

# **C# and .NET Frameworks**

## **Assignment 1**

**1.Develop the C# program to initialize two dimensional array and print all the elements of the array on the same line separated with space.**

### **AIM:**

To initialize and print a 2D array containing numbers 1 to 9.

### **PROGRAM:**

```
using System;
```

```
class Program
```

```
{
```

```
    static void Main()
```

```
    {
```

```
        // Initialize a 2D array
```

```
        int[,] array = {
```

```
            { 1, 2, 3 },
```

```
            { 4, 5, 6 },
```

```
            { 7, 8, 9 }
```

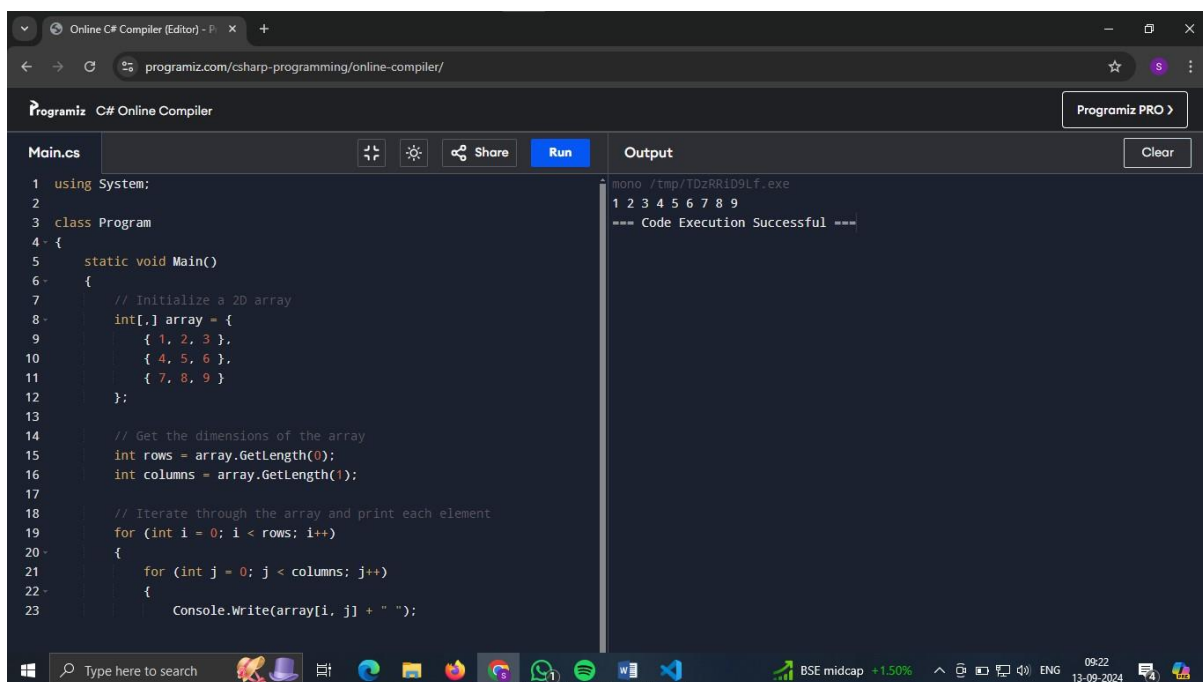
```
        };
```

```
        // Get the dimensions of the array
```

```
        int rows = array.GetLength(0);
```

```
        int columns = array.GetLength(1);
```

```
// Iterate through the array and print each element
for (int i = 0; i < rows; i++)
{
    for (int j = 0; j < columns; j++)
    {
        Console.Write(array[i, j] + " ");
    }
}
}
```

A screenshot of a web browser displaying an online C# compiler interface. The browser's address bar shows the URL 'programiz.com/csharp-programming/online-compiler/'. The compiler's header includes the 'Programiz C# Online Compiler' logo and a 'Programiz PRO >' button. Below the header, there are tabs for 'Main.cs', 'Share', 'Run', and 'Output'. The 'Main.cs' tab is active, showing a C# program. The code in 'Main.cs' initializes a 2D array with three rows and nine columns, calculates the dimensions, and iterates through the array to print each element. The 'Output' tab is also active, showing the execution results: 'mono: /tmp/TDzRRID9Lf.exe' followed by the numbers '1 2 3 4 5 6 7 8 9' on a single line, and a success message '=== Code Execution Successful ==='. The bottom of the image shows a Windows taskbar with various application icons and system information like '09:22 13-09-2024'.

## OUTPUT:

123456789

**2. Aravind wants to apply for competitive exam. He needs to know whether he is eligible to apply. The eligibility criteria is given below:**

- **Age should be greater than 18 years, but not more than 30.**
- **The candidate should have passed 10 std with a minimum pass percentage of 65.**

**Design the C# program to help him to know his eligibility. If the criteria gets satisfied, print he is eligible else print he is not eligible**

**AIM:**

To determine and print whether a person named Aravind is eligible to apply for a competitive exam based on their age and 10th standard pass percentage.

