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**SE(4A) | 19F-0916**

Operating System Lab

System call 1 Fork()

**TASK # 1**

**SCRIPT:**

**#include<iostream>**

**#include<unistd.h>**

**#include<sys/wait.h>**

**using namespace std;**

**//TASK 1**

**int main()**

**{**

**int n,pid,count=0;**

**cout << " Enter a Value to Create Child Process According to it :";**

**cin >> n;**

**if(n > 2)**

**{**

**for (int i = 0 ; i < n ; i++)**

**{**

**pid = fork();**

**if(pid == 0)**

**{**

**cout << "Child created with PID = " << getpid() << " Having Parent PPID = " << getppid() << endl;**

**count++;**

**return 0;**

**}**

**}**

**for (int i = 0 ; i < n ; i++)**

**{**

**wait(NULL);**

**}**

**cout << endl << "Total Number of Child Process are : " << count;**

**}**

**else**

**cout<<"Please try again with value higher than 2, Thank you !";**

**return 0;**

**}**

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**TASK # 2**

**SCRIPT:**

**#include<iostream>**

**#include<unistd.h>**

**#include<sys/wait.h>**

**using namespace std;**

**//TASK 2**

**int main()**

**{**

**int sum=0,prod=1,pid,n;**

**cout << " Enter a Value to Take Sum and Product Respectively :";**

**cin >> n;**

**pid = fork();**

**if(pid == 0)**

**{**

**for (int i = 1 ; i <= n ; i++)**

**{**

**prod = prod \* i;**

**}**

**cout << "Product Calculated by Child Process is : " << prod << endl ;**

**}**

**else**

**{**

**for (int i = 1 ; i <= n ; i++)**

**{**

**sum = sum + i;**

**}**

**cout << "Sum Calculated by Parent Process is : " << sum << endl ;**

**}**

**for (int i = 0 ; i < n ; i++)**

**{**

**wait(NULL);**

**}**

**return 0;**

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**TASK # 3**

**SCRIPT:**

**#include<iostream>**

**#include<unistd.h>**

**#include<sys/wait.h>**

**using namespace std;**

**//TASK 3**

**int main()**

**{**

**int pid,count;**

**cout << "Enter Number Of Traversals you want : ";**

**cin >> count;**

**int counter=0;**

**cout << endl << "Beginning of Program" << endl;**

**pid = fork();**

**for(int i = 1; i <= count; i++)**

**{**

**if(pid == 0)**

**{**

**cout << "Counter of Child is : " << ++counter << endl ;**

**}**

**else**

**{**

**cout << "Counter of Parent is : " << ++counter << endl ;**

**}**

**}**

**cout<<"Program Ends Here"<<endl;**

**return 0;**

**}**

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