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1  #include<stdio.h>
2  #include<conio.h>
3
4  int main()
5  {
6      // initialize the variable name
7      int i, NOP, sum=0, count=0, y, quant, wt=0, tat=0, at[10], bt[10], temp[10];
8      float avg_wt, avg_tat;
9      printf(" Total number of process in the system: ");
10     scanf("%d", &NOP);
11     y = NOP; // Assign the number of process to variable y
12
13     // Use for Loop to enter the details of the process like Arrival time and the Burst Time
14     for(i=0; i<NOP; i++)
15     {
16         printf("\n Enter the Arrival and Burst time of the Process[%d]\n", i+1);
17         printf(" Arrival time is: \t"); // Accept arrival time
18         scanf("%d", &at[i]);
19         printf(" \nBurst time is: \t"); // Accept the Burst time
20         scanf("%d", &bt[i]);
21         temp[i] = bt[i]; // store the burst time in temp array
22     }
23     // Accept the Time quant
24     printf("Enter the Time Quantum for the process: \t");
25     scanf("%d", &quant);
26     // Display the process No, burst time, Turn Around Time and the waiting time
27     printf("\n Process No \t\t Burst Time \t\t TAT \t\t Waiting Time ");
28     for(sum=0, i = 0; y!=0; )
29     {
30         if(temp[i] <= quant && temp[i] > 0) // define the conditions
31         {
32             sum = sum + temp[i];
33             temp[i] = 0;
34             count=1;
35         }
36         else if(temp[i] > 0)
37         {
38             temp[i] = temp[i] - quant;
39             sum = sum + quant;
40         }
41         if(temp[i]==0 && count==1)
42         {
43             // Display the process details

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29 {
30 if(temp[i] <= quant && temp[i] > 0) // define the conditions
31 {
32     sum = sum + temp[i];
33     temp[i] = 0;
34     count=1;
35 }
36 else if(temp[i] > 0)
37 {
38     temp[i] = temp[i] - quant;
39     sum = sum + quant;
40 }
41 if(temp[i]==0 && count==1)
42 {
43     y--; //decrement the process no.
44     printf("\nProcess No[%d] \t\t %d\t\t\t\t %d\t\t\t\t %d", i+1, bt[i], sum-at[i], sum-at[i]-bt[i]);
45     wt = wt+sum-at[i]-bt[i];
46     tat = tat+sum-at[i];
47     count =0;
48 }
49 if(i==NOP-1)
50 {
51     i=0;
52 }
53 else if(at[i+1]<=sum)
54 {
55     i++;
56 }
57 else
58 {
59     i=0;
60 }
61 }
62 // represents the average waiting time and Turn Around time
63 avg_wt = wt * 1.0/NOP;
64 avg_tat = tat * 1.0/NOP;
65 printf("\n Average Turn Around Time: \t%f", avg_wt);
66 printf("\n Average Waiting Time: \t%f", avg_tat);
67 getch();
68 }

```



```
C:\Users\sruith\OneDrive\Documents\Untitled1.exe
Project Class
Total number of process in the system: 4

Enter the Arrival and Burst time of the Process[1]
Arrival time is: 0

Burst time is: 9

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

Burst time is: 11

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

Burst time is: 19

Enter the Arrival and Burst time of the Process[4]
Arrival time is: 4

Burst time is: 25
Enter the Time Quantum for the process: 6

Process No      Burst Time      TAT      Waiting Time
Process No[1]   9              27        18
Process No[2]   11             30        19
Process No[3]   19             54        35
Process No[4]   25             60        35
Average Turn Around Time: 26.750000
Average Waiting Time: 42.750000

58 {
59     i=0;
60 }
61 }
62 // represents the average waiting time and Turn Around time
63 avg_wt = wt * 1.0/NOP;
64 avg_tat = tat * 1.0/NOP;
```