**FCFS ALGORITHM**

#include <stdio.h>

void main(){

int n;

printf("Enter number of process: ");

scanf("%d",&n);

int process[n];

int bt[n],wt[n],ct[n];

float twt,ttat;

//numbering the processes

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

process[i]=i;

}

//Getting burst time

printf("Enter Burst times for processes: \n");

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

printf("Process %d: ",i);

scanf("%d",&bt[i]);

}

wt[0] = 0;

ct[0] = bt[0];

// calculating waiting time

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

wt[i] = bt[i-1] + wt[i-1] ;

ct[i] = bt[i] + ct[i-1];

}

printf("\nPID BT WT TAT CT\n");

twt=0;

ttat=0;

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

printf("%d\t",process[i]);

printf("%d\t",bt[i]);

printf("%d\t",wt[i]);

//calculating tat

printf("%d\t",wt[i]+bt[i]);

printf("%d\t",ct[i]);

printf("\n");

twt+=wt[i];//total waiting time

ttat+=(wt[i]+bt[i]);

}

printf("\nAvg. waiting time: %0.2f",(twt/n));

printf("\nAvg. turn around time: %0.2f\n",(ttat/n));

}

**//SHORTEST JOB FIRST**

#include <stdio.h>

void swap(int a[],int i, int j){

int tmp=a[i];

a[i]=a[j];

a[j]=tmp;

}

void main()

{

int n;

printf("Enter number of process: ");

scanf("%d",&n);

int process[n];

int bt[n],wt[n],ct[n],at[n];

float twt,ttat;

//numbering the processes

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

process[i]=i+1;

}

/\*//Getting arrival time

printf("Enter Arrival times for processes: \n");

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

printf("Process %d: ",i);

scanf("%d",&at[i]);

} \*/

//Getting burst time

printf("Enter Burst times for processes: \n");

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

printf("Process %d: ",i+1);

scanf("%d",&bt[i]);

}

// sorting based on burst time

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

for(int j=i+1;j<n;j++){

if(bt[i]>bt[j]){

swap(process,i,j);

//swap(at,i,j);

swap(bt,i,j);

}

}

}

wt[0] = 0;

ct[0] = bt[0];

// calculating waiting time

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

ct[i] = bt[i] + ct[i-1];

wt[i] = ct[i]-bt[i];

}

printf("\nPID BT WT TAT CT\n");

twt=0;

ttat=0;

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

printf("%d\t",process[i]);

//printf("%d\t",at[i]);

printf("%d\t",bt[i]);

printf("%d\t",wt[i]);

//calculating tat

printf("%d\t",ct[i]);

printf("%d\t",ct[i]);

printf("\n");

twt+=wt[i];//total waiting time

ttat+=(wt[i]+bt[i]);

}

printf("\nAvg. waiting time: %0.2f",(twt/n));

printf("\nAvg. turn around time: %0.2f\n",(ttat/n));

}