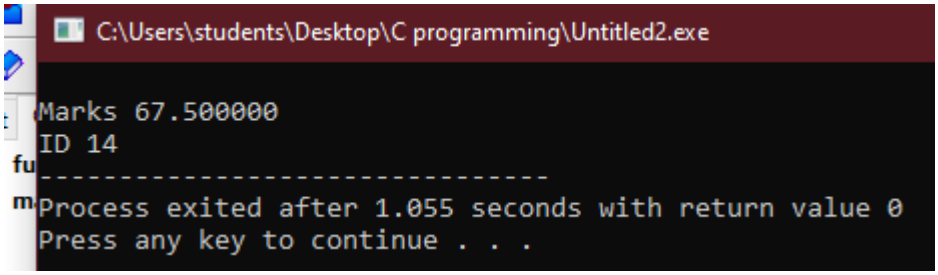
LAB: 10

Q.1 Write a c program illustrating to pass structure within functions.

Program

```c
#include<stdio.h>
#include<conio.h>
void fun(float, int);
int main()
{
    struct student
    {
        float marks;
        int id;
    };
    struct student s1 = {67.5, 14};
    fun(s1.marks, s1.id);
    return 0;
}
void fun(float marks, int id)
{
    printf("\nMarks %f", marks);
    printf("\nID %d", id);
}
```

Output



Q.2 Write a c program to create nested structure.

Program

```c
#include <stdio.h>
#include <string.h>
struct Employee
{
  int employee_id;
  char name[20];
  int salary;
};
struct Organisation
{
  char organisation_name[20];
  char org_number[20];
  struct Employee emp;
};
int main()
{
  struct Organisation org;
  printf("The size of structure organisation : %ld\n",
         sizeof(org));
  org.emp.employee_id = 101;
  strcpy(org.emp.name, "Robert");
  org.emp.salary = 400000;
  strcpy(org.organisation_name,
         "GeeksforGeeks");
  strcpy(org.org_number, "GFG123768");
  printf("Organisation Name : %s\n",
         org.organisation_name);
  printf("Organisation Number : %s\n",
         org.org_number);
  printf("Employee id : %d\n",
         org.emp.employee_id);
  printf("Employee name : %s\n",
         org.emp.name);
  printf("Employee Salary : %d\n",
         org.emp.salary);
}
```

Output

```
C:\Users\students\Desktop\C programming\Untitled4.exe
The size of structure organisation : 68
Organisation Name : GeeksforGeeks
Organisation Number : GFG123768
Employee id : 101
Employee name : Robert
Employee Salary : 400000

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Process exited after 0.09147 seconds with return value 0
Press any key to continue . . .
```

Q.3 Write a simple c program illustrating union.

Program

```c
#include <stdio.h>
#include <string.h>
union student
{
        char name[20];
        char subject[20];
        float percentage;
};
int main()
{
    union student record1;
    union student record2;
       strcpy(record1.name, "Raju");
       strcpy(record1.subject, "Maths");
       record1.percentage = 86.50;

       printf("Union record1 values example\n");
       printf(" Name       : %s \n", record1.name);
       printf(" Subject    : %s \n", record1.subject);
       printf(" Percentage : %f \n\n", record1.percentage);
       printf("Union record2 values example\n");
       strcpy(record2.name, "Mani");
       printf(" Name       : %s \n", record2.name);

       strcpy(record2.subject, "Physics");
       printf(" Subject    : %s \n", record2.subject);

       record2.percentage = 99.50;
       printf(" Percentage : %f \n", record2.percentage);
       return 0;
    }
```

Output

```
C:\Users\students\Desktop\C programming\Union.exe
Union record1 values example
 Name       :
 Subject    :
 Percentage : 86.500000

Union record2 values example
 Name       : Mani
 Subject    : Physics
 Percentage : 99.500000

--------------------------------
Process exited after 0.2218 seconds with return value 0
Press any key to continue . . .
```