

Assignment 1

PROGRAM 1-

```
using System;
```

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

```
using System.Linq;
```

```
using System.Text;
```

```
using System.Threading.Tasks;
```

```
namespace Assignment1
```

```
{
```

```
    internal class Program
```

```
    {
```

```
        static void Main(string[] args)
```

```
        {
```

```
            int[] arr = new int[5];
```

```
            int sum = 0;
```

```
            Console.WriteLine("Enter 5 Elements");
```

```
            for (int i = 0; i < arr.Length; i++)
```

```
            {
```

```
                arr[i]=Convert.ToInt32(Console.ReadLine());
```

```
            }
```

```

        for (int i=0;i<arr.Length; i++)
        {
            sum += arr[i];
        }
        Console.WriteLine("Sum is :" + sum);
    }
}

```

PROGRAM 2-

```

namespace Assignment1

```

```

{
    internal class Program
    {
        static void Main(string[] args)
        {
            int[] arr = new int[5];
            double sum = 0;
            Console.WriteLine("Enter 5 Elements");
            for (int i = 0; i < arr.Length; i++)
            {
                arr[i]=Convert.ToInt32(Console.ReadLine());
            }
            for (int i=0;i<arr.Length; i++)

```

```

        {
            sum += arr[i];
        }

        double avg = sum / 5;

        Console.WriteLine("Average is : " + avg);
    }
}

```

PROGRAM 3-

```

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

namespace Assignment1
{
    internal class Program
    {
        static void Main(string[] args)
        {

```

```

int[] arr = new int[5];
int max = 0;
Console.WriteLine("Enter 5 Elements");
for (int i = 0; i < arr.Length; i++)
{
    arr[i]=Convert.ToInt32(Console.ReadLine());
}
for (int i=0;i<arr.Length; i++)
{
    if (arr[i]> max){
        max = arr[i];
    }
}

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

```

PROGRAM 4-

```

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

```

```
using System.Text;
using System.Threading.Tasks;

namespace Assignment1
{
    internal class Program
    {
        static void Main(string[] args)
        {
            int[] arr = new int[5];
            int even = 0;
            int odd = 0;
            Console.WriteLine("Enter 5 Elements");
            for (int i = 0; i < arr.Length; i++)
            {
                arr[i]=Convert.ToInt32(Console.ReadLine());
            }
            for (int i=0;i<arr.Length; i++)
            {
                if (arr[i]%2==0){
                    even++;
                }
                else
                {

```

```
        odd++;  
    }  
}
```

```
    Console.WriteLine(" Total Even Element is : " + even);  
    Console.WriteLine(" Total Odd Element is : " + odd);  
}  
}  
}
```

PROGRAM 5-

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

```
namespace Assignment1  
{  
    internal class Program  
    {  
        static void Main(string[] args)  
        {
```

```
int[] arr = new int[5];
int start = 0;
int end=arr.Length-1;
Console.WriteLine("Enter 5 Elements");
for (int i = 0; i < arr.Length; i++)
{
    arr[i]=Convert.ToInt32(Console.ReadLine());
}
while (start < end)
{
    int temp = arr[start];
    arr[start] = arr[end];
    arr[end] = temp;
    start++;
    end--;
}
Console.WriteLine("Reverse Array is :");
for (int i = 0; i < arr.Length; i++)
{
    Console.Write(arr[i] + " ");
}
Console.ReadLine();
}
```

```
}  
}
```

PROGRAM 6-

```
using System;  
using System.Collections.Generic;  
using System.Linq;  
using System.Text;  
using System.Threading.Tasks;  
  
namespace Assignment1  
{  
    internal class Program  
    {  
        static void Main(string[] args)  
        {  
            int[] arr = new int[5];  
            Console.WriteLine("Enter 5 Elements");  
            for (int i = 0; i < arr.Length; i++)  
            {  
                arr[i]=Convert.ToInt32(Console.ReadLine());  
                arr[i] = arr[i] * 2;  
            }  
        }  
    }  
}
```



```
        Console.WriteLine("Array is :");  
        for (int i = 0; i < arr.Length; i++)  
        {  
            Console.Write(arr[i] + " ");  
        }  
        Console.ReadLine();  
  
    }  
}  
}
```

