VISUAL PROGRAMMING LAB

LAB-1

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TASKS:

1.

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace vp_lab_1
{
    0 references
    internal class Program
    {
        0 references
        static void Main(string[] args)
        {
            Console.WriteLine("Hello World");
        }
    }
}
```

```
Hello World
```

2.

```
using System;
0 references
class Program
{
    0 references
    static void Main(string[] args)
    {
        string name = "John";
        int age = 25;
        double salary = 50000.75;
        bool isEmployed = true;

        const double taxRate = 0.05;

        Console.WriteLine("Name: " + name);
        Console.WriteLine("Age: " + age);
        Console.WriteLine("Salary: $" + salary);
        Console.WriteLine("Is Employed: " + isEmployed);

        double taxAmount = salary * taxRate;
        Console.WriteLine("Tax Amount: $" + taxAmount);
    }
}
```

```
Name: John
Age: 25
Salary: $50000.75
Is Employed: True
Tax Amount: $2500.0375
```

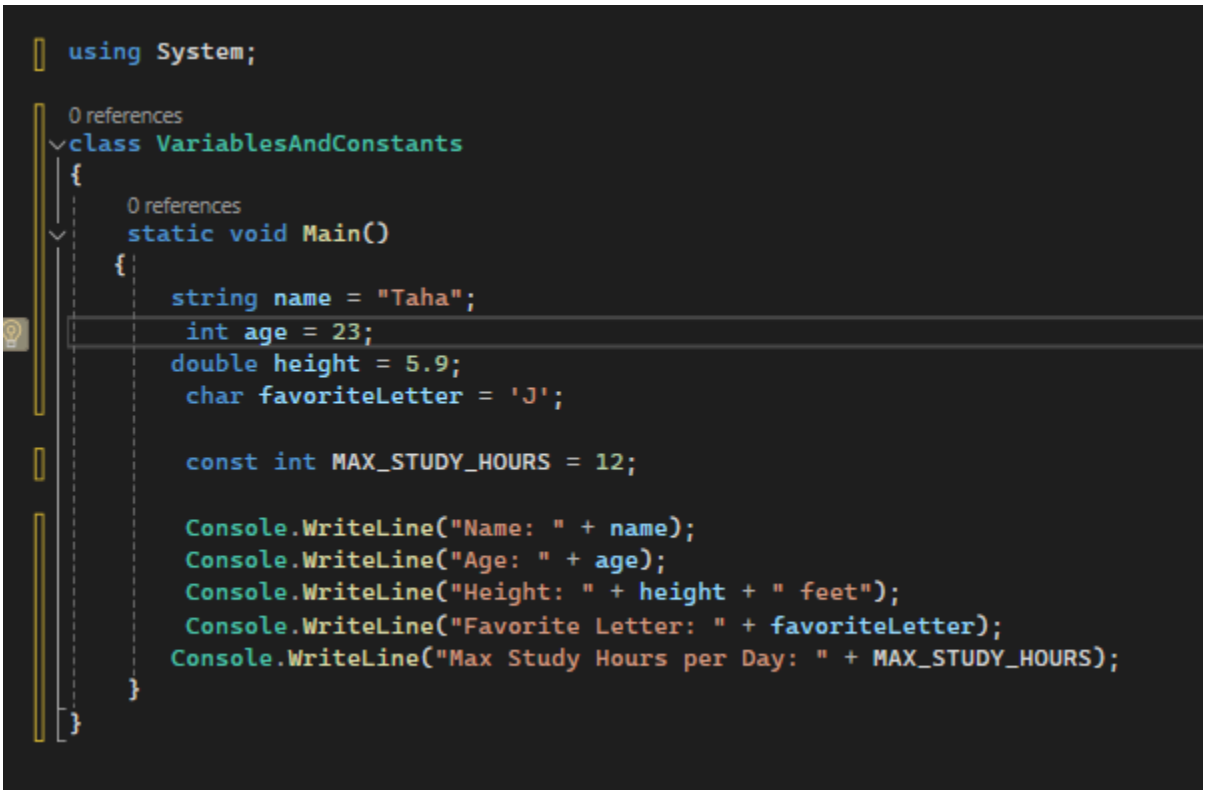
3.

