#### OS Revision Lab Tasks

1. Create a directory called project in your home directory.
2. Navigate to the project directory.
3. Create an empty file named task1.txt in the project directory.
4. List all files in the current directory using the ls command. Create a file called file1.txt.
5. Change the permissions of the file file1.txt so that only the owner has read and write permissions, and others have no permissions.
6. Check the permissions of file1.txt using the ls -l command.
7. Grant execute permissions to the owner of the file file1.txt.
8. Display the current working directory using the pwd command.
9. Show the current date and time using the date command.
10. Display your system’s disk usage with the df -h command.
11. Display system uptime using the uptime command.
12. Show all users currently logged into the system using the who command.
13. A BMI (Body Mass Index) calculator program that accepts weight (in kg) and height (in meters) via command-line arguments and computes the BMI.
14. The program should calculate BMI using the formula:
    1. **BMI=weight /height2**
15. Display the BMI category based on the result:
    1. **BMI < 18.5**: "Underweight"
    2. **18.5 <= BMI < 24.9**: "Normal weight"
    3. **25 <= BMI < 29.9**: "Overweight"
    4. **BMI >= 30**: "Obesity"
16. Write a shell script that counts the number of lines in a file.
17. The script will take a filename as input.
18. It will count and display the number of lines in that file.
19. Write a C program that implements a file processing system using the system calls open, read, write, fork, and execlp. The program should first open a file named input.txt for reading, read its contents into a buffer, and then create a child process using fork(). In the child process, modify the contents of the file by writing a new string ("Processed by child process") using write, then use execlp() to replace the child process with the cat command to display the modified content of the file. The parent process should wait for the child process to complete before terminating.