Mawlana Bhashani Science and Technology University

Lab-Report

Lab 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.

Implementation:

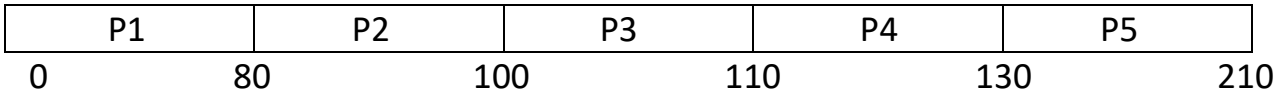
1. Take input of burst time and process.

2. Calculate waiting time = starting time – arrival time.

3. Calculate turnaround time = burst time + waiting time.

Process	Arrival time	Burst time
P1	0	80
P2	0	20
P3	0	10
P4	0	20
P5	0	80

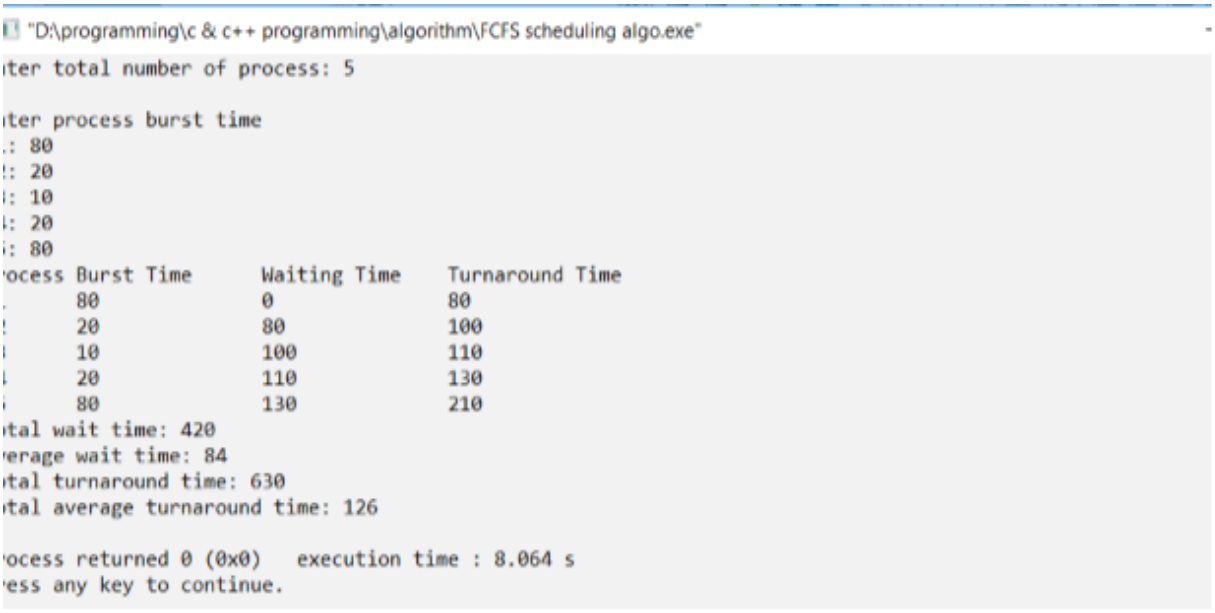
Grant chart:



Process	Arrival time(At)	Burst time(Bt)	Waiting time Wt=st-at	Total turnaround time Tat=wt+bt
P1	0	80	0	80
P2	0	20	80	100
P3	0	10	100	110
P4	0	20	110	130
P5	0	80-	130	210

```
#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:



Conclusion:

In this lab I learn about FCFS scheduling algorithm. I also implement It in c language. The output result is as expected**.**