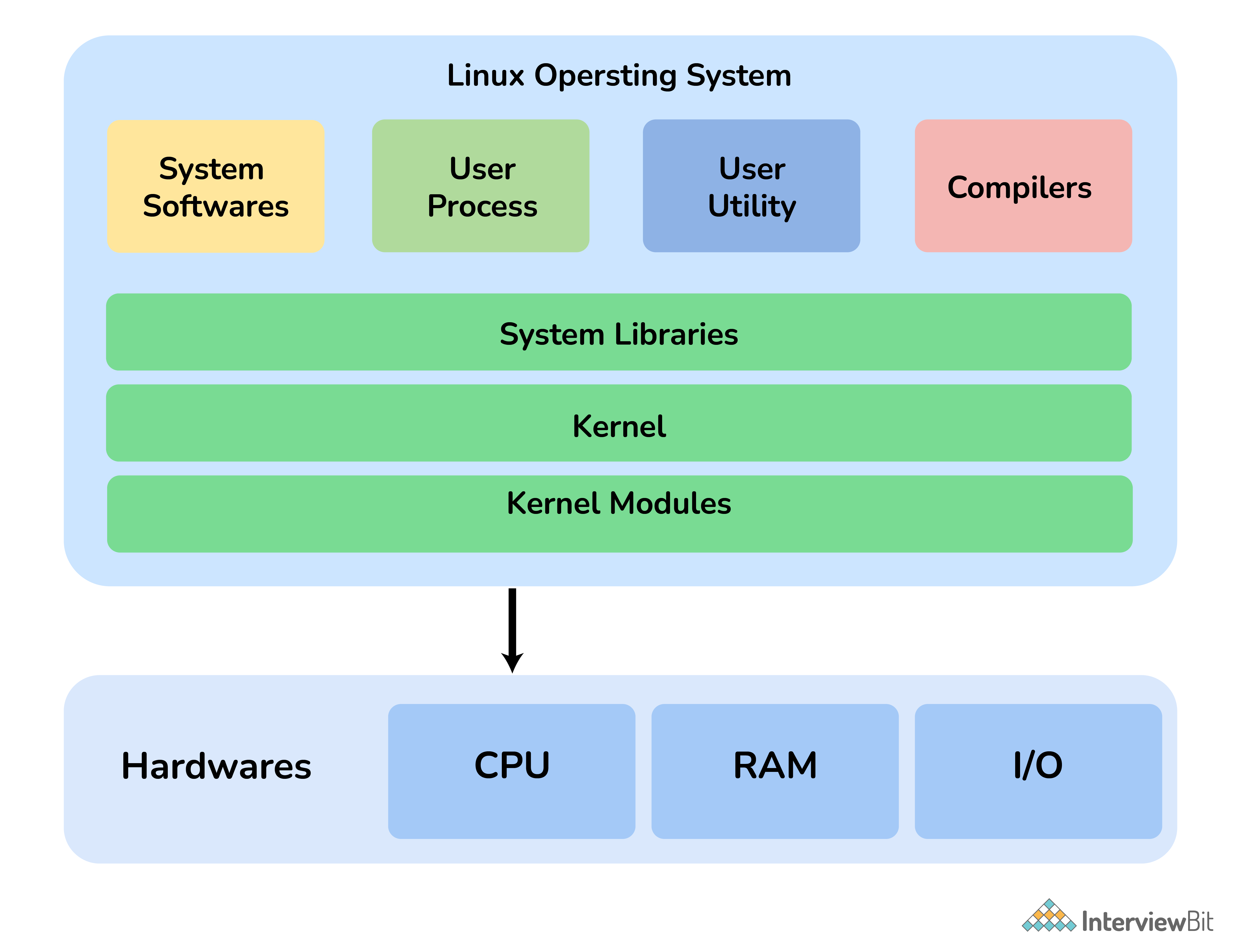
**What do you mean by Linux? Explain its features.**

Linux is a Unix-like open-source computer [operating system](https://www.interviewbit.com/operating-system-interview-questions/) (OS) that directly manages hardware and resources of a system such as CPU, memory, and storage, and manages the communication between software and hardware. It was first released on 5 October 1991 by Linus Torvalds for computers and is considered more secure and faster than Windows. It is freely distributable and is generally built around Linux Kernel (low-level system software that is used to manage hardware resources for users). Furthermore, it can be installed in mobiles, laptops, computers, notebooks, etc. Flavors of Linux OS include Ubuntu, Debian, SUSE Linux, Gentoo, etc.

