*NAME OF FACULTY : - Mrs.ASHU*

*COURSE CODE : - CSE316*

*COURSE TITLE : - OPERATING SYSTEM ASSIGNMENT*

*STUDENT NAME : - TAUSEEF RIZVI*

*REGISTRATION NUMBER : - 11804905*

*roll number :- 56*

**Code -:**

#include<iostream>

using namespace std;

main()

{

int n,T=3,l=0,CT=3,j=0;

int AT[10],BT[10],RT[10],TAT[10],WT[10];

int lbt=INT\_MAX;

float TTAT=0,TWT=0;

bool counter=false;

cout<<"Enter the number of processes : ";

cin>>n;

cout<<"\n";

for(int i=0;i<n;i++)

{

cout<<"Enter the arrival time and burst time of process "<<i+1<<" respectively.\n";

cout<<"Arrival Time : ";

cin>>AT[i];

cout<<"Burst Time : ";

cin>>BT[i];

RT[i]=BT[i];

if((AT[i]<3)||(BT[i]>10))

{

cout<<"Invalid input...Arrival Time should be more than 3 Time Units AND"

<<" Burst Time should be less than 10 Time Units.\n";

i--;

}

}

system("cls");

cout<<"Computing Average Waiting Time And Turn Around Time...";

while(j<n)

{ a:

for(int i=0;i<n;i++)

{

if((AT[i]<=T)&&(RT[i]<lbt)&&(RT[i]>0))

{

lbt=RT[i];

l=i;

counter=true;

}

}

if(counter==false)

{

T++;

goto a;

}

RT[l]--;

lbt=RT[l];

if (lbt == 0)

{

lbt = INT\_MAX;

}

if(RT[l]==0)

{

j++;

counter=false;

CT=T+1;

WT[l]=CT-BT[l]-AT[l];

if (WT[l] < 0)

{

WT[l] = 0;

}

}

T++;

}

cout<<"\n\n\t\tProcess\t\tAT\t\tBT\t\tWT\t\tTAT\n";

cout<<"\t\t-------------------------------------------------------------------\n";

for(int i=0;i<n;i++)

{

TAT[i]=BT[i]+WT[i];

cout<<"\t\t"<<i+1<<"\t\t"<<AT[i]<<"\t\t"<<BT[i]<<"\t\t"<<WT[i]<<"\t\t"<<TAT[i]<<"\n";

TTAT=TTAT+TAT[i];

TWT =TWT +WT[i] ;

}

cout<<"\nAverage Waiting Time is : "<<TWT/n;;

cout<<"\nAverage Turn Around Time is : "<<TTAT/n<<"\n";;

}