Faculty of engineering - Shoubra
Benha University

Research Project

in fulfillment of the requirements of

Department	**Engineering Mathematics and Physics**
Division	**----------**
Academic Year	**2019-2020 Preparatory**
Course name	**Computer**
Course code	**ECE001**

Title: -

Operating Systems

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Topic: Operating Systems

Github-Link: https://github.com/engmostafa/HTML-PROJECT-REPOSITORY

Github page-Link: https://engmostafa.github.io/HTML-PROJECT-REPOSITORY/

Operating Systems:

An operating system is a program that interfaces the end-user with computer hardware . The kernel is the central component of computer operating systems. The kernel is only responsible for maintaining the software / hardware communication. Two most popular kernels are Monolithic and Micro Kernels. Process, Device, File, I/O, Secondary-Storage, Memory management are various functions of an Operating Systems. Batch, Multitasking/Time Sharing, Multiprocessing, Real Time, Distributed, Network, Mobile are various types of Operating Systems. Operating systems aim mainly at implementing and facilitating user programs. In addition to the hardware framework, different programming systems are used for this function. An OS is a program that manages and controls a complete set of applications.

Operating systems provide a platform for other programs that are called applications. These apps help users easily accomplish a particular task. This acts as a computer-user interface. It is designed so that various applications are operated, controlled and executed on the computer. One of the tasks of operating systems:

It is used to transfer programs from / to memory. It allows the user to save files to the backup store. It provides the interface between the user and the computer, for instance, Windows Vista and Apple OSX. This processing time is organized by programs.

An OS operates on the same principles on a larger machine like a mainframe.

screenshots :

Operating Systems main page

links:

- main page
- introduction
- types
- examples
- tables

Defenition of operating systems :

An Operating system (OS) is a software which acts as an interface between the end user and computer hardware. Every computer must have at least one OS to run other programs. An application like Chrome, MS Word, Games, etc needs some environment in which it will run and perform its task. The OS helps you to communicate with the computer without knowing how to speak the computer's language. It is not possible for the user to use any computer or mobile device without having an operating system.

Operating Systems introduction

links:

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History of operating systems :

Operating systems were first developed in the late 1950s to manage tape storage The General Motors Research Lab implemented the first OS in the early 1950s for their IBM 701 In the mid-1960s, operating systems started to use disks In the late 1960s, the first version of the Unix OS was developed The first OS built by Microsoft was DOS. It was built in 1981 by purchasing the 86-DOS software from a Seattle company The present-day popular OS Windows first came to existence in 1985 when a GUI was created and paired with MS-DOS..

Features of Operating System :

Here is a list commonly found important features of an Operating System:

- Protected and supervisor mode

- Allows disk access and file systems Device drivers Networking Security

- Program Execution

- Memory management Virtual Memory Multitasking

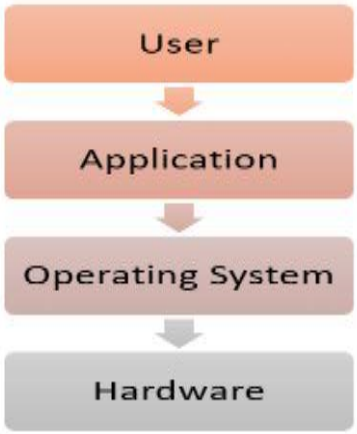
- Handling I/O operations

- Manipulation of the file system

- Error Detection and handling

- Resource allocation

- Information and Resource Protection



Functions of an Operating System :

Types of Operating Systems

links:

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Types of Operating system: -

1-Batch Operating System

Some computer processes are very lengthy and time-consuming. To speed the same process, a job with a similar type of needs are batched together and run as a group. The user of a batch operating system never directly interacts with the computer. In this type of OS, every user prepares his or her job on an offline device like a punch card and submit it to the computer operator

2-Multi-Tasking/Time-sharing Operating systems

Time-sharing operating system enables people located at a different terminal(shell) to use a single computer system at the same time. The processor time (CPU) which is shared among multiple users is termed as time sharing.

3-Real time OS

A real time operating system time interval to process and respond to inputs is very small. Examples: Military Software Systems, Space Software Systems.

4-Distributed Operating System

Distributed systems use many processors located in different machines to provide very fast computation to its users.

