Bahria University,

Karachi Campus



Course: CSL-320 – Operating System

Term: Spring 2020, Class: BSE- 4B

Submitted By:

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Submitted To:

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Signed: Remarks: Score:

INDEX

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| SNO | DATE | LAB NO | LAB OBJECTIVE | SIGN |
| 1. | 05-02-2020 | Lab1 | Introduction To Linux And C Language |  |
| 2. | 10-02-2020 | Lab2 | Linux Commands And Shell Scripting |  |
| 3. | 16-02-2020 | Lab3 | Calling c programs using shell scripts |  |
| 4. | 20-02-2020 | Lab4 | Exploring File Commands And Conditional Structures |  |
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LAB EXPERIMENT NO.

\_\_\_\_\_\_**\_01\_**\_\_\_\_\_\_

LIST OF TASKS

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| TASK NO | OBJECTIVE |
| 1. | **Question 1**: Answer the following questions.  **1**. In Linux operating system, describe the kernel.  **2**. In Linux desktop environment, describe the benefits of virtual desktops.  **3**. While GUI based tools do exist in Linux, what is the purpose of using the command line interface, i.e. shell?  **4.** Use one of the options with the **ls** command, and describe its usage. |
| 2. | **Question 2:** By using the command line shell interface, practice the commands given in this lab. Write briefly about the usage of each command. |
| 3. | **Question 3**: By using gedit, open a text editor and write the C program given below. Save the written file as “hello.c”. In order to compile and execute the output file, do the following:  Write down the output of the program below (provide snapshot). |
| 4. | **Question 4**: Make changes within the above program to display a new output text as given below. Write down the developed program. |
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Submitted On:

\_\_\_05-02-2020\_\_\_

(Date: DD/MM/YY)

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LAB Experiment NO.

\_\_\_\_\_\_**02**\_\_\_\_\_\_\_\_

LIST OF TASKS

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| TASK NO | OBJECTIVE |
| 1. | **Question 1**: Practice all the Linux commands discussed in this lab while taking assistance using the **man** command. Write the complete syntax used for utilizing the **cp**, **mv** and **rm** commands in Linux shell |
| 2. | **Question 2**: Write a shell script to display your address over multiple lines. |
| 3. | **Question 3**: Write a shell script that would traverse among any three directories that are placed under the /home directory. While moving from one directory to another, the script should display the name of the current working directory and list the content within that directory, including the hidden files. |
| 4. | **Question 4**: Write the C programs provided in this lab and generate their outputs over Linux environment (provide snapshot). |
| 5. | **Question 5:** Write a C program on the Linux environment that takes your marks as an input and display your grades accordingly to that followed at Bahria University. Limit your program to a maximum of five subjects. Use the suitable logical operator(s), i.e. and (&&), or (||), not (!), if required. |
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Submitted On:

\_\_\_10-02-2020\_\_\_

(Date: DD/MM/YY)

Bahria University,

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LAB Experiment NO.

\_\_\_\_\_\_\_**03**\_\_\_\_\_\_\_

LIST OF TASKS

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| TASK NO | OBJECTIVE |
| 1. | **Question 1**: Create an empty file with a .txt extension. Write a shell script that would write the current date, student’s name and registration number into that file, while using variables for all three entries. |
| 2. | **Question 2**: Create a .txt file and input ten lines of entry while mixing it with both alphanumeric characters. Sort the contents of the created file in an ascending order and write the sorted output into another file. |
| 3. | **Question 3**: Write two different C language programs that would generate the following for a given number , e.g. :   1. Calculate the factorial of . 2. Calculate the Fibonacci series (0,1,1,2,3,5,8…) up to .   Compile and run both programs using a single shell script, while having a running gap of 5 seconds between the first and second program. The generated output should properly display on which program is currently running (tip use ***echo*** command). |
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Submitted On:

\_\_16-02-2020\_\_\_

(Date: DD/MM/YY)

Bahria University,

Karachi Campus



LAB Experiment NO.

\_\_\_\_\_\_\_**04**\_\_\_\_\_\_\_

LIST OF TASKS

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| TASK NO | OBJECTIVE |
| 1. | Write a single shell script that creates four different files, while taking the names of all created files as input from the user. As the files contents, insert your name in the first file, registration number in the second and section details in the third. These should be followed by merging the contents of all three files into the fourth one. |
| 2. | Write a shell script that creates a “Files Location Log”. The paths of all files, having the same extension, should be stored in one log. The file extension should be taken as an input from the user, and the created logs should be named as “mylog\_extension.txt”, where “extension” is that taken as input from the user. The search process should be for all file in the system, starting from the root directory (/). All log files of different file extension should be stored inside a single directory by the name of “mylog” that would be present at your home directory. |
| 3. | Write a shell script that either performs a file sort, file search or directory listing operation based on the user’s selection of the operation he/she would like to execute. |
| 4 | Write a C program that takes values of two matrices of size and as input from the user. Multiply the above two matrixes and store the resulting matrix in a 2D array. Display the contents of the first and second matrices and also the resulting matrix. Achieve alignment in the displayed content as much possible. |

Submitted On:

\_\_\_20-02-2020\_\_\_\_

(Date: DD/MM/YY)