**PROGRAM:**

```
using System;
```

```
class Program
```

```
{
```

```
    static void Main()
```

```
    {
```

```
        // Input details for Aravind
```

```
        Console.Write("Enter Aravind's age: ");
```

```
        int age = int.Parse(Console.ReadLine());
```

```
        Console.Write("Enter Aravind's 10th standard pass percentage: ");
```

```
        double passPercentage = double.Parse(Console.ReadLine());
```

```
        // Check eligibility criteria
```

```
        bool isEligible = (age > 18 && age <= 30) && (passPercentage >= 65);
```

```
        // Print eligibility status
```

```
        if (isEligible)
```

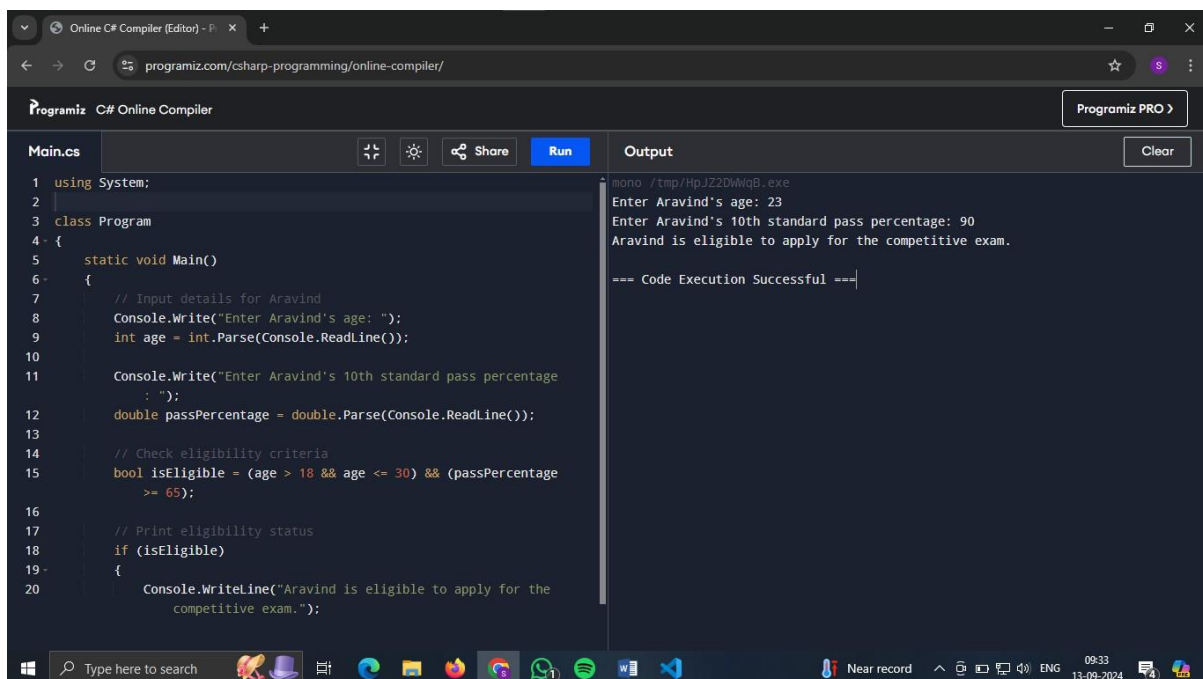
```
        {
```

```
            Console.WriteLine("Aravind is eligible to apply for the competitive exam.");
```

```

    }
    else
    {
        Console.WriteLine("Aravind is not eligible to apply for the competitive
exam.");
    }
}
}

```



The screenshot shows a web browser window with the URL `programiz.com/csharp-programming/online-compiler/`. The page title is "Programiz C# Online Compiler". The code editor on the left contains the following C# code:

```

1 using System;
2
3 class Program
4 {
5     static void Main()
6     {
7         // Input details for Aravind
8         Console.Write("Enter Aravind's age: ");
9         int age = int.Parse(Console.ReadLine());
10
11         Console.Write("Enter Aravind's 10th standard pass percentage
: ");
12         double passPercentage = double.Parse(Console.ReadLine());
13
14         // Check eligibility criteria
15         bool isEligible = (age > 18 && age <= 30) && (passPercentage
>= 65);
16
17         // Print eligibility status
18         if (isEligible)
19         {
20             Console.WriteLine("Aravind is eligible to apply for the
competitive exam.");

```

The output window on the right shows the execution results:

```

mono /tmp/HPJ220WqB.exe
Enter Aravind's age: 23
Enter Aravind's 10th standard pass percentage: 90
Aravind is eligible to apply for the competitive exam.

=== Code Execution Successful ===

```

## INPUT:

Enter Aravind's age: 23

Enter Aravind's 10th standard pass percentage: 90

## OUTPUT:

Aravind is eligible to apply for the competitive exam.

