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Kelas : R2 (Karyawan) / Teknik Informatika

Program Penjadwalan Proses dan Hasil Eksekusi

1. First-come, First-served (FCFS)

```
luthfan@DESKTOP-6URA0ND: ~  
#include <stdio.h>  
  
int main()  
{  
    int bt[20], wt[20], tat[20], i, n;  
    float wtavg, tatavg;  
    printf("\n Enter number of process ... ");  
    scanf("%d", &n);  
    for(i=0; i<n; i++)  
    {  
        printf("\n Enter burst time for process %d...", i);  
        scanf("%d", &bt[i]);  
    }  
    wt[0] = wtavg = 0;  
    tat[0] = tatavg = bt[0];  
  
    for(i=1; i<n; i++)  
    {  
        wt[i] = wt[i-1] + bt[i-1];  
        tat[i] = tat[i-1] + bt[i];  
        wtavg = wtavg + wt[i];  
        tatavg = tatavg + tat[i];  
    }  
    printf("\t PROCESS \t BURST TIME \t WAITING TIME \t TURNAROUND TIME \n");  
    for(i=0; i<n; i++)  
        printf("\n\t P%d \t\t %d \t\t %d \t\t %d \t\t %d", i, bt[i], wt[i], tat[i]);  
    printf("\n Average Waiting Time ... %f", wtavg/n);  
    printf("\n Average Turnaround Time ... %f", tatavg/n);  
}
```

-- INSERT --

28,1 All

```
luthfan@DESKTOP-6URA0ND: ~  
luthfan@DESKTOP-6URA0ND:~$ touch luthfan.c  
luthfan@DESKTOP-6URA0ND:~$ vi luthfan.c  
luthfan@DESKTOP-6URA0ND:~$ gcc luthfan.c -o luthfan.out  
luthfan@DESKTOP-6URA0ND:~$ ./luthfan.out  
  
Enter number of process ... 4  
  
Enter burst time for process 0...1  
  
Enter burst time for process 1...2  
  
Enter burst time for process 2...3  
  
Enter burst time for process 3...5  
PROCESS          BURST TIME    WAITING TIME    TURNAROUND TIME  
P0                1             0               1  
P1                2             1               3  
P2                3             3               6  
P3                5             6              11  
Average Waiting Time ... 2.500000  
Average Turnaround Time ... 5.250000luthfan@DESKTOP-6URA0ND:~$
```

2. Shortest-Job-First (SJF)

```
luthfan@DESKTOP-6URA0ND: ~  
    }  
    for(i=0;i<n;i++)  
        for(k=i+1;k<n;k++)  
            if(bt[i]>bt[k])  
            {  
                temp=bt[i];  
                bt[i]=bt[k];  
                bt[k]=temp;  
                temp=p[i];  
                p[i]=p[k];  
                p[k]=temp;  
            }  
  
    wt[0] = wtavg = 0;  
    tat[0] = tatavg = bt[0];  
    for(i=1;i<n;i++)  
    {  
        wt[i] = wt[i-1] + bt[i-1];  
        tat[i] = tat[i-1] + bt[i];  
        wtavg = wtavg + wt[i];  
        tatavg = tatavg + tat[i];  
    }  
    printf("\n\t PROCESS \tBURST TIME \t WAITING TIME\t TURNAROUND TIME\n");  
    for(i=0;i<n;i++)  
        printf("\n\t P%d \t\t %d \t\t %d \t\t %d", p[i], bt[i], wt[i], tat[i]);  
    printf("\nAverage Waiting Time ... %f", wtavg/n);  
    printf("\nAverage Turnaround Time ... %f", tatavg/n);  
    printf("\n");  
}
```

42,1 Bot

```

luthfan@DESKTOP-6URA0ND: ~
P1      2      1      3
P2      3      3      6
P3      5      6     11
Average Waiting Time ... 2.500000
Average Turnaround Time ... 5.250000luthfan@DESKTOP-6URA0ND:~$
luthfan@DESKTOP-6URA0ND:~$ touch luthfan1.c
luthfan@DESKTOP-6URA0ND:~$ vi luthfan1.c
luthfan@DESKTOP-6URA0ND:~$ vi luthfan1.c
luthfan@DESKTOP-6URA0ND:~$ gcc luthfan1.c -o luthfan.out
luthfan@DESKTOP-6URA0ND:~$ vi luthfan1.c
luthfan@DESKTOP-6URA0ND:~$ ./luthfan1.out
-bash: ./luthfan1.out: No such file or directory
luthfan@DESKTOP-6URA0ND:~$ gcc luthfan1.c -o luthfan1.out
luthfan@DESKTOP-6URA0ND:~$ ./luthfan1.out

Enter the number of processes ...4
Enter Burst Time for Process 0 ...1
Enter Burst Time for Process 1 ...2
Enter Burst Time for Process 2 ...3
Enter Burst Time for Process 3 ...5

PROCESS      BURST TIME      WAITING TIME      TURNAROUND TIME
P0           1           0           1
P1           2           1           3
P2           3           3           6
P3           5           6          11
Average Waiting Time ... 2.500000
Average Turnaround Time ... 5.250000
luthfan@DESKTOP-6URA0ND:~$

```

3. Round-Robin (RR)

```

luthfan@DESKTOP-6URA0ND: ~
for(i = 1; i < n; i++)
    if(max < bu[i])
        max = bu[i];
for(j = 0; j < (max/t)+1; j++)
    for(i = 0; i < n; i++)
        if(bu[i] != 0)
            if(bu[i] <= t)
            {
                tat[i]=temp + bu[i];
                temp=temp + bu[i];
                bu[i] = 0;
            }
            else
            {
                bu[i] = bu[i] - t;
                temp = temp + t;
            }
for(i=0;i<n;i++)
{
    wa[i]=tat[i]-ct[i];
    att+=tat[i];
    awt+=wa[i];
}
printf("\nThe average turnaround time is ... %f",att/n);
printf("\nThe average waiting time is ... %f ",awt/n);
printf("\n\tPROCESS\t BURST TIME \t WAITING TIME\tTURNAROUND TIME\n");
for(i=0;i<n;i++)
    printf("\t%d \t %d \t\t %d \t\t %d \n",i+1,ct[i],wa[i],tat[i]);
}
"luthfan2.c" 45L, 1018C
44,57-71 Bot

```

```
luthfan@DESKTOP-6URA0ND: ~  
The average turnaround time is ... 5.250000  
The average waiting time is ... 2.500000  
  PROCESS  BURST TIME  WAITING TIME  TURNAROUND TIME  
    1      1          0           1  
    2      2          1           3  
    3      3          3           6  
    4      5          6          11  
luthfan@DESKTOP-6URA0ND:~$ vi luthfan2.c  
luthfan@DESKTOP-6URA0ND:~$ ./luthfan2.out  
Enter number of process ... 4  
  
Enter burst time for process 1 ... 1  
Enter burst time for process 2 ... 2  
Enter burst time for process 3 ... 3  
Enter burst time for process 4 ... 5  
Enter the size of time slice ... 6  
  
The average turnaround time is ... 5.250000  
The average waiting time is ... 2.500000  
  PROCESS  BURST TIME  WAITING TIME  TURNAROUND TIME  
    1      1          0           1  
    2      2          1           3  
    3      3          3           6  
    4      5          6          11  
luthfan@DESKTOP-6URA0ND:~$
```