Advanced Operating System

Unit – V

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MOBILE OPERATING SYSTEMS

OVERVIEW

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OPERATING SYSTEM

- It is an interface between computer hardware and the user.

- An **operating system** is a software which performs all the basic tasks like file management, memory management, process management, handling input and output, and controlling peripheral devices such as disk drives and printers.

When computer is on, OS is loaded first in memory

COMMON OS

- Network Operating System
    - UNIX / Linux / MS Windows2000 Server

- Desktop Operating System
    - MS Windows 9X/Me / Mac OS / DOS

- Mobile Operating System
    - Palm OS and Pocket PC

MOBILE OPERATING SYSTEM

- An operating system that control mobile devices is called Mobile OS.
- A mobile operating system (mobile OS) is an OS built exclusively for a mobile device, such as a
  - Smartphone,
  - Personal digital assistant (PDA),
  - Tablet or other embedded mobile OS.
- Popular mobile operating systems are
  - Android,
  - Symbian,
  - iOS,
  - BlackBerry OS and
  - Windows Mobile

A mobile OS is responsible for identifying and defining mobile device features and functions, including keypads, application synchronization , email, thumbwheel and text messaging

- A mobile OS is similar to a standard OS (like Windows, Linux, and Mac) but is relatively simple and light.
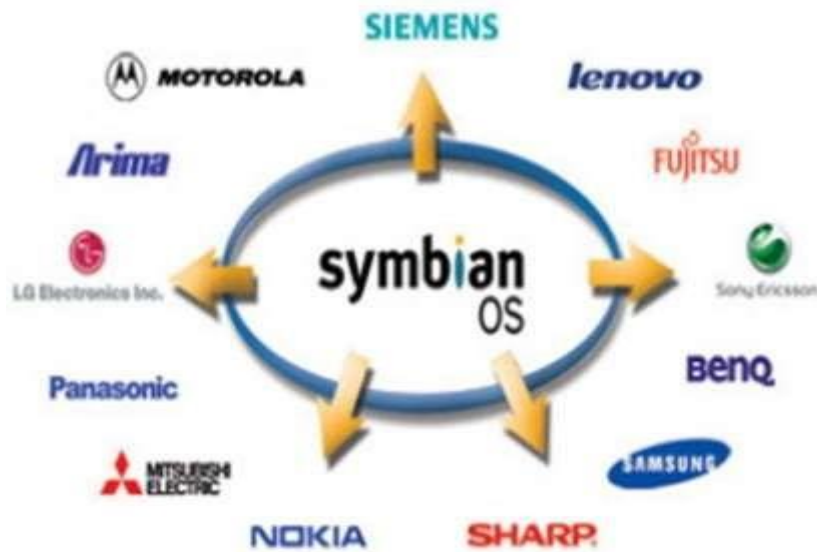- A mobile OS manages mobile multimedia functions, mobile and Internet connectivity.

Smart Phones and OS are:

- Small and handy
- Multiple, frequent and continuous connectivity
- Product and diversity
- Open platform
- Limited memory

SYMBIAN OS

- Symbian OS is a mobile operating system, developed by Symbian Ltd, in 1998.

- Initially not open source

- It is a mobile operating system (OS) and designed for Smartphone's

- It runs exclusively on ARM processors.

- In June 2008, **Nokia** announced the acquisition of Symbian Ltd.

- Symbian was absorbed by Accenture, which is supposed to maintain it until 2016.

- It was the most popular smartphone OS across the world till the end of 2010, untill Android and iphone emerged, although in some developing nations, Symbian is still the biggest.

- The **current form of Symbian is an open-source** platform developed by Symbian Foundation in 2009.

- Symbian OS is programmed in C++.

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Licensees of Symbian's operating system were

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WINDOW MOBILE

- Nokia abandoned the Symbian OS in favor of Windows Phone OS for its mobile devices, shipping its last Symbian handset in 2013

- Windows is developed by Microsoft

- The most dominant Operating system for Smart Phones in earlier time.

In 2011 Windows holds only 5% share of the World Wide Smart Phone market

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ANDROID

- Android initially founded in October 2003

- Acquired by Google in August 2005

- It was Google which developed and marketed the platform to handset makers

- Android tested its beta version first and released the first version 1.0 for HTC G1 phone in Sep 2008

- Android is an **open source** operating system which allows developers to access unlocked hardware and develop new programs as they wish.

- Android is currently the fastest growing smartphone operating system in the market.

- The Android Market, which is the Android equivalent of the Apple App Store is home to more than 370,000 apps, many of which are completely free

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Android Versions - Latest Android 10.0

iOS

- It has been developed by Apple for its Smart Phone Brand IPHONE
- It has grown to be the most popular and powerful operating system
- Many apple devices such as iPhone, iPad and iPod are powered by this OS.
- The Apple iOS is not allowed to be used in third party systems, so we will only be able to use it on products made by Apple.
- It comes with the Safari web browser for internet use, an iPod application for playing music and Apple's Mail for managing memos.
- According to apple according to some researchers iOS is packed with tons OS security features.
- Apple holds a share of about 26% in the Smart phone arena