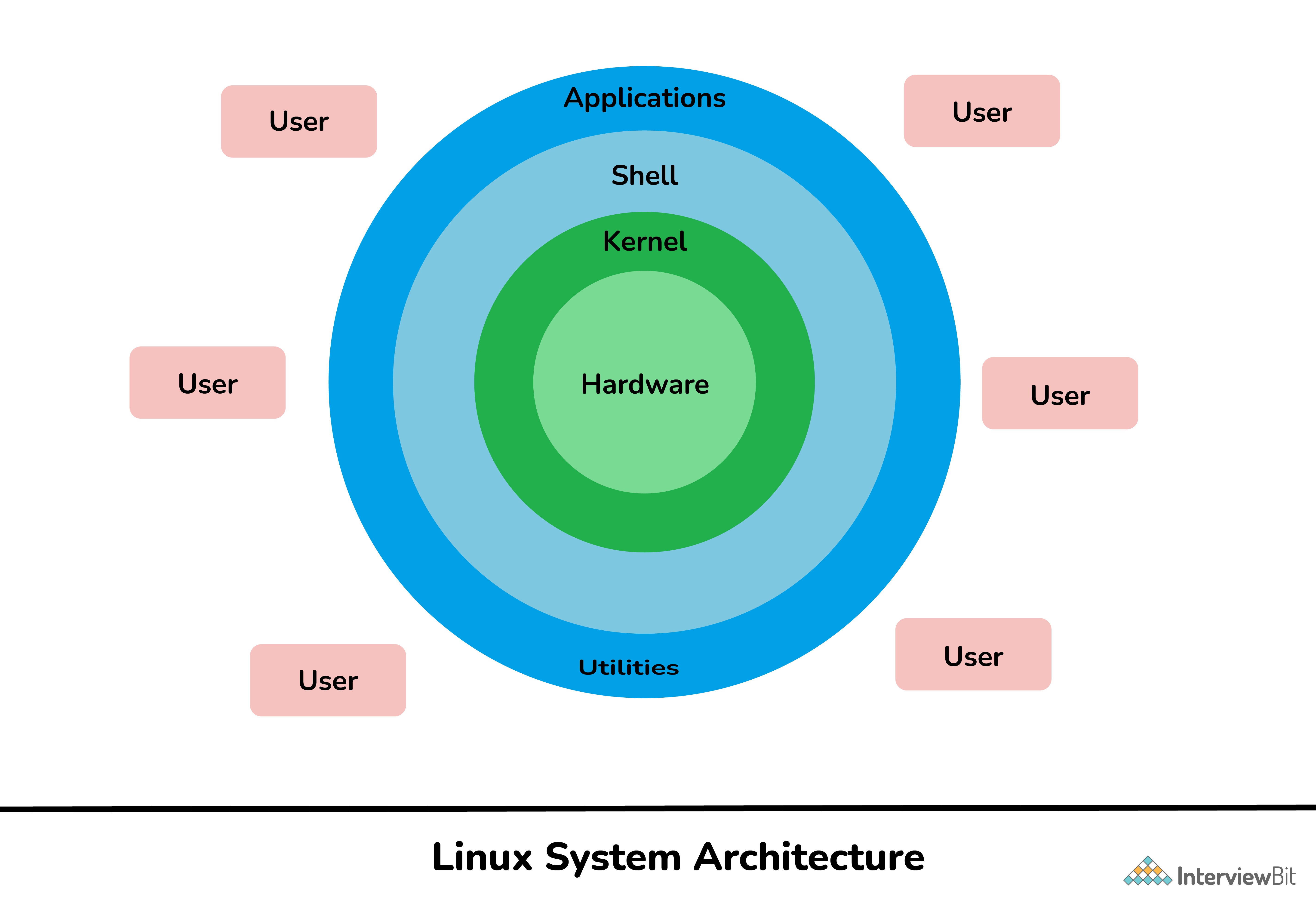


## Linux OS internals

### 1. What are basic elements or components of Linux?

Linux generally consists of five basic elements or components as given below:

* **Kernel:** It is considered a core or main part of Linux and is generally responsible for all major activities of OS such as process management, device management, etc.
* **System Library:** These are special functions or programs with the help of which application programs or system utilities can access features of the kernel without any requirement of code. It is simply used to implement the functionality of the OS.
* **System Utility:** These are utility programs that are responsible to perform specialized and individual-level tasks. They are considered more liable and allow users to manage the computer.
* **Hardware:** It is physical hardware that includes items such as a mouse, keyboard, display, CPU, etc.
* **Shell:** It is an environment in which we can run our commands, shell scripts, and programs. It is an interface between user and kernel that hides all complexities of functions of the kernel from the user. It is used to execute commands.

