CLI vs GUI:

* It is required for backend programming
* CLI is diverse as compared to GUI
* System resources
* Speed
* Better control
* Security

What is an operating system?

OS is a special piece of software that abstracts (simplifies how the H/W looks like) and arbitrates (manage, oversees and controls the H/W use) the use of computer system.

Functionalities of OS:

* Resource allocation
* Maintains smooth flow of instructions
* Optimises performance
* Controls memory and CPU
* Hides software complexity
* Provides isolation and protection

Embedded systems are those that contain sandwiched layers of OS with user mode and kernel mode. Some examples are android devices and Tabs.

OS Elements:

* Abstraction (process, threads, files ..)
* Mechanisms (create, schedule, open ..)
* Policies (LRU, LFU, earliest deadline first ..)