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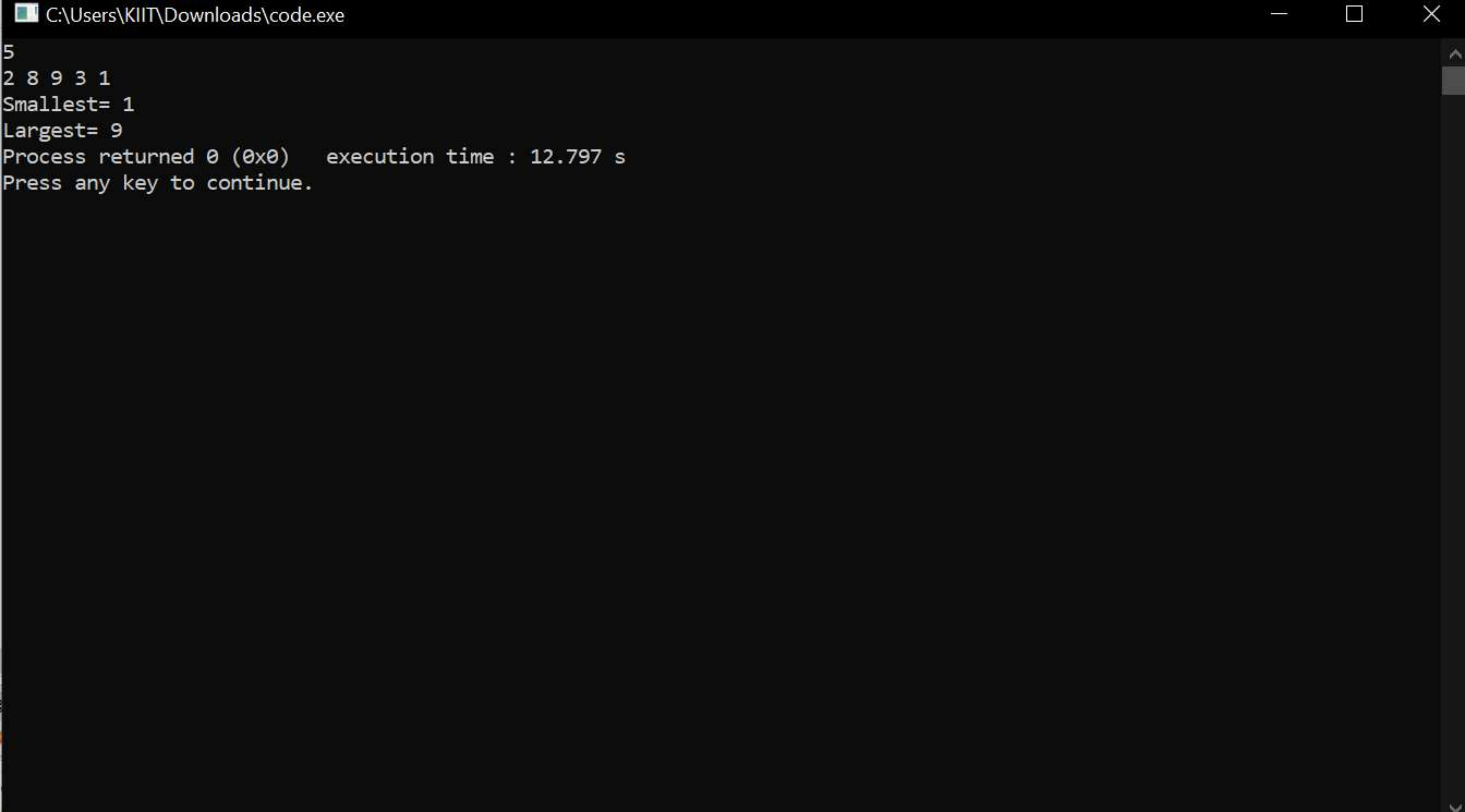
Q1 WAP to find out the smallest and Largest element stored in an array of 'n' integers.

