Hands-on Session Submission #1

Execute one program from the following questions

Duration 1 hour 30 minutes

Q1. Write a program to create a child process that lists all the executing user processes. (Avoid the creation of zombie process)

Q2. Create a global array with values [1, 6, 2, 4, 5, 8, 9, 0]. Sort the same within the child process, and display the values in the parent process. Explain, are the displayed values in the sorted order? If not, why?

Q3. Write the memory mapping with appropriate segments for the following program and show the same in your computer by executing the given program.

```c
#include<stdio.h>
#include<stdlib.h>
#include<unistd.h>

int x, y=15;
int main(int argc, char *argv[])
{
    int i, *v, sum=0, pid=0;
    v = (int *)malloc(sizeof(int)*5);
    for(i=0;i<5;i++)
    {
        printf("Enter the no:");
        scanf("%d",&v[i]);
    }
    printf("\nRead x value:");
    scanf("%d",&x);
    sum = x+y+v[0]+v[1]+v[2]+v[3]+v[4];
    printf("\nSum = %d",sum);
    printf("\nPID = %d",getpid());
    return 0;
}
```

Q4. Write a Program to demonstrate the SRTF Scheduling algorithm and calculate the average TAT and WT

Q5. Write a Program to demonstrate the FCFS Scheduling algorithm and calculate the average TAT and WT.