



**Department of Computer Science and Engineering
PES University, Bangalore, India**

Lecture Notes Python for Computational Problem Solving UE23CS151A

Lecture #5

Digital Computer – Computer Software: Operating System

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Software Components:

Computer software is a set of program instructions, including related data and documentation, that can be executed by computer. The software component is the set of instructions that makes the computer work. Held either on your computer's hard disk, CD-ROM or DVD. Loaded (i.e. copied) from the disk into the computer's RAM (Random Access Memory), as and when required.

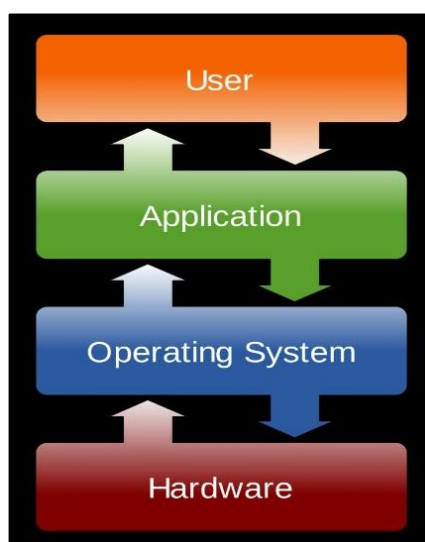
Types of Software Components are as below:

- **System software:** Intrinsic to the System

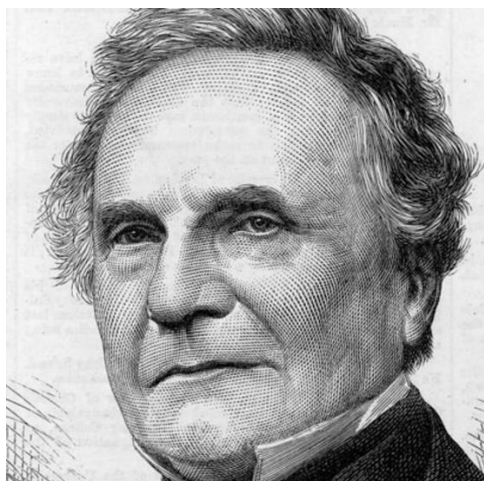
Operating System – software that manages and interacts with the hardware resources of a computer. It is a set of encoded information or computer instructions. It does the job of recognizing the input from the keyboard and mouse and displaying the output on the screen. Keeps track of files and directories on the disk and controls peripheral devices

- **Application software:** A specific purpose software which is used by user for performing specific task.

Examples - Cyberghost, Antivirus, Folderlock, Flash player, Browsers, Photoshop, 7zip, notepad++



The first computer programs ever written were for a mechanical computer designed by **Charles Babbage (The Father of Computer)** in the mid-1800s. **Ada Lovelace** was the person who wrote these programs. she is referred to as “the **first computer programmer.**”



Differences between System Software and Application Software are listed below.

System Software	Application Software
Used for operating computer hardware.	Used by user to perform specific task.
Installed on the computer when operating system is installed	Installed according to user's requirements.
User does not interact with system software because it works in the background.	User interacts with application softwares.
Can run independently. It provides platform for running application softwares.	Can't run independently. They can't run without the presence of system software.
Examples: compiler, assembler, debugger, driver, etc.	Examples: word processor, web browser, media player, etc.

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