**3.Design the C# console application named validation to get mobile number as input from the user. Validate the mobile number with the following cases:**

- **The first four number must be followed by then followed by next six numbers(eg:9894-256874)**
- **Should contains only numbers**
- **Should be of length 10.**
- **The first number should start only with 9 Or 8**

### **AIM**

To validate and print whether a given mobile number is valid or not.

### **PROGRAM:**

```
using System;
```

```
using System.Text.RegularExpressions;
```

```
class Validation
```

```
{
```

```
    static void Main()
```

```
    {
```

```
        // Prompt the user to enter the mobile number
```

```
        Console.Write("Enter the mobile number: ");
```

```
        string mobileNumber = Console.ReadLine();
```

```
        // Validate the mobile number
```

```
        if (IsValidMobileNumber(mobileNumber))
```

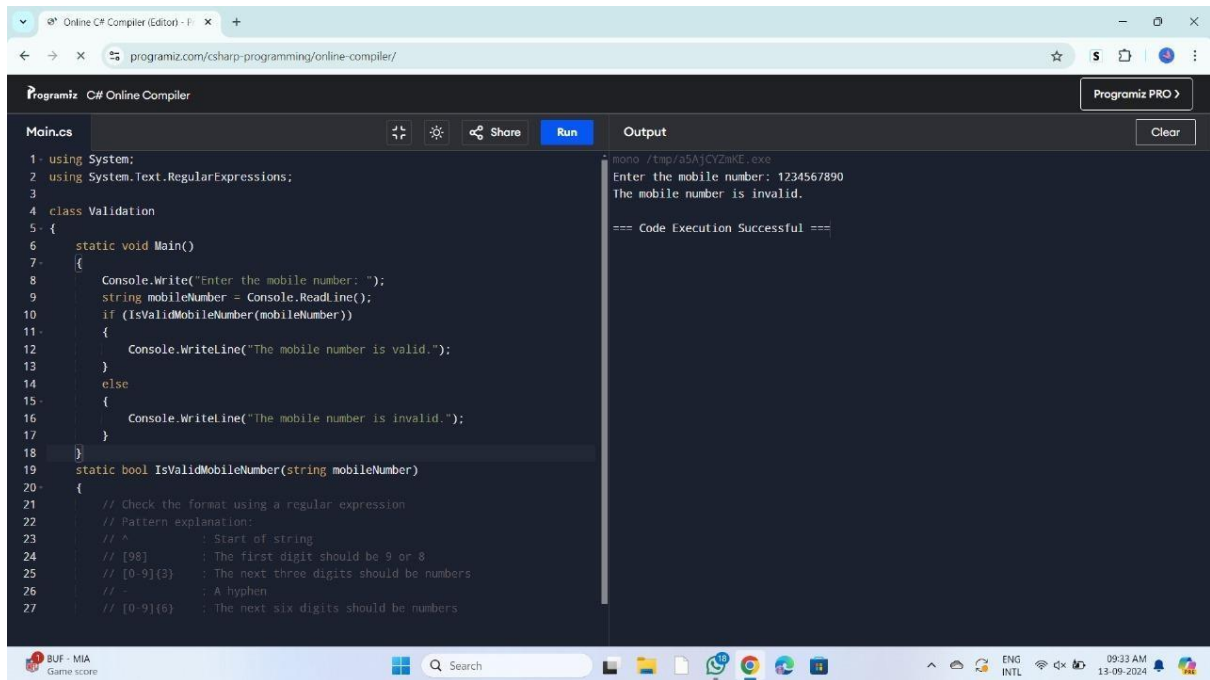
```
        {
```

```
            Console.WriteLine("The mobile number is valid.");
```

```
        }
```

```
else
{
    Console.WriteLine("The mobile number is invalid.");
}
}

static bool IsValidMobileNumber(string mobileNumber)
{
    // Check the format using a regular expression
    // Pattern explanation:
    // ^      : Start of string
    // [98]    : The first digit should be 9 or 8
    // [0-9]{3} : The next three digits should be numbers
    // -      : A hyphen
    // [0-9]{6} : The next six digits should be numbers
    // $      : End of string
    string pattern = @"^[98][0-9]{3}-[0-9]{6}$";
    if (Regex.IsMatch(mobileNumber, pattern))
    {
        return true;
    }
    return false;
}
}
```



```
1- using System;
2- using System.Text.RegularExpressions;
3-
4- class Validation
5- {
6-     static void Main()
7-     {
8-         Console.WriteLine("Enter the mobile number: ");
9-         string mobileNumber = Console.ReadLine();
10-        if (IsValidMobileNumber(mobileNumber))
11-        {
12-            Console.WriteLine("The mobile number is valid.");
13-        }
14-        else
15-        {
16-            Console.WriteLine("The mobile number is invalid.");
17-        }
18-    }
19-
20-    static bool IsValidMobileNumber(string mobileNumber)
21-    {
22-        // Check the format using a regular expression
23-        // Pattern explanation:
24-        // ^           : Start of string
25-        // [98]        : The first digit should be 9 or 8
26-        // [0-9]{3}    : The next three digits should be numbers
27-        // -          : A hyphen
28-        // [0-9]{6}    : The next six digits should be numbers
29-    }
30-}
```

