1. What is an operating system?

software that controls the operation of a computer by managing common operations that computer programmes require from the computer hardware such as input and output operations

1. What is a kernel of an operating system?

The kernel is the lowest level of a computer right above the CPU that is responsible for managing all computer resources.

1. What is a shell in Unix?

A shell is a command-line interface that is used to execute commands on a Unix system that can control the system.

1. Explain the advantages and disadvantages of using a high-level programming language versus assembly

ADVANTAGES

- It is easier to use and understand because high level languages use normal English language instead of 1's and 0's
- The ease in writing and understanding also makes debugging easier. Furthermore, compilers help to catch errors before a programme is run.
- It is also easier to maintain and amend a programme
- Programmes written in high level languages are machine independent and portable, because they can be run on multiple systems using different hardware as long as the system has an interpreter.

DISADVANTAGES

- It is not as easy to access and control hardware directly when using a high-level language. Therefore, programmes that are written for hardware are better written in a low-level language
- High level languages have slower execution time compared to low level languages, due to them having to go through an interpreter and compiler.

2. Western is running classes virtually for now. How do you feel about this? Based on your experience, what works and what doesn't work for you with regards to virtual education? What recommendations do you have?

The Virtual classes are great because the lecture sessions are recorded and so we can go back to them later if we missed something. Furthermore, having the classes premiere is genius, because it gives the feeling of a live session with live QA but without the lag. I also like the live labs because we are able to learn from other students. I just wish the TA knew more about the topic we are studying so that she could answer our questions during lab sessions.