

NAMA;MUHAMMAD AFIF RIFAI

NIM;17.01.53.2004

TUGAS PEMROGRAMAN

1.FCFS

```
ifan@AFIF-KOMP: ~  
#include<stdio.h>  
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("\n 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);  
}
```

fcfsafif.c" 29L, 718C 26,37-44 All

```
ifan@AFIF-KOMP: ~  
ifan@AFIF-KOMP:~$ touch fcfsafif.c  
ifan@AFIF-KOMP:~$ vi fcfsafif.c  
ifan@AFIF-KOMP:~$ gcc fcfsafif.c -o fcfsafif.out  
fcfsafif.c:2:1: warning: return type defaults to 'int' [-Wimplicit-int]  
main()  
{  
ifan@AFIF-KOMP:~$ ./fcfsafif.out  
-bash: ./fcfsafif.out: No such file or directory  
ifan@AFIF-KOMP:~$ ./fcfsafif.out  
  
Enter the number of processes -- 6  
Enter Burst Time for Process 0 -- 20  
Enter Burst Time for Process 1 -- 40  
Enter Burst Time for Process 2 -- 30  
Enter Burst Time for Process 3 -- 10  
Enter Burst Time for Process 4 -- 50  
Enter Burst Time for Process 5 -- 15  


| PROCESS | BURST TIME | WAITING TIME | TURNAROUND TIME |
|---------|------------|--------------|-----------------|
| P0      | 20         | 0            | 20              |
| P1      | 40         | 20           | 60              |
| P2      | 30         | 60           | 90              |
| P3      | 10         | 90           | 100             |
| P4      | 50         | 100          | 150             |
| P5      | 15         | 150          | 165             |

  
Average Waiting Time -- 70.000000  
Average Turnaround Time -- 97.500000  
ifan@AFIF-KOMP:~$
```

2.SJF.

```
rifan@AFIF-KOMP: ~  
rifan@AFIF-KOMP:~$ ./sjfafif.out  
Enter the number of processes -- 5  
Enter Burst Time for Process 0 -- 40  
Enter Burst Time for Process 1 -- 35  
Enter Burst Time for Process 2 -- 10  
Enter Burst Time for Process 3 -- 50  
Enter Burst Time for Process 4 -- 100  


| PROCESS | BURST TIME | WAITING TIME | TURNAROUND TIME |
|---------|------------|--------------|-----------------|
| P2      | 10         | 0            | 10              |
| P1      | 35         | 10           | 45              |
| P0      | 40         | 45           | 85              |
| P3      | 50         | 85           | 135             |
| P4      | 100        | 135          | 235             |

  
Average Waiting Time -- 55.000000  
Average Turnaround Time -- 102.000000  
rifan@AFIF-KOMP:~$  
  
rifan@AFIF-KOMP:~$  
#include <stdio.h>  
main()  
{  
    int p[20], bt[20], wt[20], tat[20], i, k, n, temp;  
    float wtavg, tatavg;  
    printf("\nEnter the number of processes -- ");  
    scanf("%d", &n);  
    for(i=0; i<n; i++)  
    {  
        p[i]=i;  
        printf("Enter Burst Time for Process %d -- ", i);  
        scanf("%d", &bt[i]);  
    }  
    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[i] = wtavg = 0;  
        tat[i] = tatavg = bt[i];  
        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]);  
        }  
    }  
}
```

33.RR

```

rifan@AFIF-KOMP: ~
rifan@AFIF-KOMP:~$ ./rrafif.out
-bash: ./rrafif.out: No such file or directory
rifan@AFIF-KOMP:~$ gcc rrafif.c -o rrafif.out
rrafif.c:2:1: warning: return type defaults to 'int' [-Wimplicit-int]
main()
^~~~~~
rifan@AFIF-KOMP:~$ ./rrafif.out
Enter the no of processes -- 5
Enter Burst Time for process 1 -- 20
Enter Burst Time for process 2 -- 10
Enter Burst Time for process 3 -- 30
Enter Burst Time for process 4 -- 60
Enter Burst Time for process 5 -- 40
Enter the size of time slice -- 5
The Average Turnaround time is -- 104.000000
The Average Waiting time is -- 72.000000
  PROCESS  BURST TIME  WAITING TIME  TURNAROUND TIME
    1         20         55           75
    2         10         25           35
    3         30         80          110
    4         60        100          160
    5         40        100          140
rifan@AFIF-KOMP:~$

```

```

rifan@AFIF-KOMP: ~
#include<stdio.h>
main()
{
    int i,j,n,bu[10],wa[10],tat[10],t,ct[10],max;
    float awt=0,att=0,temp=0;
    printf("Enter the no of processes -- ");
    scanf("%d",&n);
    for(i=0;i<n;i++)
    {
        printf("\nEnter Burst Time for process %d -- ",i+1);
        scanf("%d",&bu[i]);
        ct[i]=bu[i];
    }
    printf("\nEnter the size of time slice -- ");
    scanf("%d",&t);
    max=bu[0];
    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 %d \t %d \n",i+1,ct[i],wa[i],tat[i]);
}

```