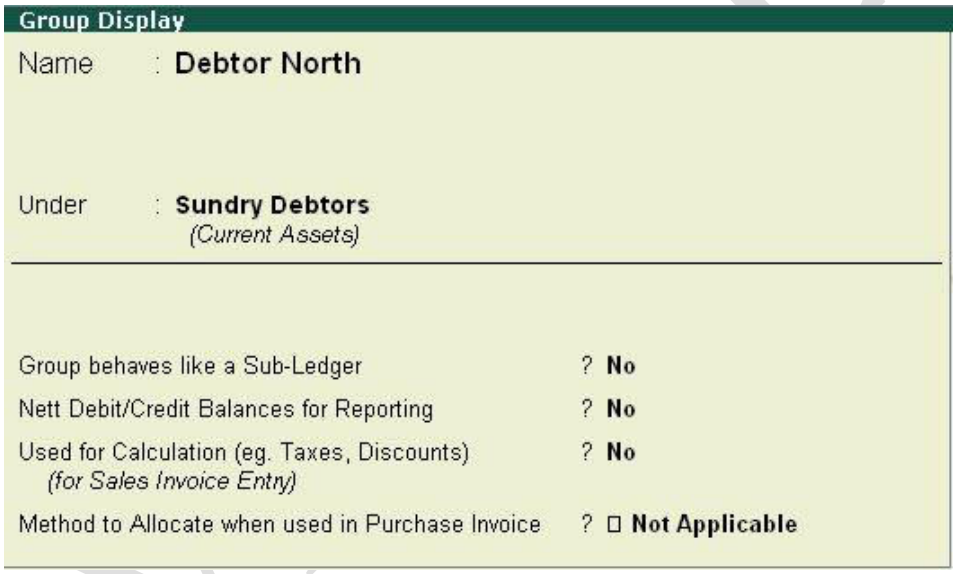


Name: Type the desired name
Alias: alias name if required, an alternative name.
Under: Select the suitable category; here we are creating for sundry debtors
You are also able to create new **primary groups** if desired by selecting **'primary'** All primary groups are already exists in tally.
Additional fields like 'Groups behaves like a sub ledger' set as No for now.
Create Debtor East, Debtor South,Debtors west in the same manner.

How to view group

To view go to **Account info>Groups>Display**
Now type the name

Select the group wants to see, then press enter, a screen similar to below displayed, which is called display screen.



Here you cannot edit ant thing.

How to alter or edit group

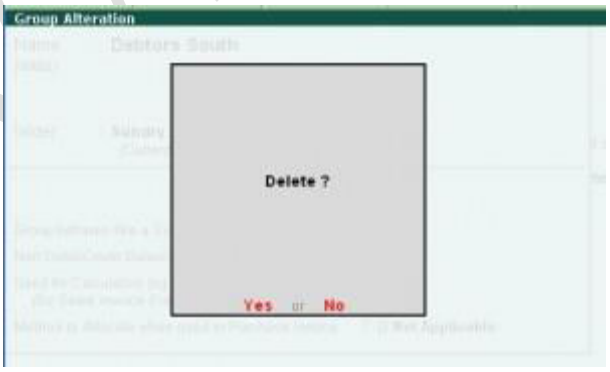
Go toAccount info>Groups>Alter
Select the name from the list that is required to be edited

Alter required field, and save the screen.

How to delete a group in tally erp 9

To delete Go to **Account info>Group>Alter**
Select the group you want to delete; the alteration screen will appear
Press delete button from the bottom bar

Or Use Alt+D from the keyboard, tally will ask you confirmation, press Y or enter button for deletion.



It will have deleted. It cannot delete if it contains a ledger in it. To delete such group you have move all ledgers contained in it.

LEDGER CREATION

Ledger creation is the preliminary steps to start with Tally ERP 9 just after creating company. Before creating a ledger you should know what is a ledger according to accounting concepts a group of account is called a ledger. Where as an **account** is a device used to record the effect of transactions on the assets,liabilities and capital of an enterprise. In accounting concepts a book with many account is called a ledger.

In Tally perspective an account itself is called ledger. In Tally ERP 9 **Account = Ledger**. As per their help documentation says as "A ledger is the actual account head to identify your transactions and are used in all accounting vouchers. For example, purchase, payments, sales, receipts, and others accounts heads are ledger accounts".

For reporting purpose a ledger is grouped according to its nature. This will help you to know the summary of a specific types of ledger. For example

Tea expense grouped under Indirect expense. Purchase expense grouped under purchase account which is a sub group of direct expense. This will help you to understand the total of Indirect expenses as well as individual ledger total.

Here is the examples of grouping of ledger compared with actual accounting groups.

Ledger	Group in Tally ERP 9	Group as per accounitng
Tea expense	Indirect Expense	Indirect expense
Purchase A/c	Purchase Account	Direct expense
ICICI Bank Loan	Secured Loan	Liabilities
Furniture	Fixed Asset	Fixed Asset
Customer A	Sundry Debtors	Debtor
Commission Received	Indirect Income	Income Indirect

In the above example you can find the purchase account is grouped under a new group called **Purchase Account** in Tally. But in Reporting (profit and loss account) this will show as direct expense in Trading Account. Which means the purchase group is the sub group of Direct expense.

Quick Guide on Creating Ledgers

Those Who are in Hurry, Please use below quick guide to creating Ledger.

1. Go to **Gateway of Tally>Account Info>Ledger>Create**
2. Enter Name of The Ledger
3. Enter alias (additional name ,code or nick name) if any .This field is not mandatory.
4. Select the appropriate group in "Under" Filed.

5. Inventory Values are affected : If you want the ledger affected in inventory select Yes else No
6. Provide Mailing Details if you are creating party ledgers like Sundry Debtors, Sundry Creditors
7. Provide Bank Details if it is a party ledger.
8. Enter Tax registration details PAN/IT No etc.
9. Press Enter and accept the screen, A new ledger will have created in Tally database.

Further Reading :

1. Types of account.
2. List of ledgers and its group in tally

Now lets have a detailed study on creating ledgers.

Predefined Ledgers

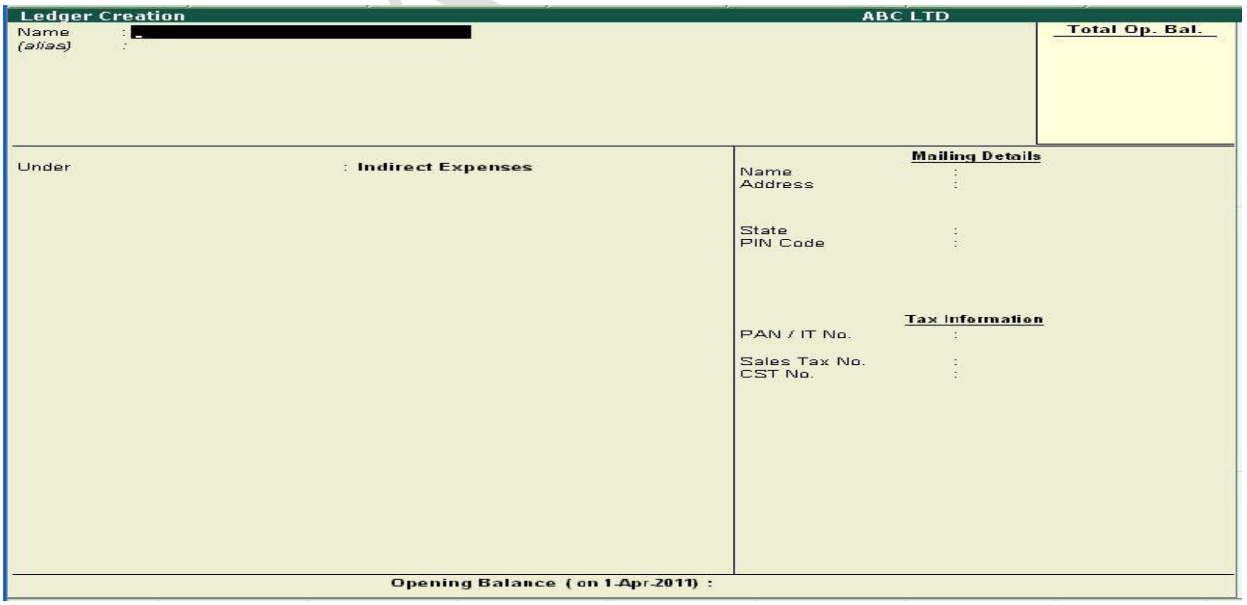
Tally create a company with two pre-defined ledger

1. Cash Account – Grouped under cash-in hand
2. Profit & Loss Account -Grouped under Primary ,Here you cannot change the group of profit and loss account.

How to create ledger in tally

Go to **Gateway of Tally> Accounts info>Ledger>Create**

Ledger creation screen will look like this.



The options in ledger creation screen will vary in accordance with the features selected in F11 features and F12 Configuration screen.

Let's fill the required details

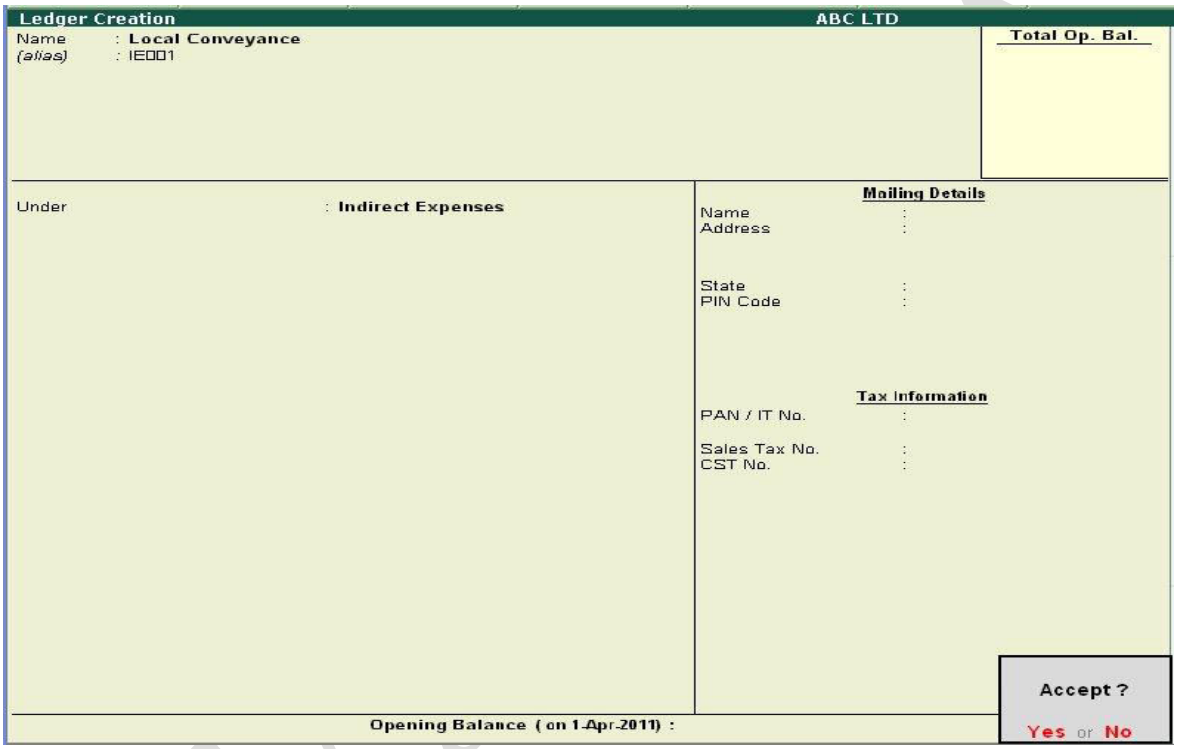
Name: Name of the ledger account for example **'Local conveyance'.**

Alias: This is an alternative name; you can enter an alternative name or code number for this ledger account. For Example (**IE001**).

Under: The group in which the ledger accounts comes under. This is selected in accordance with the nature of account, whether it is an income, expense, asset, liability account. Here this Local conveyance comes under "Indirect expense".

Opening balance: – Enter the opening balance at the time of entering accounts in tally, leave blank if there is no opening balance.

Now save the screen you are successfully created a ledger.



Tally will not allow you to create multiple accounts in the same name. If you tried to create a ledger already existing with same name ,tally will warn you "Duplicate".