Output

```
mono /tmp/a5A/CYZnKE.exe
Enter the mobile number: 1234567890
The mobile number is invalid.

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

**INPUT:**

1234567890

**OUTPUT:**

The mobile number is invalid.

**4. Write the missing code snippets and the statements in the C# program given below.**

```
Class person {
    _____name;
    _____age;
    _____weight;
    Void printperson() {
        // write the code to print name, age and weight of a person
    }
}

Class persondata {
    Static void Main(string[] args) {
```

```
person_____ = _____;  
_____.name = "Kannan";  
_____.age = 19;  
_____.weight = 58;  
// write the statement to access printperson() function  
}  
}
```

**AIM:**

To create a Person class, instantiate it, and print out the person's name, age, and weight using a method.

**PROGRAM:**

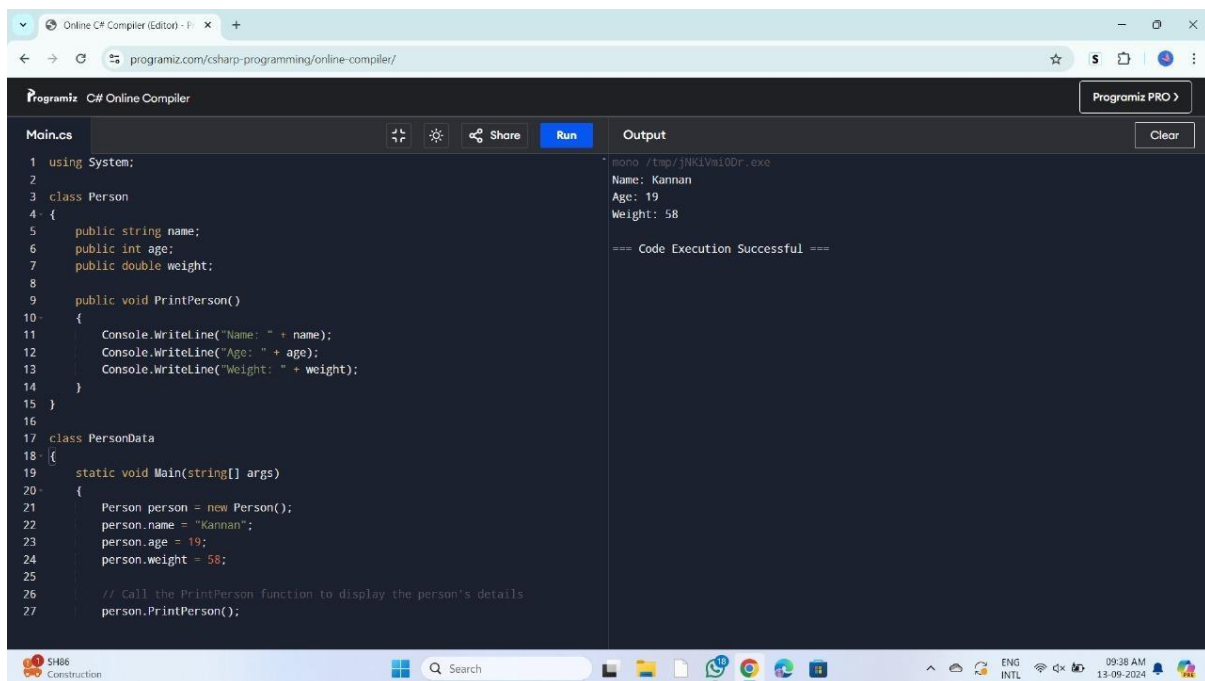
using System;

```
class Person  
{  
    public string name;  
    public int age;  
    public double weight;  
  
    public void PrintPerson()  
    {  
        Console.WriteLine("Name: " + name);  
        Console.WriteLine("Age: " + age);  
        Console.WriteLine("Weight: " + weight);  
    }  
}
```



```
class PersonData
{
    static void Main(string[] args)
    {
        Person person = new Person();
        person.name = "Kannan";
        person.age = 19;
        person.weight = 58;

        person.PrintPerson();
    }
}
```



The screenshot shows a web browser window with the URL `programiz.com/csharp-programming/online-compiler/`. The browser tab is titled "Online C# Compiler (Editor) - P...". The page content is divided into two main sections: a code editor on the left and an output window on the right. The code editor is titled "Main.cs" and contains the following C# code:

```
1 using System;
2
3 class Person
4 {
5     public string name;
6     public int age;
7     public double weight;
8
9     public void PrintPerson()
10    {
11        Console.WriteLine("Name: " + name);
12        Console.WriteLine("Age: " + age);
13        Console.WriteLine("Weight: " + weight);
14    }
15 }
16
17 class PersonData
18 {
19     static void Main(string[] args)
20     {
21         Person person = new Person();
22         person.name = "Kannan";
23         person.age = 19;
24         person.weight = 58;
25
26         // Call the PrintPerson function to display the person's details
27         person.PrintPerson();
28     }
29 }
```

The output window is titled "Output" and shows the following text:

```
mono: /tmp/.JNKiVn10Dr.exe
Name: Kannan
Age: 19
Weight: 58

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

The browser's address bar shows the URL `programiz.com/csharp-programming/online-compiler/`. The browser's status bar at the bottom shows the time `09:38 AM` and the date `13-09-2024`.

