4B OS lab assignment 06

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cs182019.cpp

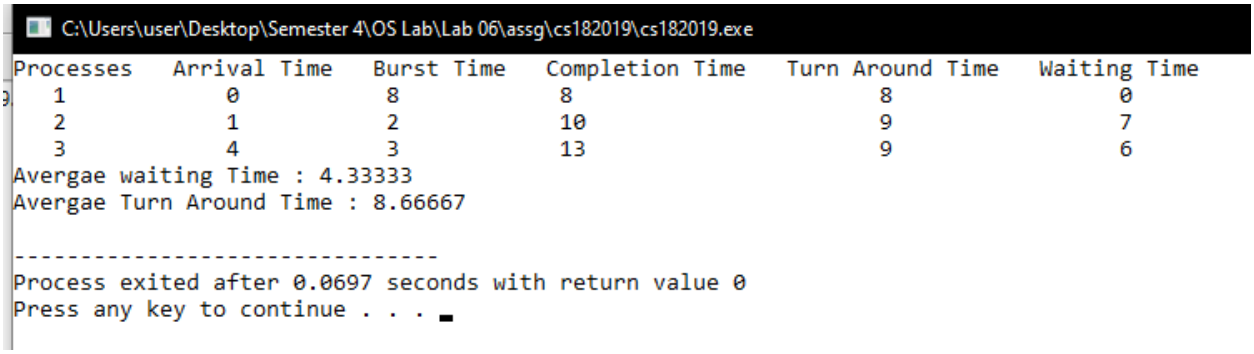
```cpp
#include <iostream>
using namespace std;

void swap(int *xp , int *yp)
{
    int temp = *xp;
    *xp=*yp;
    *yp=temp;
}

void findCompletionTime(int process[], int n, int at[],int bt[], int ct[])
{
    int i,j;
    for(i=0;i<n-1;i++)
    {
        for(j=0;j<n-i-1;j++)
        {
            if((at[j]>at[j+1])&&(bt[j]>bt[j+1]))
            {
                swap(&at[j],&at[j+1]);
                swap(&bt[j],&bt[j+1]);
            }
        }
    }

    ct[0]=bt[0];

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

cs182019.cpp

```cpp
void findTurnAroundTime( int processes[],int n , int at[], int tat[],int ct[])
{
    for(int i=0;i<n;i++)
    {
        tat[i]=ct[i]-at[i];
    }
}

void findWaitingTime(int processes[], int n , int wt[], int tat[], int bt[])
{
    wt[0]=0;

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

void findAvgTime(int processes[], int n , int bt[], int at[])
{
    int wt[n], tat[n] , ct[n],total_wt=0 , total_tat=0;

    findCompletionTime(processes,n,at,bt,ct);

    findTurnAroundTime(processes,n,at,tat,ct);

    findWaitingTime(processes,n,wt,tat,bt);

    cout<<"Processes  "<<" Arrival Time  "<<" Burst Time  "<<" Completion Time  "<<" Turn Around Time  "<<" Waiting Time\n";


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

```cpp
    findTurnAroundTime(processes,n,at,tat,ct);

    findWaitingTime(processes,n,wt,tat,bt);

    cout<<"Processes  "<<" Arrival Time  "<<" Burst Time  "<<" Completion Time  "<<" Turn Around Time  "<<" Waiting Time\n";


    for(int i=0 ;i<n;i++)
    {
        total_wt =total_wt +wt[i];
        total_tat =total_tat +tat[i];
        cout << "   "<< i+1<<"\t\t"<<at[i]<<"\t    "<<bt[i]<<"\t\t "<<ct[i]<<"          \t\t "<<tat[i]<<"\t\t   "<<wt[i]<<endl;

    }

    cout << "Avergae waiting Time : " << (float)total_wt/(float)n<<endl;
    cout << "Avergae Turn Around Time : " << (float)total_tat/(float)n<<endl;
}
int main()
{
    int processes[]={1,2,3};
    int n=3;

    int burst_time[]={8,2,3};
    int arrival_time[]={0,1,4};
```

```cpp

    cout << "Avergae waiting Time : " << (float)total_wt/(float)n<<endl;
    cout << "Avergae Turn Around Time : " << (float)total_tat/(float)n<<endl;
}

int main()
{
    int processes[]={1,2,3};
    int n=3;

    int burst_time[]={8,2,3};
    int arrival_time[]={0,1,4};

    findAvgTime(processes,n,burst_time,arrival_time);
    return 0;

}
```


C:\Users\user\Desktop\Semester 4\OS Lab\Lab 06\assg\cs182019\cs182019.exe
Processes Arrival Time Burst Time Completion Time Turn Around Time Waiting Time
1 0 8 8 8 0
2 1 2 10 9 7
3 4 3 13 9 6
Avergae waiting Time : 4.33333
Avergae Turn Around Time : 8.66667

Process exited after 0.0697 seconds with return value 0
Press any key to continue . . .