

## Introduction to the Computer & Internet

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### Lecture 3

#### Contents

- Computer software
- Types of operating systems
- Types of application systems
- Programming languages
- Software development

#### Computers Software Component and the Development of Systems and Software

Software components are the second part of the computers components, it is the method of communication between the users and the computer.

Software are programs that tell the computer what to do.

**Software Type:**

**Operating Systems:**

It is the main software in any computer, it is divided into two types according to the user interface:-

- GUI (Graphical User Interface – e.g. XP),
- CLI (Command Line Interface – e.g. MS-DOS or UNIX).

**The operating system is considered as a connection point or mediator between the hardware, software & the user.**

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**Software Type:**

**Operating Systems:**

It tells the computer how to work or operate.

The operating system also allows you to load other programs that do specialized tasks on to your computer.

Example operating systems include, Windows XP, Vista, Windows 7, MAC OSX etc...

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**The operating system's tasks**, in the most general sense:-

1. Execute the internal command stored in ROM (bios) and display the information about the hardware when you turn on the computer.
2. Test the input and output devices which are connected to the computer to verify their workability

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### The operating system's tasks (cont)

3. Show the GUI after booting the system.
4. Full readiness to receive entered commands and then make processing operation to present the outputs to the user.
5. Discover any errors in the input and output units and display it to user.

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### The common types of operating systems are:-

(Windows – Linux – Unix – Mac OS X - DOS )




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### Utility Program/System Tools

System programs: are set of software which are used to help the system in performing and completing some task for instance :

- Examining the drivers and fixing their defects.
- Controlling the folders and files, or displaying specific types of files
- Monitoring the processor and memory performance.
- Protecting data.

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## Programming languages

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## Applications

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**Applications Quiz – What are these logos?**

The slide contains five application logos arranged in two rows. The top row includes Figma (red square with white 'f'), Microsoft Excel (green square with white 'X'), and Mozilla Firefox (orange globe). The bottom row includes Microsoft Word (blue square with white 'W') and Adobe Photoshop (dark blue square with white 'Ps').

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**Software Development**

Any program's evaluated edition is called a 'version'.

We use numbers and names to refer to these versions

Examples include Windows 3.1, Windows 7, Mac OS X etc

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**Development Stages:**

**1- System Analysis:**

It defines the software's objectives and requirements , the scope of the problem, gathering data, analyzing the data, writing a report and determining whether a new or an advanced information system is a feasible solution.

The responsible person at this stage is called "the system analyzer".

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### Development Stages:

#### 2- System Design

Draw plans on how this system can be implemented on a real computer-based system.

Define the requirements for output & input & storage & process.

The responsible person at this stage is called a "system designer".

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### Development Stages:

#### 3- Programming / implementation:

The programmers will take the specification from the system's analyst and then convert the designs into actual computer programs.

Uses the post implementation review process to monitor, evaluate and modify the system as needed.

Then the program becomes ready to be used.

It will be updated depending on user reports of errors and issues.

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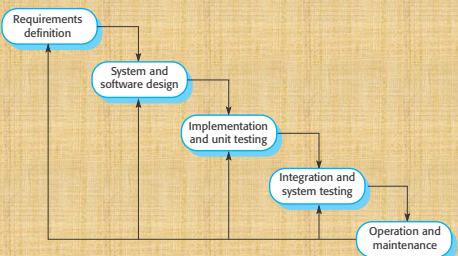


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### The waterfall model




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### Quiz

- What is software?
- What is an operating system?
- Name three types of OS....
- What are application programs?
- Name three types of applications...
- How is software developed?

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