## OUTPUT:

Name: Kannan

Age: 19

Weight: 58

**5. A hospital wants to create a console application to maintain its inpatient details. The information to store includes:**

- **Name of the patient**
- **Date of admission**
- **Age of patient**
- **Disease**
- **Date of discharge**
- **Total bills paid**

**Design the C# program with the class name patient with necessary data members to store the above information. The class should have two member functions, one to get the patients information and other to display the information. Create a main class called hospital to create necessary instances, methods calling statements and display all the details about the patient.**

**AIM:**

To create a Patient class, collect patient information through user input, and display the collected information using methods.

**PROGRAM:**

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

```
namespace Assignment1_Q5  
{  
    class Patient
```

```
{  
    // Data members to store patient information  
    private string name;  
    private DateTime dateOfAdmission;  
    private int age;  
    private string disease;  
    private DateTime dateOfDischarge;  
    private decimal totalBillsPaid;  
  
    // Method to get patient information from the user  
    public void GetPatientInfo()  
    {  
        Console.Write("Enter Patient Name: ");  
        name = Console.ReadLine();  
  
        Console.Write("Enter Date of Admission (yyyy-mm-dd): ");  
        dateOfAdmission = DateTime.Parse(Console.ReadLine());  
  
        Console.Write("Enter Age of Patient: ");  
        age = int.Parse(Console.ReadLine());  
  
        Console.Write("Enter Disease: ");  
        disease = Console.ReadLine();  
  
        Console.Write("Enter Date of Discharge (yyyy-mm-dd): ");  
        dateOfDischarge = DateTime.Parse(Console.ReadLine());  
    }  
}
```

```
        Console.WriteLine("Enter Total Bills Paid: ");
        totalBillsPaid = decimal.Parse(Console.ReadLine());
    }

    // Method to display patient information
    public void DisplayPatientInfo()
    {
        Console.WriteLine("\nPatient Details:");
        Console.WriteLine($"Name: {name}");
        Console.WriteLine($"Date of Admission:
{dateOfAdmission.ToShortDateString()}");
        Console.WriteLine($"Age: {age}");
        Console.WriteLine($"Disease: {disease}");
        Console.WriteLine($"Date of Discharge:
{dateOfDischarge.ToShortDateString()}");
        Console.WriteLine($"Total Bills Paid: {totalBillsPaid:C}");
    }
}

class Program
{
    static void Main(string[] args)
    {
        Patient patient = new Patient();

        // Get patient information
        patient.GetPatientInfo();

        // Display patient information
```

```

        patient.DisplayPatientInfo();

        // Wait for user input before closing
        Console.WriteLine("\nPress any key to exit...");
        Console.ReadKey();
    }
}
}

```

The screenshot shows a web browser window with the URL `programiz.com/csharp-programming/online-compiler/`. The page title is "Programiz C# Online Compiler". The code editor on the left shows a C# program named `Main.cs` with the following content:

```

1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6
7 namespace Assignment1_Q5
8 {
9     class Patient
10    {
11        // Data members to store patient information
12        private string name;
13        private DateTime dateOfAdmission;
14        private int age;
15        private string disease;
16        private DateTime dateOfDischarge;
17        private decimal totalBillsPaid;
18
19        // Method to get patient information from the user
20        public void GetPatientInfo()
21        {
22            Console.Write("Enter Patient Name: ");
23            name = Console.ReadLine();

```

The output window on the right shows the execution results:

```

mono /tmp/hsU5JCzyKf.exe
Enter Patient Name:raja
Enter Date of Admission (yyyy-mm-dd): 2024-08-12
Enter Age of Patient: 32
Enter Disease: Fever
Enter Date of Discharge (yyyy-mm-dd): 2024-08-20
Enter Total Bills Paid: 25,000

Patient Details:
Name: aja
Date of Admission: 08/12/2024
Age: 32
Disease: Fever
Date of Discharge: 08/20/2024
Total Bills Paid: ?25,000.00

Press any key to exit...

```

The Windows taskbar at the bottom shows the system clock as 10:15 on 13-09-2024, with a weather forecast of 29°C Sunny.

## INPUT:

Enter Patient Name:raja

Enter Date of Admission (yyyy-mm-dd): 2024-08-12

Enter Age of Patient: 32

Enter Disease: Fever

Enter Date of Discharge (yyyy-mm-dd): 2024-08-20

Enter Total Bills Paid: 25,000

### **OUTPUT:**

Patient Details:

Name: aja

Date of Admission: 08/12/2024

Age: 32

Disease: Fever

Date of Discharge: 08/20/2024

Total Bills Paid: ?25,000.00

- 6. Implement the C# code to get two vector number as input, add them and print the sum as another vector. Make use of operator overloading to perform addition of vector numbers.**

### **AIM:**

To create a Vector class, overload the '+' operator to add two vectors, and demonstrate vector addition by taking user input for two vectors and displaying their sum.

### **PROGRAM:**

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

```
namespace Assignment1_Q6
```

```

{
class Vector
{
    public int X { get; set; }
    public int Y { get; set; }

    // Constructor to initialize vector components
    public Vector(int x, int y)
    {
        X = x;
        Y = y;
    }

    // Overload the '+' operator to add two vectors
    public static Vector operator +(Vector v1, Vector v2)
    {
        return new Vector(v1.X + v2.X, v1.Y + v2.Y);
    }

    // Method to display the vector

}
class Program
{
    static void Main(string[] args)
    {
        // Input first vector
        Console.WriteLine("Enter the first vector:");
        Console.Write("X1: ");
        int x1 = int.Parse(Console.ReadLine());
        Console.Write("Y1: ");
        int y1 = int.Parse(Console.ReadLine());
        Vector vector1 = new Vector(x1, y1);

        // Input second vector
        Console.WriteLine("Enter the second vector:");
        Console.Write("X2: ");
        int x2 = int.Parse(Console.ReadLine());
        Console.Write("Y2: ");
        int y2 = int.Parse(Console.ReadLine());
    }
}

```

```

Vector vector2 = new Vector(x2, y2);

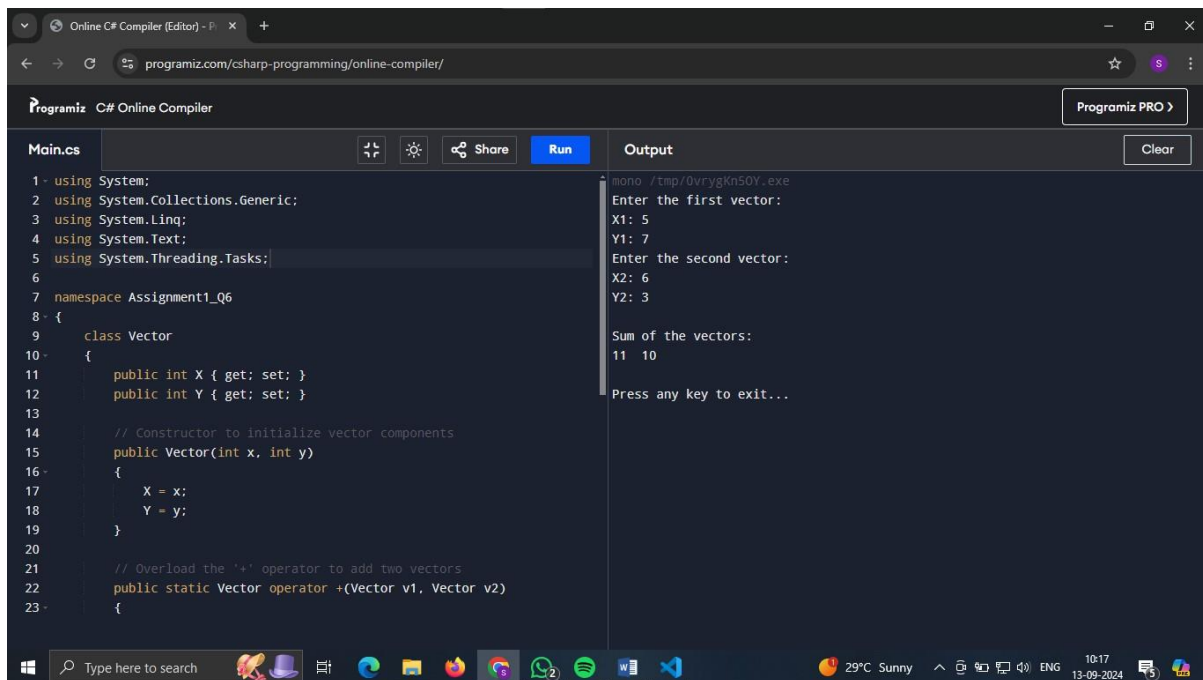
// Add the vectors using overloaded '+' operator
Vector sumVector = vector1 + vector2;

// Display the result
Console.WriteLine("\nSum of the vectors:");
Console.WriteLine($"{sumVector.X} {sumVector.Y}");

// Wait for user input before closing
Console.WriteLine("\nPress any key to exit...");
Console.ReadKey();

    }
}
}

```



The screenshot shows a web browser window with the URL `programiz.com/csharp-programming/online-compiler/`. The page title is "Programiz C# Online Compiler". The code editor on the left contains the following C# code:

```

1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6
7 namespace Assignment1_Q6
8 {
9     class Vector
10    {
11        public int X { get; set; }
12        public int Y { get; set; }
13
14        // Constructor to initialize vector components
15        public Vector(int x, int y)
16        {
17            X = x;
18            Y = y;
19        }
20
21        // Overload the '+' operator to add two vectors
22        public static Vector operator +(Vector v1, Vector v2)
23        {

```

The output window on the right shows the following text:

```

mono: /tmp/0vrygkn50Y.exe
Enter the first vector:
X1: 5
Y1: 7
Enter the second vector:
X2: 6
Y2: 3

Sum of the vectors:
11 10

Press any key to exit...

```

## INPUT:

Enter the first vector:

X1: 5



Y1: 7

Enter the second vector:

X2: 6

Y2: 3

**OUTPUT:**

Sum of the vectors:

11 10

7. Create the class student with necessary members to maintain the basic details of a student such as name, age, address and mobile number. Add method getDate() to read the basic details and printData() to print the details of the student. Inherit the student class into the sub class called studentmark with necessary members to maintain student mark details. Override the getDate() and printData() in student mark class to read mark details and print the marks, respectively. Also, define a method to find the grade of the student based on his/her marks. Design the student main class to access the member of both the classes in C#

**AIM:**

To create a Student class and a derived StudentMark class, which inherits and extends the base class to include mark details, calculates grades based on marks, and demonstrates polymorphism through overridden methods.

**PROGRAM:**

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

```
namespace Assignment1_Q7  
{
```

```
class Student
{
    // Data members for basic details
    protected string name;
    protected int age;
    protected string address;
    protected string mobileNumber;

    // Method to get basic details of the student
    public virtual void getData()
    {
        Console.Write("Enter Student Name: ");
        name = Console.ReadLine();

        Console.Write("Enter Age: ");
        age = int.Parse(Console.ReadLine());

        Console.Write("Enter Address: ");
        address = Console.ReadLine();

        Console.Write("Enter Mobile Number: ");
        mobileNumber = Console.ReadLine();
    }

    // Method to print basic details of the student
    public virtual void printData()
    {
        Console.WriteLine("\nStudent Details:");
        Console.WriteLine($"Name: {name}");
        Console.WriteLine($"Age: {age}");
        Console.WriteLine($"Address: {address}");
        Console.WriteLine($"Mobile Number: {mobileNumber}");
    }
}

// Subclass to maintain student mark details
class StudentMark : Student
{
    // Data members for mark details
```

```

private int marks;

// Override method to get student marks
public override void getData()
{
    // Call base method to get basic details
    base.getData();

    Console.Write("Enter Marks: ");
    marks = int.Parse(Console.ReadLine());
}

// Override method to print student marks
public override void printData()
{
    // Call base method to print basic details
    base.printData();

    Console.WriteLine($"Marks: {marks}");
    Console.WriteLine($"Grade: {FindGrade()}");
}

// Method to determine grade based on marks
private string FindGrade()
{
    if (marks >= 90) return "A";
    else if (marks >= 75) return "B";
    else if (marks >= 60) return "C";
    else if (marks >= 50) return "D";
    else return "F";
}
}
class Program
{
    static void Main(string[] args)
    {
        // Create an instance of the StudentMark class
        StudentMark studentMark = new StudentMark();
        studentMark.getData();
    }
}

```

```

        studentMark.printData();

        // Wait for user input before closing
        Console.WriteLine("\nPress any key to exit...");
        Console.ReadKey();
    }
}
}

```

The screenshot shows an online C# compiler interface. The code editor on the left contains the following code:

```

1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6
7 namespace Assignment1_Q7
8 {
9
10     class Student
11     {
12         // Data members for basic details
13         protected string name;
14         protected int age;
15         protected string address;
16         protected string mobileNumber;
17
18         // Method to get basic details of the student
19         public virtual void getData()
20         {
21             Console.Write("Enter Student Name: ");
22             name = Console.ReadLine();
23

```

The output window on the right shows the following output:

```

mono /tmp/EFrafVRqHu.exe
Enter Student Name: Arun
Enter Age: 19
Enter Address: Anna nagar
Enter Mobile Number: 9514017889
Enter Marks: 92

Student Details:
Name: Arun
Age: 19
Address: Anna nagar
Mobile Number: 9514017889
Marks: 92
Grade: A

Press any key to exit...

```

## INPUT:

Enter Student Name: Arun  
Enter Age: 19  
Enter Address: Anna nagar  
Enter Mobile Number: 9514017889  
Enter Marks: 92

## OUTPUT:

Student Details:  
Name: Arun  
Age: 19  
Address: Anna nagar  
Mobile Number: 9514017889  
Marks: 92  
Grade: A

8. Design sample C# program with class name employee to compute netsalary of the employee using the basic salary, if for the job\_catg is 1 use table-I else use table-II. Use constructor to initialize basic salary,hra,da,pf and loan. The employee class should contain input() method to get input for job\_catg, empno, empname, calculateSalary() method to compute salary and display() method to print the details.

