Assignment 1

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Q1

A System that Controls and coordinates use of hardware among various applications and users and is the runs other applications.

Q2

System calls provide the means for a way to user program to ask the operating system to perform tasks reserved for the operating system on the user program's behalf

Q3

The dual mode of operation provides us with the means for protecting the operating system from errant users—and errant users from one another. We accomplish this protection by designating some of the machine instructions that may cause harm as privileged instructions. The hardware allows privileged instructions to be executed only in kernel mode. If an attempt is made to execute a privileged instruction in user mode, the hardware does not execute the instruction but rather treats it as illegal and traps it to the operating system

Q4

The procedure of starting a computer by loading the kernel

is known as booting the system. On most computer systems, a small piece of code known as the bootstrap program or bootstrap loader locates the kernel, loads it into main memory, and starts its execution.

Q5

- **Pass the parameters in registers** (this may prove insufficient when there are more parameters than registers).
- **Store the parameters in a block, or table, in memory**, and pass the address of block as a parameter in a register. This approach is used by Linux and Solaris.
- **Push the parameters onto a stack**, to be popped off by the OS. Block and stack methods do not limit the number or length of parameters passed.