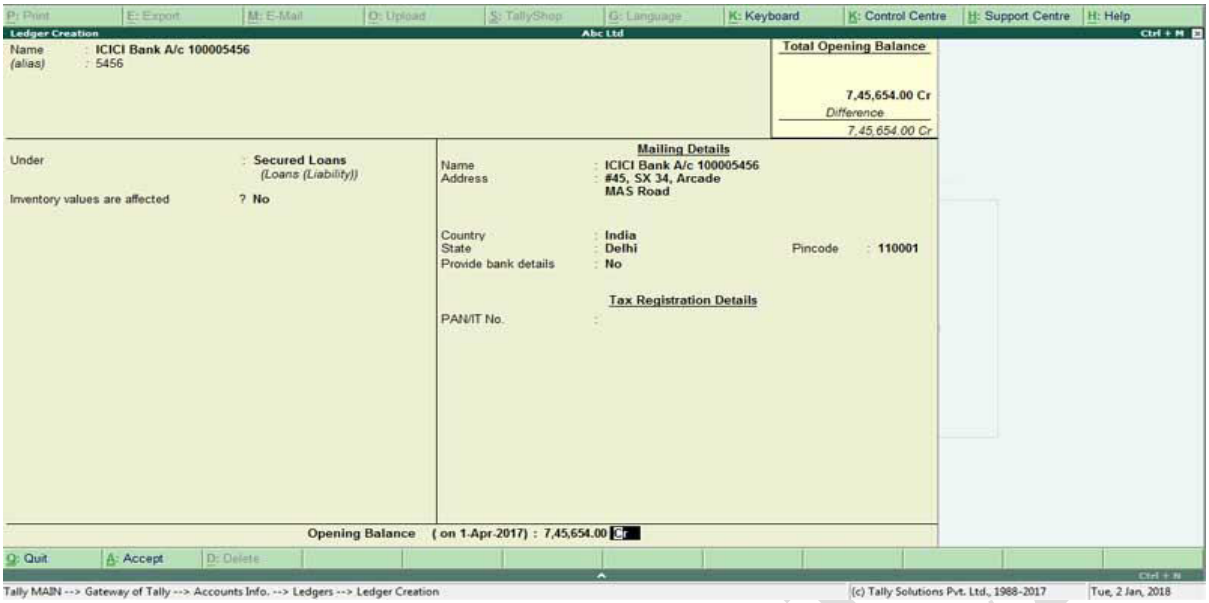
Ledger creation example

Let's create another ledger of bank loan account.For example ICICI Bank A/c 100005456. This bank loan account can be created as follows.

Name: ICICI Bank A/c 100005456

Alias: 5456 (code number)

Under : Secured Loans



Example 2: Create a sales ledger naming Local sale

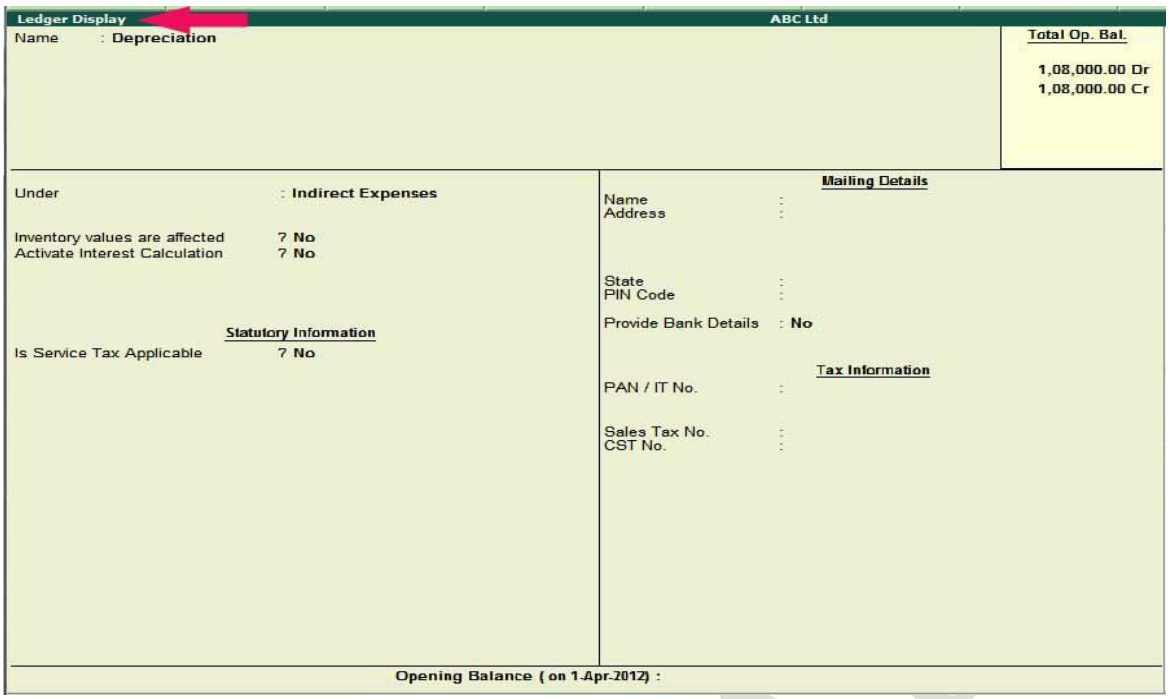
Here is the screen shot of sale ledger creation screen.

View created accounts/ledger

Viewing of ledger accounts is, just have an overlook on created ledger information. This is an extra function of Tally ERP 9 Under **Ledger** option. Nothing to do with this option.But you should know what is this option is.That's all.

Go to Gateway of Tally>Account info>Ledger>Display

Select the ledger account to see. Ledger display screen will be in front. You cannot modify anything from this screen. Here is the view of 'Depreciation Ledger ' I have created earlier.

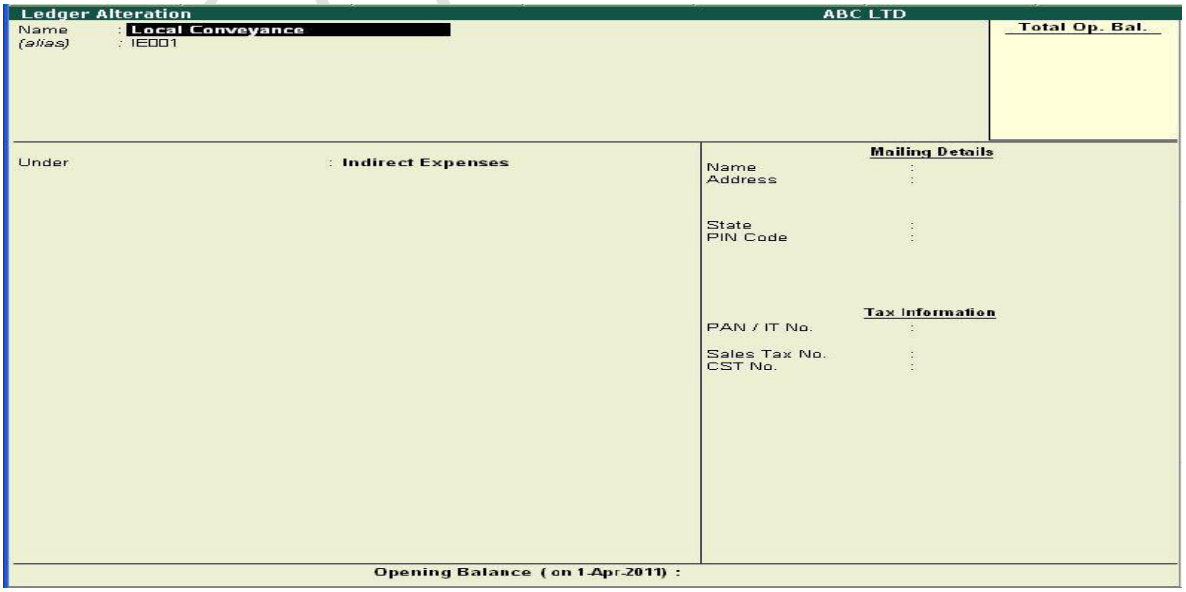


Edit or alter an account.

There certain situations we need to modify existing ledger created.For example changing of name, Or you might be chosen wrong group in under field. or mis-typed address, phone numbers, PAN Numbers etc. In such case you will have to modify existing details.To do modifications /Editing of ledger go to;

Gateway of Tally>Accounts info>Ledger>Alter

Ledger alteration screen will appear, press enter key to move forward and Backspace to move backward through the screen.



Make necessary changes and save the screen.

Delete an account

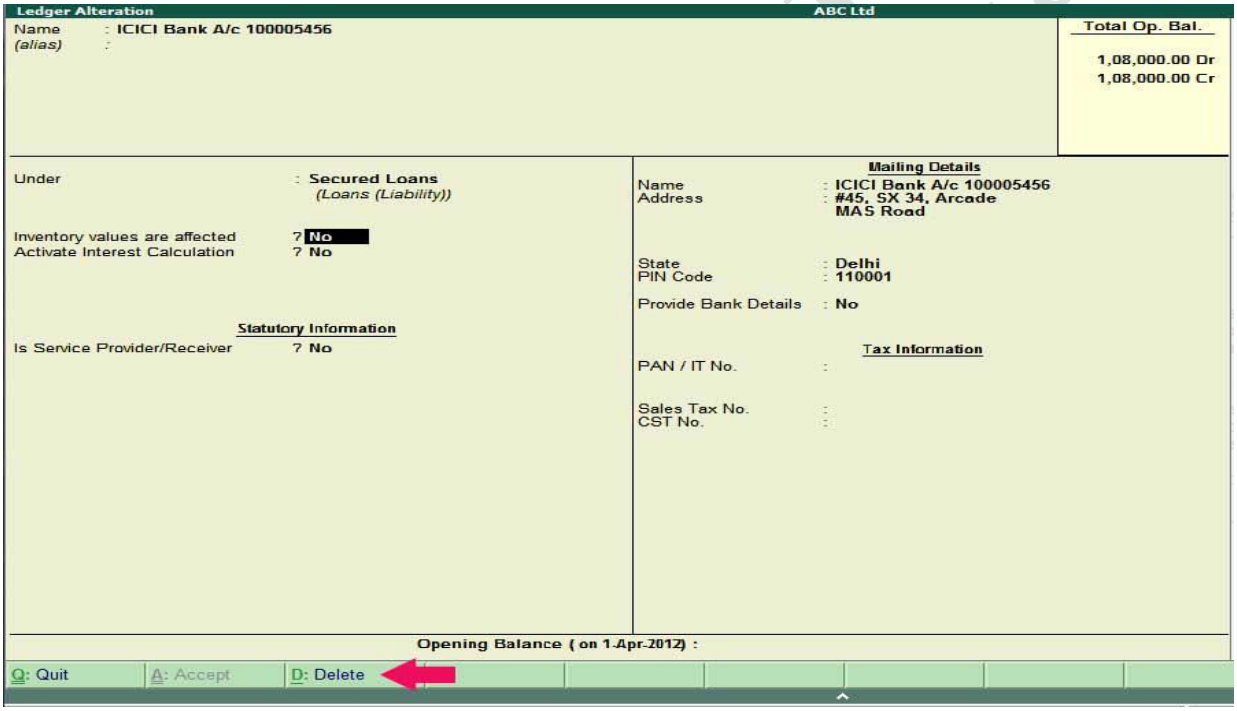
Let's learn how an account can be deleted. Tally does not permit to delete an account with transactions. That is if you have entered any voucher using the ledger, that ledger cannot be deleted. If you want to delete a ledger with transactions, You need to remove or delete those transactions.

To delete an account go to the following screen

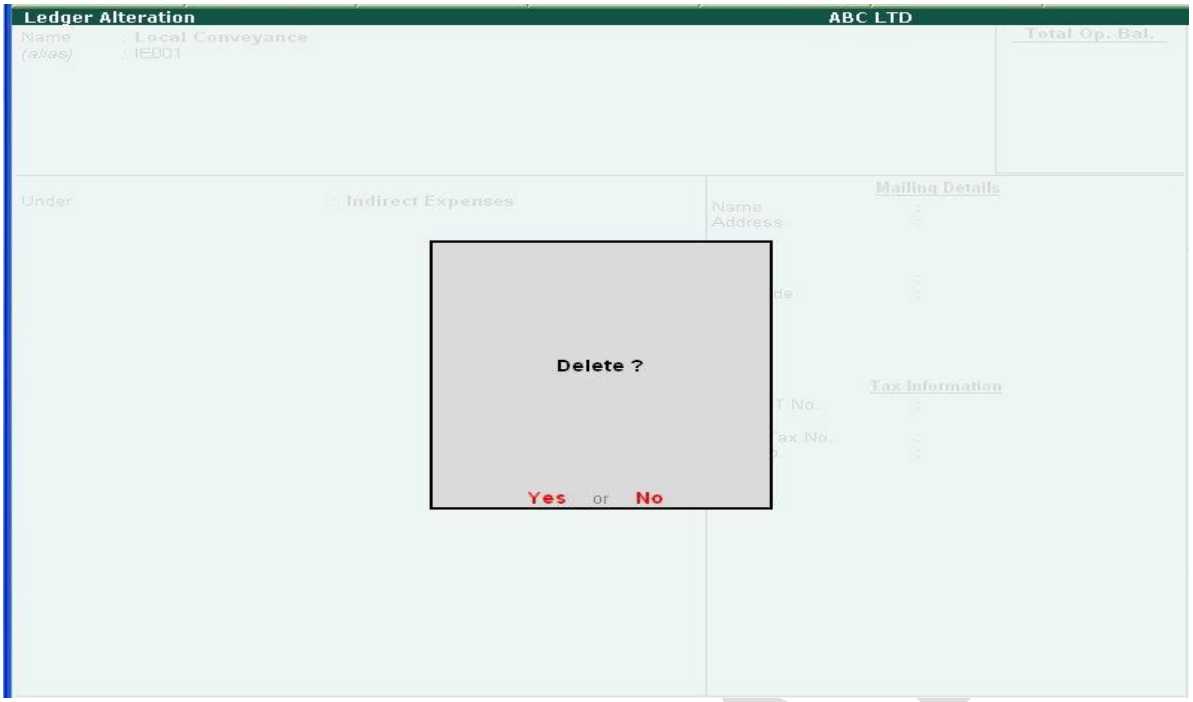
Gateway of Tally>Account info>Ledgers>Alter

Select the account to be deleted. For example we want to delete the ledger'ICICI Bank A/c 100005456′ that we have created in above example.