5-Network Operating System

Network Operating System runs on a server. It provides the capability to serve to manage data, user, groups, security, application, and other networking functions.

6-Mobile OS

Mobile operating systems are those OS which is especially that are designed to power smartphones, tablets, and wearables devices.

Exambles of Operating Systems with marketshare

links:

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- exambles
- tables

Here is a list of Operating Systems with the latest MarketShare:

Windows

Android

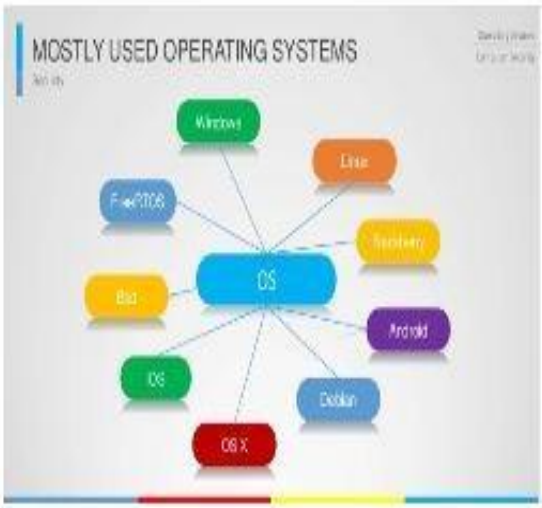
iOS

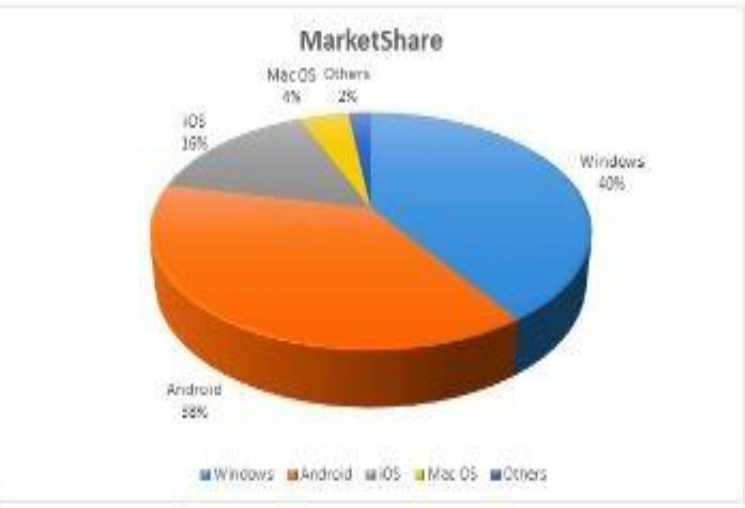
Mac OS

Linux

Chrome OS

Windows Phone OS





tables of Operating Systems with market share

links:

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- types
- exambles
- tables

Exambles of Operating Systems with market share:

Os Name	Share
Windows	40.34 %
Android	37.95 %
iOS	15.44 %
Mac Os	4.34 %
Linux	0.95 %
Chrome Os	0.14%
Windows phone Os	0.06 %

Source Code :

```
<html>
<head>
  <title>operating systems</title>
</head>
<body>
 <h1>Operating Systems main page</h1>
 <h2> links:</h2>
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 <li><a href="index.html">main page</a></li>
 <li><a href="introduction.html">introduction</a></li>
 <li><a href="types.html">types</a></li>
 <li><a href="exambles.html">exambles</a></li>
 <li><a href="tables.html">tables</a></li>
 </ul>

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<img src="a.png" alt="charts" style="width:450px;height:200px;">

 </body>
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References

1) **www.ekb.com**

2) **www.google.com**

3) ***"Desktop Operating System Market Share Worldwide | Stat Counter Global Stats"*. Stat Counter Global Stats. *Retrieved 18 December 2017*.**

4) ***Gagne, Silberschatz Galvin (2012). Operating Systems Concepts. New York: Wiley. p. 716***

5) **Brinch Hansen, Per (2000). Classic Operating Systems: From Batch Processing to Distributed Systems. Springer-Verlag**

6) **Top 5 Operating Systems from January to April 2011". StatCounter. October 2009. Archived from the original on 26 May 2012. Retrieved 5 November 2009.**