



UNIVERSITY OF ENGINEERING AND TECHNOLOGY, TAXILA

FACULTY OF TELECOMMUNICATION AND INFORMATION ENGINEERING

SOFTWARE ENGINEERING DEPARTMENT

OPERATING SYSTEMS LAB

Lab 12

First Come First Serve CPU Scheduling Algorithm



Discussion:

- Introduction to CPU scheduling
- Schedulers
- Scheduling criteria
- FCFS scheduling algorithm

Task: Write a program for First Come First Serve (FCFS) scheduling algorithm.

CODE:

```
void main()
{
    // declare variable and initialize 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 | Burst Time :");
        scanf("%s %d %d", &process[i], &Arrival_Time[i], &Burst_Time[i]);
    }
    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 BurstTime StartTime FinishTime
TurnAroundTime WaitTime");
    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]);
    }
    // Average Wait Time
    // Average Turn Around Time
}
```



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Output:

```
nauman@localhost:~/Desktop
File Edit View Terminal Help
[nauman@localhost Desktop]$ gcc FCFS.c
[nauman@localhost Desktop]$ ./a.out
Enter Number of process : 3
Enter process Name | Arrival Time | Brust Time :p1 0 24
Enter process Name | Arrival Time | Brust Time :p2 0 3
Enter process Name | Arrival Time | Brust Time :p3 0 3

Process ArrivalTime BrustTime StartTime FinishTime TurnArroundTime WaitTime
p1      0      24      0      24      24      0
p2      0      3      24      27      27      24
p3      0      3      27      30      30      27
Average Wait Time = 17.000000
Average Turn Arround Time = 27.000000
[nauman@localhost Desktop]$ ./a.out
Enter Number of process : 3
Enter process Name | Arrival Time | Brust Time :p1 0 24
Enter process Name | Arrival Time | Brust Time :p2 24 3
Enter process Name | Arrival Time | Brust Time :p3 27 3

Process ArrivalTime BrustTime StartTime FinishTime TurnArroundTime WaitTime
p1      0      24      0      24      24      0
p2     24      3      24      27      3      0
p3     27      3      27      30      3      0
Average Wait Time = 0.000000
Average Turn Arround Time = 10.000000
[nauman@localhost Desktop]$
```



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```
Applications Places System Sun Dec 4, 10:35 PM Mirza Nauman Baig
nauman@localhost:~/Desktop
File Edit View Terminal Help
[nauman@localhost Desktop]$ gcc FCFS.c
[nauman@localhost Desktop]$ ./a.out
Enter Number of process : 3
Enter process Name | Arrival Time | Brust Time :p1 0 24
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Process ArrivalTime BrustTime StartTime FinishTime TurnArroundTime WaitTime
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p2      0      3      24      27      27      24
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[nauman@localhost Desktop]$ ./a.out
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Process ArrivalTime BrustTime StartTime FinishTime TurnArroundTime WaitTime
p1      0      24      0      24      24      0
p2      24      3      24      27      3      0
p3      27      3      27      30      3      0
Average Wait Time = 0.000000
Average Turn Arround Time = 10.000000
[nauman@localhost Desktop]$
```