🏫 C Programming Lab Report

👨‍🎓 Name: Mahdi Hasan Shuvo
🆔 Roll No: 251-115-030
💼 Subject: Programming in C
🏫 Department: CSE-62
📅 Submission Date: 25-06-2025

No	Program Title
1	Calculate CGPA from Two Courses
2	Employee Salary Calculation
3	Bike Fuel Average Consumption
4	Calculate Distance Between Two Points
5	Calculate Roots Using Bhaskara's Formula
6	Print a Triangle Pattern Using Stars

Problem 1: Write a C program that accepts two courses' grades and credit hours of those courses (floating point values) and calculates your CGPA.

Code:

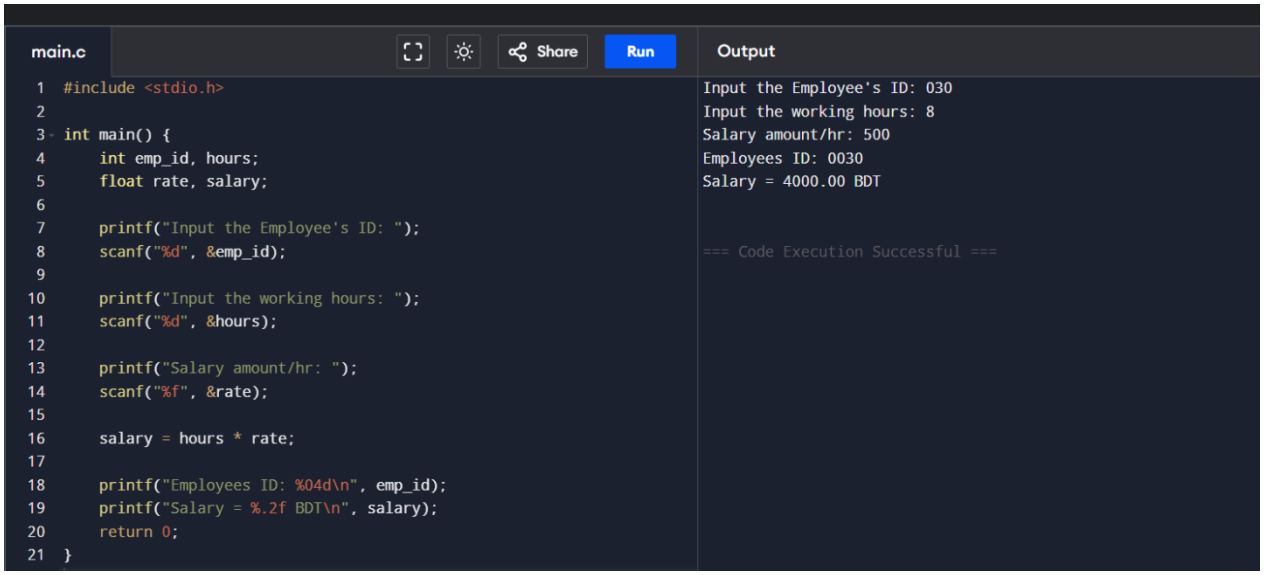
main.c | Share | Run | Output

```c
#include <stdio.h>

int main() {
    float grade1 = 3.75, credit1 = 3.0;
    float grade2 = 3.50, credit2 = 1.5;
    float cgpa;

    cgpa = (grade1 * credit1 + grade2 * credit2) / (credit1 + credit2
        );

    printf("CGPA = %.2f\n", cgpa);
    return 0;
}
```

```
CGPA = 3.67


=== Code Execution Successful ===
```

Problem 2: Write a C program that accepts an employee's ID, total worked hours in a month and the amount he received per hour. Print the ID and salary (with two decimal places) of the employee for a particular month.

Code:



Input :

Input the Employee's ID: 030

Input the working hours: 8

Salary amount/hr: 500

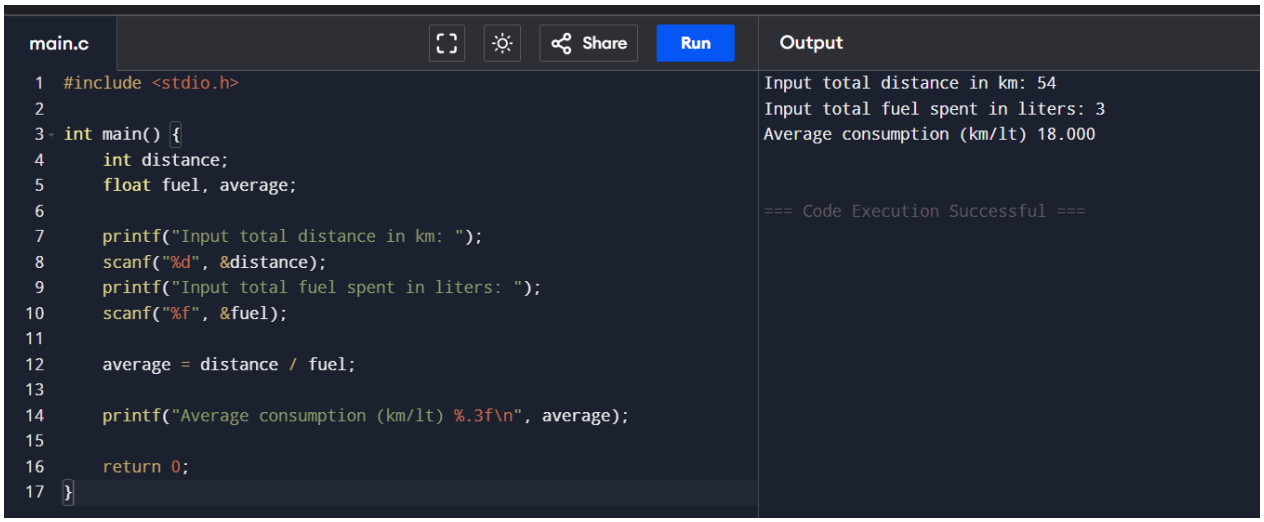
Output:

Employees ID: 0030

Salary = 4000.00 BDT

Problem 3: Write a C program to calculate a bike's average consumption from the given total distance (integer value) traveled (in km) and spent fuel (in litters, float number - 2 decimal points)

Code:



Input :

Input total distance in km: 54

Input total fuel spent in liters: 3

Output:

Average consumption (km/lt) 18.000

Problem 4: Write a C program to calculate the distance between two points.