Now press delete button from bottom bar or Use key board shot cut Alt+D.



A confirmation will be asked.



Confirm by pressing enter or Y button from key board. Hope you got a clear idea about creating ledger, Display ledger, Edit ledger and Delete Ledger in Tally ERP9.

III – UNIT
VOUCHER CREATIONS

Voucher creations – Payment voucher – Receipts voucher – Sales voucher – Purchase voucher – Journal voucher – Contra voucher.

Voucher Entry in Tally.ERP 9

In accounting terms, a voucher is a document containing the details of a financial transaction. For example, a purchase invoice, a sales receipt, a petty cash docket, a bank interest statement, and so on. For every such transaction made, a voucher is used to enter the details into the ledgers to update the financial position of the company. This feature of Tally.ERP 9 will be used most often.
Tally.ERP 9 follows the Golden Rule of Accounting :

	Real Accounts	Personal Accounts	Nominal Accounts
Debit	What Comes in	The Receiver	Expenses and Losses
Credit	What Goes out	The Giver	Incomes and Gains

5.1 Accounting Vouchers

Tally.ERP 9 is pre-programmed with a variety of accounting vouchers, each designed to perform a different job. The standard Accounting Vouchers are:

Contra Voucher (F4)
Payment Voucher (F5)
Receipt Voucher (F6)
Journal Voucher (F7)
Sales Voucher /Invoice (F8)
Credit Note Voucher (CTRL+ F8)
Purchase Voucher (F9)
Debit Note Voucher (CTRL+ F9)

Optional Voucher: All the available vouchers in Tally.ERP 9(except non-accounting vouchers)can be marked optional, if required.

Post-dated voucher: All the available vouchers in Tally.ERP 9 can be marked post-dated, if required.

Reversing Journals (F10)
Memo voucher (CTRL+ F10)

You can alter these vouchers to suit your company, and also create new ones. Read ahead to understand the function of each voucher type. The following exercises are sample entries for understanding Voucher entry in Tally.ERP 9, do not make these entries.

5.1.1 Contra Voucher (F4)

Contra Voucher			
Description	Records funds transfer between cash and bank accounts		
Voucher Entry	Account	Amount	Amount
	State Bank of India (Bank Accounts)		Credit
	Petty Cash (Cash-in-hand)	Debit	

For example: withdrawing money from the bank for petty cash.

Use a Contra Voucher to record the entry.
Setup :
In **Voucher entry mode**, press **F12: Contra Configuration** and set the following to **Yes**:
- Skip the Date field in Create Mode (faster entry!)
- Use Cr/Dr instead of To/By during entry
- Warn on Negative Cash Balance
- Show Ledger Current Balances
- Show Balances as on Voucher Date

Go to the **Gateway of Tally > Accounting Vouchers > F4: Contra**.

Figure 5.1 Contra Voucher

Press **Y** or **Enter** to accept the screen.

5.1.2 Payment Voucher (F5)

For example, a company settles a creditor's bill by cheque.

Payment Voucher			
Description	Records all bank and cash payments		
Voucher Entry	**Account**	**Amount**	**Amount**
	Ledger account paid Kaltronic Ltd. (Sundry Creditors)	Debit	
	Bank or cash account State Bank of India (Bank Account)		Credit

Use a Payment Voucher to record the entry.

Go to the **Gateway of Tally > Accounting Vouchers > F5: Payment**.

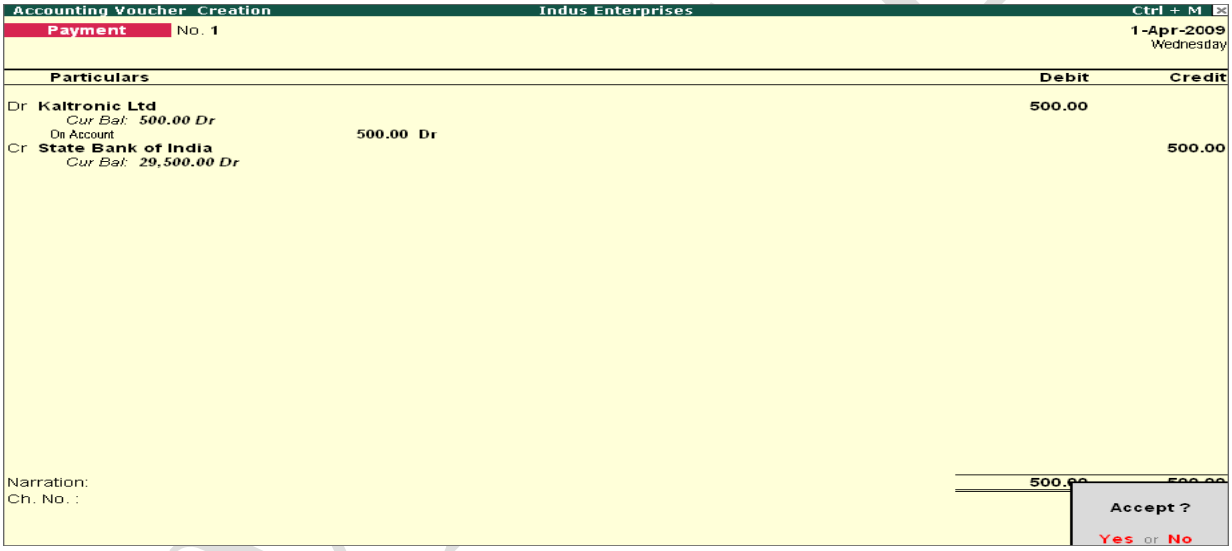


Figure 5.2 Payment Voucher

p Press **Y** or **Enter** to accept the screen.

Payment in Single Entry Mode

In **Voucher entry mode**, use **F12: Payment Configuration** and set **Use Single Entry mode for Pymt/Rcpt/Contra** to **Yes**.

Payment Voucher			
Description	Records all bank and cash payments		
Voucher Entry	**Account**	**Amount**	**Amount**
	Ledger account paid Conveyance Postage (Indirect Expenses)	Debit	
	Bank or cash account Petty Cash (Bank Account)		Credit

The entry made in the single entry mode appears as shown below:

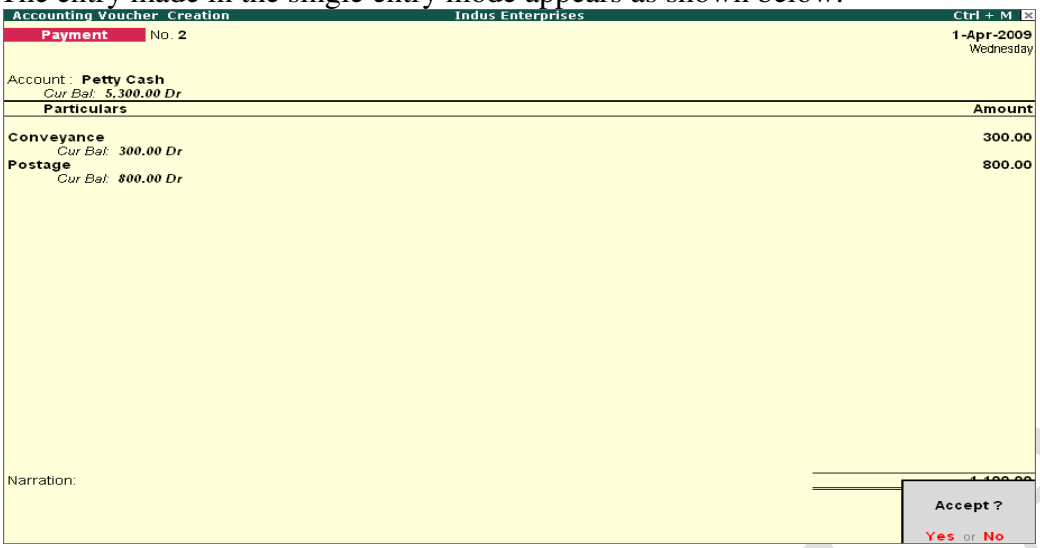


Figure 5.3 Payment Voucher with Single Entry Mode

Press **Y** or **Enter** to accept the screen.

The advantage of a single entry mode is that you can select multiple debits or credits depending on the type of entry. Similarly the transactions can be recorded in single entry mode even in Receipt and Contra vouchers.

Warn on Negative Cash Balance

Tally.ERP 9 displays a warning if the cash balance is NIL when **Warn on Negative Cash Balance** is set to **Yes** in the **F12: Payment Configuration**. For example, a cash ledger account has no balance. A payment of Rs. 4,500 towards Telephone expenses is to be made. In the process of making the payment, Tally.ERP 9 displays a warning at the time of accepting the entry.

The entry made appears as shown below:

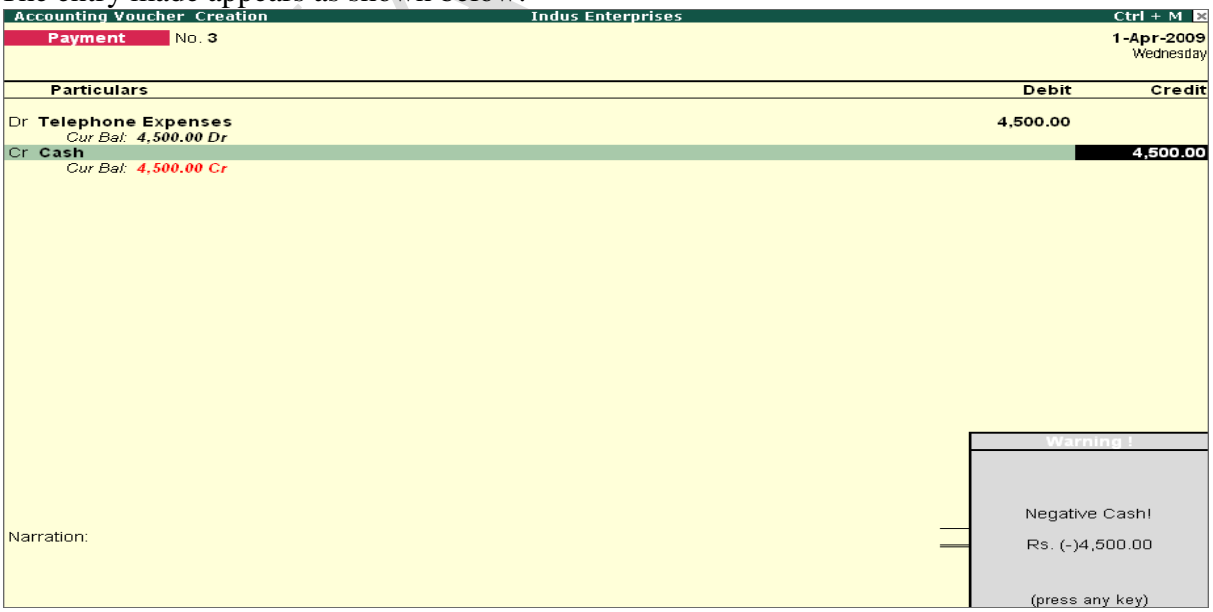


Figure 5.4 Payment Voucher with Warning on Negative Cash

In addition to the warning, Tally.ERP 9 also displays the negative balance amount in Red.

5.1.3 Receipt Voucher (F6)

For example, the company receives a bank advice that the interest has been credited to its deposit account.

