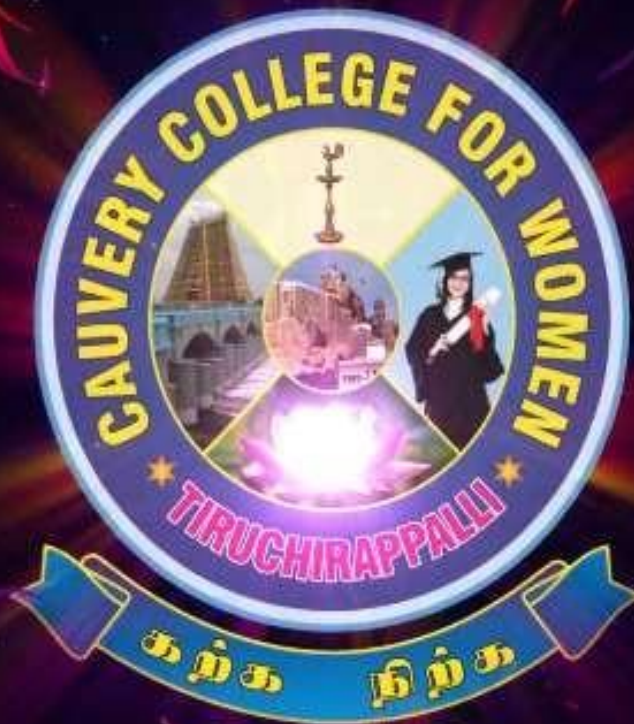# CAUVERY COLLEGE FOR WOMEN (AUTONOMOUS)
Nationally Accredited (III Cycle) with 'A' Grade by NAAC
Annamalai Nagar, Tiruchirappalli-18.

Name of the Faculty : V.Yasodha

Designamtion   : Assistant Professor

Department   : Computer Applications

Contact Number   :9789164179

 Programme   : II Maths

Batch   :2016-2017 onwords

Semester   IV

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Topics Covered   :VIRTUAL REALITY

Virtual Reality(VR)

II MATHS - Principals Of Information Technology

Semester 4- year 2020

BY

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Overview

➢ **Introduction**

➢ **History Of Virtual Reality**

➢ **Present Uses Of Virtual Reality**

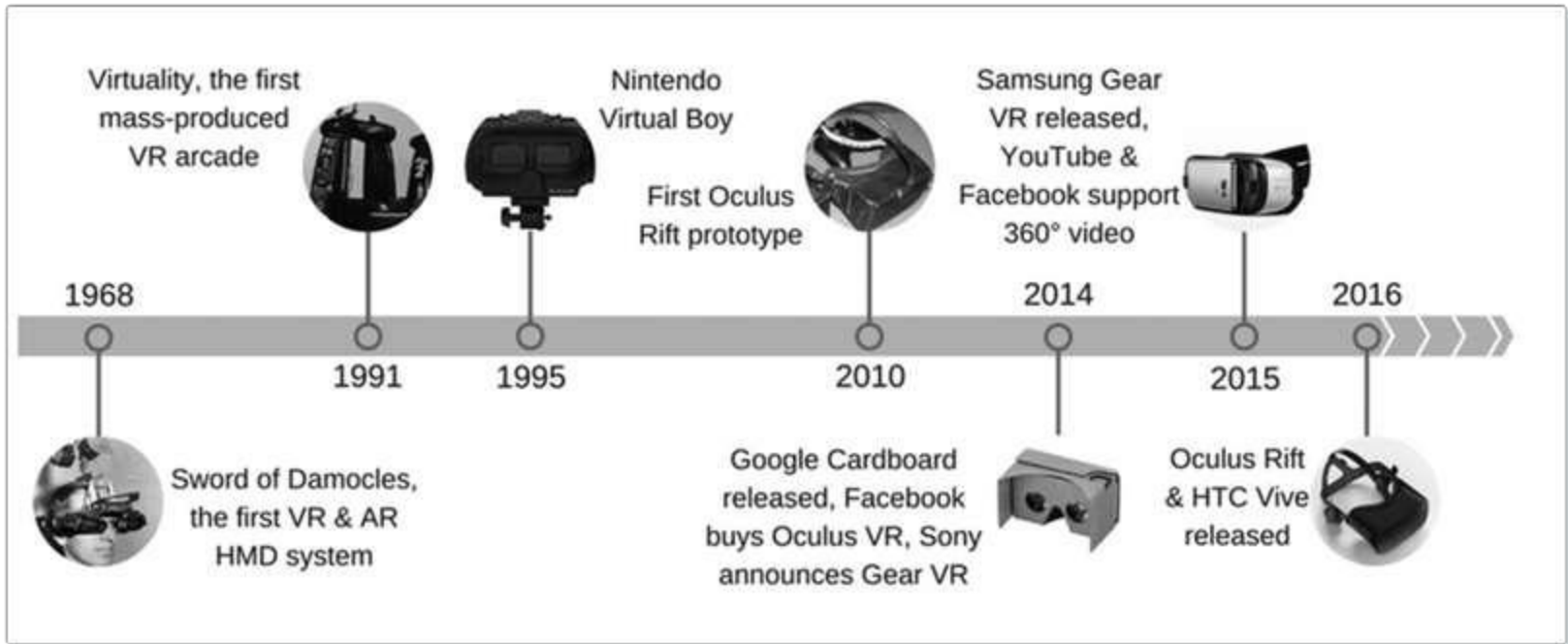➢ **What Does The Future Hold For VR**

Introduction

➢ Virtual reality(VR) - Unreal reality

➢ Perceived as real but diagnose it as being unreal.

