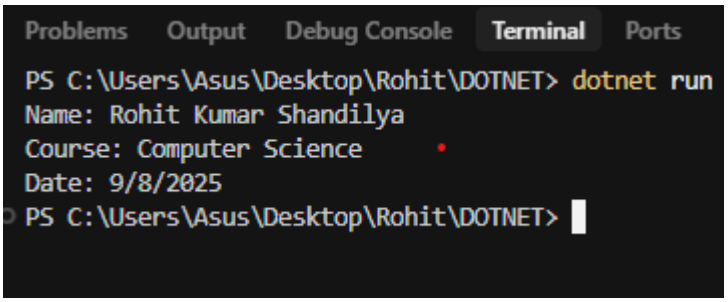
Task: 1

```
using System;

class Program
{
    static void Main()
    {
        Console.WriteLine("Name: Rohit Kumar ShaDoe");
        Console.WriteLine("Course: Computer Science");
        Console.WriteLine("Date: " + DateTime.Now.ToShortDateString());
    }
}
```

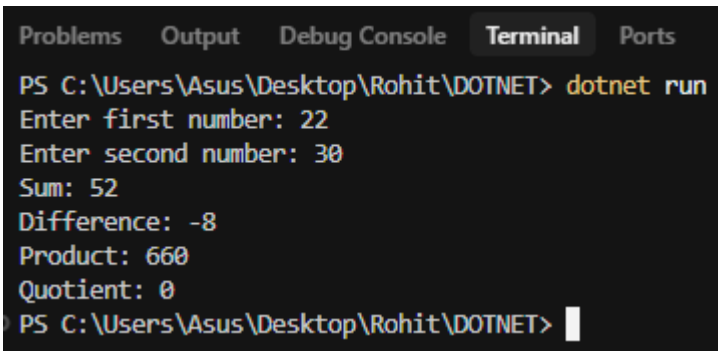
Output:



Task: 2

```
using System;

class Program
{
    static void Main()
    {
        Console.Write("Enter first number: ");
        int a = Convert.ToInt32(Console.ReadLine());
        Console.Write("Enter second number: ");
        int b = Convert.ToInt32(Console.ReadLine());

        Console.WriteLine("Sum: " + (a + b));
        Console.WriteLine("Difference: " + (a - b));
        Console.WriteLine("Product: " + (a * b));
        Console.WriteLine("Quotient: " + (a / b));
    }
}
```

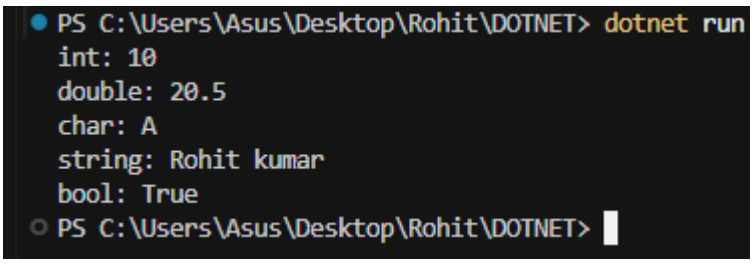
Output:



Task: 3

```
using System;

class Program
{
    static void Main()
    {
        int x = 10;
        double y = 20.5;
        char z = 'A';
        string name = "Rohit Kumar";
        bool isActive = true;
        Console.WriteLine("int: " + x);
        Console.WriteLine("double: " + y);
        Console.WriteLine("char: " + z);
        Console.WriteLine("string: " + name);
        Console.WriteLine("bool: " + isActive);
    }
}
```

Output :



Task: 4

```
using System;

class Program
{
    static void Main()
```

```
    {
        Console.Write("Enter a number: ");
        int num = Convert.ToInt32(Console.ReadLine());

        if (num % 2 == 0)
            Console.WriteLine("Even");
        else
            Console.WriteLine("Odd");
    }
}
```

Output:

```
PS C:\Users\Asus\Desktop\Rohit\DOTNET> dotnet
run
Enter a number: 33
Odd
PS C:\Users\Asus\Desktop\Rohit\DOTNET>
```