Receipt Voucher			
Description	Records all receipts into bank or cash accounts		
Voucher Entry	**Account**	**Amount**	**Amount**
	Ledger account receiving Bank Interest (Indirect Incomes)		Credit
	Bank or cash account Deposit Account	Debit	

Use a Receipt Voucher to record the entry.
Ensure in **F12: Payment Configuration**, **Use Single Entry mode for Pymt/Rcpt/Contra** is set to **No**.
Go to the **Gateway of Tally > Accounting Vouchers > F6: Receipt**.
The entry made appears as shown below:

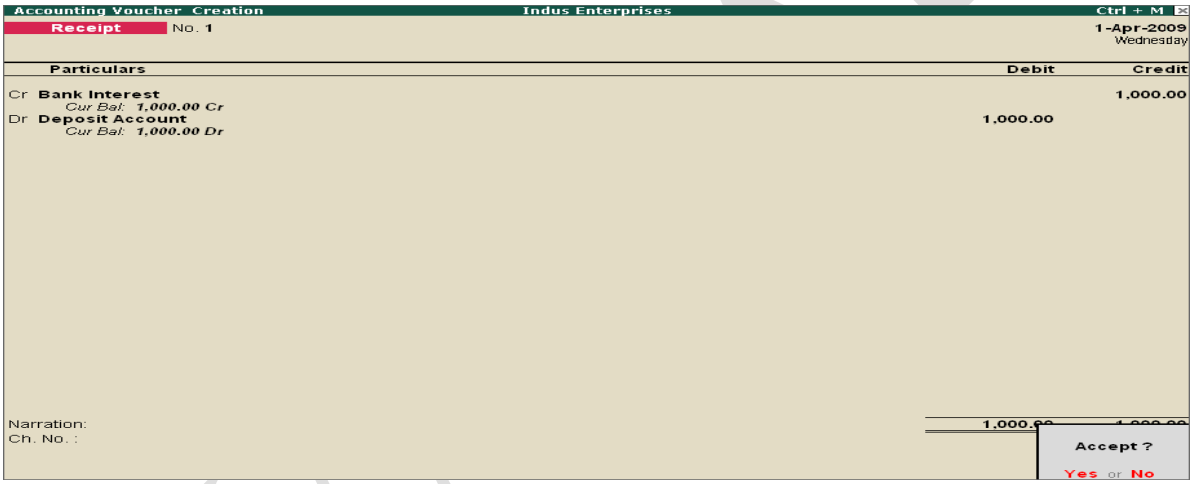


Figure 5.5 Receipt Voucher
Press **Y** or **Enter** to accept the screen.

5.1.4 Journal Voucher (F7)

For example, the company has entered some expenditure on advertising as general office costs, rather than recording the transaction in the separate ledger for advertising.

Journal Voucher			
Description	Records adjustments between ledger accounts		
Voucher Entry	**Account**	**Amount**	**Amount**
	Advertising (Indirect Expenses)	Debit	
	Office Costs (Indirect Expenses)		Credit

Use the Journal Voucher to adjust the two accounts.
Go to the **Gateway of Tally > Accounting Vouchers > F7: Journal**.
The entry made appears as shown below:

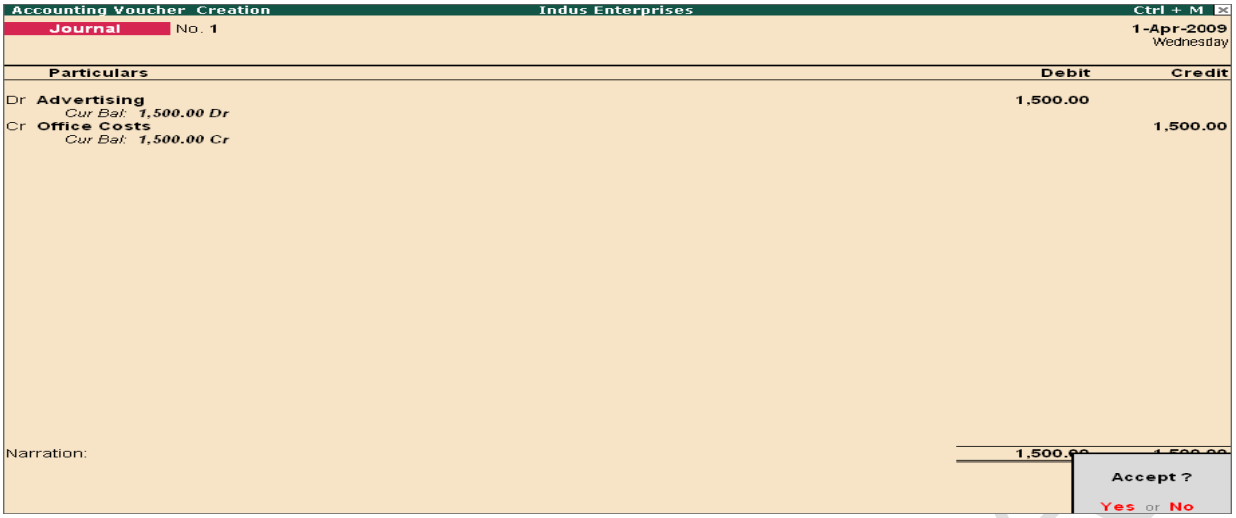


Figure 5.6 Journal Voucher

p Press **Y** or **Enter** to accept the screen.

5.1.5 Sales Voucher (F8)

For example, a company sells software on credit.

Sales Voucher			
Description	Records all sales		
Voucher Entry	**Account**	**Amount**	**Amount**
	Buyers ledger account Milton & Co. (Sundry Debtors)	Debit	
	Sales Accounts (Local Sales)		Credit

Use a Sales Voucher for making this entry.

Go to the **Gateway of Tally > Accounting Vouchers > F8: Sales**.

The entry made appears as shown below:

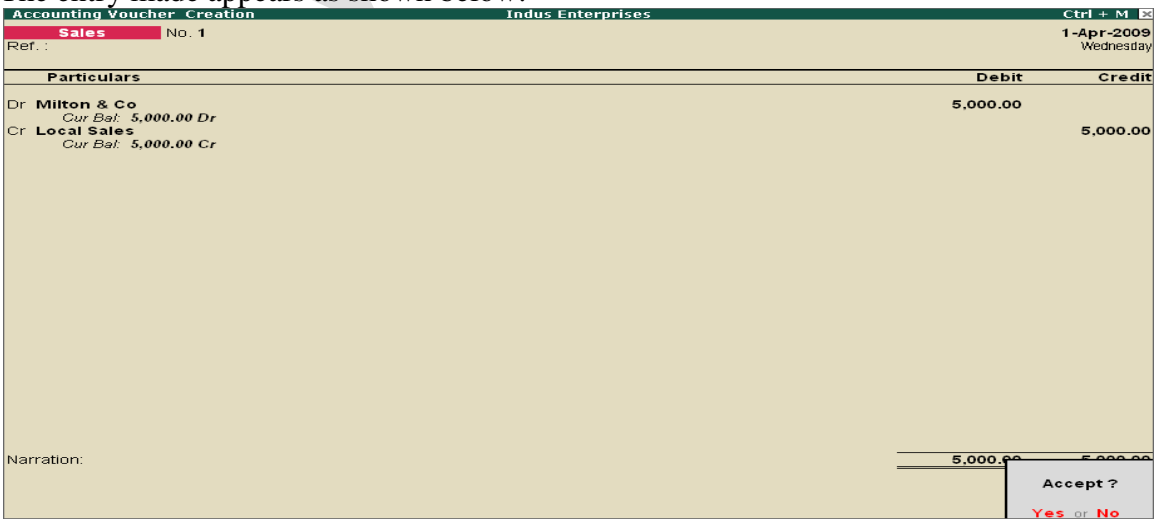


Figure 5.7 Sales Voucher

Press **Y** or **Enter** to accept the screen.

5.1.6 Credit Note Voucher (Ctrl + F8)

This voucher type is made available when the option **Use Debit/Credit Note** to is set to **Yes** in the **F11: Features (F1: Accounting features)**.

For example: A customer returns stock that was incorrectly supplied.

Credit Note Voucher			
Description	Records credit note entry for sales returns or Customer over-charging		
Voucher entry	**Account**	**Amount**	**Amount**
	Buyers ledger account Milton & Co (Sundry Debtors)		Credit
	Sales Accounts Local Sales	Debit	

Use a Credit note to record this entry.

Go to the **Gateway of Tally > Accounting Vouchers > F8: Credit Note**.

The entry made appears as shown below:

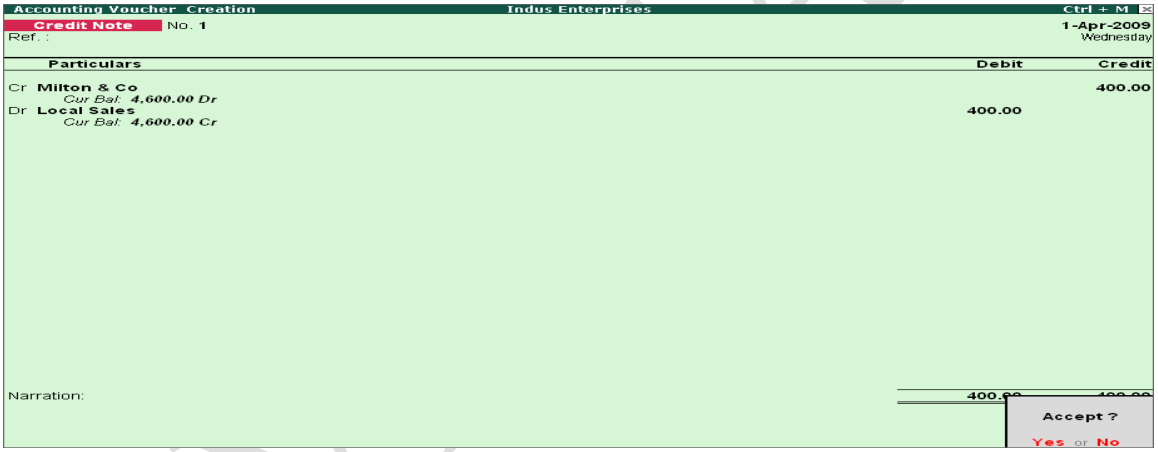


Figure 5.8 Credit Note Voucher

Press **Y** or **Enter** to accept the screen.

5.1.7 Purchase Voucher (F9)

A company buys computer parts on credit.

Purchase Voucher			
Description	Records all purchases		
Voucher Entry	**Account**	**Amount**	**Amount**
	Suppliers ledger account Beltron Ltd (Sundry Creditor)		Credit
	Purchase Accounts (Local Purchases)	Debit	

Use a Purchase Voucher to record this entry.

Go to the **Gateway of Tally > Accounting Vouchers > F9: Purchase**.

The entry made appears as shown below:

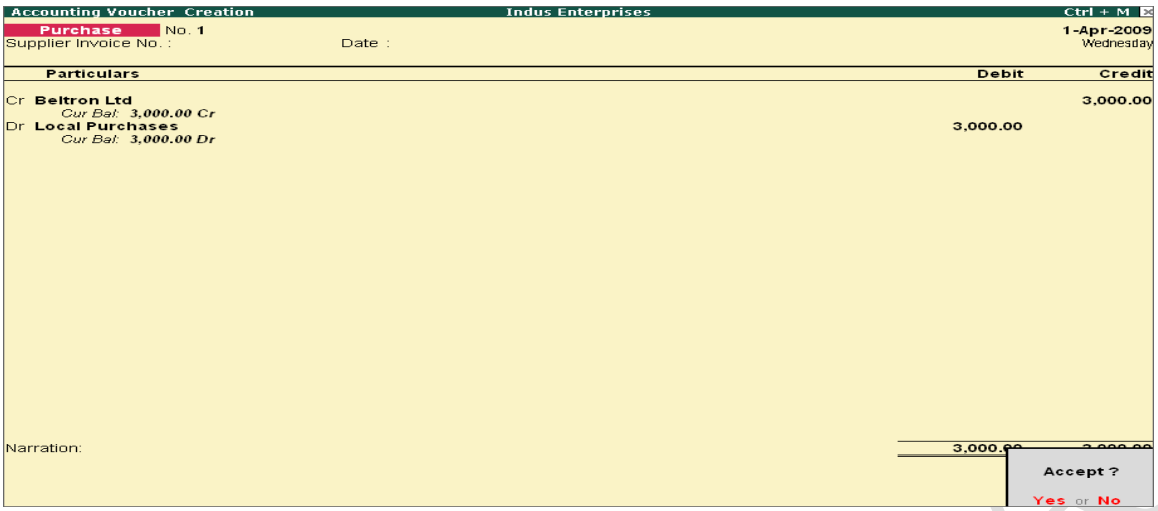


Figure 5.9 Purchase Voucher

p Press **Y** or **Enter** to accept the screen.

5.1.8 Debit Note Voucher (Ctrl + F9)

This voucher type is made available when the option **Use Debit/Credit Notes** is set to **Yes** in the **F11: Features (F1: Accounting Features)**.

For example, a company returns damaged goods to a supplier.

Debit Note Voucher			
Description	Records debit note entry for purchase returns or over-charging by a supplier		
Voucher Entry	**Account**	**Amount**	**Amount**
	Suppliers ledger account Beltron Ltd (Sundry Creditor)	Debit	
	Purchase Accounts (Local Purchases)		Credit

Use a Debit Note to record this entry.

Go to the **Gateway of Tally > Accounting Vouchers > F9: Debit Note**.

