National University of computer and emerging sciences

Operating Systems Lab (CL-2006)

Semester: Spring 2026
Section: BCS-4H
Course Instructor: Mr. Abdullah Shaikh

LAB # 01 – TASKS (A)

Getting Started with Linux Basics and Commands (Part A)

Submission Instructions:

1. Perform all the assigned tasks carefully.
2. Prepare your solutions in a Microsoft Word document, clearly writing the solution of each problem.
3. Attach relevant screenshots for every task as proof of execution.
4. Ensure that your document is properly formatted (clear headings, proper spacing, and alignment).
5. After completing the Word document, convert it into a PDF file.
6. Upload the PDF file on Google Classroom (GCR) within the given deadline.
   - No submission will be accepted after the deadline.
7. Lab 01 (Part A) carries a weightage of 01 mark.
8. Before uploading, rename your PDF file using the following format:

   OS Lab 01 (A) – Your Name – Your Roll Number

   Example:

   OS Lab 01 (A) – Abdullah Shaikh – 25K-7826

TASK # 01

Download and install Oracle VirtualBox on your respective laptop according to your system requirements.

1. Download the Ubuntu ISO image (latest LTS version recommended).
2. Create a new virtual machine in Oracle VirtualBox and successfully install Ubuntu on it.
3. After installation, run Ubuntu and ensure that the desktop loads properly.
4. Capture and submit clear screenshots showing:
    - Oracle VirtualBox with the Ubuntu virtual machine created, and
    - The Ubuntu desktop running successfully (proof of successful execution).
5. Attach all screenshots in your PDF submission as evidence that the installation has been completed on your own system.

Note:

Installation guidelines and supportive video tutorials are available in the Supplementary Resources section on Google Classroom (GCR) for your assistance.

TASK # 02

Explain the Linux file system structure. Also, write a one-line description of the following directories:

1. /
2. /bin
3. /sbin
4. /etc
5. /home
6. /root
7. /usr
8. /var
9. /tmp
10. /dev
11. /proc
12. /lib

TASK # 03

1. Create a new user on your Linux system and set a password.
2. Log in as the new user.
3. Inside your home directory, create a folder with a unique name that includes your roll number.
    - Example format: os_lab_<rollnumber>
4. Inside this folder, create a text file that includes your roll number in the file name.
5. Open the text file using a text editor and write at least 15 lines about yourself (name, roll number, hobbies, favorite subjects, etc.).
6. Perform the following tasks on your text file to explore its content:
    - Display the content normally and in reverse.
    - View the content in a way that allows scrolling.
    - View only the beginning and the end of the file.
    - Add additional lines to the file.
    - Overwrite the file content with new text.
7. Inside the same folder, create a C program file with a name that includes your roll number.
8. Write a C program that prints:
    - Your name
    - Your roll number

    Example output:

    My Name is Abdullah Shaikh
    Roll No: 25K-7826
9. Compile and run the program to verify it works correctly.

Screenshot Requirements (Mandatory)

Take original screenshots showing:

1. Creation of the new user and login
2. Creation of the folder and files
3. Editing of the text file with your own content
4. Successful viewing and modification of the text file (all the tasks mentioned above)
5. Creation, compilation, and execution of the C program showing correct output

THE END!