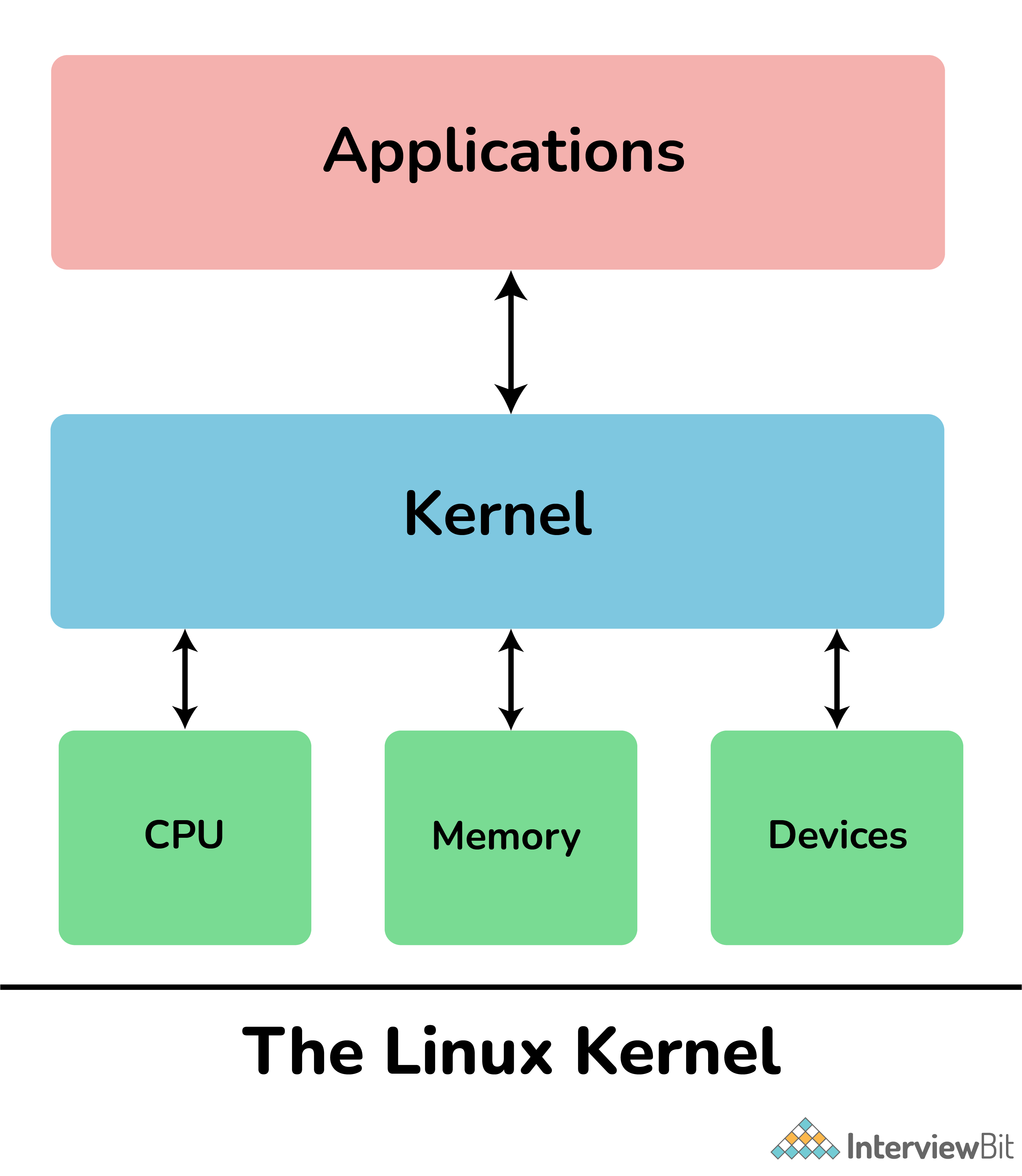


### 2. What is BASH?

BASH (Bourne Again Shell) is basically a command language interpreter. It was written by Brian Fox for GNU OS and can be used in place of Bourne Shell. It is similar to Bourne Shell but includes some additional features such as command-line editing that make it easier and more convenient to use. It is the default user shell on most Linux installations. It is basically an interpreted and non-compiled process that can also run in the terminal window. It is also capable of reading commands from shell scripts.

