

Program -8

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1  #include<stdio.h>
2  #include<conio.h>
3  int main() {
4      int i, NOP, sum=0, count=0, y, quant, wt=0, tat=0, at[10], bt[10], temp[10];
5      float avg_wt, avg_tat;
6      printf(" Total number of process in the system: ");
7      scanf("%d", &NOP);
8      y = NOP;
9      for(i=0; i<NOP; i++) {
10         printf("\n Enter the Arrival and Burst time of the Process[%d]\n", i+1);
11         printf(" Arrival time is: \t"); scanf("%d", &at[i]);
12         scanf("%d", &bt[i]);
13         temp[i] = bt[i];
14         printf("Enter the Time Quantum for the process: \t");
15         scanf("%d", &quant);
16         printf("\n Process No \t\t Burst Time \t\t TAT \t\t Waiting Time ");
17         for(sum=0, i = 0; y!=0; )
18         {
19             if(temp[i] <= quant && temp[i] > 0)
20             { sum = sum + temp[i]; temp[i] = 0;
21               count=1;
22             }
23             else if(temp[i] > 0)
24             { temp[i] = temp[i] - quant;
25               sum = sum + quant;
26             }
27             if(temp[i]==0 && count==1)
28             { y--;
29               printf("\nProcess No[%d] \t\t %d\t\t\t\t %d\t\t\t %d", i+1, bt[i], sum-at[i], sum-at[i]-bt[i]); wt = wt+sum-at[i]-bt[i];
30               tat = tat+sum-at[i];
31               count =0;
32             }

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33         }
34     }
35     if(i==NOP-1)
36     { i=0;
37     }
38     else if(at[i+1]<=sum) {
39         i++;
40     }
41     else { i=0; }
42 }
43 avg_wt = wt * 1.0/NOP;
44 avg_tat = tat * 1.0/NOP;
45 printf("\n Average Turn Around Time: \t%f", avg_wt);
46 printf("\n Average Waiting Time: \t%f", avg_tat);
47 getch();
48 }

```

Output

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Total number of process in the system: 3

Enter the Arrival and Burst time of the Process[1]
Arrival time is:      1
2

Enter the Arrival and Burst time of the Process[2]
Arrival time is:      1
3

Enter the Arrival and Burst time of the Process[3]
Arrival time is:      5
3
Enter the Time Quantum for the process:      5

Process No      Burst Time      TAT      Waiting Time
Process No[1]    2              1              -1
Process No[2]    3              4              1
Process No[3]    3              3              0
Average Turn Around Time:      0.000000
Average Waiting Time:  2.666667

```