National University of Computer & Emerging Sciences

Department of Computer

Science

Operating Systems Lab

Lab # 6

Instructions:

1. Make a word document with the convention “SECTION_ROLLNO _LAB-NO”. In addition, paste all of your work done at the LINUX prompt.
2. You have to submit a Word File.
3. Plagiarism is strictly prohibited; negative marks would be given to students who cheat.

Tasks

1. Write a program to create n child processes from same parent using fork() system call where n should be greater than 2.
2. Write a code which takes an input “n” from user and forks a child process. The parent process should calculate the sum of numbers from 1 to n while the child process should calculate the product of numbers from 1 to n. separate your sum and product code in functions.
3. The program declares a counter variable, set its value to zero before forking. After the fork call, we have two process running in parallel, both incrementing their own versions of counter. Each process will run to completion and exit. Because the both process running in parallel, we have no way of knowing which will finish first. Running this program will print something similar to what is shown below. Though results may vary from one run to other.

Output:

```
--beginning of program
parent process: counter=1
parent process: counter=2
parent process: counter=3
child process: counter=1
parent process: counter=4
child process: counter=2
parent process: counter=5
child process: counter=3
--end of program--
child process: counter=4
child process: counter=5
--end of program—
```