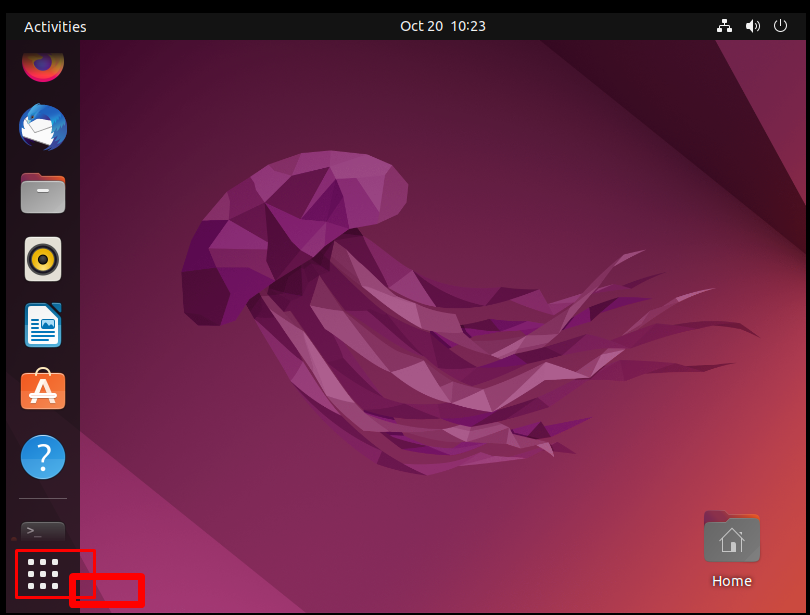
### 3. What is Kernel? Explain its functions.

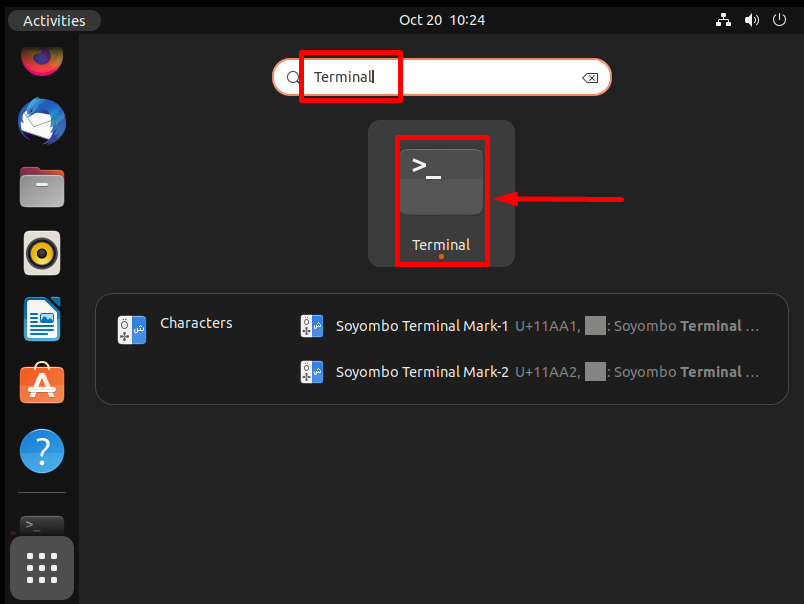
A kernel is considered the main component of Linux OS. It is simply a resource manager that acts as a bridge between hardware and software. Its main role is to manage hardware resources for users and is generally used to provide an interface for user-level interaction. A kernel is the first program that is loaded whenever a computer system starts. It is also referred to as low-level system software.

