#include<stdio.h>

#include<stdlib.h>

struct process{

int pid;

int arrival\_time;

int burst\_time;

int FinishTime;

int TurnaroundTime;

int WaitingTime;

};

void print\_struc(struct process proc[],int p){

printf("Process\tAT\tBT\tFT\tTT\tWT\n");

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

printf("%d\t%d\t%d\t%d\t%d\t%d\n",proc[i].pid,proc[i].arrival\_time,proc[i].burst\_time,proc[i].FinishTime,proc[i].TurnaroundTime,proc[i].WaitingTime);

}

}

int main(){

int p;

printf("Enter the no. of processes: ");

scanf("%d",&p);

struct process proc[p];

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

proc[i].pid=i;

}

printf("Enter the arrival time for the processes: ");

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

scanf("%d",&proc[i].arrival\_time);

}

printf("Enter the burst time for the processes: ");

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

scanf("%d",&proc[i].burst\_time);

}

for(int i =0;i<p-1;i++){

for(int j=0;j<p-i-1;j++){

if(proc[j].arrival\_time>proc[j+1].arrival\_time){

struct process temp = proc[j];

proc[j]=proc[j+1];

proc[j+1]=temp;

}

}

}

int curr\_finish=proc[0].arrival\_time;

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

proc[i].FinishTime=proc[i].burst\_time+curr\_finish;

curr\_finish=proc[i].FinishTime;

}

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

proc[i].TurnaroundTime=proc[i].FinishTime-proc[i].arrival\_time;

}

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

proc[i].WaitingTime=proc[i].TurnaroundTime-proc[i].burst\_time;

}

print\_struc(proc,p);

printf("Following is the gantt chart\n");

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

printf("%d\t\t",proc[i].pid);

}printf("\n");

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

printf("%d\t\t",proc[i].FinishTime);

}

return 0;

}

ALTERNATE CODE -->

#include <stdio.h>

#include<stdlib.h>

// FOR FCFS---->>>>

int main()

{// FOR FCFS---->>>>

int n;

printf("Enter the number of processes: ");

scanf("%d", &n);

int burst\_time[n];

int arrival\_time[n];

int comp\_time[n];

int tat[n];

int wait[n];

int comp[n];

printf("Enter the arrival time for each process:\n");

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

{

printf("arrival time of process %d: ", i + 1);

scanf("%d", &arrival\_time[i]);

}

printf("Enter the burst time for each process:\n");

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

{

printf("Burst time of process %d: ", i + 1);

scanf("%d", &burst\_time[i]);

}

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

comp\_time[i]=0;

for(int j=i;j>=0;j--){

comp\_time[i]=comp\_time[i]+burst\_time[j];

comp[i]=comp\_time[i];

}

}

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

tat[i]=comp[i]-arrival\_time[i];

}

printf("completion time of processes are :");

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

printf("%d--",i+1);

printf("%d ",comp[i]);

}

printf("tat time of processes : ");

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

printf("%d--",i+1);

printf("%d ",tat[i]);

}

return 0;

}