Mawlana Bhashani Science and Technology University

Lab-Report

Report No: 07

Course code: ICT-3110

Course title: Operating System Lab

Date of Performance:

Date of Submission:

Submitted by

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Submitted To

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Experiment No: 07

Experiment Name: Implementation of FCFS scheduling algorithm.

Objectives:

i) What is FCFS scheduling algorithm?
ii) How to implement FCFS scheduling algorithm.

Theory:

FCFS is also known as first come first serve algorithm. It is a scheduling algorithm that automatically executes queued request and processes in order of their arrival. It is the easiest and simplest scheduling algorithm.

In this algorithm, processes which requests the CPU first get the CPU allocation first. This is managed with a FIFO queue. We can also calculate the waiting time of a process and also turnaround time of a process by following the rule.

Waiting time = start time –arrival time

Turnaround time = burst time + waiting time

Source code:

```
#include<bits/stdc++.h>
using namespace std;
int main()
{
	int n,bt[100],i,j,wt=0,tat;
	double twt=0,ttat=0;
	cout<<"Enter total number of process: ";
	cin>>n;
	cout<<endl<<"Enter process burst time"<<endl;
	for(i=1;i<=n;i++)
	{
		cout<<"p"<<i<<": ";
```

```
        cin>>bt[i];
    }
    bt[0]=0;
    cout<<"Process\tBurst Time\tWaiting Time\tTurnaround Time"<<endl;
    for(i=1;i<=n;i++)
    {
        cout<<"p"<<i<<"\t"<<bt[i];
        wt+=bt[i-1];
        twt+=wt;
        cout<<"\t\t"<<wt;
        tat=bt[i]+wt;
        ttat+=tat;
        cout<<"\t\t"<<tat<<endl;
    }
    cout<<"Total wait time: "<<twt<<endl;
    cout<<"Average wait time: "<<double(twt/n)<<endl;
    cout<<"Total turnaround time: "<<ttat<<endl;
    cout<<"Total average turnaround time: "<<double(ttat/n)<<endl;
}
```

Output: