**Assignment 2**

**1.Types design principles in OS:**

They are two types:

a. Separation of mechanism and policy by implementing flexible mechanisms to support policies.Eg: LRU,LFU,Random.

b. Optimize for common case: where will the OS used?,What will the user want to execute on that machine? What are the workload requirements?

**2. OS protection**:

1. User Level - Applications.
2. Kernel Level - OS kernel , Hardware access.

**3. Trap:**

* It gives access,but it doesn’t allow access or work on it.

**4.System Call Applications :**

* Making System call: Interaction between applications and OS is via system call.
* Writing arguments.
* Save relevant data at well defined location.

**5.System call Functioning:**

* User executes - call system call - execute system call - return from system call.

**6. OS boundaries :**

* Cache few cycles.
* Memory hundred cycle.

**7.OS services:**

* CPU scheduling the controlling access to CPU.
* Memory management.
* Process management.
* File management.
* Device management.
* Memory management.
* Storage management.

**8.Types of OS:**

* Monolithic: where the entire OS is working in kernel space and is alone in supervisor mode.
* Modular: Where some part of the system core will be located in independent files called modules that can be added to the system at run time.
* Micro Kernel: Where the kernel is broken down into separate processes known as servers.some run in Kernel space and some run in user-space.

**9.Linux OS Architecture:**

1. Linux:
   1. User apps.
   2. Standard utility programs.
   3. Standard Library.
   4. Linux OS.
   5. Hardware.