

Nama : Haikal Fikri Rejani
NIM : 17.01.53.2035
Kelas : R2 (Karyawan) / Teknik Informatika

Program Penjadwalan Proses dan Hasil Eksekusi

1. First come

```
haikal@DESKTOP-6URA0ND: ~  
Setting up libisl19:amd64 (0.19-1) ...  
Setting up libasan4:amd64 (7.3.0-27ubuntu1~18.04) ...  
Setting up libbinutils:amd64 (2.30-21ubuntu1~18.04) ...  
Setting up libcilkrts5:amd64 (7.3.0-27ubuntu1~18.04) ...  
Setting up libubsan0:amd64 (7.3.0-27ubuntu1~18.04) ...  
Setting up libgcc-7-dev:amd64 (7.3.0-27ubuntu1~18.04) ...  
Setting up cpp-7 (7.3.0-27ubuntu1~18.04) ...  
Setting up binutils-x86-64-linux-gnu (2.30-21ubuntu1~18.04) ...  
Setting up cpp (4:7.3.0-3ubuntu2.1) ...  
Setting up binutils (2.30-21ubuntu1~18.04) ...  
Setting up gcc-7 (7.3.0-27ubuntu1~18.04) ...  
Setting up gcc (4:7.3.0-3ubuntu2.1) ...  
Processing triggers for libc-bin (2.27-3ubuntu1) ...  
haikal@DESKTOP-6URA0ND:~$ gcc haikalfc.c -o haikalfc.out  
haikal@DESKTOP-6URA0ND:~$ ./haikalfc.out  
  
Enter the number of processes -- 3  
  
Enter Burst Time for Process 0 -- 2  
  
Enter Burst Time for Process 1 -- 1  
  
Enter Burst Time for Process 2 -- 2  
  
PROCESS          BURST TIME    WAITING TIME  TURNAROUND TIME  
P0                2              0              2  
P1                1              2              3  
P2                2              3              5  
Average Waiting Time -- 1.666667  
Average Turnaround Time -- 3.333333haikal@DESKTOP-6URA0ND:~$
```

```
haikal@DESKTOP-6URA0ND: ~  
#include <stdio.h>  
  
int main()  
{  
    int bt[20], wt[20], tat[20], i, n;  
    float wtavg, tatavg;  
    printf("\nEnter the number of processes -- "); scanf("%d", &n);  
    for(i = 0 ; i < n; i++)  
    {  
        printf("\nEnter 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 \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", i, bt[i], wt[i], tat[i]);  
    printf("\nAverage Waiting Time -- %f", wtavg/n);  
    printf("\nAverage Turnaround Time -- %f", tatavg/n);  
}
```

2. Shortest-Job-First (SJF)

```
haikal@DESKTOP-6URA0ND: ~  
haikal@DESKTOP-6URA0ND:~$ ./haikalfc.out  
Enter the number of processes -- 3  
Enter Burst Time for Process 0 -- 2  
Enter Burst Time for Process 1 -- 1  
Enter Burst Time for Process 2 -- 2  
PROCESS          BURST TIME    WAITING TIME    TURNAROUND TIME  
P0                2              0                2  
P1                1              2                3  
P2                2              3                5  
Average Waiting Time -- 1.666667  
Average Turnaround Time -- 3.333333haikal@DESKTOP-6URA0ND:~$ vi haikalfc.c  
haikal@DESKTOP-6URA0ND:~$ touch haikalsj.c  
haikal@DESKTOP-6URA0ND:~$ vi haikalsj.c  
haikal@DESKTOP-6URA0ND:~$ gcc haikalsj.c -o haikalsj.out  
haikal@DESKTOP-6URA0ND:~$ ./haikalsj.out  
Enter the number of processes -- 1  
Enter Burst Time for Process 0 -- 2  
PROCESS          BURST TIME    WAITING TIME    TURNAROUND TIME  
P0                2              0                2  
Average Waiting Time -- 0.000000  
Average Turnaround Time -- 2.000000  
haikal@DESKTOP-6URA0ND:~$
```

```
haikal@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");  
"haikalsj.c" 40L, 910C 40,1 Bot
```

3. Round-Robin (RR)

```

haikal@DESKTOP-6URA0ND: ~
haikal@DESKTOP-6URA0ND:~$ vi haikalsj.c
haikal@DESKTOP-6URA0ND:~$ touch haikalr.c
haikal@DESKTOP-6URA0ND:~$ vi haikalr.c
haikal@DESKTOP-6URA0ND:~$ gcc haikalr.c -o haikalr.out
haikal@DESKTOP-6URA0ND:~$ ./haikalr.out
Enter the no of processes -- 1

Enter Burst Time for process 1 -- 2

Enter the size of time slice -- 3

The Average Turnaround time is -- 2.000000
The Average Waiting time is -- 0.000000
  PROCESS  BURST TIME  WAITING TIME  TURNAROUND TIME
    1         2           0             2
haikal@DESKTOP-6URA0ND:~$ ./haikalr.out
Enter the no of processes -- 2

Enter Burst Time for process 1 -- 3

Enter Burst Time for process 2 -- 4

Enter the size of time slice -- 54

The Average Turnaround time is -- 5.000000
The Average Waiting time is -- 1.500000
  PROCESS  BURST TIME  WAITING TIME  TURNAROUND TIME
    1         3           0             3
    2         4           3             7
haikal@DESKTOP-6URA0ND:~$

```

```

haikal@DESKTOP-6URA0ND: ~
    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 %d \t %d \n", i+1, ct[i], wa[i], tat[i]);
}

```

"haikalr.c" 48L, 1018C

48,0-1 Bot