PROGRAM 7-

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

```
namespace Assignment1
```

```
{  
    internal class Program  
    {
```

```
static void Main(string[] args)
{
    int[] arr = new int[5];

    Console.WriteLine("Enter 5 Elements");
    for (int i = 0; i < arr.Length; i++)
    {
        arr[i]=Convert.ToInt32(Console.ReadLine());

    }

    Console.WriteLine("Enter Elements to be search");
    int n = Convert.ToInt32(Console.ReadLine());

    for (int i = 0; i < arr.Length; i++)
    {
        if (arr[i] == n)
        {
            Console.WriteLine("Element found at index :" + i);
            Console.ReadLine();
            return;
        }
    }
}
```

```
        Console.WriteLine("Element not found");
        Console.ReadLine();

    }
}
}
```

PROGRAM 8-

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

namespace Assignment1
{
    internal class Program
    {
        static void Main(string[] args)
        {
            int[] arr = new int[5];

            Console.WriteLine("Enter 5 Elements");
            for (int i = 0; i < arr.Length; i++)
```

```
{  
    arr[i]=Convert.ToInt32(Console.ReadLine());  
  
}
```

```
for (int i = 0; i < arr.Length; i++)  
{  
    for (int j = 1; j < arr.Length; j++)  
    {  
        if (arr[j - 1] > arr[j])  
        {  
            int temp = arr[j];  
            arr[j] = arr[j - 1];  
            arr[j - 1] = temp;  
        }  
    }  
}
```

```
Console.WriteLine("Array is:");  
for (int i = 0; i < arr.Length; i++)  
{  
    Console.Write(arr[i]+" ");  
  
}
```

```
Console.WriteLine();
```

```
        Console.WriteLine("Second Minimum is: " +arr[1]);  
        Console.ReadLine();  
  
    }  
}  
}
```

PROGRAM 9-

```
using System;  
using System.Collections.Generic;  
using System.Linq;  
using System.Text;  
using System.Threading.Tasks;  
  
namespace Assignment1  
{  
    internal class Program  
    {  
        static void Main(string[] args)  
        {  
            int[] arr = { 1,1,3,3,3,4,5,5};  
            int l = arr.Length;  
            int r = removeDuplicateFromArray(arr, l);  
        }  
    }  
}
```

```

        Console.WriteLine("Final Array is:");
        for(int i = 0; i < r; i++)
        {
            Console.Write(arr[i] + " ");
        }
        Console.ReadLine();
    }
    static int removeDuplicateFromArray(int[] arr,int n)
    {
        if (n == 0 || n == 1)
            return 0;

        int[] arr2 = new int[n];
        int j = 0;

        for (int i = 0; i < n-1; i++)
        {
            if (arr[i] != arr[i + 1])
            {
                arr2[j++] = arr[i];
            }
        }
    }

```

```
        arr2[j++] = arr[n-1];

        for (int i = 0; i < j; i++)
        {
            arr[i] = arr2[i];
        }

        return j;
    }
}
```

PROGRAM 10-

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

```
namespace Assignment1
{
    internal class Program
    {
        static void Main(string[] args)
        {
            int[] arr = new int[5];
            int[] arr2=new int[5];
            int j = 0;
            int[] arr3=new int[5];
            Console.WriteLine("Enter 5 Elements of First Array");
            for (int i = 0; i < arr.Length; i++)
            {
                arr[i]=Convert.ToInt32(Console.ReadLine());

            }
            Console.WriteLine("Enter 5 Elements of second Array");
            for (int i = 0; i < arr2.Length; i++)
            {
                arr2[i] = Convert.ToInt32(Console.ReadLine());

            }

            for (int i = 0; i < arr.Length; i++)
```



```

{
    for(int k = 0; k < arr2.Length; k++)
    {
        if (arr[i] == arr2[k])
        {
            arr3[j] = arr[i];
            j++;
        }
    }

}

Console.WriteLine("Final Array with Common Elements are:");
for (int i = 0; i < j; i++)
{
    Console.Write(arr3[i] + " ");