(C)

```
#include <stdio.h>
int main() {
    int n;
    scanf("%d",&n);
    int arr[n];
    for (int i=0; i<n; i++) {
        scanf("%d",&arr[i]);
    }
    int counter=0;
    while (counter<n-1) {
      for (int i=0; i<n-1; i++) {
            if( arr[i]> arr[i+1]) {
                  int temp = arr[i];
                  arr[i] = arr[i+1] ;
                  arr[i+1] = temp;
      }     }
      counter++;
    }
    printf("smallest = %d\nLargest= %d", arr[0], arr[n-1]);
    return 0;
}
```



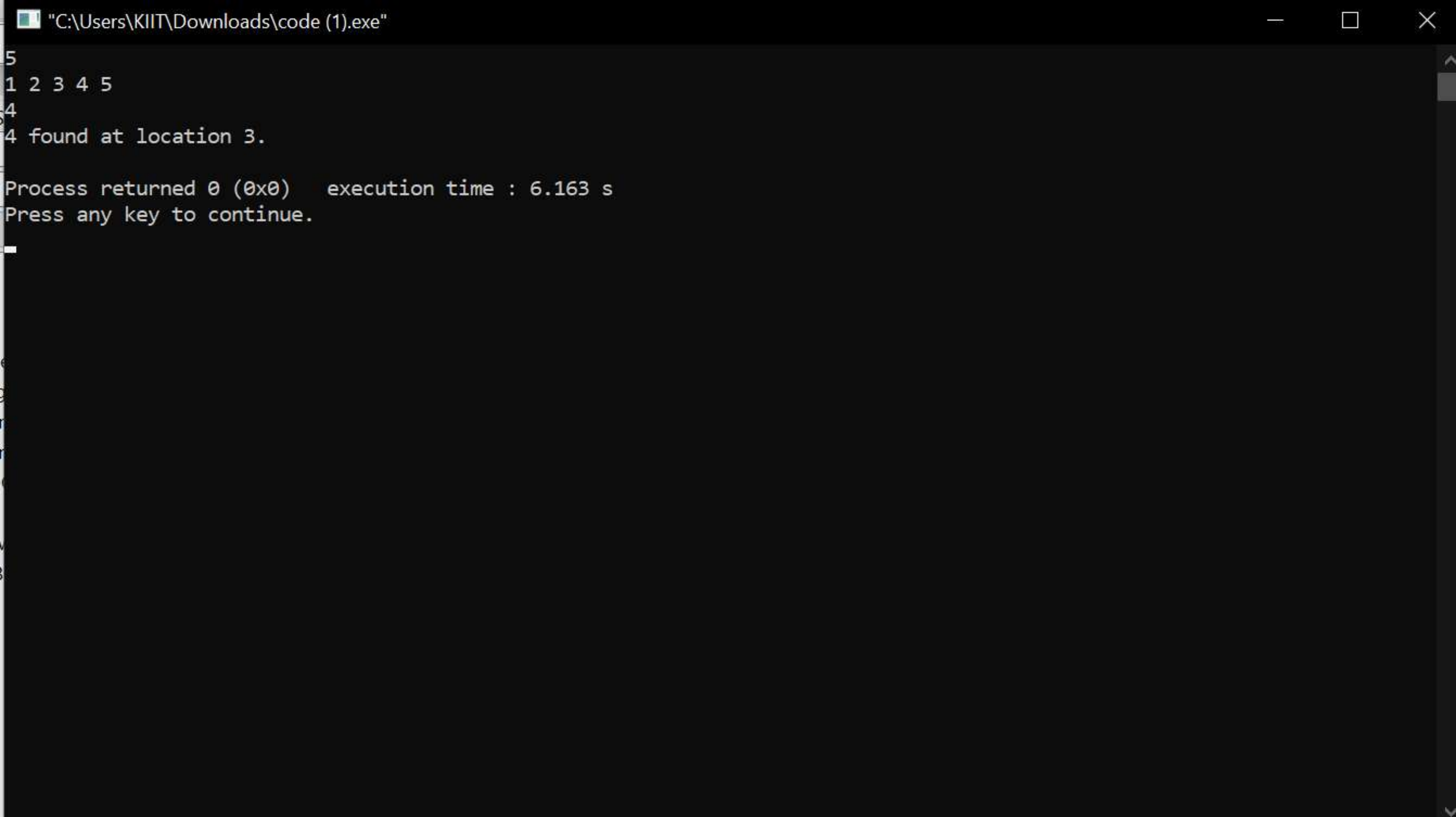
```
5
2 8 9 3 1
Smallest= 1
Largest= 9
Process returned 0 (0x0)   execution time : 12.797 s
Press any key to continue.
```