Task: 5

```
using System;

class Program
{
    static void Main()
    {
        for (int i = 1; i <= 10; i++)
            Console.WriteLine(i);
    }
}
```

Output:

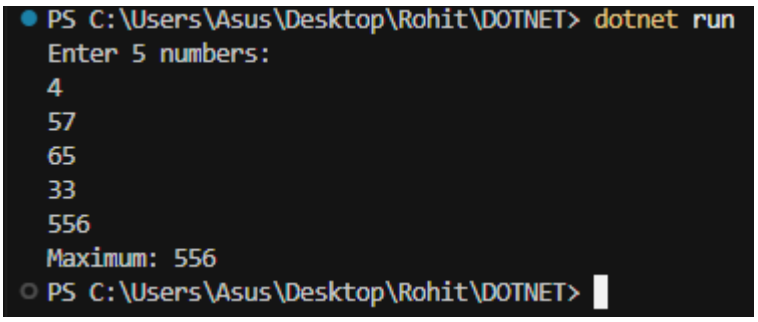
```
PS C:\Users\Asus\Desktop\Rohit\DOTNET> dotnet run
1
2
3
4
5
6
7
8
9
10
PS C:\Users\Asus\Desktop\Rohit\DOTNET>
```

Task: 6

```
using System;
```

```
class Program
{
    static void Main()
    {
        int[] arr = new int[5];
        Console.WriteLine("Enter 5 numbers:");
        for (int i = 0; i < 5; i++)
            arr[i] = Convert.ToInt32(Console.ReadLine());

        int max = arr[0];
        for (int i = 1; i < 5; i++)
            if (arr[i] > max)
                max = arr[i];

        Console.WriteLine("Maximum: " + max);
    }
}
```

Output:

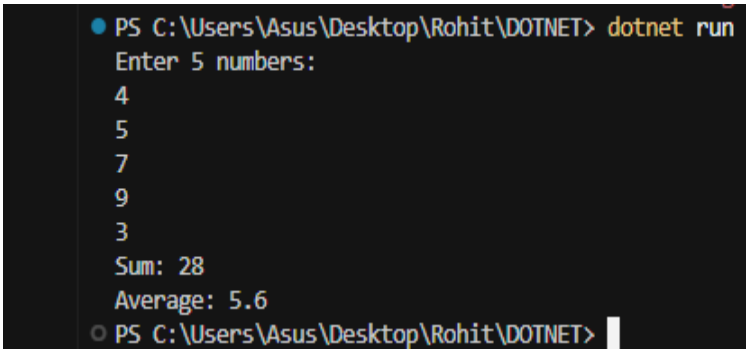


Task 7

```
using System;

class Program
{
    static void Main()
    {
        int[] arr = new int[5];
        int sum = 0;
        Console.WriteLine("Enter 5 numbers:");
        for (int i = 0; i < 5; i++)
        {
            arr[i] = Convert.ToInt32(Console.ReadLine());
            sum += arr[i];
        }
        double average = sum / 5.0;
        Console.WriteLine("Sum: " + sum);
```

```
        Console.WriteLine("Average: " + average);
    }
}
```

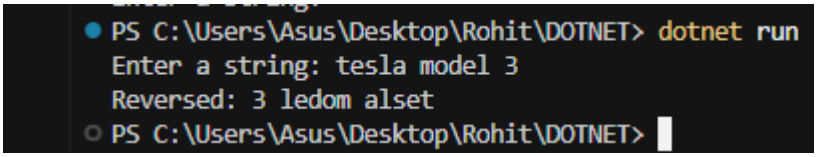
Output:



Task 8

```
using System;

class Program
{
    static void Main()
    {
        Console.Write("Enter a string: ");
        string str = Console.ReadLine();
        char[] charArray = str.ToCharArray();
        Array.Reverse(charArray);
        string reversed = new string(charArray);
        Console.WriteLine("Reversed: " + reversed);
    }
}
```

