#include <stdio.h>

struct Process {

int pid; // Process ID

int arrivalTime; // Arrival time

int burstTime; // Burst time

int waitingTime; // Waiting time

int turnaroundTime; // Turnaround time

};

int main() {

int n;

printf("Enter the number of processes: ");

scanf("%d", &n);

struct Process processes[n];

printf("\nEnter the arrival time and burst time for each process:\n");

for (int i = 0; i < n; i++) {

processes[i].pid = i + 1;

printf("Process %d:\n", i + 1);

printf("Arrival Time: ");

scanf("%d", &processes[i].arrivalTime);

printf("Burst Time: ");

scanf("%d", &processes[i].burstTime);

}

int totalWaitingTime = 0, totalTurnaroundTime = 0;

processes[0].waitingTime = 0;

processes[0].turnaroundTime = processes[0].burstTime;

for (int i = 1; i < n; i++) {

processes[i].waitingTime = processes[i - 1].waitingTime + processes[i - 1].burstTime;

processes[i].turnaroundTime = processes[i].waitingTime + processes[i].burstTime;

}

printf("\nProcess\tArrival Time\tBurst Time\tWaiting Time\tTurnaround Time\n");

for (int i = 0; i < n; i++) {

printf("%d\t%d\t\t%d\t\t%d\t\t%d\n", processes[i].pid, processes[i].arrivalTime,

processes[i].burstTime, processes[i].waitingTime, processes[i].turnaroundTime);

totalWaitingTime += processes[i].waitingTime;

totalTurnaroundTime += processes[i].turnaroundTime;

}

printf("\nAverage Waiting Time: %.2f\n", (float)totalWaitingTime / n);

printf("Average Turnaround Time: %.2f\n", (float)totalTurnaroundTime / n);

return 0;

}

Output:

Enter the number of processes: 3

Enter the arrival time and burst time for each process:

Process 1:

Arrival Time: 0

Burst Time: 5

Process 2:

Arrival Time: 1

Burst Time: 3

Process 3:

Arrival Time: 2

Burst Time: 6

Process Arrival Time Burst Time Waiting Time Turnaround Time

1 0 5 0 5

2 1 3 5 8

3 2 6 8 14

Average Waiting Time: 4.33

Average Turnaround Time: 9.00