EX NO: 4C	**PRIORITY – SCHEDULING ALGORITHM**
DATE:	

AIM:

To write a ‘C’ program to perform priority scheduling.

ALGORITHM:

1. Start the program.
2. Read burst time, waiting time, turn the around time and priority.
3. Initialize the waiting time for process 1 and 0.
4. Based up on the priority process are arranged
5. The waiting time of all the processes is summed and then the average waiting time
6. The waiting time of each process and average waiting time are displayed based on the priority.
7. Stop the program.

PROGRAM:

```
#include<stdio.h>
void main() {
int i,j,n,tat[10],wt[10],bt[10],pid[10],pr[10],t,twt=0,ttat=0; float
awt,atat;
printf("\n----------PRIORITY SCHEDULING----------\n");
printf("Enter the number of process: ");
scanf("%d",&n); for(i=0;i<n;i++)
{ pid[i]=i;
printf("Enter the Burst time of Pid %d: ",i); scanf("%d",&bt[i]);
printf("Enter the Priority of Pid %d: ",i);
scanf("%d",&pr[i]);
} for(i=0;i<n;i++)
for(j=i+1;j<n;j++
)
{
if(pr[i]>pr[j])
```

```
{ t=pr[i];
pr[i]=pr[j];
pr[j]=t;
t=bt[i];
bt[i]=bt[j];
bt[j]=t;
t=pid[i];
```

```
pid[i]=pid[j];
pid[j]=t;
} } tat[0]=bt[0];
wt[0]=0;
for(i=1;i<n;i++
)
{
wt[i]=wt[i-1]+bt[i-1]; tat[i]=wt[i]+bt[i];
}
printf("\n ---------------------------------- \n");
printf("Pid \t Priority \t Burst time \t WaitingTime \tTurnAroundTime \n");
printf("\n ---------------------------------- \n");
for(i=0;i<n;i++)
{
```

```
printf("\n %d \t\t %d \t\t %d \t\t %d \t\t %d",pid[i],pr[i],bt[i],bt[i],wt[i],ta
t[i]);
}
for(i=0;i<n;i++)
{
ttat=ttat+tat[i];
twt=twt+wt[i];
}
awt=(float)twt/n;
atat=(float)ttat/n;
printf("\n\n Avg.Waiting Time: %f\n Avg.Turn Around Time: %f\n",awt,atat);
}
```

OUTPUT:

```
mohamedinam@Mohamed-Inam-PC: ~
mohamedinam@Mohamed-Inam-PC:~$ gcc priority.c -o priority
mohamedinam@Mohamed-Inam-PC:~$ ./priority

-----------PRIORITY SCHEDULING-----------
Enter the number of process: 4
Enter the Burst time of Pid 0: 2
Enter the Priority of Pid 0: 3
Enter the Burst time of Pid 1: 6
Enter the Priority of Pid 1: 2
Enter the Burst time of Pid 2: 4
Enter the Priority of Pid 2: 1
Enter the Burst time of Pid 3: 5
Enter the Priority of Pid 3: 7

 -----------------------------------
Pid      Priority        Burst time      WaitingTime     TurnAroundTime

 -----------------------------------

 2               1               4               0               4
 1               2               6               4               10
 0               3               2               10              12
 3               7               5               12              17

 Avg.Waiting Time: 6.500000
 Avg.Turn Around Time: 10.750000
mohamedinam@Mohamed-Inam-PC:~$
```

RESULT:

Thus the priority scheduling program was executed and verified successfully