## EXP : 5

```
#include <stdio.h>

//Function to swap two variables
void swap(int *a,int *b)
{
   int temp=*a;
   *a=*b;
   *b=temp;
}
int main()
{
   int n;
   printf("Enter Number of Processes: ");
   scanf("%d",&n);

   // b is array for burst time, p for priority and index for process id
   int b[n],p[n],index[n];
   for(int i=0;i<n;i++)
   {
      printf("Enter Burst Time and Priority Value for Process %d: ",i+1);
      scanf("%d %d",&b[i],&p[i]);
      index[i]=i+1;
   }
   for(int i=0;i<n;i++)
   {
      int a=p[i],m=i;

      //Finding out highest priority element and placing it at its desired position
      for(int j=i;j<n;j++)
      {
         if(p[j] > a)
         {
            a=p[j];
            m=j;
         }
      }

      //Swapping processes
      swap(&p[i], &p[m]);
      swap(&b[i], &b[m]);
      swap(&index[i],&index[m]);
   }

   // T stores the starting time of process
   int t=0;
```

```
    //Printing scheduled process
    printf("Order of process Execution is\n");
    for(int i=0;i<n;i++)
    {
        printf("P%d is executed from %d to %d\n",index[i],t,t+b[i]);
        t+=b[i];
    }
    printf("\n");
    printf("Process Id     Burst Time   Wait Time    TurnAround Time\n");
    int wait_time=0;
    for(int i=0;i<n;i++)
    {
        printf("P%d         %d         %d         %d\n",index[i],b[i],wait_time,wait_time + b[i]);
        wait_time += b[i];
    }
    return 0;
}
```

```
Enter total number of processes(maximum 20):3

Enter Process Burst TimenP[1]:2
P[2]:4
P[3]:3

Process         Burst TimetWaiting TimetTurnaround Time
P[1]            2               0               2
P[2]            4               2               6
P[3]            3               6               9

Average Waiting Time:2
Average Turnaround Time:5
--------------------------------
Process exited after 2.617 seconds with return value 0
Press any key to continue . . .
```