School of Computing Science and Engineering

Programme: B.Tech   Branch: CSE

Course: CSE212-Operating Systems Lab   2012-13 Winter Semester

Common to all Batch's and Slots

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Cycle Sheet -1

1. Study of basic commands in Linux

2. Write a Shell Script for the following conditions using command line arguments:

   i.   Find a given number is even or odd
   ii.   Accept a number N and a word. Print the word N times, one word per line
   iii.   Reversing a number using while loop

3. Write a Shell Script for the menu driven application using case structure to
   i.   Find factorial of a number
   ii.   Find a number is palindrome or not
   iii.   Print the Fibonacci series
   iv.   Find a number is prime or not

4. Write a C program

   i. To report the behavior of OS to get the CPU type, model and kernel version.
   ii. To get the amount of memory configured with the computer and amount of
       Memory currently available.

5. Write a C program to create a process for the following hierarchy using various system
   calls like fork, exec, getpid, exit,wait, close, stat, opendir, readdir etc.

   | Grand Father | ⟶ | Father | ⟶ | Son |
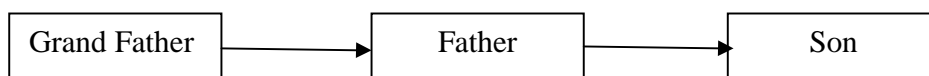
 i. To create parent & child process and print their id.
 ii. Make any process as zombie process.
 iii. Make any process as orphan process.
 iv. Make any process to sleep few seconds
 v. Make any process as background process

6. Given the list of processes, their CPU burst times and arrival times, print the Gantt chart for FCFS and SJF Scheduling Policies. For each of the scheduling policies, compute and print the average waiting time and average turnaround time.

7. Given the list of processes, their CPU burst times and arrival times, display the Gantt chart for Priority and Round Robin Scheduling Policies. For each of the scheduling policies, compute and print the average waiting time and average turnaround time.

8. Develop Applications to illustrate Inter Process communication using
 i. pipes
 ii. shared memory
 iii. Message Queues
 iv. Threads