}

}

}
}

```

Assignment 2

Program 1

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

namespace Assignment2
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Employee e1 = new Employee(1, "Anjali", 123.56);
            e1.displayData();
        }
    }

    class Employee
    {
        public int id;
        public string name;
        public double salary;
```

```
public Employee(int id, string name, double salary)
{
    this.id = id;
    this.name = name;
    this.salary = salary;
}

public void displayData()
{
    Console.WriteLine("id :" + this.id);
    Console.WriteLine("Name :" + this.name);
    Console.WriteLine("Salary :" + this.salary);
    Console.ReadKey();
}
}
```

Program 2 -

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

```
namespace Assignment2
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Bank b1 = new Bank(12345, "Anjali", 1000);
            b1.displayData();
        }
    }
}

class Bank
{
    public int AccountNumber;
    public string name;
    public double balance;

    public Bank(int AccountNumber, string name, double balance)
    {
        this.AccountNumber = AccountNumber;
        this.name = name;
        this.balance = balance;
    }

    public void deposit(double balance)
    {

```

```

        balance += balance;
    }
    public void withdrawl(double amount)
    {
        if (amount > balance)
        {
            Console.WriteLine("Insufficinent Balance");
        }
        else
        {
            balance = balance - amount;
        }
    }
    public void displayData()
    {
        Console.WriteLine("AccountNumber:" + this.AccountNumber);
        Console.WriteLine("Name :" + this.name);
        Console.WriteLine("Balance :" + this.balance);
        Console.ReadKey();
    }
}
}

```

Program 3-

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

namespace Assignment2
{
    internal class Program
    {
        static void Main(string[] args)
        {
            float[] nums = { 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 };
            MathHelper.average(nums);
        }
    }

    public static class MathHelper
    {
        static float sum= 0;
        static float avg = 0;
        public static void average(float[] nums)
```

```

    {
        for(int i=0;i<nums.Length; i++)
        {
            sum += nums[i];
        }
        avg = sum/nums.Length;
        Console.WriteLine("Average is " + avg);
        Console.ReadKey();
    }

}

}

```

Program 4 -

```

using System;
using System.Collections.Generic;
using System.Diagnostics.CodeAnalysis;
using System.Linq;
using System.Runtime.CompilerServices;
using System.Text;
using System.Threading.Tasks;

```

```
namespace Assignment2
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Logger.setNameAndPassword("Anjali", 1234);
            Logger.Login("Anjali", 1234);

        }
    }

    public static class Logger
    {
        static string name;
        static int password;

        public static void setNameAndPassword(string username ,int userpassword)
        {
            name = username;
            password = userpassword;
        }

        public static void Login(string username ,int userpassword)
        {
```



```
        if (username == name && userpassword == password)
        {
            Console.WriteLine("Login SuccessFull");
            Console.ReadKey();
        }
        else
        {
            Console.WriteLine("Login Failed");
            Console.ReadKey();
        }
    }
}
```

Program 5-

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

```
namespace Assignment2
```

```
{  
    public partial class Person  
    {  
        public string firstName;  
        public string lastName;  
        public Person(string firstName, string lastName)  
        {  
            this.firstName = firstName;  
            this.lastName = lastName;  
        }  
    }  
}
```

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

```
namespace Assignment2  
{  
    public partial class Person  
    {
```

```
public void showDetails() {  
  
    Console.WriteLine("FirstName :"+firstName+ "LastName :"+ lastName);  
    Console.ReadKey();  
}  
}  
}
```

```
using System;  
using System.Collections.Generic;  
using System.Diagnostics.CodeAnalysis;  
using System.Linq;  
using System.Runtime.CompilerServices;  
using System.Text;  
using System.Threading.Tasks;
```

```
namespace Assignment2  
{  
    internal class Program  
    {  
        static void Main(string[] args)  
        {  
            Person p1 = new Person("Anjali", "sharma");
```

```
        p1.showDetails();

