**Exp 6**

**1. FCFS**

**Code:**

#include<stdio.h>

#include<stdlib.h>

#include<string.h>

#include<ctype.h>

struct process

{

char proname[10];

int btime;

int wtime;

int turn\_around\_time;

};

void main()

{

FILE \*fp;

fp=fopen("//home//etc//anand//fcfs\_output.c","w");

struct process p1[20]={0};

int n=0,i,j,k=0,temp=0;

char temp1[10];

float avg\_wtime, total\_wtime, total\_ttime, avg\_ttime;

printf("Enter the no of processes");

scanf("%d",&n);

printf("Enter the details of processes(name,burst time)");

for(i=1;i<=n;i++)

{

printf("\n%d",i);

scanf("%s%d",p1[i].proname,&p1[i].btime);

}

p1[0].wtime=0;

p1[0].btime=0;

for(i=1;i<=n;i++)

{

p1[i].wtime=p1[i-1].btime+p1[i-1].wtime;

total\_wtime=total\_wtime+p1[i].wtime;

p1[i].turn\_around\_time=p1[i].btime+p1[i].wtime;

total\_ttime=total\_ttime+p1[i].turn\_around\_time;

}

fprintf(fp,"Sr.no \tProcess name\tBurst time\twaiting time \t turn around time\n");

for(i=1;i<=n;i++)

{

fprintf(fp,"\n%d\t\t%s\t\t%d\t\t%d\t\t%d",i,p1[i].proname,p1[i].btime,p1[i].wtime,p1[i].turn\_around\_time);

}

avg\_wtime=total\_wtime/n;

fprintf(fp,"\n Average waiting time is %f\n",avg\_wtime);

avg\_ttime=total\_ttime/n;

fprintf(fp,"\n Average turnaround time is %f\n",avg\_ttime);

}

**Output:**

Enter the no of processes 3

Enter the details of processes(name,burst time) a10

b2

c5

Sr.no Process name Burst time waiting time turn around time

1 a 10 0 10

2 b 2 10 12

3 c 5 12 17

Average waiting time is 7.333333

Average turnaround time is 13.000000

**2. SJF**

**Code:**

// shortest job first

#include<stdio.h>

#include<string.h>

struct process

{

char proname[10];

int btime;

int wtime;

int turn\_around\_time;

};

void main()

{

float avg\_wtime, total\_wtime, total\_ttime, avg\_ttime;

FILE \*fp;

fp=fopen("//home//etc//anand//sjf1\_output","w");

struct process p1[10]={0};

int i,j,n;

struct process temp1[10]={0};

printf("Enter the no of processes");

scanf("%d",&n);

printf("Enter the details of processes(name,burst time)");

for(i=1;i<=n;i++)

{

printf("\n%d",i);

scanf("%s%d",p1[i].proname,&p1[i].btime);

}

for(i=0;i<n;i++)

{

for(j=0;j<=n-i-1;j++)

{

if(p1[j].btime>p1[j+1].btime)

{

temp1[j]=p1[j];

p1[j]=p1[j+1];

p1[j+1]=temp1[j];

}

}

}

p1[0].wtime=0;

p1[0].btime=0;

for(i=1;i<=n;i++) //code for calculation of turn around time

{

p1[i].wtime=p1[i-1].btime+p1[i-1].wtime;

total\_wtime=total\_wtime+p1[i].wtime;

p1[i].turn\_around\_time=p1[i].btime+p1[i].wtime;

total\_ttime=total\_ttime+p1[i].turn\_around\_time;

}

fprintf(fp,"Sr.no \tProcess name\tBurst time\twaiting time \t turn around time\n");

for(i=1;i<=n;i++)

{

fprintf(fp,"\n%d\t\t%s\t\t%d\t\t%d\t\t%d",i,p1[i].proname,p1[i].btime,p1[i].wtime,p1[i].turn\_around\_time);

}

avg\_wtime=total\_wtime/n;

fprintf(fp,"\n Average waiting time is %f\n",avg\_wtime);

avg\_ttime=total\_ttime/n;

fprintf(fp,"\n Average turnaround time is %f\n",avg\_ttime);

}

**Output:**

Enter the no of processes 3

Enter the details of processes(name,burst time) a10

b2

c5

Sr.no Process name Burst time waiting time turn around time

1 b 2 0 2

2 c 5 2 7

3 a 10 7 17

Average waiting time is 3.000000

Average turnaround time is 8.666666