CODE

```
#include<stdio.h>

#include<conio.h>


void main()

{

   // initlialize the variable name

   int i, NOP, sum=0,count=0, y, quant, wt=0, tat=0, at[10], bt[10], temp[10];

   float avg_wt, avg_tat;

   printf(" Total number of process in the system: ");

   scanf("%d", &NOP);

   y = NOP; // Assign the number of process to variable y


// Use for loop to enter the details of the process like Arrival time and the Burst Time

for(i=0; i<NOP; i++)

{

printf("\n Enter the Arrival and Burst time of the Process[%d]\n", i+1);

printf(" Arrival time is: \t");  // Accept arrival time

scanf("%d", &at[i]);

printf(" \nBurst time is: \t"); // Accept the Burst time

scanf("%d", &bt[i]);

temp[i] = bt[i]; // store the burst time in temp array

}

// Accept the Time qunat
```

```
printf("Enter the Time Quantum for the process: \t");

scanf("%d", &quant);

// Display the process No, burst time, Turn Around Time and the waiting time

printf("\n Process No \t\t Burst Time \t\t TAT \t\t Waiting Time ");

for(sum=0, i = 0; y!=0; )

{

if(temp[i] <= quant && temp[i] > 0) // define the conditions

{

   sum = sum + temp[i];

   temp[i] = 0;

   count=1;

   }

   else if(temp[i] > 0)

   {

      temp[i] = temp[i] - quant;

      sum = sum + quant;

   }

   if(temp[i]==0 && count==1)

   {

      y--; //decrement the process no.

      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];

      tat = tat+sum-at[i];

      count =0;
```

```
    }
    if(i==NOP-1)
    {
        i=0;
    }
    else if(at[i+1]<=sum)
    {
        i++;
    }
    else
    {
        i=0;
    }
}
// represents the average waiting time and Turn Around time
avg_wt = wt * 1.0/NOP;
avg_tat = tat * 1.0/NOP;
printf("\n Average Turn Around Time: \t%f", avg_wt);
printf("\n Average Waiting Time: \t%f", avg_tat);
getch();
}
```

OUTPUT

```
 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:  8

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

Burst time is:  5

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

Burst time is:  10

 Enter the Arrival and Burst time of the Process[4]
 Arrival time is:       3

Burst time is:  11
Enter the Time Quantum for the process:         6

 Process No              Burst Time              TAT             Waiting Time

 Process No[2]           5               10              5
 Process No[1]           8               25              17
 Process No[3]           10              27              17
 Process No[4]           11              31              20
 Average Turn Around Time:      14.750000
 Average Waiting Time:  23.250000
```