



UNIVERSITY OF ENGINEERING AND TECHNOLOGY, TAXILA

**FACULTY OF TELECOMMUNICATION AND INFORMATION ENGINEERING**

**SOFTWARE ENGINEERING DEPARTMENT**

# **OPERATING SYSTEMS LAB**

Lab 14

Priority Scheduling Algorithm

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**Task:** Write a program for non preemptive priority scheduling algorithm. And compare its results with previous implemented algorithms.

## Solution:

Source Code:

```
#include<stdio.h>
#include<string.h>
void main()
{
    // declare variable and initilize them
    // total number of process
    printf("Enter Number of process : ");
    scanf("%d", &n);
    for(i=0;i<n;i++)
    {
        printf("Enter process Name | Arrival Time | Brust Time :");
        scanf("%s %d %d",&process[i],&Arrival_Time[i],&Burst_Time[i]);
        // take Priority of each process from user as well
    }
    /* Sort in Accending order Process, BrustTime(execution TIME) and
Arrival according to the Priority */
    for(i=0;i<n;i++)
    {
        if(i==0)
            Start_Time[i]=Arrival_Time[i];
        else
            //Start Time = Finish Time;

            //Wait Time = Start Time - Arrival Time;
            //Finish Time = ????.;
            //Turn around Time = Finish Time - Arrival Time;
    }
    printf("\n Process ArrivalTime BrustTime StartTime FinishTime
TurnAroundTime WaitTime Priority");
    for(i=0;i<n;i++)
    {
        printf("\n  %s %10d %10d %10d %10d %13d
%10d",process[i],Arrival_Time[i],Burst_Time[i],Start_Time[i],Finish_Time[i],TA
_Time[i],Wait_Time[i]);
        // Display Priority
    }
    // Average Wait Time
    // Average Turn Around Time
}
```



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Outputs And Comparisons:

Job Arrival Sequence	Length	Priority	Wait Time		
			FCFS	SJF	Priority
1	22	3	0	73	52
2	12	4	22	14	74
3	12	2	34	26	21
4	16	0	46	38	0
5	27	4	62	95	86
6	5	1	89	0	16
7	9	5	94	5	113
8	19	2	103	54	33
Average Waiting Time			56.25	38.125	49.375



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```
[nauman@localhost Priority]$ ./PRIORITY
```

```
Enter Number of process :
```

```
8
```

```
Enter process Name | Arrival Time | Brust Time | Priority Time :p1 0 22 3
```

```
Enter process Name | Arrival Time | Brust Time | Priority Time :p2 0 12 4
```

```
Enter process Name | Arrival Time | Brust Time | Priority Time :p3 0 12 2
```

```
Enter process Name | Arrival Time | Brust Time | Priority Time :p4 0 16 0
```

```
Enter process Name | Arrival Time | Brust Time | Priority Time :p5 0 27 4
```

```
Enter process Name | Arrival Time | Brust Time | Priority Time :p6 0 5 1
```

```
Enter process Name | Arrival Time | Brust Time | Priority Time :p7 0 9 5
```

```
Enter process Name | Arrival Time | Brust Time | Priority Time :p8 0 19 2
```

Process	ArrivalTime	BrustTime	StartTime	FinishTime	TurnArroundTime	WaitTime	Priority
p4	0	16	0	16	16	0	0
p6	0	5	16	21	21	16	1
p3	0	12	21	33	33	21	2
p8	0	19	33	52	52	33	2
p1	0	22	52	74	74	52	3
p2	0	12	74	86	86	74	4
p5	0	27	86	113	113	86	4
p7	0	9	113	122	122	113	5

```
Average Wait Time = 49.375000
```

```
Average Turn Arround Time = 64.625000
```

```
[nauman@localhost Priority]$ █
```

```
priority.c (~/Desktop/... nauman@localhost: ~/...
```