

**Mawlana Bhashani Science and Technology University**

**Lab-Report**

Report No:07

Course code: ICT-3110

Course title: Operating System Lab

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**Submitted by Submitted To**

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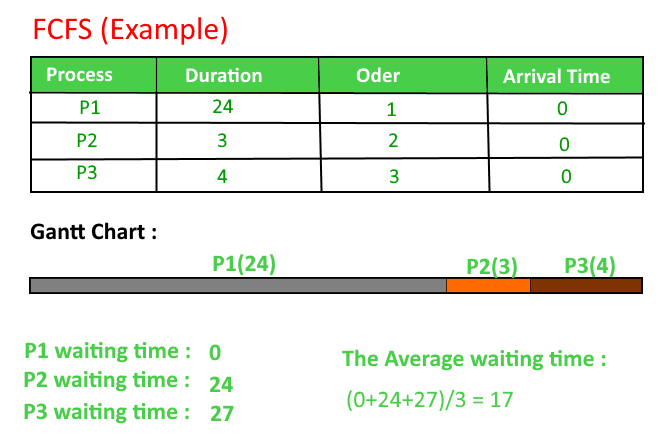
MBSTU.

# Experiment no : 07

# Experiment Name : Implementation of FCFS Scheduling Algorithm

# Theory:

Given n processes with their burst times, the task is to find average waiting time and average turn around time using FCFS scheduling algorithm.First in, first out (FIFO), also known as first come, first served (FCFS), is the simplest scheduling algorithm. FIFO simply queues processes in the order that they arrive in the ready queue.In this, the process that comes first will executed first and next process starts only after the previous gets fully executed.Here we are considering that arrival time for all processes is 0.

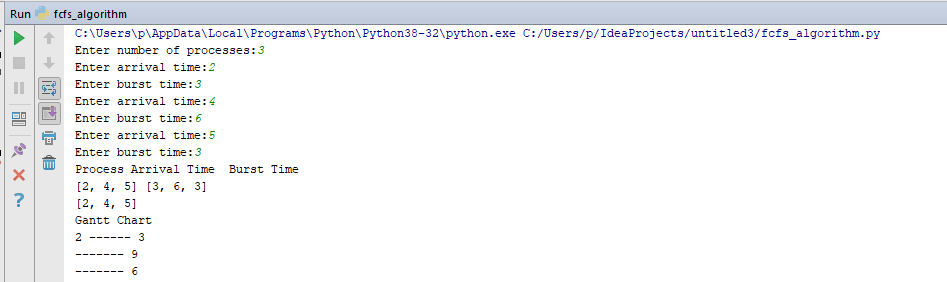


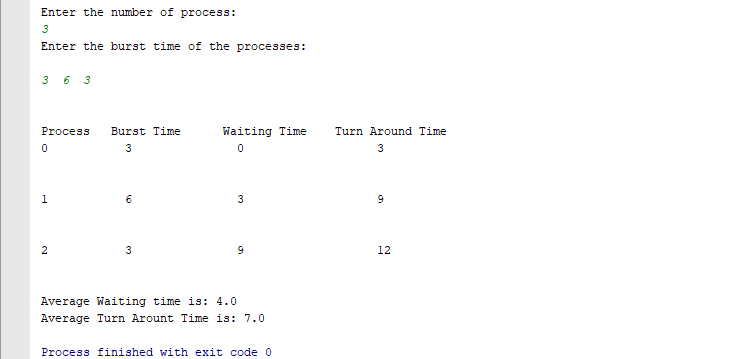
# Working Procedure:

Coding implementation with python ….

*''' Created by asik  
 date:01/09/2020  
'''*arrival\_time=[]  
  
burst\_time=[]  
  
ch=int(input(**"Enter number of processes:"**))  
  
i=0  
  
**while** i<ch:  
  
 a=int(input(**"Enter arrival time:"**))  
 b=int(input(**"Enter burst time:"**))  
 arrival\_time.insert(i,a)  
 burst\_time.insert(i,b)  
 i=i+1  
  
print(**"Process Arrival Time Burst Time "**)  
print(arrival\_time,burst\_time)  
  
count=0  
  
**for** j **in** range(ch-1):  
 **for** l **in** range(1+count,ch):  
 **if** arrival\_time[j]>arrival\_time[1+count]:  
 temp=arrival\_time[j]  
 arrival\_time[j]=arrival\_time[1+count]  
 arrival\_time[1+count]=temp  
 count=count+1  
  
  
print(arrival\_time)  
k=0  
sum=0  
print(**"Gantt Chart"**)  
  
**while** k<ch:  
 **if** k==0:  
 sum=sum+burst\_time[k]  
 print(arrival\_time[k],**"------"**,sum)  
  
 **elif** k>0:  
  
 sum1=sum+burst\_time[k]  
 print(**"-------"**,sum1)  
  
 k=k+1  
bt=[]  
print(**"Enter the number of process: "**)  
n=int(input())  
print(**"Enter the burst time of the processes: \n"**)  
bt=list(map(int, input().split()))  
  
wt=[]  
avgwt=0  
tat=[]  
avgtat=0  
  
wt.insert(0,0)  
tat.insert(0,bt[0])  
  
**for** i **in** range(1,len(bt)):  
 wt.insert(i,wt[i-1]+bt[i-1])  
 tat.insert(i,wt[i]+bt[i])  
 avgwt+=wt[i]  
 avgtat+=tat[i]  
  
avgwt=float(avgwt)/n  
avgtat=float(avgtat)/n  
print(**"\n"**)  
print(**"Process\t Burst Time\t Waiting Time\t Turn Around Time"**)  
  
**for** i **in** range(0,n):  
 print(str(i)+**"\t\t\t"**+str(bt[i])+**"\t\t\t\t"**+str(wt[i])+**"\t\t\t\t\t"**+str(tat[i]))  
 print(**"\n"**)  
  
print(**"Average Waiting time is: "**+str(avgwt))  
print(**"Average Turn Arount Time is: "**+str(avgtat))

# Output:





# Discussion:

Here we can learn fcfs algorithm for cpu scheduling and implement in python.

Advances of fcfs algorithm:

1.The simplest form of a CPU scheduling algorithm

2. Easy to program

3. First come first served