Code:

main.c

Share Run

```c
#include <stdio.h>
#include <math.h>

int main() {
    float x1, y1, x2, y2, distance;

    printf("Input x1: ");
    scanf("%f", &x1);
    printf("Input y1: ");
    scanf("%f", &y1);
    printf("Input x2: ");
    scanf("%f", &x2);
    printf("Input y2: ");
    scanf("%f", &y2);

    distance = sqrt(pow(x2 - x1, 2) + pow(y2 - y1, 2));

    printf("Distance between the said points: %.4f\n", distance);

    return 0;
}
```

Output

```
Input x1: 3
Input y1: 4
Input x2: 5
Input y2: 6
Distance between the said points: 2.8284


=== Code Execution Successful ===
```

Input :

Input x1: 3

Input y1: 4

Input x2: 5

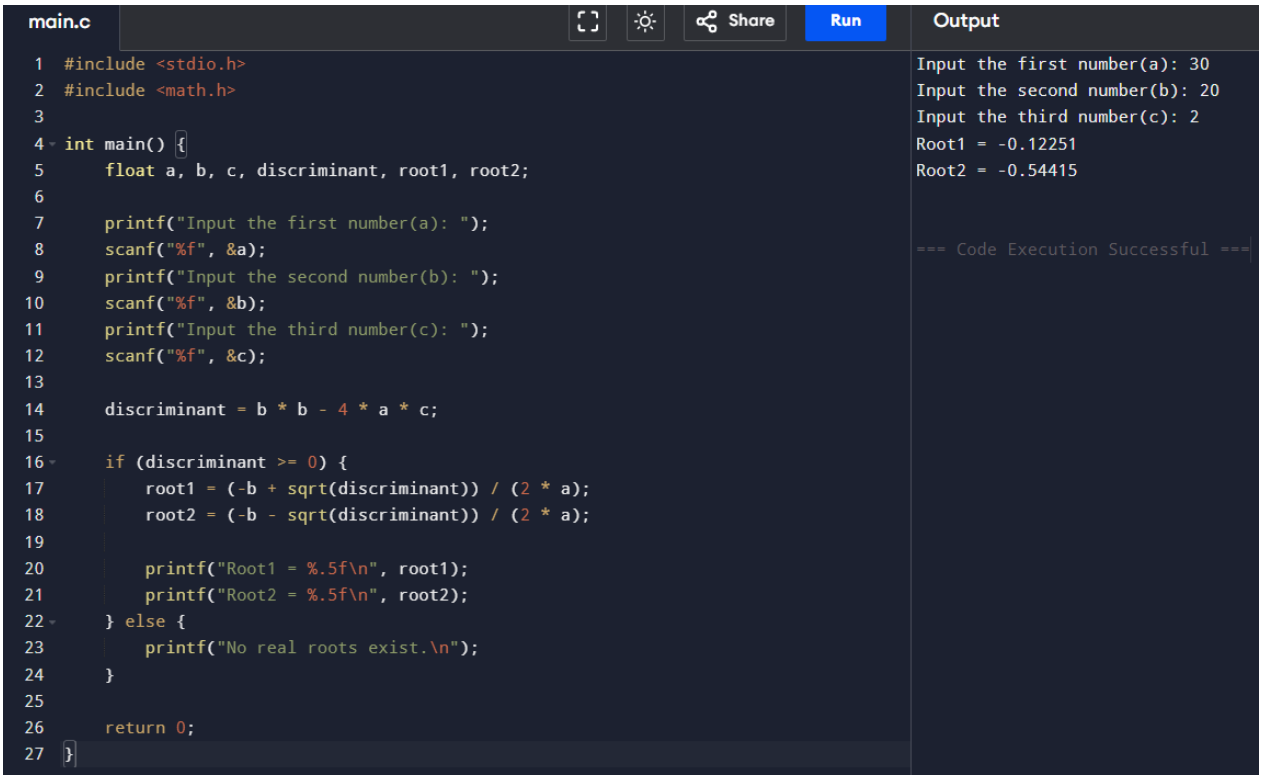
Input y2: 6

Output:

Distance between the said points: 2.8284

Problem 5: Write a C program to print the roots of Bhaskara's formula from the given three floating numbers.

Code:



Input :

Input the first number(a): 30

Input the second number(b): 20

Input the third number(c): 2

Output:

Root1 = -0.12251

Root2 = -0.54415

Problem 6 :Print the following pattern as it is. Expected Outpu

Code:

main.c

Share Run

Output

```c
#include <stdio.h>

int main() {
    printf("*\n");
    printf("* *\n");
    printf("* * *\n");
    printf("* * * *\n");
    printf("* * * * *\n");

    return 0;
}
```

```
*
* *
* * *
* * * *
* * * * *


=== Code Execution Succe
```