**Linux assignments**

**Chapter 1 : System Calls usage in Linux**

**A1: Implement a cp(copy) command with –p option**

**A2: Implement a wc(word count) command with –l –w -c options**

**A3: Write a program to understand usage of dup and dup2 system calls.**

**A4: Write a program to understand advanced file control system calls**

**Chapter 2 : Threads**

**A1: WAP to print the factorial of a given number using multithreads**

**A2: WAP to sum and maximum of a given array using multiple threads. Synchronize threads using mutex**

**A3: WAP to multiply two matrices using multiple threads**

**Chapter 3 : Signals**

**A1: WAP to print the address which causing segmentation fault**

**A2: WAP to implement alarm with snooze for given time and date using SIGALRM**

**A3: WAP to block certain signals from being received from command-line.**

**A4: WAP to avoid a child become zombie by using signal handlers. Implement it with two different method.**

**Chapter 4 : Process**

**A1: Create a scenario to make zombie process become orphan, print status of each state**

**A2: WAP to avoid a child become zombie with out blocking the parent**

**A3: WAP to create a child process which will execute command passed through command- line arguments**

**A4: WAP to create three child processes from same parent**

**Chapter 5 : IPC**

**A1: WAP to create two child process which will execute command (with or without options) passed through command-line arguments. First child will pass output to second child as input**

**A2: WAP to implement ls -l | grep “patern” | wc -l where pattern passed through command- line arguments**