Q2 Search an element in array of n integers.

(c)

```
#include <stdio.h>                                    (Linear search)

int main(){
    int n;
    scanf("%d",&n);
    int arr[n];
    for (int i=0; i<n;i++){
        scanf(" %d",&arr[i]);
    }
    int search;
    scanf("%d",&search);
   for(int i=0;i<n;i++){
        if(arr[i]==search){
            printf(" found at %d", i);
        }
   }
}
```



"C:\Users\KIIT\Downloads\code (1).exe"

```
5
1 2 3 4 5
4
4 found at location 3.

Process returned 0 (0x0)   execution time : 6.163 s
Press any key to continue.
```

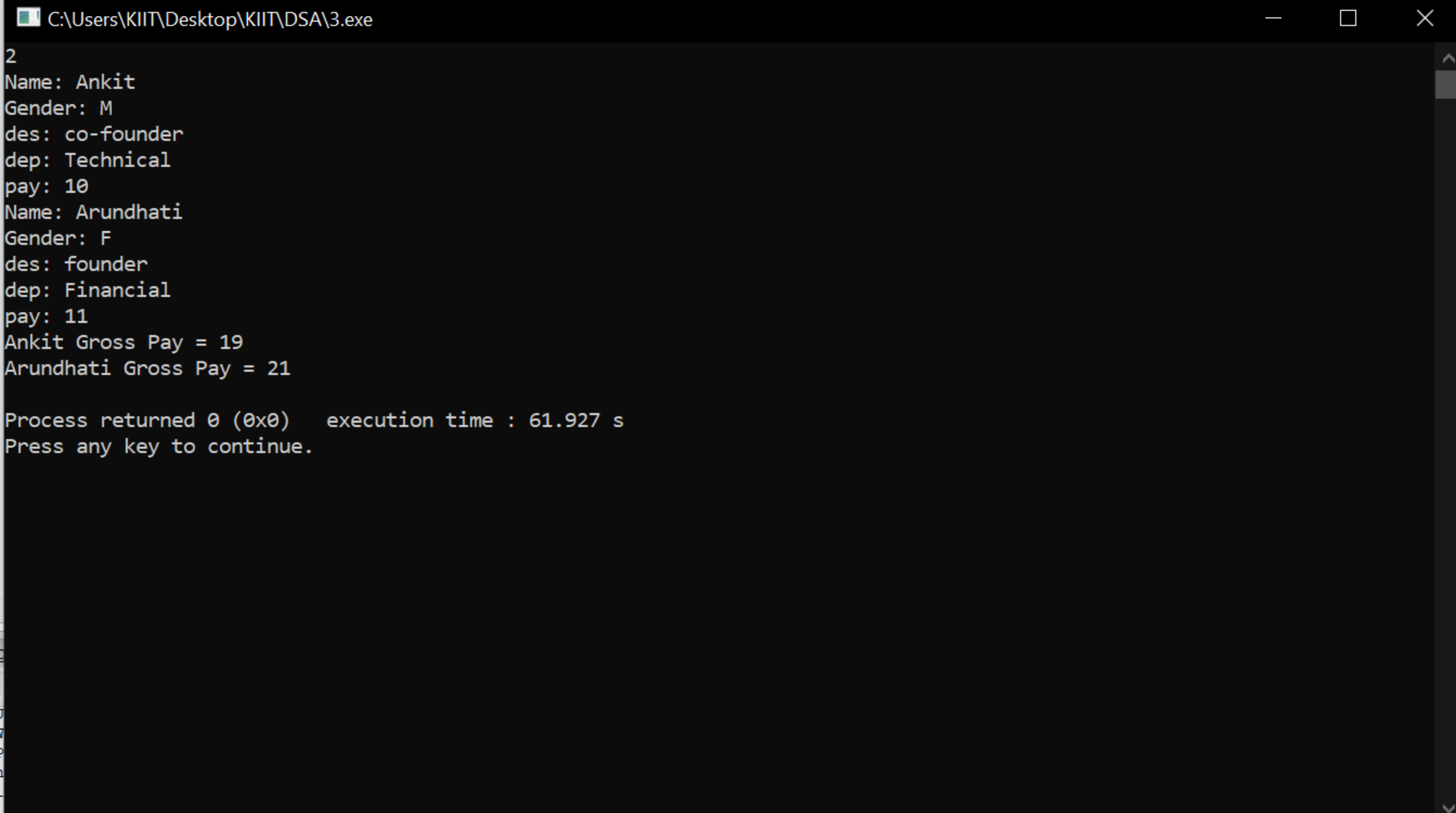
Q3 WAP to store emp-data, Calculate the gross pay of each employ!

