PROGRAM -3

Consider the following set of processes with the length of the CPU burst given in milliseconds.

Process	Burst Time	Priority
P1	2	2
P2	1	1
P3	8	4
P4	4	2
P5	5	4

All processes are assumed to have arrived at time 0 and in the order P1, P2, P3, P4, P5.

Write C program to implement the following:

1. FCFS scheduling
2. Priority scheduling

PRIORITY SCHEDULING CODE:

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
int i,j,n;
int bt[10],p[10],compt[10],wt[10],tat[10];
int temp1,temp2;
float sumwt = 0.0, sumtat = 0.0;
printf("Enter number of processes =");
scanf("%d",&n);
printf("Enter the burst time of %d process\n",n)
for(i=0;i<n;i++)
scanf("%d",&bt[i]);
printf("Enter the priority of %d process\n",n);
for(i=0;i<n;i++)
scanf("%d",&p[i]);
```

```
for(i=0;i<n;i++)
for(j=i+1;j<n;j++)
if(p[i]>p[j])
{
temp1 = bt[i];
bt[i] = bt[j];
bt[j] = temp1;
temp2 = p[i];
p[i] = p[j];
p[j] = temp2;
}
compt[0] = bt[0];
wt[0] = 0;
for(i=1;i<n;i++)
compt[i]=bt[i] + compt[i-1];
for(i=0;i<n;i++)
{
tat[i] = compt[i];
wt[i] = tat[i] – bt[i];
sumtat+=tat[i];
sumwt+=wt[i];
}
printf(“TOTAL WAITING TIME = %f\n”,sumwt);
printf(“AVERAGE WAITING TIME = %f\n”,sumwt/n);
printf(“TOTAL TURNAROUND TIME = %f\n”,sumtat);
printf(“AVERAGE TURNAROUND TIME = %f\n”,sumtat/n);
}
```

FCFS CODE:

```
#include<stdio.h>
#include<stdlib.h>
int main()
{
int i,n;
int sum, wt, tat, twt, ttat;
int bt[10];
float sumwt, sumtat;
printf("Enter number of processes =");
scanf("%d",&n);
printf("Enter the burst time of %d process\n",n)
for(i=0;i<n;i++)
scanf("%d",&bt[i]);
printf("\n FCFS\n");
printf(" Process \t\t Waiting Time \t\t Turn Around Time\n");
printf("1 \t\t\t 0 \t\t\t %d\n",bt[0]);
sum=0;
twt=0;
ttat=bt[0];
for(i=1;i<n;i++)
{
sum+=bt[i-1];
wt=sum;
tat=sum+bt[i];
twt=twt+wt;
ttat=ttat+tat;
printf("\n Process = %d \t\t Waiting Time = %d \t\t Turn Around Time =
%d",i+1,wt,tat);
```

```
printf("\n\n");
}
sumwt=(float)twt/n;
sumtat=(float)ttat/n;
printf("\n Average Waiting Time = %4.2f",sumwt);
printf("\n Average Turn Around Time = %4.2f",sumtat);
}
```