

MID Name - Metali Aarora
TERM Course - BSCIT
(Practical) Section - 2B
Campus - Dehradun
Student ID - 20052094

①

OPERATING SYSTEM

Metali
22/6/21

Ques 2. Program to implement SJF.

```
#include <stdio.h>
#define max 30

int main()
{
    int i, j, n, t, p[max], bt[max], wt[max], tat[max];
    float awt = 0, atat = 0;

    printf("Enter the number of processes\n");
    scanf("%d", &n);

    printf("Enter the process number\n");
    for(i = 0; i < n; i++)
    {
        scanf("%d", &p[i]);
    }

    printf("Enter the burst time of the process\n");
    for(i = 0; i < n; i++)
    {
        scanf("%d", &bt[i]);
    }
}
```


②

```
for(i=0; i<n; i++)  
{  
    for(j=0; j<n-i-1; j++)  
    {  
        if (bt[j] > bt[j+1])  
        {  
            t = bt[j];  
            bt[j] = bt[j+1];  
            bt[j+1] = t;
```

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```
            t = p[j];  
            p[j] = p[j+1];  
            p[j+1] = t;  
        }  
    }  
}
```

```
printf("process\t Burst time\t Waiting Time\t  
Turnaround time\t");
```

```
for(i=0; i<n; i++)
```

```
{  
    wt[i] = 0;  
    tat[i] = 0;
```

```
    for(j=0; j<i; j++)
```

```
    {  
        wt[i] = wt[i] + bt[j];
```

```
    }
```


(2)

```
    tat[i] = wt[i] + bt[i];  
    awt = awt + wt[i];  
    atat = atat + tat[i];  
    printf("%d\t %d\t\t %d\t\t %d\n", p[i],  
        bt[i], wt[i], tat[i]);  
}  
    awt = awt/n;  
    atat = atat/n;  
    printf("Average waiting Time = %f\n", awt);  
    printf("Average Turnaround Time = %f\n", atat);  
    return 0;  
}
```

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```
File Edit View Compiler Settings Help
*CAUsers\jasar\Documents\C programming\fcfs\bin\Debug\fcfs.exe*
Enter the number of process
4
Enter the process number
1
2
3
4
Enter the burst time of the process
10
1
2
3
4
Process Burst time Waiting time Turnaround time
3 1 1 2
2 2 1 3
4 4 1 5
1 10 1 11
Average Waiting Time = 1.000000
Average Turnaround Time = 5.250000
Process returned 0 (0x0) execution time : 41.067 s
Press any key to continue.
```

```
101 return 0;
102 }
103 }
```

Logs & others

```
Code::Blocks Search results Cccc Build log Build messages CppCheck/Vera++ CppCheck/Vera++ messages Cscope Debugger DoxyBlocks Fortran info
----- Run: Debug in fcfs (compiler: GNU GCC Compiler)-----
Checking for existence: C:\Users\jasar\Documents\C programming\fcfs\bin\Debug\fcfs.exe
Set variable: PATH=.;C:\Program Files\CodeBlocks\MinGW\bin;C:\Program Files\CodeBlocks\MinGW\bin\Program Files\Common Files\Oracle\Java\javapath;C:\Program Files (x86)\Common Files\Oracle\Java\javapath;C:\Windows\System32;C:\Windows\System32\wbem;C:\Windows\System32\WindowsPowerShell\v1.0;C:\Windows\System32\OpenSSH;C:\Program Files (x86)\NVIDIA Corporation\PhysX\Common;C:\Program Files\NVIDIA Corporation\NVIDIA NVDLISR;C:\Program Files\nodejs;C:\Program Files\PowerShell\7;C:\Program Files\Git\cmd;C:\Users\jasar\AppData\Local\Microsoft\WindowsApps;C:\Users\jasar\AppData\Local\Programs\Microsoft VS Code\bin;C:\Users\jasar\AppData\Roaming\npm;C:\Program Files (x86)\apache-maven-3.8.1\bin;C:\Program Files\Java\jdk-15.0.2\bin
Executing: "C:\Program Files\CodeBlocks\cb_console_runner.exe" "C:\Users\jasar\Documents\C programming\fcfs\bin\Debug\fcfs.exe" (in C:\Users\jasar\Documents\C programming\fcfs\.)
```