

```

#include<stdio.h>
typedef struct Process
{
    int pid;
    int AT;
    int BT;
    int CT;
    int TAT;
    int WT;
    int m;

}FC;
FC P[],temp;
int n1,n2,sum1=0,sum2=0,c=0;
float T_avg,W_avg;
void sort(FC P[],int n)
{
    for(int i=0;i<n;i++)
    {
        for(int j=i+1;j<n;j++)
        {
            if(P[i].AT>P[j].AT)
            {
                temp=P[i];
                P[i]=P[j];
                P[j]=temp;
            }
        }
    }
}
void calc(FC P[],int n)
{
    for(int i=0;i<n;i++)
    {
        if(P[i].AT<P[i-1].CT)
        {
            c+=P[i].BT;
            P[i].CT=c;
        }
        else
        {
            c+=(P[i].AT-P[i-1].CT)+P[i].BT;
            P[i].CT=c;
        }
    }
}
int main()
{
    printf("Enter the number of System processors:\n");
    scanf("%d",&n1);

```

```

printf("Enter PID,Arrival time and Burst time for system process\n");
for(int i=0;i<n1;i++)
{
    printf("%d.",i+1);
    scanf("%d%d%d",&P[i].pid,&P[i].AT,&P[i].BT);
    P[i].m=0;
}
sort(P,n1);
printf("Enter the number of User processors:\n");
scanf("%d",&n2);
printf("Enter PID,Arrival time and Burst time for user process\n");
for(int i=n1;i<(n1+n2);i++)
{
    printf("%d.",i+1);
    scanf("%d%d%d",&P[i].pid,&P[i].AT,&P[i].BT);
    P[i].m=1;
}
sort(P,n2);
calc(P,(n1+n2));

```

```

for(int i=0;i<(n1+n2);i++)
{
    P[i].TAT=P[i].CT-P[i].AT;
}
for(int i=0;i<(n1+n2);i++)
{
    P[i].WT=P[i].TAT-P[i].BT;
}
printf("PID\tSorU\tAT\tBT\tCT\tTAT\tWT\n");
for(int i=0;i<(n1+n2);i++)
{

```

```

printf("%d\t%d\t%d\t%d\t%d\t%d\t%d\n",P[i].pid,P[i].m,P[i].AT,P[i].BT,P[i].CT,P[i].
TAT,P[i].WT);
}
for(int i=0;i<(n1+n2);i++)
{
    sum1+=P[i].TAT;
}
T_avg=sum1/(n1+n2);
printf("Average of TAT is %f",T_avg);
for(int i=0;i<(n1+n2);i++)
{
    sum2+=P[i].WT;
}
W_avg=sum2/(n1+n2);
printf("Average of WT is %f",W_avg);

```

}