Table-I	Table-II
<b>BASIC=Rs. 8,000</b> <b>HRA=10% of basic</b> <b>DA=20% of basic</b> <b>LOAN=Rs. 300</b> <b>PF=Rs. 500</b>	<b>BASIC=Rs. 15,000</b> <b>HRA=20% of basic</b> <b>DA=30% of basic</b> <b>LOAN=Rs. 600</b> <b>PF=1000</b>

**AIM:**

To create an Employee class that calculates and displays an employee's net salary based on their job category, with salary components and deductions, and demonstrates encapsulation and methods.

**PROGRAM:**

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

namespace Assignment1_Q8
{
    class Employee
    {
        // Data members for employee details and salary components
        private int empno;
        private string empname;
```

```

private int job_catg;
private decimal basic;
private decimal hra;
private decimal da;
private decimal pf;
private decimal loan;
private decimal netSalary;

// Constructor to initialize salary components
public Employee()
{
    // Initialization of salary components based on job category will be done
in calculateSalary()
    hra = 0;
    da = 0;
    pf = 0;
    loan = 0;
    netSalary = 0;
}

// Method to get employee details
public void Input()
{
    Console.Write("Enter Employee Number: ");
    empno = int.Parse(Console.ReadLine());

    Console.Write("Enter Employee Name: ");
    empname = Console.ReadLine();

    Console.Write("Enter Job Category (1 for Table-I, 2 for Table-II): ");
    job_catg = int.Parse(Console.ReadLine());
}

// Method to calculate salary based on job category
public void CalculateSalary()
{
    if (job_catg == 1)
    {
        // Table-I calculations
        basic = 8000;

```

```

        hra = 0.10m * basic;
        da = 0.20m * basic;
        loan = 300;
        pf = 500;
    }
    else if (job_catg == 2)
    {
        // Table-II calculations
        basic = 15000;
        hra = 0.20m * basic;
        da = 0.30m * basic;
        loan = 600;
        pf = 1000;
    }
    else
    {
        Console.WriteLine("Invalid Job Category!");
        return;
    }

    // Calculate net salary
    netSalary = basic + hra + da - (pf + loan);
}

// Method to display employee details and salary
public void Display()
{
    Console.WriteLine("\nEmployee Details:");
    Console.WriteLine($"Employee Number: {empno}");
    Console.WriteLine($"Employee Name: {empname}");
    Console.WriteLine($"Job Category: {job_catg}");
    Console.WriteLine($"Basic Salary: Rs. {basic}");
    Console.WriteLine($"HRA: Rs. {hra}");
    Console.WriteLine($"DA: Rs. {da}");
    Console.WriteLine($"Loan Deduction: Rs. {loan}");
    Console.WriteLine($"PF Deduction: Rs. {pf}");
    Console.WriteLine($"Net Salary: Rs. {netSalary}");
}
}
class Program

```

```

{
    static void Main(string[] args)
    {
        // Create an instance of the Employee class
        Employee employee = new Employee();

        // Get employee details
        employee.Input();

        // Calculate salary
        employee.CalculateSalary();

        // Display employee details and net salary
        employee.Display();

        // Wait for user input before closing
        Console.WriteLine("\nPress any key to exit...");
        Console.ReadKey();
    }
}
}

```

The screenshot shows a web browser window with the URL `programiz.com/csharp-programming/online-compiler/`. The page title is "Programiz C# Online Compiler". The code editor on the left shows the following C# code:

```

1 using System;
2 using System.Collections.Generic;
3 using System.Linq;
4 using System.Text;
5 using System.Threading.Tasks;
6
7 namespace Assignment1_Q8
8 {
9
10     class Employee
11     {
12         // Data members for employee details and salary components
13         private int empno;
14         private string empname;
15         private int job_catg;
16         private decimal basic;
17         private decimal hra;
18         private decimal da;
19         private decimal pf;
20         private decimal loan;
21         private decimal netSalary;
22
23         // Constructor to initialize salary components

```

The output window on the right shows the following text:

```

mono /tmp/b72pmYknZH.exe
Enter Employee Number: 21
Enter Employee Name: Surya
Enter Job Category (1 for Table-I, 2 for Table-II): 1

Employee Details:
Employee Number: 21
Employee Name: Surya
Job Category: 1
Basic Salary: Rs. 8000
HRA: Rs. 800.00
DA: Rs. 1600.00
Loan Deduction: Rs. 300
PF Deduction: Rs. 500
Net Salary: Rs. 9600.00

Press any key to exit...

```

The bottom of the image shows a Windows taskbar with various icons and a system tray displaying "29°C Sunny" and "10:20 13-09-2024".



**INPUT:**

Enter Employee Number: 21

Enter Employee Name: Surya

Enter Job Category (1 for Table-I, 2 for Table-II): 1

**OUTPUT:**

Employee Details:

Employee Number: 21

Employee Name: Surya

Job Category: 1

Basic Salary: Rs. 8000

HRA: Rs. 800.00

DA: Rs. 1600.00

Loan Deduction: Rs. 300

PF Deduction: Rs. 500

Net Salary: Rs. 9600.00

**BY:**

**RAHUL J**

**73772226139**

**III – B.TECH AI&DS**