```
#include<stdio.h>
int main()
{
int n,i,p,bt[30],wt[30],tat[30],twt=0,tot=0,awt=0,atat=0;
printf("Enter the process:");
scanf("%d",&n);
printf("\n Enter the burst time for each process\n");
for(i=0;i<n;i++)
{
printf("p[%d]:",i);
scanf("%d",&bt[i]);
}
for(i=0;i<n;i++)
{
wt[0]=0;
wt[i+1]=wt[i]+bt[i];
twt=twt+wt[i];
tat[i]=wt[i]+bt[i];
tot=tot+tat[i];
}
awt=awt/n;
atat=tot/n;
printf("Process\t\tBurst time\t\tWaiting time\t\tTurn around time\n");
for(i=0;i<n;i++)
{
printf("p[%d]\t\t\t%d\t\t\t%d\t\t\t%d\n",i,bt[i],wt[i],tat[i]);
}
printf("\nAverage waiting time:%d\n",awt);
printf("\nAverage turn around time:%d",atat);
printf("\n______GANTT CHART______\n");
printf("_______________\n");
for(i=0;i<n;i++)
{
printf("p%d\t",i);
printf("|");
}
printf("\n______\n");
for(i=0;i<n;i++)
{
printf("%d\t",wt[i]);
}
}
```

```
#include<stdio.h>
int main()
{
int n,i,j,p[30],bt[30],wt[30],tat[30],temp;
float awt=0,atat=0,twt=0,tot=0;
printf("enter the number of process:");
scanf("%d",&n);
printf("enter the burst time of each process\n");
for(i=0;i<n;i++)
{
scanf("%d",&bt[i]);
p[i]=i+1;
}
for(i=0;i<n;i++)
{
for(j=i+1;j<n;j++)
{
for(j=i+1;j<n;j++)
{
if(bt[i]>bt[j])
{
temp=bt[i];
bt[i]=bt[j];
bt[j]=temp;
temp=p[i];
p[i]=p[j];
p[j]=temp;
}
}
}
for(i=0;i<n;i++)
{
wt[0]=0;
wt[i+1]=wt[i]+bt[i];
twt=twt+wt[i];
tat[i]=wt[i]+bt[i];
tot=tot+tat[i];
}
awt=twt/n;
atat=tot/n;
printf("PROCESS\t\tBURST TIME\t\tWAITING TIME\t\tTURN AROUND TIME\n");
for(i=0;i<n;i++)
{
printf("p[%d]\t\t\t%d\t\t\t%d\t\t%d\t\t\n",p[i],bt[i],wt[i],tat[i]);
}
printf("\n Average waiting time:%f\n",awt);
printf("\nAVerage turn around time:%f",atat);
printf("\n-------GANTT CHART-------\n");
printf("__________________\n");
for(i=0;i<n;i++)

{
printf("p%d\t",p[i]);
printf("|");
}
printf("\n__________\n");
for(i=0;i<n;i++)
{
printf("%d\t",wt[i]);
}
}
}
```

```
#include<stdio.h>
int main(){
int n,i,j,p[30],pr[30],bt[30],wt[30],tat[30],temp;
float awt=0,atat=0,twt=0,tot=0;
printf("Enter the number of process:");
scanf("%d",&n);
printf("Enter the burst time for each process\n");
for(i=0;i<n;i++)
{
scanf("%d",&bt[i]);
p[i]=i+1;
}
printf("Enter the priority for each process\n");
for(i=0;i<n;i++)
{
scanf("%d",&pr[i]);
}
for(i=0;i<n;i++)
{
for(j=i+1;j<n;j++)
{if(pr[i]>pr[j])
{
temp=pr[i];
pr[i]=pr[j];
pr[j]=temp;
temp=bt[i];
bt[i]=bt[j];
bt[j]=temp;
temp=p[i];
p[i]=p[j];
p[j]=temp;
}
}
}
for(i=0;i<n;i++)
{
wt[0]=0;
wt[i+1]=wt[i]+bt[i];
twt=twt+wt[i];
tat[i]=wt[i]+bt[i];
tot=tot+tat[i];
}awt=twt/n;
atat=tot/n;
printf("PROCESS\t\tBURST TIME\t\tPRIORITY\t\tWAITING TIME\t\tTURNAROUND TIME\
n");
for(i=0;i<n;i++)
{
printf("p[%d]\t\t\t%d\t\t\t%d\t\t\t%d\t\t\t%d\n",p[i],bt[i],pr[i],wt[i],tat[i]);
}
printf("\nAverage waiting time:%f\n",awt);
printf("\nAverage turn around time:%f",atat);
printf("\n--------GANTT CHART--------------- \n");
printf("_____________\n");
for(i=0;i<n;i++)
{
printf("p%d\t",p[i]);
printf("|");
}
printf("\n_____________\n");
for(i=0;i<=n;i++) {
printf("%d\t",wt[i]);
}
}
```

```
#include<stdio.h>
void main()
{
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;
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");
scanf("%d", &at[i]);
printf("\nBurst time is: \t");
scanf("%d", &bt[i]);
temp[i] = bt[i];
}
printf("Enter the Time Quantum for the process: \t");
scanf("%d", &quant);
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)
{
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--;
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]);
tat = tat+sum-at[i];
wt=wt+tat-bt[i];
count =0;
}
if(i==NOP-1)
{
i=0;}
else if(at[i+1]<=sum)
{
i++;
}
else
{
i=0;
}
}
avg_wt = wt/NOP; avg_tat = tat/NOP;
 printf("\nAverage Turn Around Time: \t%f", avg_wt);
```