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CS A1 OS LAB

```
#include <stdio.h>

int main() {    int n, bt[20], wt[20],
tat[20], i, j;    float avwt = 0, avtat
= 0;

   printf("Enter the number of processes: ");
scanf("%d", &n);

   printf("Enter the burst time for each process:\n");
   for(i = 0; i < n; i++) {
printf("Process %d: ", i+1);
scanf("%d", &bt[i]);
   }

   wt[0] = 0; // Waiting time for the first process is 0

   // Calculate waiting time for each process
   for(i = 1; i < n; i++) {
wt[i] = 0;       for(j =
0; j < i; j++)
wt[i] += bt[j];
```

```
    }

    // Calculate turnaround time for each process
    for(i = 0; i < n; i++)
tat[i] = bt[i] + wt[i];

    printf("\nProcess\tBurst Time\tWaiting Time\tTurnaround Time\n");
    for(i = 0; i < n; i++) {        printf("P%d  \t\t%d     \t\t%d    \t\t%d   \n",
i+1, bt[i], wt[i], tat[i]);        avwt += wt[i];        avtat += tat[i];
    }

    avwt /= n;
avtat /= n;

    printf("\nAverage Waiting Time: %.2f", avwt);
printf("\nAverage Turnaround Time: %.2f", avtat);

    return 0;
}
```

OUTPUT

```
/tmp/Yi3FbKGOe7.o
Enter the number of processes: 7
Enter the burst time for each process:
Process 1: 6
Process 2: 5
Process 3: 4
4Process 4:
8
Process 5: 5
Process 6: 7
Process 7: 3
Process Burst Time  Waiting Time    Turnaround Time
P1          6           0           6
P2          5           6           11
P3          4           11          15
P4          8           15          23
P5          5           23          28
P6          7           28          35
P7          3           35          38

Average Waiting Time: 16.86
Average Turnaround Time: 22.29
```