➢ The image perceived by the term VR is both more or less in it simplest form.

Brief history of VR

➤ In 1930's the very first flight simulator was built VR.

➤ Then it can be traced back by cotton and oliver in 1993.

➤ This simulator possessed the "Bare minimum of audio and visual cues" was said to be the start of the development of VR.

➤ Then become more complex and demanding to complete the specific needs of different airlines.

➤ It was influenced by film techniques during early 1950's,

➤ The film techniques are:

- Stereoscopic or 3-D cinema and

- Several wide – screen systems

➢ The first head mounted display was produced by ivan sutherland in 1966.

➢ In 1970's simple computer based flight simulators were being used and they were continued through the 1980's and 1990's

➢ Overtaken by the emergence of VR video games into the entertainment market,both in amusement arcades and at home on video games consoles.

Virtuality, the first mass-produced VR arcade

Nintendo Virtual Boy

First Oculus Rift prototype

Samsung Gear VR released, YouTube & Facebook support 360° video

1968

1991

1995

2010

2014

2015

2016

Sword of Damocles, the first VR & AR HMD system

Google Cardboard released, Facebook buys Oculus VR, Sony announces Gear VR

Oculus Rift & HTC Vive released

A walk through VR history

1516
'Sala delle Prospettive'
created by
Baldassare Tommaso Peruzzi
Villa Farnesina in Rome

1960
Morton Heilig
creates 'Sensorama'
a multi-sensory
simulator

1968
"The Sword
of Damocles"
created by
Ivan Sutherland
first AR HMD system

1978
Andy Lippman's team at MIT
create the Aspen Movie Map

1982
Thomas Furness develops
Visually Coupled Airborne Systems Simulator

1982
Steven
Lisberger's
TRON
is released

1984
William Gibson
publishes 'Neuromancer'

1985
Data Glove
for commercial use
developed by VPL Research Inc.

1987
"Virtual Reality"
coined by
Jaron Lanier
of VPL Research Inc.

1988
Eyephone HMD for
commercial use developed
by VPL Research Inc.

1988
Star Trek: The Next Generation
introduces "the holodeck"

1992
Brett Leonard's
The Lawnmower Man

1993
Sega announce
Sega VR prototype
for Mega Drive console

1995
CAVE
Automatic
Virtual
Environment

1999
The Wachowski Brothers'
The Matrix
is released

2003
Linden Labs
releases
Second Life

2007
Google introduces
Street View

2013
Nintendo files
patent for VR
3D technology

2014
Google invest
US$500 million
into Magic Leap

magic leap

2014
Facebook buy
Oculus VR
for US$2 billion
from Palmer Luckey

2015...
To Infinity
& Beyond

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Present uses of VR

➢ VR primarily used as a visualisation tool.

➢ Variety of applications is limited only by imagination.

➢ VR as a means of sampling or developing situations devices and techniques for use in the real world.

➢ VR is going to be used increasingly in schools, we are showing that we can use it in order to help children as well as entertain them.

➢ Games market, VR appears to be forming a stronghold in the advent of video and PC games.

➢ Examples,

- Doom and its sequels,

- Resident EVIL and formula one.

➢ Manufacturers are using VR in designing furniture units for customers, to view how kitchen units or furniture suites will look in a designed setting

➢ The same can be applied to :

- Civil Engineering,

- Architectural and

- Interior Design.

➢ The evolution of creating an environment, in real life situations can be recreated, altered and simulated in order for aircraft pilots or fighter pilots scenarios appears to be of invaluable.

Benefits :

➢ Vast amount of knowledgeable experience gained by the pilots and cockpit groups.

➢ It ensuring the safety of thousands of lives that could be in safer if such a situation occurred which the pilots are not familiar with.

➢ The graphics designers also "cashing in" on the VR phenomenon.

➢ Car designers have been using VR Techniques in designing, modifying and creating cars from 3D perspectives.

➢ Manufacturers are also performing virtual tests on cars.

➢ **Other fields:**

- Surgeons

- Weather forecasting

The Future Hold For VR

➢ Virtual Reality Modeling Language (VRML)

- It allows 3D information to be put on the WWW.

- It enhance the image of the internet and enabling users to walk through a virtual web site.

➢ In Business

- Business will profit from the scope of VR in terms of development and training for staff, business ventures and proposal presentations.

- The company bosses and executives will be able to have meeting with one another in virtual boardrooms.

- Advantages: Less time and money being spent travelling around any part of the world.

- ➢ In Education
  - • Stimulate the interest of the students studying the subjects taught using VR technology.
  - • Example:
    - ❖ Allowing students to create 3D biological or molecular patterns.
    - ❖ Allowing explore virtual solar systems to study the ecology of star system.
  - • Disadvantages
    - ❖ The cost of obtaining the specific VR equipment and the required VR software to run such procedures.
- ➢ In Entertainment Industry
  - • Games Market:
    - ❖ Development of VR type video games.
    - ❖ It giving more realistic sensations of actually being in the game.
    - ❖ It will be connect to every home and offering live interaction through games

- ➢ In Medical Field
  - • Medical research can benefit from further development of VR to
    - ❖ Educate
    - ❖ Learn
    - ❖ Prototype
    - ❖ Test
    - ❖ Evaluate new treatments or
    - ❖ Analyze new diseases and conditions
    - ❖ The expansion of more surgical simulators could provide better resolution graphics, realistic reactions to situation.
- ➢ Disadvantages
  - • Expensive
  - • Situation based (Designed for set purposes)