    }

}

}
```

Program 6 -

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

namespace Assignment2
{
    public partial class Employee
    {
        public int id;
        public string name;
        public double salary;
```

```
        public Employee(int id, string name, double salary)
        {
            this.id = id;
            this.name = name;
            this.salary = salary;
        }
    }
}
```

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

```
namespace Assignment2
{
    public partial class Employee
    {

        public void displayData()
        {
            Console.WriteLine("id :" + this.id);
        }
    }
}
```

```
        Console.WriteLine("Name :" + this.name);  
        Console.WriteLine("Salary :" + this.salary);  
        Console.ReadKey();  
    }  
}  
}
```

```
using System;  
using System.Collections.Generic;  
using System.Diagnostics.CodeAnalysis;  
using System.Linq;  
using System.Runtime.CompilerServices;  
using System.Text;  
using System.Threading.Tasks;
```

```
namespace Assignment2  
{  
    internal class Program  
    {  
        static void Main(string[] args)  
        {  
            Employee e1 = new Employee(1, "Anjali", 1000);  
            e1.displayData();  
        }  
    }  
}
```

```
}
```

```
}
```

Program 7 -

```
using System;  
using System.Collections.Generic;  
using System.Diagnostics.CodeAnalysis;  
using System.Linq;  
using System.Runtime.CompilerServices;  
using System.Text;  
using System.Threading.Tasks;
```

```
namespace Assignment2
```

```
{
```

```
    internal class Program
```

```
    {
```

```
        static void Main(string[] args)
```

```
        {
```

```
            Circle c1 = new Circle();
```

```
            c1.setRadius(5);
```

```
            c1.getarea();
```

```
}
```

```
}
```

```
public abstract class Shape
```

```
{
```

```
    public abstract void getarea();
```

```
}
```

```
public class Circle : Shape
```

```
{
```

```
    float radius;
```

```
    public void setRadius( float r)
```

```
{
```

```
        radius = r;
```

```
}
```

```
    public override void getarea()
```

```
{
```

```
        double area = 3.14 * radius * radius;
```

```
        Console.WriteLine("Area is :" + area);
```

```
        Console.ReadKey();
```

```
}
```

```
}
```

```
}
```


Program 8 -

using System;

using System.Collections.Generic;

using System.Diagnostics.CodeAnalysis;

using System.Linq;

using System.Runtime.CompilerServices;

using System.Text;

using System.Threading.Tasks;

namespace Assignment2

{

internal class Program

{

static void Main(string[] args)

{

Dog d1 = new Dog();

Cat c1 = new Cat();

d1.Sound("WOW WOW");

c1.Sound("MEOW MEOW");

}

}

public abstract class Animal

```
{
    public abstract void Sound(string sound);
}

public class Dog : Animal
{
    public override void Sound(string sound)
    {
        Console.WriteLine("Dog is barking " + sound);
        Console.ReadKey();
    }
}

public class Cat: Animal
{
    public override void Sound(string sound)
    {
        Console.WriteLine("Cat Sound " + sound);
        Console.ReadKey();
    }
}

}
```

Program 9 -

```
using System;  
using System.Collections.Generic;  
using System.Diagnostics.CodeAnalysis;  
using System.Linq;  
using System.Runtime.CompilerServices;  
using System.Text;  
using System.Threading.Tasks;
```

```
namespace Assignment2  
{  
    internal class Program  
    {  
        static void Main(string[] args)  
        {  
            Car Audi = new Car("Audi");  
        }  
    }  
}
```

```
}
```

```
public sealed class Vechile
```

```
{
```

```
    string vechile;
```

```
    public void startEngine(string vechile)
```

```
    {
```

```
        this.vechile = vechile;
```

```
        Console.WriteLine(vechile + " is start");
```

```
    }
```

```
    public void stopEngine()
```

```
    {
```

```
        Console.WriteLine(vechile + "is stop");
```

```
    }
```

```
}
```

```
public class Car : Vechile
```

```
{
```

```
    string name;
```

```
    public Car(string name)
```

```
    {
```

```
        this.name = name;
```

$$\left\{ \begin{array}{l} \\ \\ \end{array} \right\}$$

Program 10-

```
using System;  
using System.Collections.Generic;  
using System.Diagnostics.CodeAnalysis;  
using System.Linq;  
using System.Runtime.CompilerServices;  
using System.Text;  
using System.Threading.Tasks;
```

```
namespace Assignment2
{
    internal class Program
    {
        static void Main(string[] args)
        {

        }
    }
}
```

sealed class Bank

{

public int AccountNumber;

public string name;

public double balance;

public Bank(int AccountNumber, string name, double balance)