The entry made appears as shown below:

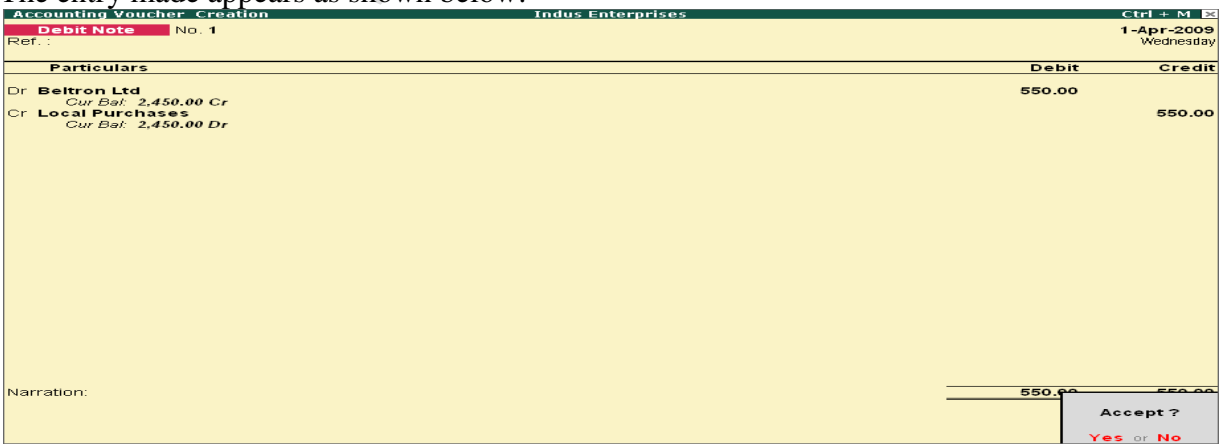


Figure 5.10 Debit Note Voucher

p Press **Y** or **Enter** to accept the screen.

5.1.9 Reversing Journal Voucher (F10)

Reversing Journals are special journals that are automatically reversed after the date of the journal. They exist only for a day and are effective on the date of the reversing journal. This voucher type is available only if the feature **Use Reversing Journals & Optional Vouchers** is set to **Yes** in the **F11: Features (F1: Accounting Features**).

The entry made for this, is as follows:

Reversing Journal Voucher			
Description	Records the voucher entries in a Reversing Journal Register, without affecting the ledger accounts and financial statements		
Voucher entry	**Account**	**Amount**	**Amount**
	Ledger account	Debit	
	Ledger account		Credit

Go to the **Gateway of Tally > Accounting Vouchers > F10: Reversing Journal.**

Reversing Journals are useful in **Scenario Management**.

5.1.10 Memo Voucher (Ctrl + F10)

Memo Voucher is a non-accounting voucher and the entries made using it will not affect your accounts. In other words, Tally.ERP 9 does not post these entries to ledgers but stores them in a separate **Memo Register**. You can alter and convert a Memo voucher into a regular voucher when you decide to bring the entry into your books.

Memo vouchers are used for the following purposes :

1. **Making suspense payments**

For example, the company gives an employee cash to buy office supplies, the exact nature and cost of which are unknown. You could have entered a voucher stating petty cash advance, a voucher to record the actual expenditure details when they are known, and another voucher to record the return of surplus cash. However, a simpler way is to enter a Memo voucher when the cash is advanced, and then turn it into a Payment voucher for the actual amount spent, when known.

2. **Vouchers not verified at the time of entry**

Sometimes it so happens that you do not understand the details of a voucher you are entering. In such cases, enter it as a Memo voucher and amend it when you get the details.

3. **Items given on approval**

Usually, entries are made into the books only after a sales transaction is completed. Items given **on approval**, can be tracked by using a Memo voucher. It can either be converted into a proper Sales voucher or be deleted depending on the outcome.

Memo Voucher			
Description	Records the voucher entries in a memo register, without affecting the ledger accounts and financial statements		
Voucher Entry	**Account**	**Amount**	**Amount**
	Ledger account	Debit	
	Ledger account		Credit

5.1.11 Optional Voucher

This is another **non-accounting** voucher which is available only if the feature **Use Reversing Journals & Optional Vouchers** is set to **Yes** in the **F11: Features (F1: Accounting Features)**. It differs from the Memo voucher in two respects:

p It is not a voucher type, since all the other voucher types can be marked as Optional during a voucher entry.

p You have the option to bring this voucher into your accounts **temporarily** and see its effect on financial reports. Any voucher type (except non-accounting voucher) can be designated as an Optional voucher.

Optional Voucher			
Description	Records voucher entries temporarily, to help visualise the effect on reports, without affecting the ledgers		
Voucher Entry	**Account**	**Amount**	**Amount**
	Ledger account	Debit	
	Ledger account		Credit

5.1.12 Post-dated Vouchers

Post-dated Vouchers are ignored by Tally.ERP 9 until the date in question. This is useful for entering transactions that take place on a regular basis. For example, if you pay for something by instalments, you can set-up the payments in advance, and Tally.ERP 9 will only enter them in the ledgers as and when they fall due. A voucher is marked as Post-dated while creating or altering it.

5.1.13 Creating a New Voucher Type

National Traders wants to record bank and petty cash payments differently and needs two new voucher types to replace the pre-defined Payment voucher. Inorder to do this:

Create a **Bank Payment** voucher

Go to the **Gateway of Tally > Accounts Info. > Voucher Types > Create**.

1. **Name**: **Bank Payment**
2. **Type of Voucher**: **Payment** (Specify the default Tally.ERP 9 voucher, whose functions the new voucher should copy).
3. **Abbr.: Bank Pymt** (Specify the abbreviation to denote this new voucher in reports)
4. **Method of Voucher Numbering**: **Automatic**

You can choose one of the following methods for numbering from the pop-up:

Method of Numbering	**Purpose**
Automatic	For Tally.ERP 9 to do it for you.
Manual	You do it. You can also specify if you wish to prevent duplicates.
None	To disable numbering for this voucher type.

5. **Use Advance Configuration**: **No**
6. **Use EFFECTIVE Dates for Vouchers**: **No**
7. **Make Optional as default**: **No** (This is to set the voucher type as an Optional voucher, by default)
8. **Use Common Narration**: **Yes**
9. **Narrations for each entry**: **No**

10. **Print after saving Voucher**: **No**
11. **Name of Class**: **Skip**.

- The voucher date is taken from the current date mentioned at the Gateway of Tally.ERP 9. However, the **effective date** for the voucher may be different. For example, entering a post-dated cheque.
- Tally.ERP 9 displays the narration field which applies to the whole voucher. By setting **Use Common Narration** option to **No**,we can have separate narration fields for each line on the voucher. Reversing Journals are used for Scenario Management.
- The **Name of Class** field enables creation of Voucher Classes for the respective voucher types. (The Voucher class is a template to customise voucher data entry).

A **Bank Payment Voucher Type** Creation screen appears as shown below:

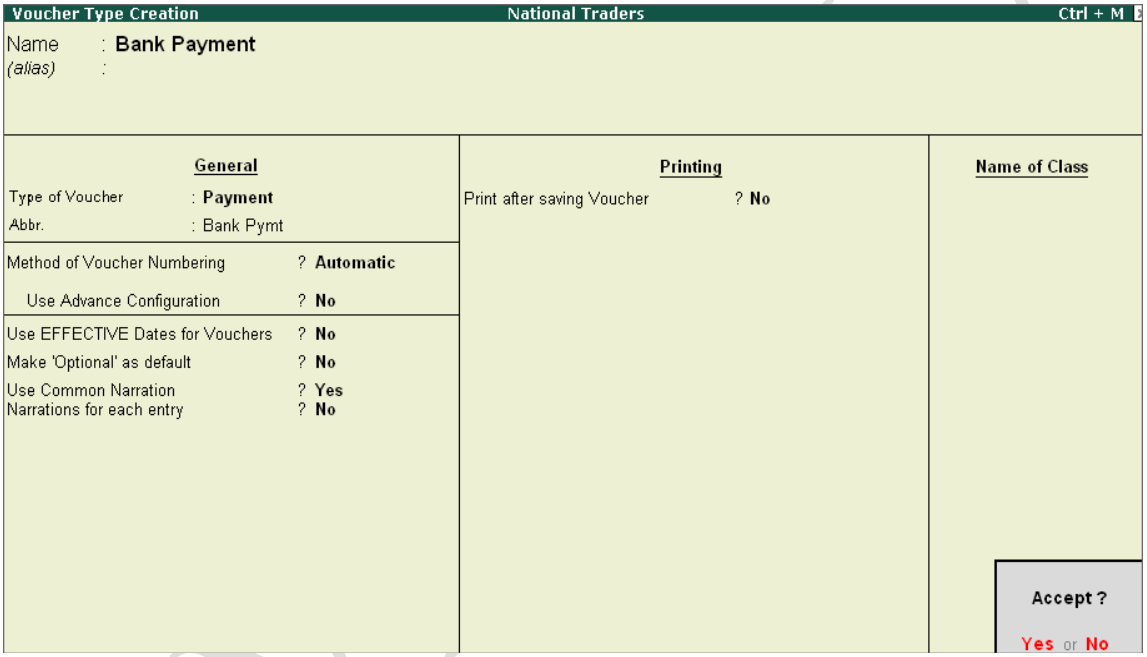


Figure 5.11 Voucher Type Creation Screen Bank Payment

12. Press **Y** or **Enter** to accept the screen.

5.1.14 Displaying and Altering a Voucher Type

Observe the menu, you will notice that you can also display and alter voucher types. Selecting these options brings up a **List of Voucher Types**, from which you can select the one you want to view or work on. Apart from the heading, the ***Voucher Type Display/Alter*** screens are identical to the ***Creation*** screen.

Practice Exercise

Create a Petty Cash Payment Voucher Type

Ensure that the details in the Voucher Type Creation screen are as shown below:

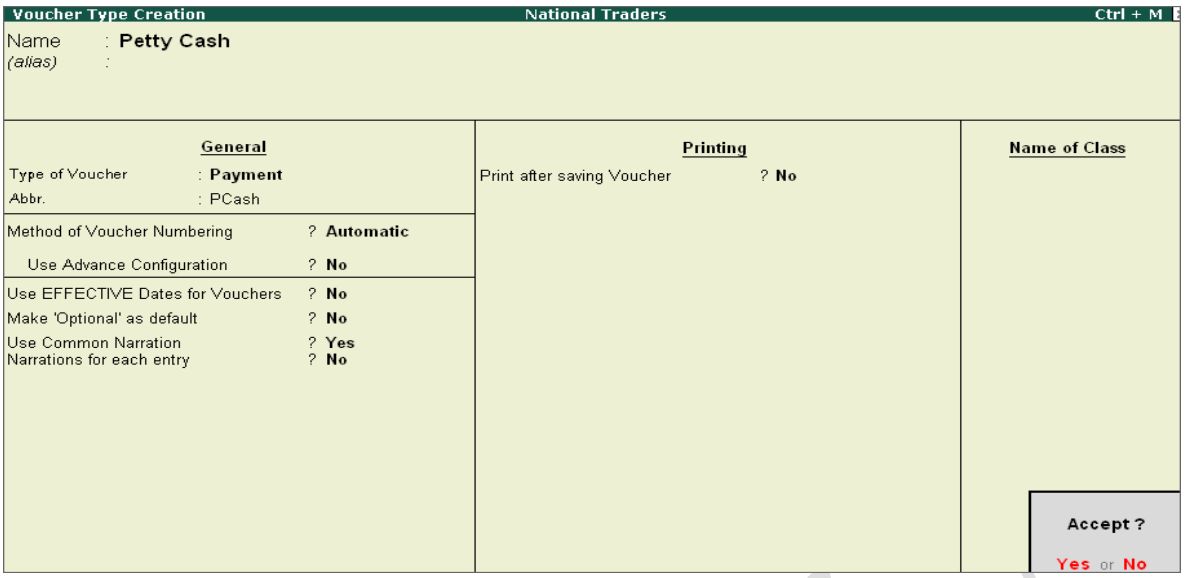


Figure 5.12 Voucher Type Creation Petty Cash

Press **Y** or **Enter** to accept the screen.

The above exercises are sample enteries for understanding Voucher entry in Tally.ERP 9, do not make these entries.

5.1.15 Recording Accounting Transactions

Let us record the following business transactions of National Traders for the month of April 2009 :

National Traders Business Transactions	
Date	**Transaction Details**
1-4-09	Paid Rs 500 to Challenger Systems by cheque
1-4-09	Bought office supplies for Rs 150 with Petty Cash
2-4-09	Wages of Rs 600 paid to employees by cheque
5-4-09	Banked a cheque for Rs 5000 received from Data Link Technologies
6-4-09	Sold 1 IBM Pentium IV to Spectrum Computers for Rs 24,785.
6-4-09	Withdrew Rs 200 from Bank Account for Petty Cash
7-4-09	Bought 1 Laserjet 1500 from Silver Plus computers on credit for Rs 8,100

The basic steps to be followed while entering each voucher are:

Check if the date is correct and use **F2: Date** to change it if necessary.

