Os Practical 4 os

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#include <iostream>
#include <iomanip>
using namespace std;

int main() {
    int total_process;
    int burst_time[30], waiting_time[30], turnaround_time[30];
      float average_waiting_time = 0.0, average_turnaround_time =
0.0;

    // Input the number of processes
    cout << "Enter the Number of Processes to Execute: ";
    cin >> total_process;

    // Input the burst times of the processes
    cout << "Enter the Burst Time of Processes:\n";
    for (int count = 0; count < total_process; count++) {
        cout << "Process [" << count + 1 << "]: ";
        cin >> burst_time[count];
    }

    // Initialize waiting time for the first process
    waiting_time[0] = 0;

    // Calculate waiting times
    for (int count = 1; count < total_process; count++) {
        waiting_time[count] = 0;
        for (int j = 0; j < count; j++) {
            waiting_time[count] += burst_time[j];
        }
    }
```

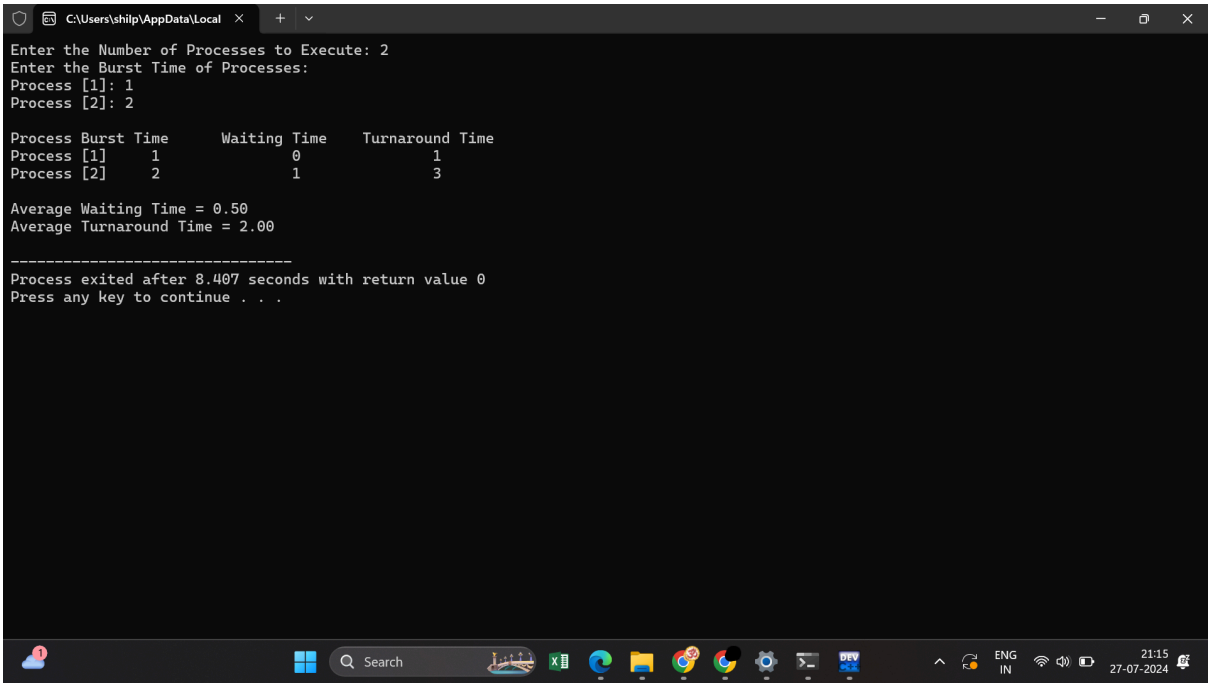
```
    // Calculate turnaround times and averages
        cout << "\nProcess\tBurst Time\tWaiting Time\tTurnaround Time\n";
    for (int count = 0; count < total_process; count++) {
                        turnaround_time[count] = burst_time[count] + waiting_time[count];
        average_waiting_time += waiting_time[count];
        average_turnaround_time += turnaround_time[count];
        cout << "Process [" << count + 1 << "]\t"
            << burst_time[count] << "\t\t"
            << waiting_time[count] << "\t\t"
            << turnaround_time[count] << endl;
    }

    // Calculate and print averages
    average_waiting_time /= total_process;
    average_turnaround_time /= total_process;

     cout << "\nAverage Waiting Time = " << fixed << setprecision(2) << average_waiting_time << endl;
          cout << "Average Turnaround Time = " << fixed << setprecision(2) << average_turnaround_time << endl;

    return 0;
}
```

OutPut:


C:\Users\shilp\AppData\Local
Enter the Number of Processes to Execute: 2
Enter the Burst Time of Processes:
Process [1]: 1
Process [2]: 2
Process Burst Time Waiting Time Turnaround Time
Process [1] 1 0 1
Process [2] 2 1 3
Average Waiting Time = 0.50
Average Turnaround Time = 2.00
Process exited after 8.407 seconds with return value 0
Press any key to continue . . .
Search
ENG
IN
21:15
27-07-2024