

1. Write a program to create 4 processes: parent process and its child process

which perform various tasks :

- Parent process count the frequency of a number
- 1st child sort the array
- 2nd child find total even number(s) in a given array
- 3rd child calculate the sum of the even numbers in an array

Example:

```
Input :  
2, 4, 6, 7, 9, 0, 1, 5, 8, 3  
  
Output :  
Parent process :  
the key to be searched is 7  
the frequency of 7 is 1  
1st child process :  
the sorted array is  
0 1 2 3 4 5 6 7 8 9  
2nd child process :  
Total even no are: 5  
3rd child process :  
the sum is :45
```

2. Implement Readers-Writers Problem where one reader and one writer trying to access the shared variable containing some data and eliminate the problem of synchronisation.

3. Find the completion time of the processes P1,P2,P3 using SRTF algorithms?

Process No	Arr. Time	CPU Time	I/O time	CPU Time
P1	0	1	2	2
P2	1	2	4	5
P3	2	3	6	8

The processes first spends CPU time followed by I/O time and followed by CPU time again and I/O of the processes can be overlapped as much as possible.

4. Find the average waiting time for the following list processes when Preemptive priority scheduling is used.

ProcessNo.	Arr. Time	Priority	CPU time	IO time	CPU time
1	0	2	1	5	3
2	2	3 (L)	3	3	1
3	3	1 (H)	2	3	1