{

 this.AccountNumber = AccountNumber;

 this.name = name;

 this.balance = balance;

}

public void deposit(double balance)

{

 balance += balance;

}

public void withdrawl(double amount)

{

 if (amount > balance)

 {

 Console.WriteLine("Insufficinent Balance");

 }

 else

```

        {
            balance = balance - amount;
        }
    }

    public void displayData()
    {
        Console.WriteLine("AccountNumber:" + this.AccountNumber);
        Console.WriteLine("Name :" + this.name);
        Console.WriteLine("Balance :" + this.balance);
        Console.ReadKey();
    }
}

class SavingAccount : Bank
{
    public int AccountNumber;
    public string name;

}

}

```

Program1-

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

namespace Assignment3
{
    internal class Program
    {
        static void Main(string[] args)
        {
            User u1= new User();
            u1.setName("Anjali Sharma");
            Console.WriteLine(u1.getName());
            Console.ReadLine();
        }
    }
    class User
    {
        private String name;
        public void setName(String name)
```



```
{
    this.name = name;
}
public String getName()
{
    return this.name;
}
}
```

Program2-

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

namespace Assignment3

```
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Login l1 = new Login();
```

```
        l1.setNameLogin("Anjali Sharma");  
        Console.WriteLine(l1.getName());  
        Console.ReadLine();  
    }  
}  
  
class User  
{  
    private String name;  
    public void setName(String name)  
    {  
        this.name = name;  
    }  
    public String getName()  
    {  
        return this.name;  
    }  
}  
  
class Login : User  
{  
    public void setNameLogin(String name)  
    {  
        this.setName(name);  
    }  
}
```

```
}
```

Program3-

```
using Assignment3;  
using System;  
using System.Collections.Generic;  
using System.Linq;  
using System.Text;  
using System.Threading.Tasks;
```

```
namespace As3
```

```
{
```

```
    internal class Program1
```

```
    {
```

```
        static void Main(string[] args)
```

```
        {
```

```
            Assignment3.Program program = new Assignment3.Program();
```

```
            Console.WriteLine(program.name);
```

```
        }
```

```
    }
```

```
}
```

Program4-

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

namespace Assignment3
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Login l1 = new Login();
            l1.setNameLogin("Anjali");
            Console.WriteLine(l1.getName());
            Console.ReadLine();
        }
    }
    class User
    {
        protected String name;
```

```
    public void setName(String name)
    {
        this.name = name;
    }

    public String getName()
    {
        return this.name;
    }
}

class Login : User
{
    public void setNameLogin(String name)
    {
        this.name = name;
    }
}
}
```

Program5-

Assembly1-

using System;

using System.Collections.Generic;

```
using System.Linq;
using System.Runtime.CompilerServices;
using System.Text;
using System.Threading.Tasks;
```

```
[assembly:InternalsVisibleTo("As3")]
```

```
namespace Assignment3
{
    internal class Program
    {
        internal String name = "ABC";
        protected internal void getName()
        {
            Console.WriteLine(name);
        }
    }
}
```

Assembly2-

```
using Assignment3;
```

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

```
namespace As3
{
    internal class Program1
    {
        static void Main(string[] args)
        {
            Assignment3.Program program = new Assignment3.Program();
            program.getName();
            Console.ReadLine();
        }
    }
}
```

Program6-

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

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

namespace Assignment3
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Login l1 = new Login();
            l1.setNameLogin("anjali");
            Console.WriteLine(l1.getName());
            Console.ReadLine();
        }
    }
    class User
    {
        public String name;
        public void setName(String name)
        {
            this.name = name;
        }
        public String getName()
```



