Mawlana Bhashani Science and Technology University

Lab-Report

Lab Report No: 07

Lab Report Name: Implementation of FCFS Scheduling algorithm. .

Course code: ICT-3110

Course title: Operating System Lab

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Experiment No: 07

Experiment Name: Implementation of FCFS Scheduling algorithm.

Theory: First Come First Served (FCFS) is a Non-Preemptive scheduling algorithm. FIFO (First In First Out) strategy assigns priority to process in the order in which they request the processor. The process that requests the CPU first is allocated the CPU first. This is easily implemented with a FIFO queue for managing the tasks. As the process come in, they are put at the end of the queue. As the CPU finishes each task, it removes it from the start of the queue and heads on to the next task. Turn Around Time = Completion Time - Arrival Time.

Turn Around Time = Completion Time - Arrival Time

Waiting Time = Turnaround time – Burst Time

Code-

Open ▾ | fcfs.c ~/program | Save

```
#include<stdio.h>
int main()
{
int n,a[10],b[10],t[10],w[10],g[10],i,m;
float att=0,awt=0;
        for(i=0;i<10;i++)
        {
              a[i]=0; b[i]=0; w[i]=0; g[i]=0;
        }
printf("enter the number of process");
            scanf("%d",&n);
printf("enter the burst times");
         for(i=0;i<n;i++)
             scanf("%d",&b[i]);
    printf("\nenter the arrival times");
         for(i=0;i<n;i++)
              scanf("%d",&a[i]);
       g[0]=0;
         for(i=0;i<10;i++)
                   g[i+1]=g[i]+b[i];
         for(i=0;i<n;i++)
          {
               w[i]=g[i]-a[i];
                        t[i]=g[i+1]-a[i];
                        awt=awt+w[i];
                        att=att+t[i];
           }
            awt =awt/n;
            att=att/n;
            printf("\n\tprocess\twaiting time\tturn arround time\n");
            for(i=0;i<n;i++)
            {
                        printf("\tp%d\t\t%d\t\t%d\n",i,w[i],t[i]);
            }
printf("the average waiting time is %f\n",awt);
printf("the average turn around time is %f\n",att);
return 0;
}
```

Output:

```
masud@masud-VirtualBox:~/program$ ./fcfs.out
enter the number of process 4
enter the burst times
4 9 8 2

enter the arrival times
0 2 2 5

        process waiting time    turn arround time
        p0              0               4
        p1              2               11
        p2              11              19
        p3              16              18
the average waiting time is 7.250000
the average turn around time is 13.000000
```

Discussion: From this lab we learn FCFS scheduling algorithm which is non-preemptive scheduling algorithm.In this lab we have used c programming language .This lab helps to understand about FCFS scheduling algorithm.