  Its latest version is IOS 13 launched in 2019

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BLACKBERRY OS

- Developed by Research In Motion(RIM) for Black Berry Phones

- This OS is used only for the Black Berry mobiles

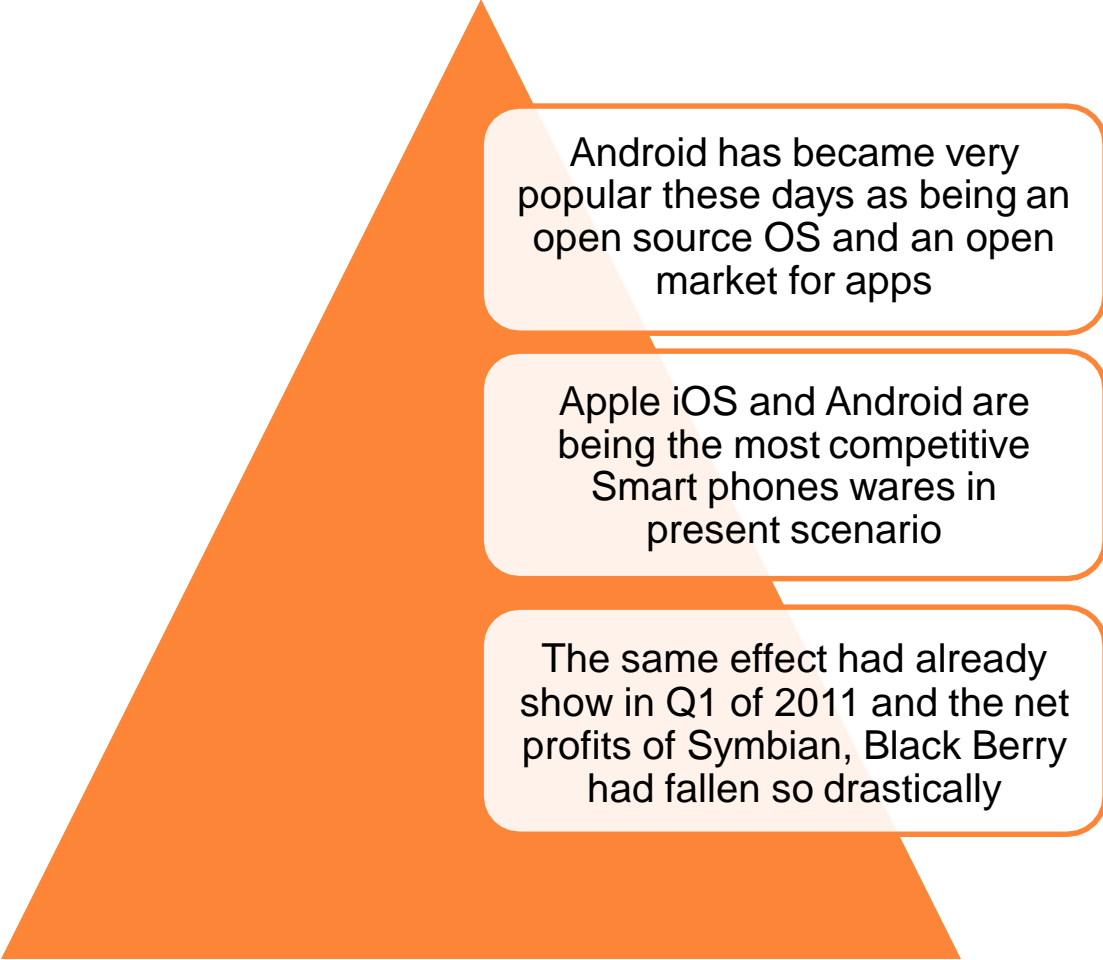- It has got limited number of applications being developed on its own platform

PALM WEB OS

- **Founded in 1991**
  - Own operating system (Palm OS)
  - Has been very popular
  - On the decline in the last few years
  - Palm even released some Windows Mobile devices
- **webOS**
  - Built on web technology
  - Application development with HTML, JavaScript, CSS
  - Mojo: JavaScript framework, access to UI, APIs and services
  - Multitasking support

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- Palm OS is an embedded operating system designed for ease of use with a touchscreen-based graphical user interface.

- It has been implemented on a wide variety of mobile devices such as smart phones, GPS devices.

- It is run on ARM architecture-based processors. It is designed as a 32-bit architecture.

Conclusion- market

Android has became very popular these days as being an open source OS and an open market for apps

Apple iOS and Android are being the most competitive Smart phones wares in present scenario

The same effect had already show in Q1 of 2011 and the net profits of Symbian, Black Berry had fallen so drastically

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FIREFOX OS

Firefox OS is a **Linux-based open source** operating system for smartphones and tablet computers being developed by Mozilla.

- Programmed in HTML5, C++, JavaScript and CSS.

- Released 2013

- Firefox have also announced Electronics, LG, ZTE, Huawei and Corporation have to TC Firefox OS somewhere devices L ma Mozilla with Firefox OS announces the end of this OS in 2016.

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Ubuntu Touch

Ubuntu Touch developed OS by Canonical Ltd.

release handsets

Ubuntu Touch devices can be equipped with a full Ubuntu session and may change into a full desktop operating system when plugged into a docking station.

Tizen OS

Tizen is an operating system for devices including smartphones, tablets, in-vehicle infotainment (IVI) devices, and smart TVs.

It is an open source system that aims to offer a consistent user experience across devices.

The Tizen project resides within the Linux Foundation and is governed by a Technical Steering Group (TSG) composed of Intel and Samsung.

Tizen provides an environment for application developers based on the JavaScript libraries JQuery and JQuery Mobile.