

GOVERNMENT ENGINEERING COLLEGE, DAHOD

COMPUTER ENGINEERING DEPARTMENT

B.E SEMESTER VIII PRACTICAL LIST YEAR 2016

Subject Name : Parallel Processing (180702)

PractNo	Title	Last date of submission
1	Demonstrate a system call 'fork()' in linux and write description on functionality of the program. a) Program to show the use of fork() b) Program to check the status of variables before and after fork() c) Program to show the execution of fork() in the loop. d) To create n child processes by single parent process. e) Program to show how the child process is killed. f) Program to show the local memory region of processes.	
2	Write a header file 'head.h' containing two user defined functions 'process_fork' and 'process_join'. a) Write a program to demonstrate that process_join() is kill for child and wait for parent process.	
3	Write a parallel program to calculate sum of all the elements of integer array of size 100. Use two processes for this. Parent will calculate sum of all even indexed elements into sum1, and child will calculate sum of all odd indexed elements into sum2. Explain output of the program with reasons and explain limitations of the program.	
4	Write the user-defined function 'share'. a) Write a program to demonstrate that sharing a variable, creates a common copy of the variable between all the processes.	
5	Loop splitting: a) Write a parallel program to calculate sum of all the elements of an array of size 100. Use total of four processes for this. Use inefficient loop splitting. b) Write a parallel program to calculate sum of all the elements of an array of size 100. Use total of four processes for this. Use efficient loop splitting. c) Write a parallel program to copy data from one array to another. Size of both the array is 100. Use total of four processes for this. Use efficient loop splitting. d) Write a parallel program to find out highest from an array of size 100. Use total of five processes for this. Use efficient loop splitting.	

6	<p>Explain What is contention With the help of an example</p> <p>a) Write user define function <code>init_lock()</code>,<code>lock()</code> and <code>unlock()</code>.Explain how they can be used to solve the contention.</p>	
7	<p>Write a parallel program to copy data from one array to another. Size of both the array is 100. Use total of four processes for this. Use self scheduling.</p>	
8	<p>With the help of a program explain what is race condition?</p> <p>a) Write a header file "barrier.h" containing two user defined functions 'init_barrier()' and 'barrier()'</p> <p>b) Write a program to calculate average deviation for an array of size 100.</p>	
9	<p>Write a C program to implement PRIM's algorithm.</p>	
10	<p>Write a C program to implement Quick sort algorithm.</p>	
11	<p>Write a C program to implement multiplication of two matrix.</p>	
12	<p>Write a C program to implement DIJKSTRA'S Algorithm.</p>	
13	<p>Write a C program to implement Buble Sort technique.</p>	
14	<p>Implement Matrix-Vector Multiplication.</p>	