Design a CPU scheduling program with C using First Come First Served technique with the following considerations.

a. All processes are activated at time 0.

b. Assume that no process waits on I/O devices.

```c
#include <stdio.h>
// Function to find the waiting time for all processes
int waitingtime(int proc[], int n,
int burst_time[], int wait_time[]) {
    // waiting time for first process is 0
    wait_time[0] = 0;
    // calculating waiting time
    for (int i = 1; i < n ; i++ )
    wait_time[i] = burst_time[i-1] + wait_time[i-1] ;
    return 0;
}
// Function to calculate turn around time
int turnaroundtime( int proc[], int n,
int burst_time[], int wait_time[], int tat[]) {
    // calculating turnaround time by adding
    // burst_time[i] + wait_time[i]
    int i;
    for ( i = 0; i < n ; i++)
    tat[i] = burst_time[i] + wait_time[i];
    return 0;
}
//Function to calculate average time
int avgtime( int proc[], int n, int burst_time[]) {
    int wait_time[n], tat[n], total_wt = 0, total_tat = 0;
    int i;
    //Function to find waiting time of all processes
    waitingtime(proc, n, burst_time, wait_time);
    //Function to find turn around time for all processes
    turnaroundtime(proc, n, burst_time, wait_time, tat);
    //Display processes along with all details
    printf("Processes  Burst   Waiting Turn around \n");
    // Calculate total waiting time and total turn
```

```
}
//Function to calculate average time
int avgtime( int proc[], int n, int burst_time[]) {
   int wait_time[n], tat[n], total_wt = 0, total_tat = 0;
   int i;
   //Function to find waiting time of all processes
   waitingtime(proc, n, burst_time, wait_time);
   //Function to find turn around time for all processes
   turnaroundtime(proc, n, burst_time, wait_time, tat);
   //Display processes along with all details
   printf("Processes  Burst   Waiting Turn around \n");
   // Calculate total waiting time and total turn
   // around time
   for ( i=0; i<n; i++) {
      total_wt = total_wt + wait_time[i];
      total_tat = total_tat + tat[i];
      printf(" %d\t  %d\t\t %d \t%d\n", i+1, burst_time[i], wait_time[i], tat[i]);
   }
   printf("Average waiting time = %f\n", (float)total_wt / (float)n);
   printf("Average turn around time = %f\n", (float)total_tat / (float)n);
   return 0;
}
// main function
int main() {
   //process id's
   int proc[] = { 1, 2, 3};
   int n = sizeof proc / sizeof proc[0];
   //Burst time of all processes
   int burst_time[] = {5, 8, 12};
   avgtime(proc, n, burst_time);
   return 0;
}
```

Output:

```
C:\Users\kalya\OneDrive\Desktop\3.cpu scheduling.exe
Processes  Burst   Waiting Turn around
 1         5              0      5
 2         8              5      13
 3         12             13     25
Average waiting time = 6.000000
Average turn around time = 14.333333

--------------------------------
Process exited after 0.07032 seconds with return value 0
Press any key to continue . . .
```