Select the voucher type from the button bar and make a further selection from the supplementary list that Tally.ERP 9 displays, if necessary.

Enter the appropriate reference for the **Purchase** and **Sales** vouchers.

Select the ledgers and enter the amounts.

Type the narration and check whether all the data is correct before accepting.

Create the following **Accounting Vouchers** in the books of National Traders:

Date	Voucher Type	Ledgers to be Selected	Debit	Credit

1-4-09	**F5:Payment** Bank Payment	Dr - Challenger Systems Cr - Bank Account	500.00	 500.00
1-4-09	**F5: Payment** Petty Cash	Dr - Office Costs Cr - Petty Cash	150.00	 150.00
2-4-09	**F5: Payment** Bank Payment	Dr - Wages Cr - Bank Account	600.00	 600.00
5-4-09	**F6: Receipt**	Cr - Data Link Technologies Dr - Bank Account	 5000.00	5000.00
6-4-09	**F8: Sales**	Dr - Spectrum Computers Cr - Computer Sales	24,785.00	 24,785.00
6-4-09	**F4: Contra**	Cr - Bank Account Dr - Petty Cash	 200.00	200.00
7-4-09	**F9:Purchase**	Cr - Silverplus Computers Dr - Printer Purchases	 8,100.00	8,100.00

	In the **Purchase/Sales Ledger** Masters, set **Inventory Values are affected** to **No** and proceed with the above transactions. Enable the option to **Yes** in the **Inventory Transactions** section.

A Voucher Entry screen comprises of the following :

Type of voucher

It is essential to check if you are using the right voucher for the transaction. You can change the voucher type by selecting a new type from the button bar, if required. For example on the selection of a payment voucher, Tally.ERP 9 automatically displays the **List of Voucher** types you have created. You can select the voucher type required.

Voucher number

Tally.ERP 9 automatically sets the voucher number for you. You can change the voucher number manually, if required.

Reference

You can enter a reference of your choice. A Purchase order number or an Invoice Number can be entered as a reference.

Date of voucher

The date of the voucher you enter is displayed at the top-right of the Voucher Creation screen. The date is taken initially from the Gateway of Tally - Current Date and you may need to change it frequently to ensure that the vouchers are dated as you want.

Effective date

A voucher type can be configured to allow for an **Effective date**. The line below the **Date of voucher** displays the date when the voucher will be effective.

Particulars

This is where you enter the ledger names and the debit and credit amounts. Each line displays a prompt of **Dr** or **By** for debit entries and **Cr** or **To** for credit entries.

Depending on the voucher type, Tally.ERP 9 selects either Dr or Cr for the first prompt, which you cannot change. Thereafter, you can change the prompt (if necessary) by typing over it with a **D** or a **C**. To select a ledger, type the first letter of its name. Tally.ERP 9 then displays a **List of Ledger Accounts** beginning with the letter highlighted. Only ledgers suitable for the voucher type are displayed. As you continue typing, the highlights reduce until a match is found.The current balance is displayed when you select the ledger, (if this option has been configured). The revised current balance is shown after the amount is entered. On selecting the next ledger, Tally.ERP 9 suggests the balancing amount as the value to be entered, which may be accepted or typed over. The voucher entry cannot be completed until the debits equal the credits.

Narration

Here you type whatever appropriately describes the transaction. Remember, you can have a separate narration for each line of particulars, if you configure the voucher type in that way.

For Payment Vouchers, where a bank account has been credited, Tally.ERP 9 pre-sets the narration to **Ch.No.** expecting a cheque number to be entered. This can be over written if required.

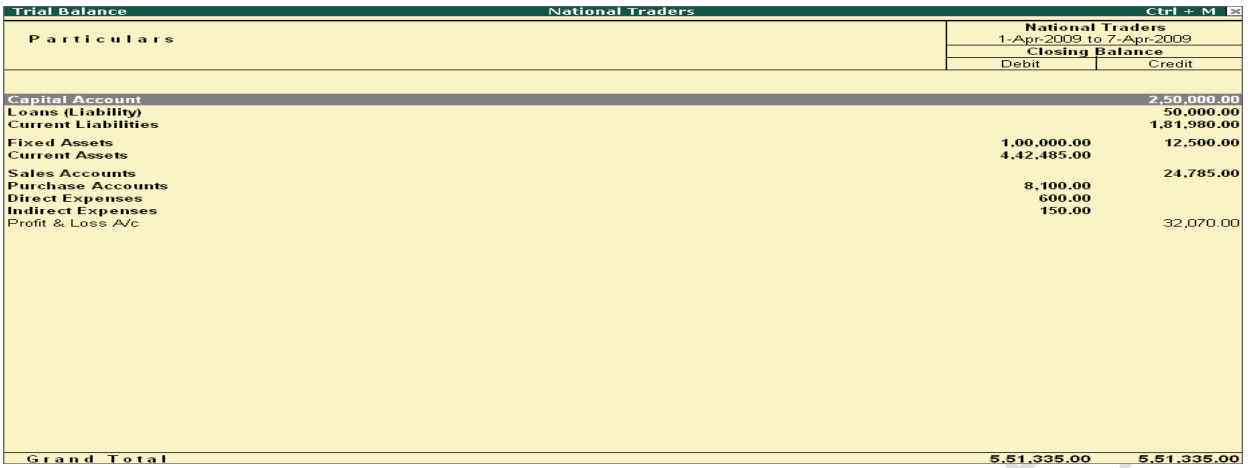
Once the narration is complete, press **Enter** to bring up the Accept? box.

Once you accept the data, Tally.ERP 9 presents another data entry screen.

5.1.16 Trial Balance for April 2009

Go to the **Gateway of Tally > Display > Trial Balance**.

After making the above emtries, the Trial Balance of National Traders will appear as shown :



Trial Balance — National Traders — Ctrl + M

Particulars	National Traders 1-Apr-2009 to 7-Apr-2009 Closing Balance Debit	Credit
Capital Account		2,50,000.00
Loans (Liability)		50,000.00
Current Liabilities		1,81,980.00
Fixed Assets	1,00,000.00	12,500.00
Current Assets	4,42,485.00	
Sales Accounts		24,785.00
Purchase Accounts	8,100.00	
Direct Expenses	600.00	
Indirect Expenses	150.00	
Profit & Loss A/c		32,070.00
Grand Total	5,51,335.00	5,51,335.00

Figure 5.13 Trial Balance From April 1, 2009 to April 7, 2009

Enter further transactions for National Traders.

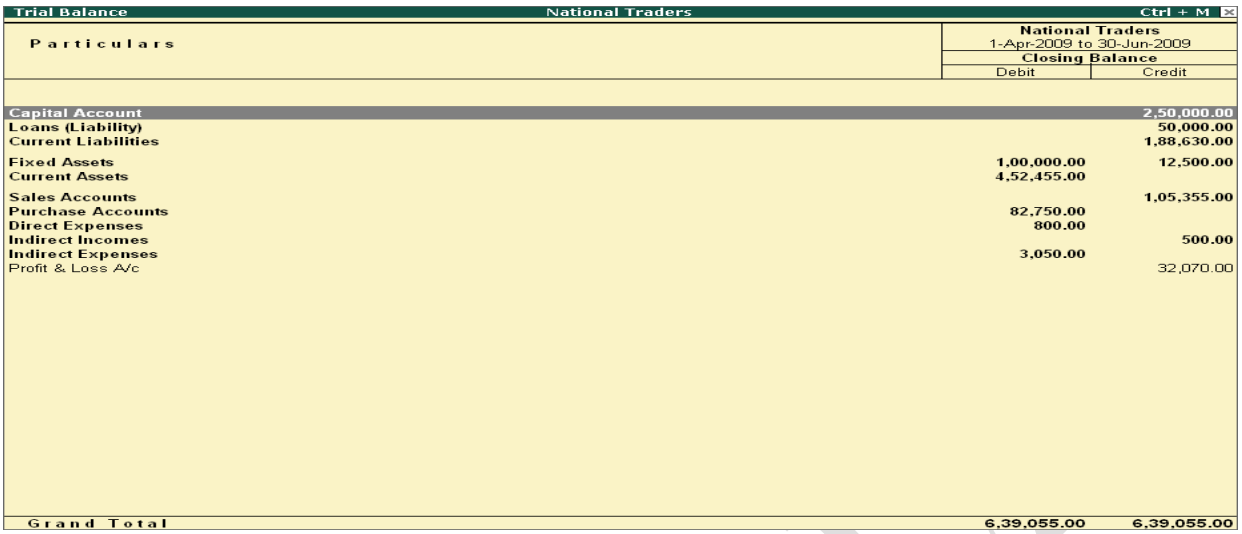
Business Transactions for the months of May and June 2009 are as follows:

National Traders Business Transactions	
Date	**Transaction Details**
10-5-09	Bank Advice received for bank interest of Rs.500 credited to the deposit account.
11-5-09	Electricity bill (Office costs) for Rs.400 received from Horizon Enterprises. *(Note: Use a Journal Voucher)*
13-5-09	Sold 1 HP Laserjet 1010 Series for Rs 9,500 to a cash customer, retaining the money as Petty Cash.
19-5-09	Salaries of Rs 2,500. Amount paid through Bank Account.
24-5-09	Sold 1 HCL Pentium IV for Rs. 21,500 to Supreme Computers.
30-5-09	Purchased 5 USB Pen Drives 64MB @ Rs. 1,250 each from Challenger Systems on credit.
01-6-09	Paid freight charges of Rs 200 from petty Cash
01-6-09	Paid Challenger Systems Rs. 11,500 by cheque
09-6-09	Transferred Rs 6,000 from Bank Account to Deposit Account.
15-6-09	Cheque for Rs 15,000 received from Spectrum Computers
22-6-09	Purchased 4 IBM Pentium IVs for Rs. 17,100 each from a new supplier and paid by cheque
22-6-09	Sold 2 IBM Pentium IVs for Rs. 24,785 to a customer who paid by cheque

In the **Purchase/Sales Ledger** Masters, set **Inventory Values are affected** to **No** and proceed with the above transactions. Enable the option to **Yes** in the **Inventory Transactions** section.

5.1.17 Trial Balance for June 2009

Go to the **Gateway of Tally > Display > Trial Balance**



Trial Balance — National Traders — Ctrl + M

Particulars	National Traders 1-Apr-2009 to 30-Jun-2009 Closing Balance	
	Debit	Credit
Capital Account		2,50,000.00
Loans (Liability)		50,000.00
Current Liabilities		1,88,630.00
Fixed Assets	1,00,000.00	12,500.00
Current Assets	4,52,455.00	
Sales Accounts		1,05,355.00
Purchase Accounts	82,750.00	
Direct Expenses	800.00	
Indirect Incomes		500.00
Indirect Expenses	3,050.00	
Profit & Loss A/c		32,070.00
Grand Total	6,39,055.00	6,39,055.00

Figure 5.14 Trial Balance From April 1, 2009 to June 30, 2009

5.2 Inventory Vouchers

Tally.ERP 9 inventory vouchers perform the same function in the inventory system as accounting vouchers do. They are the means by which you enter transactions relating to the Inventory. The vouchers record transactions relating to the issue and receipt of stock, the transfer of stock between godowns, and physical stock adjustments. The following inventory vouchers are available in Tally.ERP 9 :

Purchase Order (Alt+F4)
Sales Order (Alt+F5)
Rejections Out (Alt+F6)
Rejections In (Ctrl+ F6)
Stock Journal (Alt+F7)
Delivery Note (Alt+F8)
Receipt Note (Alt+F9)
Physical Stock (Alt+F10)

5.2.1 Purchase Order

A Purchase order entry has to be made in the books of the company to assist them in checking whether the goods have been received or not. The Purchase Order number can be used as a reference. For example, the company wishes to place an order with the supplier for some goods.

Purchase Order	
Description	Records placing an order for stock items to suppliers.
Details recorded	Supplier's Ledger account, Name and address, Order details, name of stock item, ***Due on***, Godown, Quantity, Rate, Amount, Narration.

5.2.2 Sales Order

A Sales Order entry has to be made to record this. The Sales Order number can be used as a reference. For example, a customer places an order with the company for purchasing some goods.

Sales Order	
Description	Records order details for stock items received from customers.
Details recorded	Customer's Ledger account, Name and address, Order details, name of stock item, ***Due on***, Godown, Quantity, Rate, Amount, Narration.

5.2.3 Rejections Out

A Rejections Out entry is passed to record the rejected goods. This is a pure inventory voucher. For example: We have purchased some goods and have rejected a part of it.

Rejections Out (Purchase Returns)	
Description	Records rejected stock details returned to suppliers.
Details recorded	Ledger Account, Suppliers name and address, stock item, Tracking details, Order details, Godown, Quantity, Rate, Amount, Narration.

5.2.4 Rejections In

A Rejections In entry is passed to record the rejected goods. The Rejections In entry is a pure inventory voucher. For example a customer has rejected goods that was sold earlier.

