FCFS.cpp | SJF.cpp | sjfWithArrival.cpp

```cpp
#include <bits/stdc++.h>
using namespace std;

int main()
{
    int n, i;
    cout << "Enter number of processes: ";
    cin >> n;
    int pid[n], bt[n], wt[n], tat[n];
    for (i = 0; i < n; i++)
    {
        cout << "Enter burst time for Process " << i + 1 << ": ";
        cin >> bt[i];
        pid[i] = i + 1;
    }
    wt[0] = 0;
    for (i = 1; i < n; i++)
    {
        wt[i] = wt[i - 1] + bt[i - 1];
    }
    for (i = 0; i < n; i++)
    {
        tat[i] = wt[i] + bt[i];
    }
    float total_wt = 0, total_tat = 0;
    cout << "\nProcess\tBurst Time\tWaiting Time\tTurnar
    for (i = 0; i < n; i++)
    {
        cout << pid[i] << "\t" << bt[i] << "\t\t" << wt
        total_wt += wt[i];
        total_tat += tat[i];
    }

    cout << "\nAverage Waiting Time: " << total_wt / n;
```

C:\Users\nayan\Dow... | C/C++ | Windows (CR+LF) | WINDOWS-1252 | Line 31, Col 9, Po

Select C:\Users\nayan\Downloads\FCFS.exe

```
Enter number of processes: 3
Enter burst time for Process 1: 5
Enter burst time for Process 2: 3
Enter burst time for Process 3: 8

Process Burst Time      Waiting Time    Turnaround Time
1       5               0               5
2       3               5               8
3       8               8               16

Average Waiting Time: 4.33333
Average Turnaround Time: 9.66667
```

*SJF.cpp sjfWithArrival.cpp

```cpp
#include <iostream>
using namespace std;
int main()
{
    int n;
    cout << "Enter number of processes: ";
    cin >> n;

    int pid[n], bt[n], wt[n], tat[n];
    for (int i = 0; i < n; i++)
    {
        cout << "Enter burst time for Process " << i + 1 << ": ";
       cin >> bt[i];
        pid[i] = i + 1;
    }

    for (int i = 0; i < n - 1; i++)
    {
        for (int j = i + 1; j < n; j++)
        {
            if (bt[i] > bt[j])
            {
                swap(bt[i], bt[j]);
                swap(pid[i], pid[j]);
            }
        }
    }

    wt[0] = 0;
    for (int i = 1; i < n; i++)
    {
        wt[i] = wt[i - 1] + bt[i - 1];
    }
    for (int i = 0; i < n; i++)
```

n\Dow... C/C++ Windows (CR+LF) WINDOWS-1252 Line 37, C

Select C:\Users\nayan\Downloads\SJF.exe

```
Enter number of processes: 3
Enter burst time for Process 1: 5
Enter burst time for Process 2: 3
Enter burst time for Process 3: 8

Process Burst Time      Waiting Time    Turnaround Time
2       3               0               3
1       5               3               8
3       8               8               16

Average Waiting Time: 3.66667 ms
Average Turnaround Time: 9 ms
```

*SJF.cpp sjfWithArrival.cpp

```cpp
#include <iostream>
using namespace std;

int main() {
    int n;
    cout << "Enter number of processes: ";
    cin >> n;

    int at[n], bt[n], rt[n], wt[n], tat[n];
    int complete = 0, time = 0, shortest = 0;
    bool found = false;
    float total_wt = 0, total_tat = 0;


    for (int i = 0; i < n; i++) {
        cout << "Enter arrival time for Process " << i + 1 << ":
        cin >> at[i];
        cout << "Enter burst time for Process " << i + 1 << ": "
        cin >> bt[i];
        rt[i] = bt[i];
    }


    while (complete != n) {
        int minm = 1e9;
        found = false;

        for (int i = 0; i < n; i++) {
            if (at[i] <= time && rt[i] > 0 && rt[i] < minm) {
                minm = rt[i];
                shortest = i;
                found = true;
            }
        }
```

C/C++ | Windows (CR+LF) | WINDOWS-1252 | Line 1, Col 1, Pos 0

Select C:\Users\nayan\Downloads\sjfWithArrival.exe

```
Enter number of processes: 5
Enter arrival time for Process 1: 2
Enter burst time for Process 1: 6
Enter arrival time for Process 2: 5
Enter burst time for Process 2: 2
Enter arrival time for Process 3: 1
Enter burst time for Process 3: 8
Enter arrival time for Process 4: 0
Enter burst time for Process 4: 3
Enter arrival time for Process 5: 4
Enter burst time for Process 5: 4

Process AT      BT      WT      TAT
1       2       6       7       13
2       5       2       0       2
3       1       8       14      22
4       0       3       0       3
5       4       4       2       6

Average Waiting Time: 4.6
Average Turnaround Time: 9.2
```