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Lab 3

Ques: Understand the FCFS algorithm: Implement the same.

Ans:

Source Code

```
/* Name: Hitendra Sisodia
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#include<bits/stdc++.h>
using namespace std;
void findWaitingTime(int processes[], int n,int bt[], int wt[]) // Function to find the waiting time
{
    wt[0] = 0; // waiting time for first process is 0
    for (int i = 1; i < n ; i++) // calculating waiting time
        wt[i] = bt[i-1] + wt[i-1];
}
// Function to calculate turn around time
void findTurnAroundTime(int processes[], int n,int bt[], int wt[], int tat[])
{
    for (int i = 0; i < n ; i++){ // calculating turnaround time by adding
        tat[i] = bt[i] + wt[i]; // bt[i] + wt[i]
    }
}
void findavgTime( int processes[], int n, int bt[]) //Function to calculate average time
{
    int wt[n], tat[n], total_wt = 0, total_tat = 0;
    findWaitingTime(processes, n, bt, wt);
    findTurnAroundTime(processes, n, bt, wt, tat);
    //Display processes along with all details
    cout << "Processes "<< " Burst time "<< " Waiting time " << " Turn around 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" << bt[i] << "\t " << wt[i] << "\t\t " << tat[i] << endl;
    }
    cout << "Average waiting time = "<< (float)total_wt / (float)n;
    cout << "\nAverage turn around time = "<< (float)total_tat / (float)n;
}
int main()
{
    int processes[] = { 1, 2, 3}; //process id's
    int n = sizeof processes / sizeof processes[0]; //Burst time of all processes
    int burst_time[] = {10, 5, 8};
    findavgTime(processes, n, burst_time);
    return 0;
}
```

Output

```
Processes Burst time Waiting time Turn around time
1          10          0           10
2           5          10           15
3           8          15           23
Average waiting time = 8.33333
Average turn around time = 16
```