```

        {
            return this.name;
        }
    }

    class Login : User
    {
        public void setNameLogin(String name)
        {
            this.name = name;
        }
    }
}

```

Program7-

```

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

```

```

namespace Assignment3

```

```

{
    internal class Program
    {

```

```
static void Main(string[] args)
{
    User l1 = new User();
    l1.setName("anjali");
    Console.WriteLine(l1.getName());
    Console.ReadLine();
}
}
class User
{
    public String name="ABC";
    public void setName(String name)
    {
        this.name = name;
    }
    public String getName()
    {
        return this.name;
    }
}
}
```

Program8-

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

namespace Assignment3
{
    internal class Program
    {
        static void Main(string[] args)
        {
            User l1 = new User();
            l1.setProfile("Anjali",20);
            l1.getProfile();
            Console.ReadLine();
        }
    }

    class User
    {
        public String name="ABC";
        private int age;
        public void setProfile(String name,int age)
```

```

    {
        this.name = name;
        this.setAge(age);
    }
    private void setAge(int age)
    {
        this.age = age;
    }
    public void getProfile()
    {
        Console.WriteLine("NAME : " + name + " " + "Age : " + age);
    }
}

}

```

Program9-

```

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

```

```
namespace Assignment3
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Login l1 = new Login();
            l1.setNameLoginDetails("Anjali", 21);
            l1.getProfile();
            Console.ReadLine();
        }
    }
}

class User
{
    public String name="ABC";
    private int age;
    protected void setProfile(String name,int age)
    {
        this.name = name;
        this.setAge(age);
    }
    private void setAge(int age)
    {
        this.age = age;
    }
}
```

```

    }
    public void getProfile()
    {
        Console.WriteLine("NAME : " + name + " " + "Age : " + age);
    }
}
class Login : User
{
    public void setNameLoginDetails(String name,int age)
    {
        this.setProfile(name,age);
    }
}
}

```

Program10-

Assembly1-

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Runtime.CompilerServices;
using System.Text;

```

```
using System.Threading.Tasks;
```

```
[assembly:InternalsVisibleTo("As3")]
```

```
namespace Assignment3
```

```
{
```

```
    internal class Program
```

```
    {
```

```
        internal String name;
```

```
        internal Program(String name)
```

```
        {
```

```
            this.name= name;
```

```
        }
```

```
        protected internal void getName()
```

```
        {
```

```
            Console.WriteLine(name);
```

```
        }
```

```
    }
```

```
}
```

```
Assembly2-
```

```
using Assignment3;
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
```

```
namespace As3
{
    internal class Program1
    {
        static void Main(string[] args)
        {
            Assignment3.Program program = new Assignment3.Program("Anjali");
            program.getName();
            Console.ReadLine();
        }
    }
}
```


Program 1-

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

namespace Assignment4
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Bank b1 = new Bank("Anjali Sharma", 1000);
            b1.getDetails();
            Console.ReadKey();
        }
        class Bank
        {
            String name;
            float balance;
            public Bank(String name, float balance)
            {
```

```

        this.name = name;
        if(balance < 0)
        {
            Console.WriteLine("Enter Correct Balance");
        }
        this.balance = balance;
    }

    public void getDetails()
    {
        Console.WriteLine("Name :" + this.name);
        Console.WriteLine("Balance :"+this.balance);
    }
}
}
}
}

```

Program 2-

```

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

```

```
namespace Assignment4
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Car b1 = new Car("BMW", "A7", 2002);
            b1.getDetails();
            Console.ReadKey();
        }
    }
    class Car
    {
        String name;
        String model;
        int year;

        public Car(String name, String model,int year)
        {
            this.name = name;
            this.year = year;
            this.model = model;
        }
    }
}
```

```

        public void getDetails()
        {
            Console.WriteLine("Name :" + this.name);
            Console.WriteLine("Model :"+this.model);
            Console.WriteLine("Year :" + this.year);
        }
    }
}

```

Program 3-

```

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

```

```

namespace Assignment4
{
    internal class Program
    {
        static void Main(string[] args)
        {

