

Krys Jenkins - Computer Architecture & OS Assignment - 742023

by Krys Jenkins

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Computer Architecture & Operating Systems
Assignment 1

Krys Jenkins – 2005056

31/03/2023

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Introduction

To explain the basis and general functions of operating systems is the goal of this report.

Allowing a simplified understanding of why we use operating systems and what they can do, but also demonstrating different tasks they help the users to perform via a computer. Not only this, but a general overview of the commands used within different operating systems command line interfaces and what these commands can do.

Question One

Key Functions of general Operating Systems:

The computers of today all utilise general operating systems, with the majority of them running a version of Windows, iOS, Linux or Android. These operating systems are what are used in the majority of people's day-to-day life, whether from work, school or even on mobile phones. They allow a certain level of personality to the devices including different GUI's, different levels of energy consumption and especially different demographics.

Operating systems are the key feature of a computer that allow it to control hardware components (1); from the peripherals (keyboard, mouse, headphones, etc.) to the internals (graphics card, CPU, RAM, etc.). It allows the user a multitude of settings via drivers that are run on the computer in order to alter or update components such as the graphics card or audio card. Allowing the user access to their own computer with more depth than without the OS, is a huge benefit when it comes to attempting to overclock a CPU or even editing lighting on a keyboard.

Overall operating systems are ever-changing and ever-advancing with their user friendly interfaces and control options. Without them, the computing industry would more than likely still be years behind than where we are today.

Question Two

Windows OS provides its users with a GUI shell. This allows for beginners and intermediate users of computers a more user friendly way of interacting with the OS and computer. It provides an illustrated view of the computer to allow its user to interact with files or programmes in a much simpler format in comparison to its CLI counterpart. However, Windows OS also comes pre-installed with its own version of a command line interface, within the GUI. The reason for this is so that more advanced computer users have a more direct and efficient way of communicating with the OS. It does this by allowing the user to operate with the use of commands via the keyboard instead of using a cursor to click icons to run programmes or open files

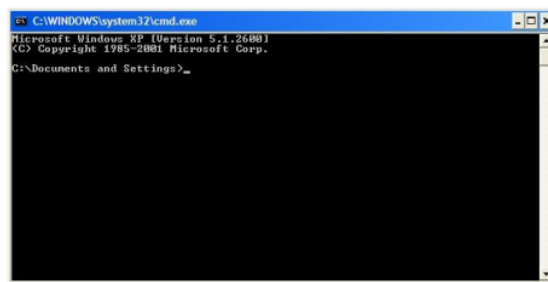


Figure 1: Image of the CLI from Windows XP (3)

(2). The use of a GUI to find and run programmes definitely makes it a lot easier to use a computer, however, this relies on the graphics card and CPU heavily to keep up with the interface updates. On the other hand, a CLI utilising an extremely minimalist interface means it barely uses the CPU and next to nothing from the graphics card for the modern day computer, allowing updates and searches to be halved in time taken to find the programme or file you were searching for. Only having to type in your search term such as "home.mp4" and following it with "/s" (4). It is a useful alternative to the GUI as it doesn't require much power to run. Also allowing the user to still execute commands such as copy (copies a file), cat (gets the contents of a file), compare (compares 2 sets of objects), del (deletes specified item). There are many more commands that allows the CLI to be used entirely instead of the general Windows OS GUI.

Question Three

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GRADEMARK REPORT

FINAL GRADE

GENERAL COMMENTS

Instructor

12/100

Total:		12
1. Engagement with Literature Skills:		
+ 2 citations. – No reference list.	20	1
2. Knowledge and Understanding Skills: 4e		
Key functions: + Good overview of OSs documented. - could include some additional key features. + Overview of GUI and CLI is documented. Good. – ½ commands and their purpose is documented. Bat Commands: - Not complete. Bash Commands: - Not complete. Bat Scripts: - Not complete. Bash Scripts: - Not complete.	20	7
3. Cognitive and Intellectual Skills: 2e		
+ Evidence of some good OS and initial GUI and CLI analysis. Good analysis and understanding of OS functions. – Some analysis of relevant languages and their command and	10	3

script capabilities is not documented. - could be extended = as mentioned above, to gain the extra marks in this category. - Conclusion.		
4. Practical Application Skills: 10e		
1. Bat Commands: - Not complete. 2. Bash Commands: - Not complete. 3. Bat Scripts: - Not complete. 4. Bash Scripts: - Not complete.	4 0	0
5. Transferable Skills for Life and Professional Practice: 5+1+2+2		
- Report incomplete. - Tutorial Activity 1 – OS Types: relevant supplementary information on OS types is not included in the Appendix of the report. - No evidence of engagement with a CPD course documented in the appendix.	1 0	1

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