Output:

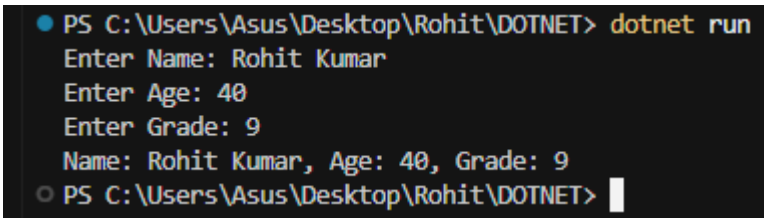


Task 9

```
using System;

class Student
{
    public string Name;
    public int Age;
```

```
    public char Grade;

    public void Input()
    {
        Console.Write("Enter Name: ");
        Name = Console.ReadLine();
        Console.Write("Enter Age: ");
        Age = Convert.ToInt32(Console.ReadLine());
        Console.Write("Enter Grade: ");
        Grade = Convert.ToChar(Console.ReadLine());
    }

    public void Display()
    {
        Console.WriteLine($"Name: {Name}, Age: {Age}, Grade: {Grade}");
    }
}

class Program
{
    static void Main()
    {
        Student s = new Student();
        s.Input();
        s.Display();
    }
}
```

Output:

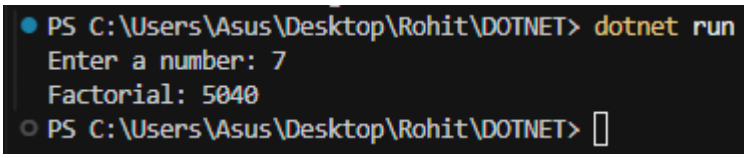


Task 10

```
using System;

class Factorial
{
    public static long Calculate(int n)
    {
        long fact = 1;
        for (int i = 1; i <= n; i++)
            fact *= i;
        return fact;
```

```
    }
}

class Program
{
    static void Main()
    {
        Console.Write("Enter a number: ");
        int n = Convert.ToInt32(Console.ReadLine());
        Console.WriteLine("Factorial: " + Factorial.Calculate(n));
    }
}
```

Output:



Task 11

```
using System;

class Person
{
    public virtual void Display()
    {
        Console.WriteLine("I am a person.");
    }
}

class Teacher : Person
{
    public override void Display()
    {
        Console.WriteLine("I am a teacher.");
    }
}

class Student : Person
{
    public override void Display()
    {
        Console.WriteLine("I am a student.");
    }
}

class Program
```

```
{
    static void Main()
    {
        Person p1 = new Teacher();
        Person p2 = new Student();
        p1.Display();
        p2.Display();
    }
}
```

Output:

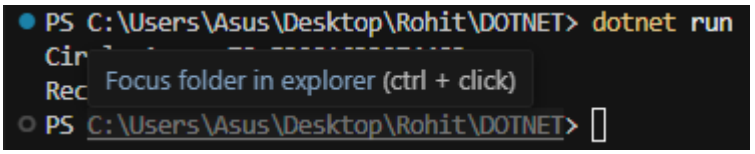
```
PS C:\Users\Asus\Desktop\Rohit\DOTNET> dotnet run
I am a teacher.
I am a student.
PS C:\Users\Asus\Desktop\Rohit\DOTNET>
```

Task 12

```
using System;

interface IShape
{
    double Area();
}

class Circle : IShape
{
    public double Radius;
    public Circle(double r) { Radius = r; }
    public double Area() { return Math.PI * Radius * Radius; }
}

class Rectangle : IShape
{
    public double Length, Breadth;
    public Rectangle(double l, double b) { Length = l; Breadth = b; }
    public double Area() { return Length * Breadth; }
}

class Program
{
    static void Main()
    {
        IShape c = new Circle(5);
        IShape r = new Rectangle(4, 6);
        Console.WriteLine("Circle Area: " + c.Area());
```

```
        Console.WriteLine("Rectangle Area: " + r.Area());
    }
}
```