```
using System;

namespace ArithmeticExample
{

    class Program
    {

        static void Main(string[] args)
        {
            int num1 = 5;
            int num2 = 3;
            int sum = num1 + num2;

            Console.WriteLine("The sum of " + num1 + " and " + num2 + " is: " + sum);
        }
    }
}
```

```
The sum of 5 and 3 is: 8
```

Lab Tasks:

Declare Variables and Constants



```
using System;

0 references
class VariablesAndConstants
{
    0 references
    static void Main()
    {
        string name = "Taha";
        int age = 23;
        double height = 5.9;
        char favoriteLetter = 'J';

        const int MAX_STUDY_HOURS = 12;

        Console.WriteLine("Name: " + name);
        Console.WriteLine("Age: " + age);
        Console.WriteLine("Height: " + height + " feet");
        Console.WriteLine("Favorite Letter: " + favoriteLetter);
        Console.WriteLine("Max Study Hours per Day: " + MAX_STUDY_HOURS);
    }
}
```

Arithmetic Operations

```
using System;

0 references
class ArithmeticOperations
{
    0 references
    static void Main()
    {
        Console.Write("Enter the first number: ");
        double num1 = Convert.ToDouble(Console.ReadLine());

        Console.Write("Enter the second number: ");
        double num2 = Convert.ToDouble(Console.ReadLine());

        double sum = num1 + num2;
        double difference = num1 - num2;
        double product = num1 * num2;
        double division = num1 / num2;

        Console.WriteLine("\nSum: " + sum);
        Console.WriteLine("Difference: " + difference);
        Console.WriteLine("Product: " + product);
        Console.WriteLine("Division: " + division);
    }
}
```

```
Enter the first number: 5
Enter the second number: 7

Sum: 12
Difference: -2
Product: 35
Division: 0.714285714285714
```

Using an Array

```
using System;

0 references
class TemperatureArray
{
    0 references
    static void Main()
    {
        float[] temperatures = { 72.5f, 75.0f, 68.9f, 70.2f, 73.8f };

        Console.WriteLine("Temperatures recorded over the week:");
        foreach (float temp in temperatures)
        {
            Console.WriteLine(temp + "°F");
        }

        float sum = 0;
        foreach (float temp in temperatures)
        {
            sum += temp;
        }
        float average = sum / temperatures.Length;
        Console.WriteLine("\nAverage Temperature: " + average + "°F");
    }
}
```

```
Temperatures recorded over the week:
72.5°F
75°F
68.9°F
70.2°F
73.8°F

Average Temperature: 72.07999°F
```

Boolean Logic

```
using System;

0 references
class AgeChecker
{
    0 references
    static void Main()
    {
        int currentYear = DateTime.Now.Year;
        Console.Write("Enter your birth year: ");
        int birthYear = Convert.ToInt32(Console.ReadLine());

        bool isAdult = (currentYear - birthYear) > 18;

        if (isAdult)
        {
            Console.WriteLine("You are an adult.");
        }
        else
        {
            Console.WriteLine("You are not an adult.");
        }
    }
}
```

```
Enter your birth year: 2005
You are an adult.
```

Calculate Discount Using Constants

```
using System;

0 references
class DiscountCalculator
{
    0 references
    static void Main()
    {
        Console.Write("Enter the price of the item: ");
        double price = Convert.ToDouble(Console.ReadLine());

        Console.Write("Enter the quantity: ");
        int quantity = Convert.ToInt32(Console.ReadLine());

        const double DISCOUNT_RATE = 0.10;

        double totalPrice = price * quantity;

        double discountAmount = totalPrice * DISCOUNT_RATE;
        double finalPrice = totalPrice - discountAmount;

        Console.WriteLine("\nTotal Price Before Discount: $" + totalPrice);
        Console.WriteLine("Discount Amount: $" + discountAmount);
        Console.WriteLine("Final Price After Discount: $" + finalPrice);
    }
}
```

```
Enter the price of the item: 5
Enter the quantity: 2

Total Price Before Discount: $10
Discount Amount: $1
Final Price After Discount: $9
```