Fast**National University of Computer & Emerging Sciences, Karachi  
Fall-2018 CS-Department**

**Lab Mid**

|  |  |  |
| --- | --- | --- |
| **Course Code: CL205** | **Course Name: Operating Systems Lab** | |
| **Instructor Name: Sumaiyah, Zahid** | | |
| **Student Roll No:** | | **Section:** |

***"Be willing to take a chance, because you never know how perfect something could turn out to be."  
BEST OF LUCK!***

Instructions

* Rules are made to break them. So, invent yours and I’ll break.

**Time**: 60 minutes. **Max Marks:** 40 points

**(5 marks)**

1. Display the contents of ‘file1’, ‘file2’ and ‘studentList’ files.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.Create shortcut of the directory ‘song’ which is in ‘home/user/Document/Music’ in ‘/home/user/Desktop’.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Create a write-only file in your home directory.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. List all files with extension ‘.txt’ present in a directory ‘OS’ which is in ‘/home/user/Document/’.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. Copy all files in the current directory whose names contain the character string "let" into the subdirectory "Letters".

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

for i in { 1 . . 10 . . 2 }

do

echo “Hey!!”

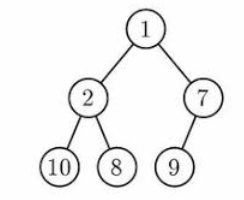
done

What is the output? **(2.5 marks)**

Write a Bash script to rename all files having extension sh to exe. **(3.5 marks)**

Write a Bash script that prints the number of arguments provided to that program multiplied by the first argument provided to the program. **(4 marks)**

Write a Bash script that prints “Oh No!! Today is GR2 Mid” if today is Monday. **(5 marks)**

Write a c program for this process tree.

Each node will print its name and PID but by not using printf().

**(10 marks)**

Write System calls for Shared Memory **(10 marks)**



System call for named pipe is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

System call for unnamed pipe is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Explain functions and their arguments:

msgrcv(msgid,&msg,sizeof(msg),1,0);

retval = read(fd, buffer, sizeof(buffer));

write(1, buffer, sizeof(buffer));

**Bonus Question:**

Write anything which proves me you are a Linux User. Bonus marks depends on your creativity.