Program Number : 07

1BY18CS177 6 C

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Answer

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#include <stdio.h>
int main()
{
int count, j, n, time, flag=0, time_quantum, ch=0
int wait_time=0, turnaround_time=0 at[10] bt[10] rt[10]
int endtime, i, smallest;
int remain=0, sum_wait=0, sum_turnaround=0;
printf("\n Roundrobin \n 2. SRTF\n");
scanf("%d",&n)
for (i=0; i<n; i++)
{ printf("enter arrival time for process-%d", i+1);
scanf("%d", &at[i]);
printf("enter burst time for process %d", i+1);
scanf("%d", &bt[i]);
rt[i] = bt[i];
}
switch(ch)
{
case 1
printf("enter time quantum : \t")
scanf("%d", &time_quantum);
remain=n;
printf("\n process time / Turnaround Time / wait
for(time=0; count=0; remain!=0);)
{ if(rt[count]<=time_quantum && rt[count]>0
```

```
{
time += bt[count];
bt[count] = 0;
flag = 1;
}
else if (bt[count] > 0)
{
bt[count] -= time_quantum;
time += time_quantum;
}
if (bt[count] == 0 && flag == 1)
{
remain--;
printf("P[%d]\t%d\t%d\t%d\n",
count+1, time-at[count], time-atleast-bt[count]);
waittime += time - at[count] - bt[count];
turnout_time += time - at[count];
flag = 0;
}
if(count == n-1)
count = 0;
else if(at[count+1] <= time)
count++;
else
count = 0;
}
printf("\n Average waiting Time = %.2f\n", wait_time/n);
printf("Avg Turnaround Time = %.2f\n", turnaround_time/n);
```

```
break;
case 2
remain = 0
printf("\n Process | Turnaround Time | Waiting Time \n");
rt[9] = 9999;
for (time=0; remain != n; time++)
{
smallest = 9
for (i=0; i<n; i++)
{
if (at[i]<=time && rt[i]<rt[smallest] && rt[i]>0)
    smallest = i;
}
rt[smallest]--;
if (rt[smallest]==0)
{
remain++;
endTime = time+1
printf("\n P[%d]\t\t %d\t\t %d", smallest+1, endTime-at[smallest], endTime
        -bt[smallest]-at[smallest]);
printf("\n");
sum_wait += endTime - bt[smallest] - at[smallest];
sum_turnaround += endTime - at[smallest];
}}
printf("\n Average waiting time = %f \n", sum_wait*
    1.0);
printf("\n Average Turnaround time = %f", sum_turnaround
                                    *1.0/n);
break;
default:
    printf("Invalid \n"); } return 0; }
```