Rejections In (Sales Returns)	
Description	Records rejected stock details received from customers
Details recorded	Ledger account, Customer's name and address, stock item, tracking details, order details, Godown, Quantity, Rate, Amount, Narration.

5.2.5 Stock Journal

To record the consumption of goods there is no need for entries on both sides of the voucher. Such entries can be entered in a stock journal voucher. For example: the company transfers items of stock from the warehouse to the shop.

Stock Journal	
Description	Essentially records the transfer of stock from one Godown to another.
Details recorded	Names of from and to godowns, name of stock item, quantity, rate, amount, narration.

5.2.6 Delivery Note

Goods that are being delivered to a customer are recorded in a Delivery Note voucher.

Delivery Note	
Description	Records delivery of new stock to customers
Details recorded	Reference, ledger account, suppliers (if supplementary details are set to yes in F12: Delivery Note Configuration) then, name and address, Order & dispatch details, name of stock item, Tracking details, Order details, Godown, Quantity, Rate(optional), Amount(optional), narration.

5.2.7 Receipt Note

Goods that are received from the supplier are recorded in a Receipt Note (Goods Receipt Note GRN) voucher.

Receipt Note	
Description	Records receipt of new stock from suppliers
Details recorded	Reference, ledger account, (If supplementary details are set to yes in F12: Receipt Note Configuration) then, Order details, Suppliers name and address, name of stock item, Tracking details, Order details, Godown, Quantity, Rate (optional), Amount (optional), narration.

5.2.8 Physical Stock Voucher

Tally.ERP 9 considers the stock available based on the entry made in a physical stock voucher. For example, on conducting a stock-check, the company finds a discrepancy between the actual stock and the recorded stock figure.

Physical Stock Voucher	
Description	Records the physical stock count as the new stock balance
Details recorded	Name of stock item, Godown, Physical stock quantity.

5.2.9 Pure Inventory Transactions

Pure inventory Transactions (vouchers) are those that do not affect financial records. They affect only the stocks. There will be a rise or fall in the stock when such vouchers are entered.
The different pure inventory vouchers are:

Rejections Out (Alt+F6)
Rejections In (Ctrl+F6)
Stock Journal (Alt+F7)
Delivery Note (Alt+F8)
Receipt Note (Alt+F9)
Physical Stock (Alt+F10)

Setup :

To enable **Delivery Note** and **Receipt Note**, set **Yes** to **Use Tracking Numbers** and **Use Rejection Notes** in **F11: Features (F2: Inventory Features)**.

Go to the **Gateway of Tally > F12: Configuration > Invoice/Orders Entry** Set **Complete Accounting Allocations in Order/Delivery Note** to **Yes**.

Make sure that **Inventory Values are affected?** is set to **Yes** in all ledger accounts under the groups Sales Accounts and Purchase Accounts.

An entry made in a purchase voucher can update the stocks. It is not necessary to make a separate entry in a Goods Receipt Note. This holds true for the goods delivered and recorded in the Sales Voucher itself.
We shall now learn how to enter pure inventory vouchers.

5.2.10 Recording Inventory Transactions

The inventory transactions of National Traders for April 2009 are:

National Traders Inventory Transactions	
Date	**Transaction Details**
6-4-09	Delivered 1 HCL PIV from On-Site to Spectrum Computers.
7-4-09	Received delivery of 2 HP Laserjet 1010 Series from Silver Plus Computers and stored in On-Site Godown.
9-4-09	Transferred 2 HCL PIV from On Site to Warehouse.
13-4-09	Returned 1 HP Laserjet 1010 Series (Faulty) to Silver Plus Computers.
15-4-09	Supreme Computers returned 1 HCL Pentium IV which was ordered incorrectly
16-4-09	Stock check reveals physical stock of 3 Boxes of CD ROM Disks 100s in On-Site Godown.

- In the **Purchase/Sales Ledger** Masters, set **Inventory Values are affected** to **Yes** and proceed with the above transactions.
- **Tracking numbers** must be activated and disabled after the exercise is completed. (Tracking numbers will be discussed later.)

Go to the **Gateway of Tally > Inventory Vouchers**.
The basic steps to enter the vouchers are:
Change the date if necessary.
Select the voucher type from the button bar menu.
Type the details and check whether they are correct before accepting.
Accept the default rates of items that appear according to the standard cost and standard selling price given in the workbook.

Practice Exercise
Create the following transactions in the books of **National Traders.**

Field	Details to be entered
Voucher 1	
Voucher type	Alt +F8: **Delivery Note**
Current date	6-4-2009
Ref:	ABC/DN/00654
Ledger account	Spectrum Computers
Order details	Accept the default
Name of item	HCL PIV
Tracking Number	Not Applicable
Godown	On-Site
Quantity	1
Rate	21,500 / Nos

Amount	21,500
In Accounting Details Screen	Computer Sales
Narration	Computer delivery
Accept? Yes or No	Yes
Voucher 2	
Voucher type	**Alt +F9: Receipt Note**
Current date	7-4-2009
Ref:	USC/12089/Del
Ledger Account	Silver Plus Computers
Order Details	Accept the default
Name of item	HP Laserjet 1010 Series
Tracking Number	Not Applicable
Godown	On-site
Quantity	2
Rate	8,200 / Nos
Amount	16,400
In Accounting Details Screen	Printer Purchase
Narration	Printer received
Accept? Yes or No	Yes
Voucher 3	
Voucher type	**Alt +F7: Stock Journal**
Current date	9-4-2009
Source (Consumption)	
Name of item	*HCL PIV*
Godown	*On-site*
Quantity	*2*
Rate	*17,500 / Nos*
Amount	*35,000*
Destination (Production)	
Name of item	*HCL PIV*
Godown	*Warehouse*

Quantity	*2*
Rate	*17,500 / Nos*
Amount	*35,000*
Narration	*Transfer of stock*
Accept? Yes or No	*Yes*
Voucher 4	
Voucher type	**Alt +F6: Rejection Out**
Current date	13-4-2009
Ledger Account	Silver Plus Computers
Supplier's Name and Address	Silver Plus Computers
Name of item	HP Laserjet 1010 Series
Tracking Number	Not Applicable
Godown	On-site
Quantity	1
Rate	8,200 / Nos
Amount	8,200
Narration	Rejected goods out
Accept? Yes or No	Yes
Voucher 5	
Voucher type	**Ctrl+F6: Rejection In**
Current date	15-4-2009
Ledger account	Supreme Computers
Customer's Name and Address	Supreme Computers
Name of item	HCL PIV
Tracking Number	Not Applicable
Godown	On-site
Quantity	1 Nos
Rate	21,500 / Nos
Amount	21,500
Narration	Rejected goods in
Accept? Yes or No	Yes
Voucher 6	

Current date	16-4-2009
Voucher type	**Alt +F10: Physical stock**
Name of item	CD ROM Disks 100s
Godown	On-site
Quantity	3 Box
Narration	Stock check adjustment
Accept? Yes or No	Yes

5.2.11 Stock Summary for April 2009

Go to the **Gateway of Tally > Stock Summary**.

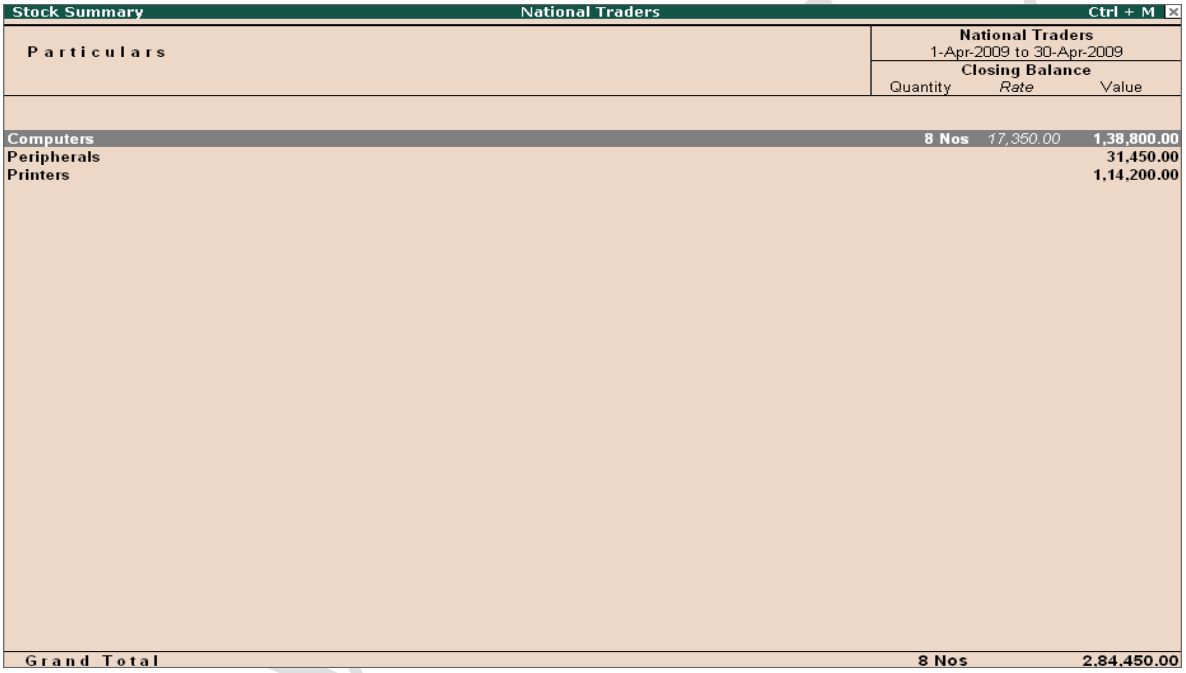


Figure 5.15 Stock Summary from April 1, 2009 to April 30, 2009

Enter further inventory transactions for National Traders.

The sample inventory transactions of the company for the months of May and June 2009 are as follows:

National Traders Inventory Transactions		
Date	**No**	**Transaction Details**
9-5-09	1	Delivered 2 Nos of HCL PIV from warehouse to Spectrum Computers (Ref: ABC/DN/00654) *Hint: Select Computer Sales.*
17-5-09	2	Received 5 Boxes of CDROM Disks 100s from Silver Plus Computers (Ref: USC/13049/Del).
18-5-09	3	Returned 1 Box of CDROM Disks 100s (damaged) to Silver Plus Computers.
1-6-09	4	Received 5 Nos of Wireless Keyboards from Silver Plus Comptuers (Ref:USC/13420/Del).

15-6-09	5	Delivered 2 Nos IBM pentium IV from On-site to Supreme Computers (Ref: ABC/DN/00721) *Hint: Select Computer Sales*
24-6-09	6	Stock check reveals physical stock HP Laserjet 1010 Series as 5 Nos.
29-6-09	7	Spectrum Computers returned 1 Nos HCL PIV.
30-6-09	8	Transferred 2 Nos of IBM PIV from warehouse to onsite.

:

- Accept the default rates that appear for each item, as specified in the **Standard Cost** and **Standard Selling Price** of the Stock Item.
- If the godown has not been specified in the table above, select **On - Site**.

5.2.12 Stock Summary for June 2009

Go to the **Gateway of Tally > Stock Summary**.

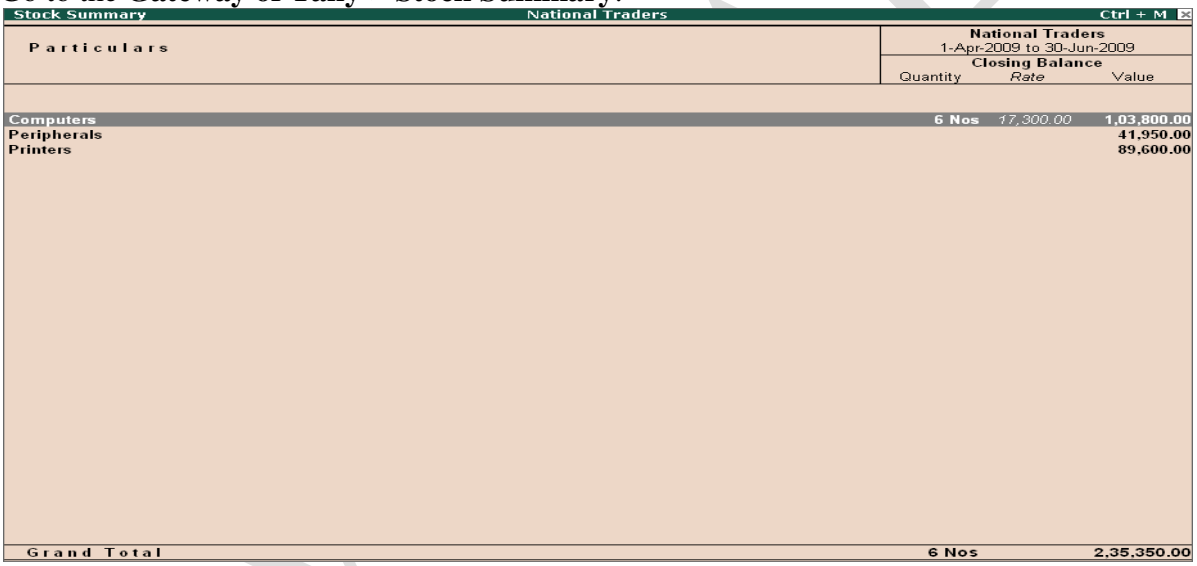


Figure 5.16 Stock Summary from April 1, 2009 to June 30, 2009

The **Total Stock value** should be **2,35,350** made up of **Computers - 1,03,800**, **Peripherals - 41,950** and **Printers - 89,600**.