(C++)

```
#include <iostream>
using namespace std

struct emp {
        char name[100];
        char gender;
        char designation[50];
        char dep[50];
        long int pay;
};

int main() {
    int n;
    cin>>n;
    struct emp s[n];
    for (int i=0 ;i<n;i++){
        cin.ignore();
        cout<<"Name: " ;
        ~~cin~~ gets( s[i]. name);
        cin>> s[i].gender;
        cin.ignore();
        gets (s[i] . designation);
        gets (s[i]. dep);
        cin>> s[i]. pay;
    }
  for (int i=0;i<n;i++){
        int hr  = ( s[i].pay)* 0.25;
        int dr  = (s[i].pay)* 0.75;
        cout << s[i].name <<" gross pay= " ;
        cout <<  s[i].pay + hr + dr << endl;
  }
 return 0;
}
```



```
2
Name: Ankit
Gender: M
des: co-founder
dep: Technical
pay: 10
Name: Arundhati
Gender: F
des: founder
dep: Financial
pay: 11
Ankit Gross Pay = 19
Arundhati Gross Pay = 21

Process returned 0 (0x0)   execution time : 61.927 s
Press any key to continue.
```

Q4 Add distances in (kilometer-meter) by passing structure to a function.

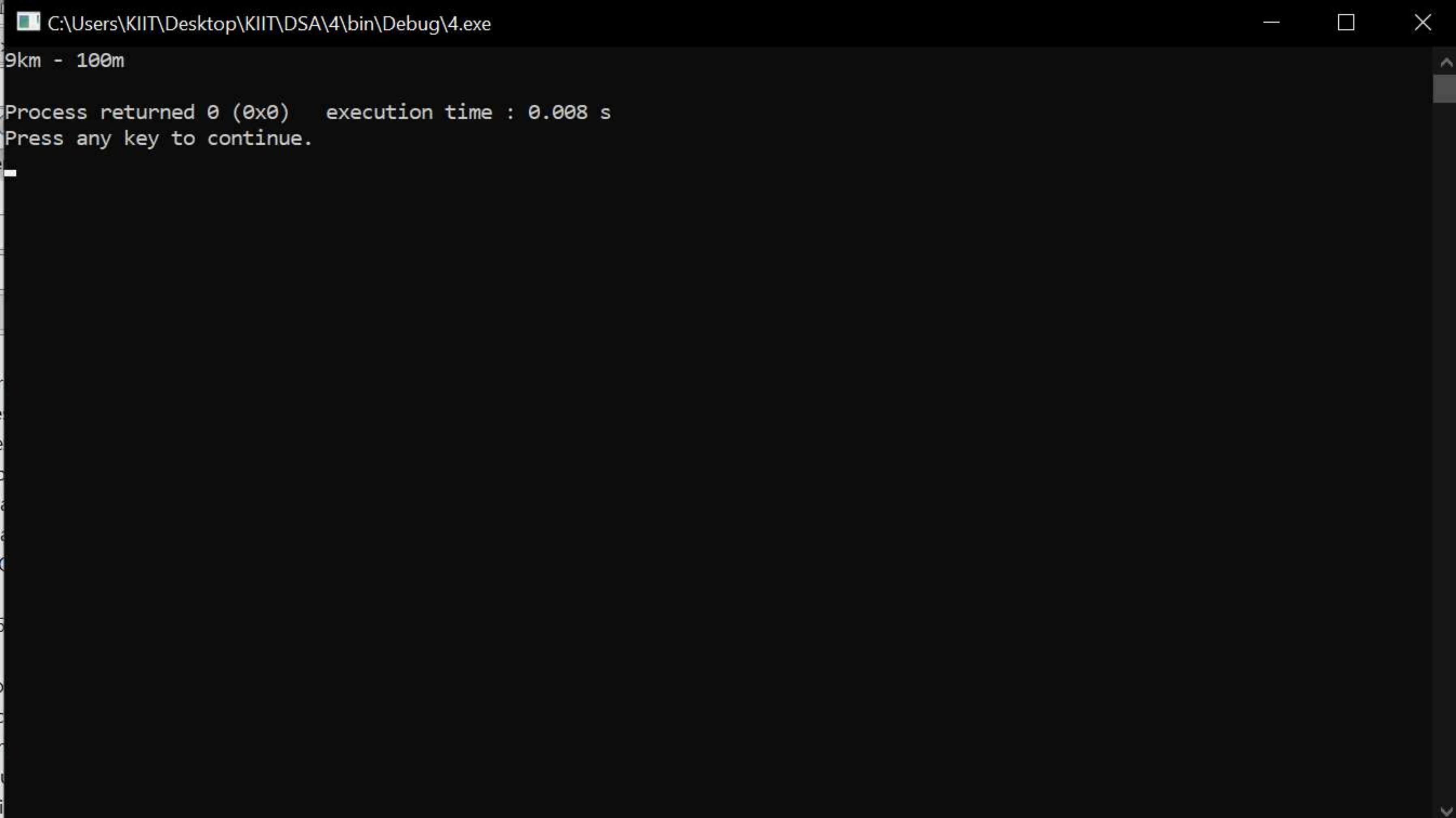
C++

```
#include <iostream>
using namespace std;
struct distance {
        int km;
        int m;
 };
void add_dist( struct distance d1 , struct distance d2);

int main(){
    struct distane d1, d2 ;
      d1.km = 5;
     d1.m  = 300;
     d2.km = 3;
     d2.m  = 900;
    add_dist( d1, d2 );
   return 0;
}
void add_dist (struct distane d1 , struct distane d2){
        int extra_km=0, extra_m=0;
        if( (d1.m + d2.m)/1000 >0){
              extra_km = (d1.m+ d2.m)/1000;
              extra_m= extra_km * 1000;

        }
        cout << d1.km + d2.km + extra_km << "km ";
        cout << d1.m + d2.m - extra_m<< "m \n";

}
```



```
9km - 100m

Process returned 0 (0x0)   execution time : 0.008 s
Press any key to continue.
```