

Noakhali Science and Technology University Noakhali-3814.

Online Examination Answer scripts

Year:º.3 T	erm: <u>0.1</u>	Examir	nation, 20.2.1	
Course Title:	Operating	_ System	Lab	
Course Code:	ICE-310)6		
Department:	ICE			
Roll no.: .ASH - 1				
Total number of p	pages :			
Signature of the st	tudent : A	dul Awal	Nadim	
Date of examination	on :			
Signature of invig	ilator :			

throughput, avg. WI avg. TAT

```
SJF
#include <bits/stdet+.h>
using namespace std;
struct os }
        int bt;
        int at;
         int id;
3;
 bool compare (os a, os b) {
       if (a.bt == 6.bt) neturn a.at < b. at;
       neturn a. bt < b. bt;
    int n, at [20], bt[20], et[20], wx[20], tat[20],
int main () }
        bH[20], i, j
    float avwt=0, avtat=0;
   printf ("Enter total number of processes
           (maximum 20):");
    seanf ("Tod", &n);
    printf ("In Enter Process Borst
          Time : \n"):
```

```
for (i=0; izn; i++) {
      printf ("P[%d];", i+1);
      scanf ("ord", &b+[i]);
      6世[门=6地]
                                   Tine: \u');
printf ("In Entery Process Arrival
 for (is i= 0; icn/i++) {
        enint f ("P[%d]:", i+1);
scarf ("%d", 26+[i]);
                            Arrival Time: (n')
 printf ("In Enter Process
   for (i=0; izn; i++) {
           print ( ( [ 76d] : ", i+1);
           scanf ("70d", & at [i]);
     int complete = 0
     for lint time = 0; campletern; }
      vector LOS> Que;
      fortin for (int i=0; izn; i++){
                   if (time > = at[i] and
                        bx[i]!=0)
                    ane.push_back(869[i],afi]iff.
```

```
sont (que bogin (), que end (), compare);
         if ( que empty ()) { time++; continue; }
        int pro=que. front ().id;
         6 t [Pro] -- ;
         time ++!
         if (bt[pro] == 0) {
              ct[ Pro] = fine;
             complete++;
Printf ("In Process It Aritival T & BT & CT HTAT
      A H WTh);
int total_ct=0
 for(i-o;ich;i++) {
      tatei]=cf[i] -at[i]
       w+[i]= +a+[i]- b++[i];
       tatal_ct + = ct[i];
       arwt+=wt[i];
       autat + = tat [i]
       print ("In P[%d] It 70d Hod And
             A 2014 ord, at [i], bHCi],
             extil, tattil, wttil):
```

avwt/=(n*1.0)

avtat/=(n*1.0)

float throughput = (n/(botal-ct*1.0));

cont cc" throughput = "122 throughput ccentl;

cont cc" throughput = "122 convert ccentl;

cont cc" Average wt '2" 2 convert ccentl;

cont cc "Average TAT = "22 avtat centl;

neturn 0;

```
Round Robin
Hirdude Lbits/stdet+.h>
using names pace std;
struct os ?
       int at;
       int id;
     compane (os a, os b) {
         if (a.at == 6.at) a.id < 6.id;
         else neturn a at b, at;
    int i, j, n, time, nemain, flag=0, time_quantum;
 2
 int main () }
   int wait-time = 0, townaround - time = 20, at[10],
   printf ("Enter The Number of Total Process! (t);
   contic "Enter AT of Processes");
   for (i=0; i < n; i++){
          contice " p(9/2d):", i+1);
           ひいかけじ);
           6HCi)=6t[i];
```

```
cont CC " Enter Time onantum" /2 cond);
  cins, time - quantum:
  6001 sex n+2);
 int constate = 0; last =-1;
 float ava-wait = 0, ava-turn=0
 quene Linty neady - quene;
 for (im = 0; completech;) ?
       vectoricos > que;
       for(int i=0; icn: i++)
           if (+ine > at [i] and ses[i] = lalse)
           Que. push_bach ({d(i), i);
           Solse of time + = b+ [pno];
b+[pno]=0; e+[pno]=time;
contice" ( Process & AT HBT HCT, HTAT
           It wt "ccondl;
```

torz (i = 0; icn; i++) { tat = ct[i] - at[i] W+= Frantat -6++Ci] ava-tait + = tal ; ava-wt 4 = wt cont co "etad total i+1 codeisco 64+Ci) eacteil KCWt [i]; floot troput= n/(time*1.0); cont LC "Throughput = " cc throughout 2cendl; cont ex " Average wt = ", LC ava=who ceendl; cent 2c Avenage TAT="1 ccasa-tentracende Feturen 0;

```
Priority
#include < bits/stdet+.h>
using namespace std;
struct os &
         int bt;
         int at;
         int id;
 bool compare (os a, os b) }
        if (a.bt == 6.bt) neturn a.at < b. at
        neturn a. bt < b. bt;
    int n, at [20], 6+[20], et [20], w+[20], tat[20],
 int main () }
         btt[20], i, j.
     float avwt=0, avtat=0; Dar
    printf ("Entered total number of processes
            (moximum 20):");
      seanf ("%d", &n);
     printf ("In Enter Process Borst
            Time : (n");
```

```
sont (que begin (), que end (); conjure);
         if ( ave. empty()) { time++; continue; }
        int pro=que. front ().id;
         6 t [Pro] -- ;
         time ++;
         if (bt[pno] == 0) {
              ct[ Pro] = fine;
              complete++;
printf ("In Process L'Anival T & BT & CT HTAT
       * HWTh);
int total-ct=0
 for(i=0; ich; i++) {
      tatei7=cf[i] -at[i]
       w+[i] = tat[i] - b++[i];
       tatal_ct+=ct[i];
       arw+ + = w+[i];
        autat + = test [i]:
        print ("In P[%d] It Tod Had 47d 47d
              A salt sad, at [i], bHCi],
              excit, tat [i], wt[i]);
```

K:];}

avit/=(n*1.0)

avtat/=(n*1.0)

float Throughput = (r/(lotal_ct*1.0)); to

cont 2c" throughput = "22 throughput czendl;

cont 2c" throughput = "22 cavint czendl;

cont 2c" Average wt '2" 2cavint czendl;

cont 2c" Average TAT = "22 avtat zendl;

neturin 0;

optimal Replacment

for (int time; complete < n;

vector cos > orne;

for (int i = o; i < n; i + t) { ne;