Graphic Era Hill University, Dehradun

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Course : B.Sc. [IT]
Sem : 2nd sem

Section : 'A'
Subject Name : Operating System
Subject Code : PBI-202
Campus : Dehradun
Page No : (1)

Ans ⇒ (2)

```
#include <stdio.h>
#include <conio.h>
#include <string.h>
main()
{
int et[20], at[10], n, i, j, temp, st[10], ft[10], wt[10]
                                    , ta[10];
int totwt=0, totta=0;
float awt, ata;
Char pn[10][10], t[10];
printf("Enter the number of process:");
scanf("%d", &n);
for(i=0; i<n; i++)
{
printf("Enter process name, arrival time &
                                    execution time:");
Scanf("%s %d %d", pn[i], &at[i], &et[i]);
}
```

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```
for(i=0; i<n; i++)
    for(j=0; j<n; j++)
  {
    if(et[i]<et[j])
    {
      temp=at[i];
      at[i]=at[j];
      at[j]=temp;
      temp=et[i];
      et[i]=et[j];
      et[j]=temp;
      strcpy(t, pn[i]);
      strcpy(pn[i], pn[j]);
      strcpy(pn[j], t);
    }
  }
for(i=0; i<n; i++)
  {
    if(i==0)
        st[i]=at[i];
    else
        st[i]=ft[i-1];
    wt[i]=st[i]-at[i];
    ft[i]=st[i]+et[i];
    ta[i]=ft[i]-at[i];
    totwt+=wt[i];
    totta+=ta[i];
  }
```

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```
awt=(float)totwt/n;
ata=(float)totta/n;
printf("\n Pname \t arrival time \t execution time \
                    \t waiting time \t tatime");
for(i=0; i<n; i++)
    printf("\n%5\t %5d \t \t %5d \t \t %5d",
                    pn[i], at[i], et[i], wt[i], ta[i]);
printf("\n Average waiting time is : %f", awt);
printf("\n Average turnaround time is : %f", ata);

}
```

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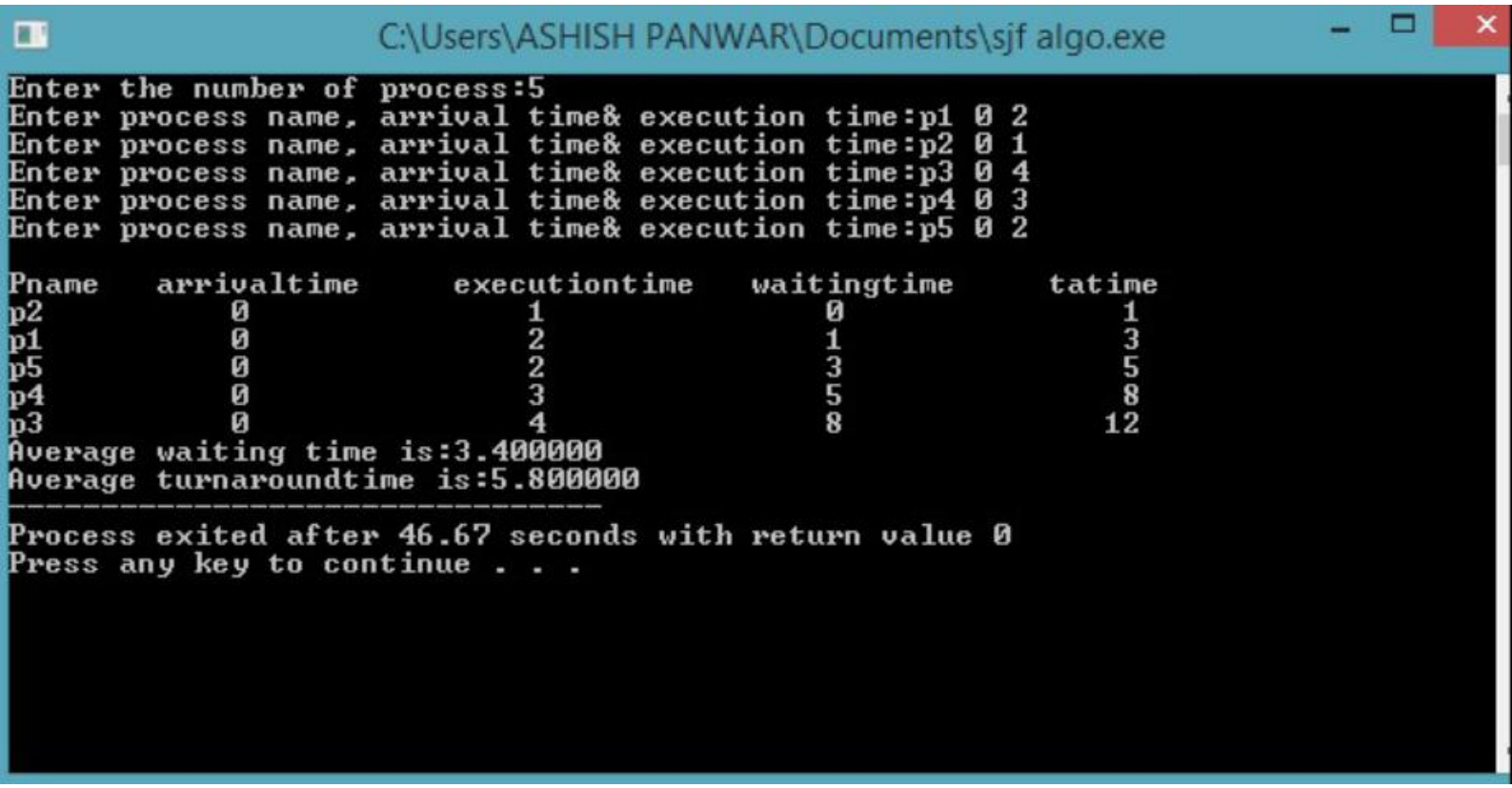
C:\Users\ASHISH PANWAR\Documents\sjf algo.exe
Enter the number of process:5
Enter process name, arrival time& execution time:p1 0 2
Enter process name, arrival time& execution time:p2 0 1
Enter process name, arrival time& execution time:p3 0 4
Enter process name, arrival time& execution time:p4 0 3
Enter process name, arrival time& execution time:p5 0 2
Pname arrivaltime executiontime waitingtime tatime
p2 0 1 0 1
p1 0 2 1 3
p5 0 2 3 5
p4 0 3 5 8
p3 0 4 8 12
Average waiting time is:3.400000
Average turnaroundtime is:5.800000
Process exited after 46.67 seconds with return value 0
Press any key to continue . . .