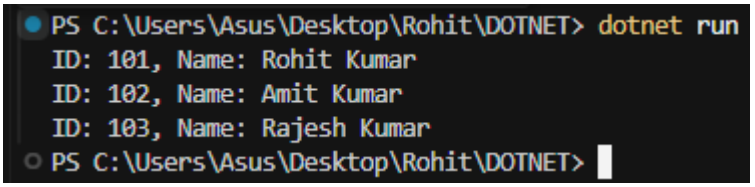
Output:



Task 13

```
using System;
using System.Collections.Generic;

class Program
{
    static void Main()
    {
        Dictionary<int, string> employees = new Dictionary<int,
string>();
        employees.Add(101, "Alice");
        employees.Add(102, "Bob");
        employees.Add(103, "Charlie");

        foreach (var kvp in employees)
        {
            Console.WriteLine("ID: " + kvp.Key + ", Name: " +
kvp.Value);
        }
    }
}
```

Output:



Task 14

```
using System;

class Program
```

```
{
    static void Main()
    {
        DateTime now = DateTime.Now;
        Console.WriteLine("Current Date and Time: " + now);
        DateTime after10Days = now.AddDays(10);
        Console.WriteLine("Date after 10 days: " + after10Days);
    }
}
```

Output:

```
PS C:\Users\Asus\Desktop\Rohit\DOTNET> dotnet run
Current Date and Time: 9/13/2025 2:43:43 PM
Date after 15 days: 9/28/2025 2:43:43 PM
PS C:\Users\Asus\Desktop\Rohit\DOTNET>
```

Task 15

```
using System;

class Program
{
    static void Main()
    {
        try
        {
            int a = 10, b = 0;
            int result = a / b;
            Console.WriteLine("Result: " + result);
        }
        catch (DivideByZeroException ex)
        {
            Console.WriteLine("Error: DivideByZeroException");
        }
    }
}
```

Output:

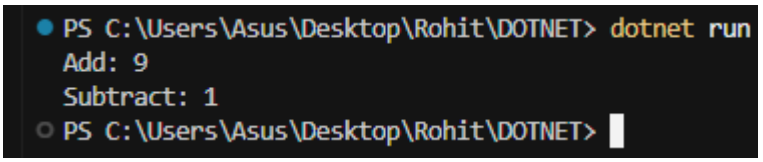
```
PS C:\Users\Asus\Desktop\Rohit\DOTNET> dotnet run
C:\Users\Asus\Desktop\Rohit\DOTNET\Program.cs(14,38): warning CS0168: The variable
'ex' is declared but never used
Error: DivideByZeroException
PS C:\Users\Asus\Desktop\Rohit\DOTNET>
```

Task 16

```
using System;
```

```
delegate int MathOperation(int x, int y);

class Program
{
    static int Add(int a, int b) => a + b;
    static int Subtract(int a, int b) => a - b;

    static void Main()
    {
        MathOperation op = Add;
        Console.WriteLine("Add: " + op(5, 3));
        op = Subtract;
        Console.WriteLine("Subtract: " + op(5, 3));
    }
}
```

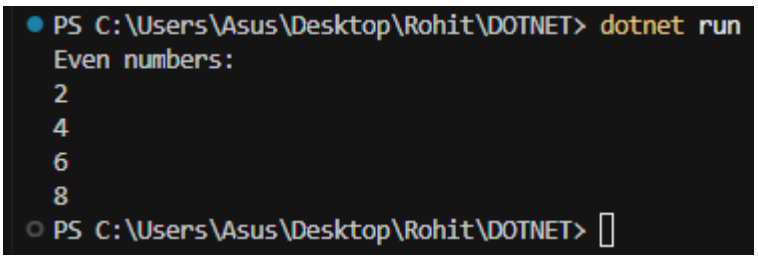
Output:



Task 17

```
using System;
using System.Collections.Generic;
using System.Linq;

class Program
{
    static void Main()
    {
        List<int> numbers = new List<int> { 1, 2, 3, 4, 5, 6, 7, 8 };
        var evens = numbers.Where(n => n % 2 == 0);

        Console.WriteLine("Even numbers:");
        foreach (var num in evens)
            Console.WriteLine(num);
    }
}
```

Output:



Task 18
File name= task.aspx

```
<%@ Page Language="C#" AutoEventWireup="true" CodeFile="task.aspx.cs"
Inherits="task" %>

<!DOCTYPE html>
<html>
<head>
    <title>CRUD</title>
</head>
<body>
    <form id="form1" runat="server">
        <h2>CRUD Operations</h2>

        <asp:Label ID="lblId" runat="server" Text="ID:"></asp:Label>
        <asp:TextBox ID="txtId" runat="server"></asp:TextBox><br /><br />

        <asp:Label ID="lblName" runat="server" Text="Name:"></asp:Label>
        <asp:TextBox ID="txtName" runat="server"></asp:TextBox><br /><br />

        <asp:Label ID="lblEmail" runat="server" Text="Email:"></asp:Label>
        <asp:TextBox ID="txtEmail" runat="server"></asp:TextBox><br /><br />

        <asp:Button ID="btnInsert" runat="server" Text="Insert" OnClick="btnInsert_Click" />
        <asp:Button ID="btnUpdate" runat="server" Text="Update" OnClick="btnUpdate_Click"
/>
        <asp:Button ID="btnDelete" runat="server" Text="Delete" OnClick="btnDelete_Click" />
        <asp:Button ID="btnFetch" runat="server" Text="Fetch All" OnClick="btnFetch_Click"
/><br /><br />

        <asp:GridView ID="GridView1" runat="server"></asp:GridView>
    </form>
</body>
</html>
```

File name= task.aspx.cs

```
using System;
using System.Data;
using System.Data.SqlClient;

public partial class task : System.Web.UI.Page
{
   string connectionString = "Data Source=localhost;Initial
Catalog=crudoperations;Integrated Security=True";

   protected void btnInsert_Click(object sender, EventArgs e)
   {
      using (SqlConnection con = new SqlConnection(connectionString))
      {
         string query = "INSERT INTO Users (Name, Email) VALUES (@Name, @Email)";
         SqlCommand cmd = new SqlCommand(query, con);
         cmd.Parameters.AddWithValue("@Name", txtName.Text);
         cmd.Parameters.AddWithValue("@Email", txtEmail.Text);
         con.Open();
         cmd.ExecuteNonQuery();
      }
   }

   protected void btnUpdate_Click(object sender, EventArgs e)
   {
      using (SqlConnection con = new SqlConnection(connectionString))
      {
         string query = "UPDATE Users SET Name=@Name, Email=@Email WHERE
Id=@Id";
         SqlCommand cmd = new SqlCommand(query, con);
         cmd.Parameters.AddWithValue("@Id", txtId.Text);
         cmd.Parameters.AddWithValue("@Name", txtName.Text);
         cmd.Parameters.AddWithValue("@Email", txtEmail.Text);
         con.Open();
         cmd.ExecuteNonQuery();
      }
   }

   protected void btnDelete_Click(object sender, EventArgs e)
   {
      using (SqlConnection con = new SqlConnection(connectionString))
      {
         string query = "DELETE FROM Users WHERE Id=@Id";
         SqlCommand cmd = new SqlCommand(query, con);
         cmd.Parameters.AddWithValue("@Id", txtId.Text);
         con.Open();
         cmd.ExecuteNonQuery();
```

```
        }
    }

    protected void btnFetch_Click(object sender, EventArgs e)
    {
        using (SqlConnection con = new SqlConnection(connectionString))
        {
            string query = "SELECT * FROM Users";
            SqlDataAdapter da = new SqlDataAdapter(query, con);
            DataTable dt = new DataTable();
            da.Fill(dt);
            GridView1.DataSource = dt;
            GridView1.DataBind();
        }
    }
}
```

Output: