SSN College of Engineering

Department of Computer Science and Engineering

UCS1411 – Operating Systems Laboratory

II Year CSE - A Section (IV Semester)

Academic Year 2019-20

Exercise – 1- Study of System Calls and System Commands

Objective:

1. To study the purpose and working of various system calls and system commands used in Linux

Sample Learning Outcome:

1. Learn about the various system calls and system commands, their purpose and options

2. Work and experience the system calls and commands

3. Understand the relation between the system calls and commands

Best Practices:

1. Algorithm design

2. Naming convention – for file names, variables

3. Comment usage at proper places

4. Prompt messages during reading input and displaying output

5. Error handling mechanisms for failures in system calls

6. Incremental program development

7. Modularity

8. All possible test cases in output

1. Study the following system calls and system commands (using Linux manual pages)

Write the following in your observation for each of the commands and calls.

(1) System Commands:

Name, Purpose, options, Syntax, Example

(2) System Calls:

Name, Description, Header file, Syntax, Arguments, Return type (both : on success and on failure)

System calls

1. fork
2. exec
3. getpid
4. getppid
5. exit
6. wait
7. close
8. opendir
9. readdir
10. open
11. read
12. write
13. creat
14. sleep
15. pipe

System commands

1. cp
2. mv
3. ls
4. grep
5. chmod
6. cat
7. mkdir
8. rm
9. rmdir
10. wc
11. who
12. pipe (pipe symbol)
13. head, tail
14. nl
15. awk, sed