National University of Computer and Emerging Sciences

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**Laboratory Manual**

*for*

**Operating Systems Lab**

**(CL 220)**

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| Section | CS-4E |
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**Lab Topic:**

I/O Redirection

**Lab Objectives:**

* Input, output redirection using Dup, Dup2 system calls.

**Inlab Questions:**

**Question 1**:

(I/O REDIRECTION using filing)

Write a program that takes that reads an input from file input.txt rather than keyboard and sum all the digits and write the sum to a new file output.txt rather than console.

(Hint: use Dup system call)

Q2: Write a shell script that performs the task of the below shell command.

man ls | grep ls > file.txt

**Note**: you must submit the makefile of your code

You can take help from this link for makefile https://www.youtube.com/watch?v=\_r7i5X0rXJk

**PostLab:**

Before starting this read about exec family system calls

**Question:**

Write a C++ program which executes the following commands using **fork & execlp**. (Hint: You will need to create three child processes, and each child process will execute one command using execlp)

1. mkdir ./myFolder\_1 ./my\_Folder2
2. mkdir ./myFolder\_1/mySubFolder
3. ls -S

Note: You have to submit a makefile of these questions aswell.