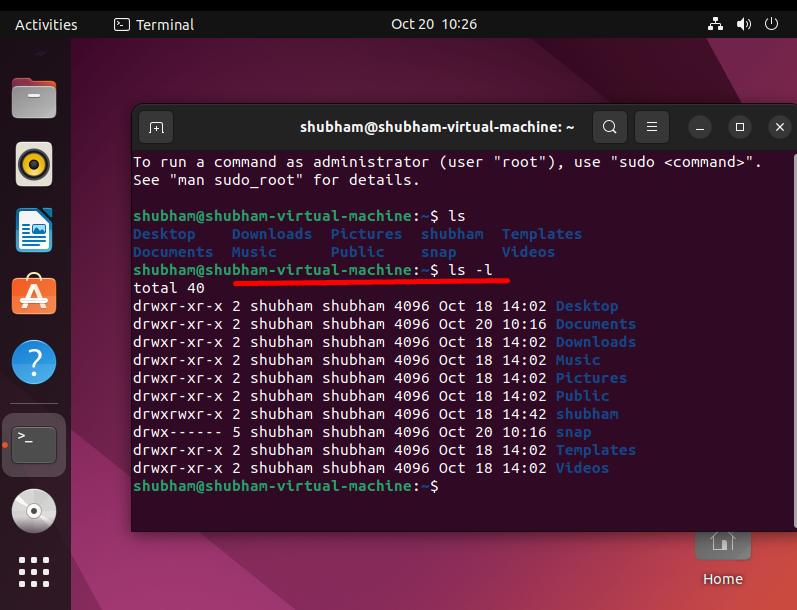


Its other main functions include:

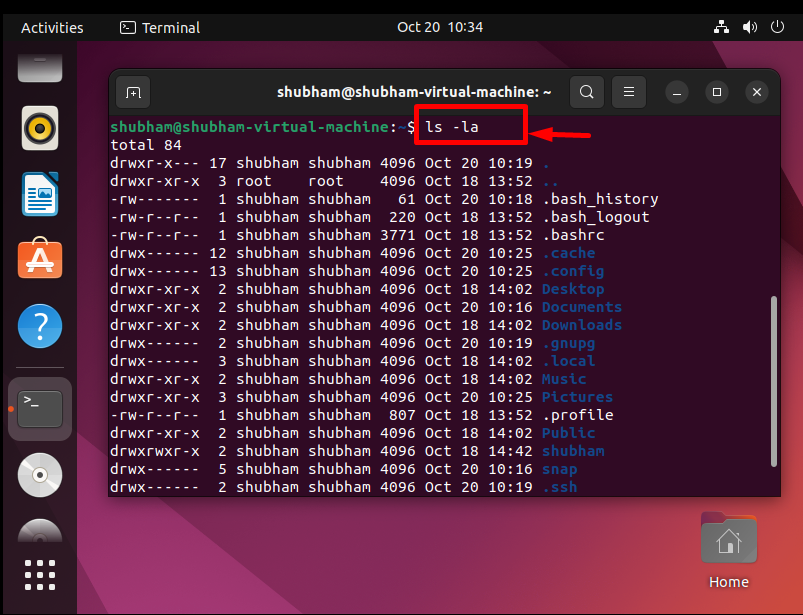
* Memory Management
* Process Management
* Device Management
* Storage Management
* Manage access, and use of various peripherals that are connected to the computer.







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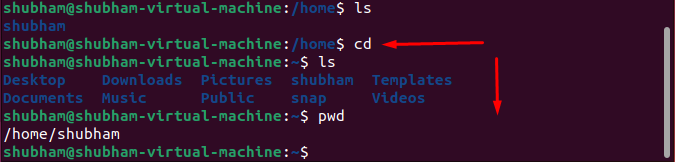
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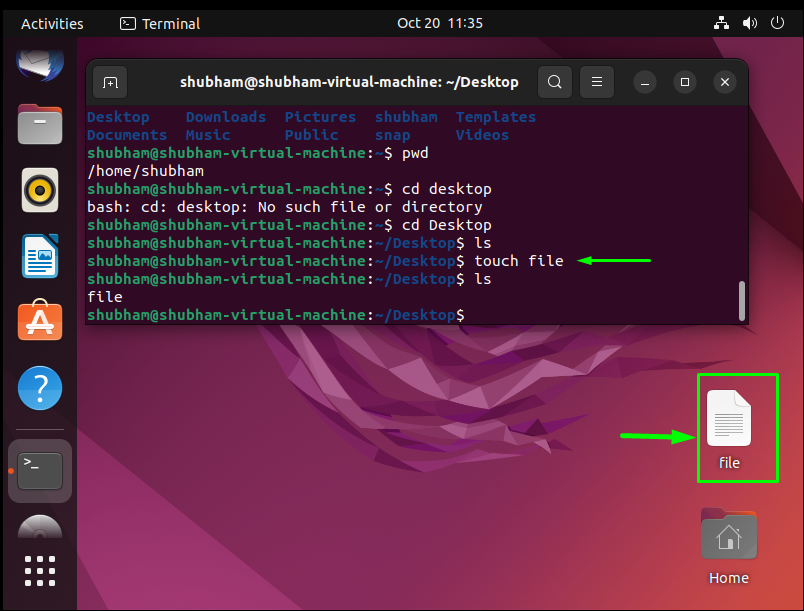
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