

National University of Computer and Emerging Sciences, Lahore Campus



Course:	Operating Systems	Course Code:	CS 2006
Program:	BSCS (4A)	Semester:	Spring 2024
Due Date	25-February-2024 at 11:59 pm	Total Marks:	50 marks
Type:	Assignment 1	Page(s):	1

Important Instructions:

1. Submit the solution in a zipped file named as your roll number.
2. **You are not allowed to copy solutions from other students. We will check your code for plagiarism using plagiarism checkers. If any sort of cheating is found, heavy penalties will be given to all students involved.**
3. Late submission of your solution is not allowed.

Question 1: Custom Shell

[50 marks]

In this assignment, you will develop your own version of shell in C language. Your shell will execute commands given by the user. The steps involved will be as follows:

1. The user types a command, such as "cp ./OS ./newOS". The command will be stored in a character array or a string object.
2. The shell will perform tokenization and separate the command and its arguments.
3. You must implement the "ls, cp, cd, pwd, mv, mkdir, rmdir, rm, touch and grep" commands. You can learn more about these commands at the following link: <https://www.hostinger.com/tutorials/linux-commands>
4. After the command has been executed, the shell will ask the user to enter a command again.
5. The shell will exit when the command given by the user is "exit".

