

CS2211 2023

Assignment number: 1

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1.a

The operating system operates directly on the computer's hardware and is responsible for managing hardware resources. It takes the confusion of the hardware, providing a simplified interface for software programs to interact with. If there are changes in the hardware, the software remains unaffected, as it is the operating system's responsibility to adapt. By efficiently allocating hardware resources, the operating system enables multiple programs to run concurrently. This management not only simplifies the user experience but also makes software development more less complex.

1.b

The kernel plays an important role in the operating system. It acts as a gateway between the computer's hardware and software allowing it to manage the computer's resources. It is responsible for things like process and memory management, file systems, and device managers.

1.c

A shell in a unix operating system is a command line that provides a user interface to work with the operating system. It takes commands from the user and the computer will call a function or program. A shell allow you to run code and do file management.

2.a

`mkdir {directory_name}`

where `directory_name` is the name you want to give the directory youre creating

2.b

`vi filename.txt`

where `filename` is the name of the text file you want to create

3.a

`tf1 tf2`

`df1:`

`df1.txt`

`df2:`

`tf1`

3.b

`ls -l`

3.c

`/usr/bin/ls -ld df1 df2`

3.d

The results are the same. The `.` in the second command represents the current directory. But running `/usr/bin/ls` already lists the content of the current directory.