5.2.13 Entering Inventory Details in Accounting Vouchers

Assume that the inventories have to be updated at the same time as entering the accounting vouchers. This is particularly useful for organisations that send and receive goods with a bill or invoice only. In other words, they do not want to update stocks with only a delivery note neither do they want to with a Goods Receipt Note. Tally.ERP 9 permits stock movement along with invoice. Therefore, you need to select the stock items that come in or move out at the time of purchase or sales voucher entry.

Apart from the Sales and Purchase Vouchers that record the inventory movements, the following vouchers are used to record the stock movements.

p Debit Note for Goods rejected and returned to supplier.

p Credit Note for Goods rejected and returned by customer.

Debit Notes and Credit Notes are used to record the return of goods and the corresponding reversal of sales and purchases.
Given below are examples of Purchase, Sales, Debit Note and Credit Note vouchers with inventory details :

Purchase voucher
For example: the company receives new stock from a supplier.

Purchase Voucher	
Description	Records receipt of new stock with invoice from suppliers.
Details recorded	Reference, ledger account, supplier's name and address, name of stock item, godown, quantity, rate, amount, purchase ledger, other ledgers (if required), narration.

Sales voucher
For example: the company delivers goods from its stock to a customer.

Sales Voucher	
Description	Records the delivery of goods and invoice to customers.
Details recorded	Reference, ledger account, customer's name and address, name of stock item, godown, quantity, rate, amount, sales ledger, sales tax ledger (if required), narration.

Debit Note
For example: the company rejects and returns goods to the supplier.

Debit Note	
Description	Records the delivery of goods and debit note to supplier.
Details recorded	Reference, ledger account, supplier's name and address, name of stock item, godown, quantity, rate, amount, purchase ledger, other ledgers (if required), narration.

Credit Note
For example: the company receives rejected goods from a customer.

Credit Note	
Description	Records receipt of rejected goods with advice from customer. Company issues credit note.
Details recorded	Reference, ledger account, customer's name and address, name of stock item, godown, quantity, rate, amount, sales ledger, sales tax ledger (if required), narration.

Tally.ERP 9 permits the entries of these vouchers in Voucher Mode as well as in invoice mode. In this section, you will learn how to enter them in Voucher Mode.

Set up :
Set **Yes** to **Use Debit/Credit Notes** in **F11: Features (F1: Accounting Features)**. Do not activate the invoice mode.

Make sure that **Inventory Values are affected?** is set to **Yes** in all ledger accounts under the groups Sales Accounts and Purchase Accounts.

Set **Use Tracking Numbers** to **No** in **F11: Features (F2: Inventory Features)**.

Go to the **Gateway of Tally > Accounting Vouchers**.

Ensure that in **F11: Features (F1: Accounting Features) Allow Invoicing** is set to **No**.

Create the following **Accounting Vouchers** with **Inventory details**.

i. Sales voucher

Select **F8: Sales** from the button bar and enter.

Field	Details
Date	1-7-2009
Ref:	Blank
Dr	Supreme Computers
Debit Amount	21,500
Cr	Computer Sales
Inventory Allocation	Name of Item - **HCL PIV** Godown - **On-site** Quantity - **1** Rate -**21,500**
Credit Amount	21500
Narration	Sales made
Accept? Yes or No	Yes

ii. Purchase voucher

p Select **F9: Purchase** from the button bar and enter:

Fields	Details
Date	1-7-2009
Ref:	Blank
Cr	Silver Plus Computers
Credit Amount	1,500
Dr	Purchases
Inventory Allocation	Name of Item - **Wireless Mouse** Godown - **On-site** Quantity - **6** Rate -**250**
Debit Amount	1,500
Narration	Purchases made
Accept? Yes or No	Yes

iii. Payment voucher

p Select **F5: Payment** from the button bar, **Petty Cash**, and enter:

Fields	Details
Date	1-7-2009
Dr	Office Costs
Debit Amount	85
Cr	Petty Cash
Credit Amount	85
Narration	Office cost paid
Accept? Yes or No	Yes

Ensure that in the **F12: Payment Configuration**, **Use Single Entry mode for Pymt/Rcpt/Contra** is set to **No.**

5.3 Invoicing

Tally.ERP 9 has an in-built system to create and print sales invoices. You will now record sales and purchase invoice details, adjust accounting and inventory balances.

To enable the option of invoicing, set **Yes** to **Allow Invoicing**, **Enter Purchases in Invoice Format** and **Separate Discount Column in invoices** in **F11: Features (Accounting Features/Inventory Features)**.

Ensure that the **Inventory values are affected?** is set to **Yes** in Purchases Ledger.

Ensure that the **Inventory values are affected?** is set to **Yes** in Parts Sales, Software Sales and Computer Sales.

Make the following entry of Sales in Voucher Mode.

Go to the **Gateway of Tally > Accounting Vouchers > F8: Sales**.

Ensure the button above the **Post-Dated** option reads **As Invoice**. This button enables you to toggle between the voucher and invoice format for data entry. The button visible is the format **NOT** in use.

Enter the following data as on **1-7-2009** to record the sale of 2 Nos of USB Pen Drives 64 MB to Supreme Computers. (at the standard price) and update the accounting and stock records:

Field	Details
Ref:	
Dr	Supreme Computers.
Debit Amount	3,200
Cr	Component Sales
Name of item	USB Pen Drives 64 MB
Godown	On-site
Quantity	2 Nos

Rate	1,600 (accept)
Per	Nos (accept)
Amount	3,200.00
Narration	◆
Accept? Yes or No	Yes

Make the following entry of Sales in Invoice Mode:

1. **Date**: **2-7-2009**.
2. **Voucher Type**: **Sales**
3. Click on the Toggle Button **As Invoice** (so it reads **As Voucher**)
4. Click on the Toggle Button **Item invoice** (so it reads **Acct Invoice**)
5. Enter the following to record the sale of two nos of USB Pen Drives 64 MB to Supreme Comput◆ers. (at the standard price) and update the accounting and stock records:

Fields	Details
Ref:	
Party◆s A/c Name	Supreme Computers.
Despatch Details	Accept the default
Address	Ctrl+A to accept all
Name of item	USB Pen Drives 64 MB
In Item Allocation for: USB Pen Drives 64 MB Screen	
Godown	On-site
Quantity	2 Nos
Rate	1,600 (accept)
Per	Nos (accept)
Discount	10%
Amount	2,880.00 (accept ◆ then keep pressing **Enter** until the accounting details screen appears)
Particulars (Accounting allocation sub-form)	Component Sales
Amount	2,880.00 (accept)
Narration	◆
Accept? Yes or No	Yes

5.3.1 Item Invoice and Account Invoice

Tally.ERP 9 gives you an option called **Account Invoice** where you can select the ledgers instead of the stock items. An **Item Invoice** on the other hand, allows you to select stock items instead of ledgers.

Businesses that require an invoice raised with the item details, can select the Item Invoice option. Businesses that want to raise invoices for services rendered, can do so by selecting the Account Invoice.

At this point, it is understood that you already know how to enter an Item Invoice, by selecting items and entering their quantity, rate, discount, etc.

5.3.2 Walk-through to create an Item Invoice

1. Ensure that you are at the **Gateway of Tally** of **Indus Enterprises.**
2. Ensure **Allow Invoicing** option in **F11: Features (F1: Acounting Features)** is set to **Yes**.
3. Go to the **Gateway of Tally > Accounting Vouchers > F8: Sales**.
4. The invoice screen must display the columns - **Name of Item, Quantity, Rate, per, Amount**, etc.
5. **Party's A/c Name**: **Customer One** (create one, if it is not displayed in the list of ledgers).
6. Press **Enter** till you reach the Name of Item field and press the spacebar to view the List of Stock Items.
7. The different stock items with their balances are displayed as follows:.

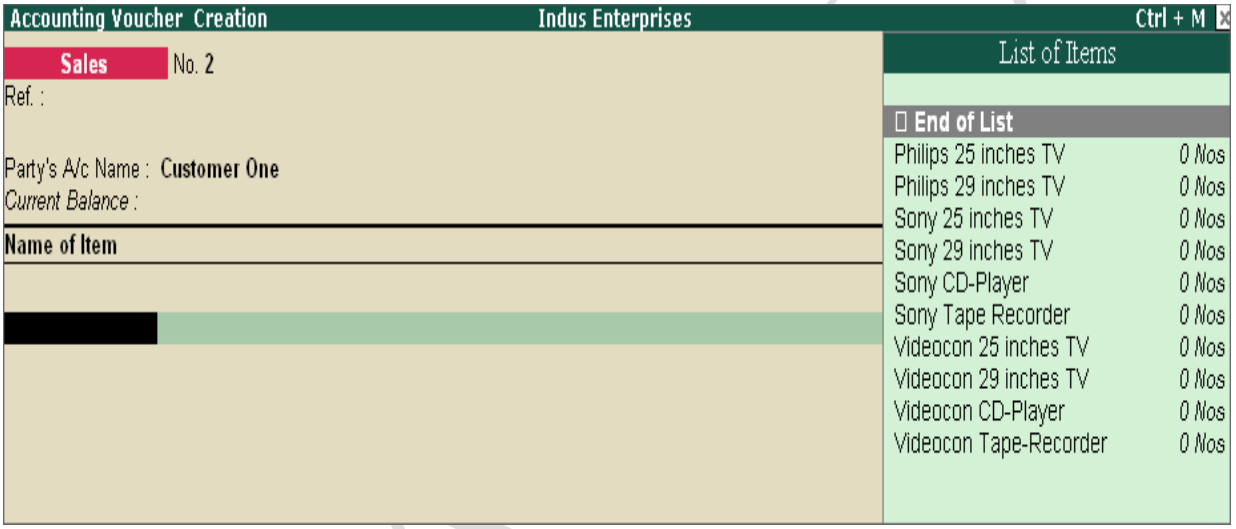


Figure 5.17 Sales Voucher In Item Invoice Mode

You already know how to enter an item invoice. Now, let us go to the **Gateway of Tally** to learn how Account Invoices are entered.

5.3.3 Walk-through to create an Account Invoice

Go to the **Gateway of Tally > Accounting Vouchers > F8: Sales**.

1. The invoice screen must display the following columns: **Name of Item, Quantity, Rate, per and Amount**.
2. Click on the **Acct Invoice** button. You will notice that Tally.ERP 9 now displays the columns as **Particulars, Rate, per and Amount**.
3. Select the **Party's A/c Name** as **Customer One**.
4. Press **Enter** till you reach the **Particulars** field. Press the Space Bar and Tally.ERP 9 displays the List of Ledgers.

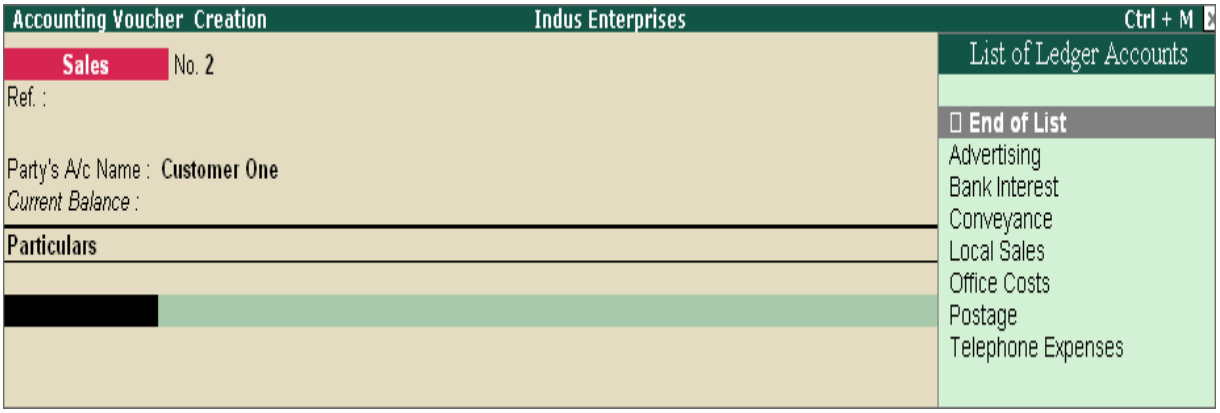


Figure 5.18 Sales Voucher In Accounting Invoice Mode

5. Select the **Consulting Fees** (create one if it is not displayed under Direct Income).
6. Specify the amount as **Rs. 45000** and press **Enter**.