```

```
    Person p1 = new Person("Anjali", "Sharma");  
    p1.getDetails();  
    Console.ReadKey();  
}  
  
class Person  
{  
    String name;  
    String lastname;  
  
    public Person(String name, String lastname)  
    {  
        this.name = name;  
        this.lastname = lastname;  
    }  
  
    public void getDetails()  
    {  
        String fullname = this.name.ToUpper()+" "+this.lastname.ToUpper();  
        Console.WriteLine("FullName : " + fullname);  
    }  
}  
}
```

Program 4-

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

namespace Assignment4
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Temperature t1 = new Temperature(33);
            t1.convertToFahrenheit();
            Console.ReadKey();
        }

        class Temperature
        {
            float temp;

            public Temperature(float value)
```

```

    {
        temp = value;
    }

    public void convertToFahrenheit()
    {
        float f = (temp*9)/5+ 32;
        Console.WriteLine("Temperature in Fahrenheit is :"+ f);
    }
}
}
}

```

Program 5-

```

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

namespace Assignment4
{
    internal class Program

```

```
{
```

```
class CustomList
```

```
{
```

```
    private int[] num = new int[10];
```

```
    public int this[int i]
```

```
    {
```

```
        get
```

```
        {
```

```
            return num[i];
```

```
        }
```

```
        set
```

```
        {
```

```
            num[i] = value;
```

```
        }
```

```
    }
```

```
}
```

```
static void Main(string[] args)
```

```
{
```

```
    CustomList c1 = new CustomList();
```



```
        c1[0] = 12;
        c1[1] = 13;
        Console.WriteLine(c1[0]);
        Console.WriteLine(c1[1]);
        Console.ReadLine();

    }

}

}
```

Program 6-

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

namespace Assignment4
{
    internal class Program
```

```
{
```

```
class Stack
```

```
{
```

```
    private int[] num = new int[3];
```

```
    public int this[int i]
```

```
    {
```

```
        get
```

```
        {
```

```
            return num[i];
```

```
        }
```

```
        set
```

```
        {
```

```
            num[i] = value;
```

```
        }
```

```
    }
```

```
}
```

```
static void Main(string[] args)
```

```
{
```

```
    Stack c1 = new Stack();
```

```
        c1[0] = 12;
        c1[1] = 13;
        Console.WriteLine(c1[0]);
        Console.WriteLine(c1[1]);
        Console.ReadLine();

    }

}
}
```

Program 7-

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

namespace Assignment4
{
```

```
internal class Program
```

```
{
```

```
    class Book
```

```
    {
```

```
        private string bookname;
```

```
        public string this[ string param]
```

```
        {
```

```
            get
```

```
            {
```

```
                return bookname;
```

```
            }
```

```
            set
```

```
            { if(param=="title")
```

```
                bookname=value.ToString();
```

```
            else
```

```
            {
```

```
                throw new Exception("please use title for index");
```

```
            }
```

```
        }
```

```
    }
```

```
}
```

```
static void Main(string[] args)
{
    Book book = new Book();
    book["title"] = "Python";
    Console.WriteLine(book["title"]);
    Console.ReadLine();

}

}
```

Program 8-

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

```
namespace Assignment4
{
    internal class Program
    {

        enum Seasons
        {
            spring=1,summer,monsoon,autumn,winter
        }


        static void Main(string[] args)
        {
            Console.WriteLine((int)Seasons.spring);
            Console.WriteLine(Seasons.spring );


            Console.WriteLine((int)Seasons.summer);
            Console.WriteLine(Seasons.summer);


            Console.WriteLine((int)Seasons.monsoon);
            Console.WriteLine(Seasons.monsoon);


            Console.WriteLine((int)Seasons.autumn);
```

```
Console.WriteLine(Seasons.autumn);
```

```
Console.WriteLine((int)Seasons.winter);
```

```
Console.WriteLine(Seasons.winter);
```

```
Console.ReadLine();
```

```
}
```

```
}
```

```
}
```

Program 9 -

```
using System;
```

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

```
using System.Linq;
```

```
using System.Text;
```

```
using System.Threading.Tasks;
```

```
namespace Assignment4
{
    internal class Program
    {

        enum Shapes
        {
            Circle=1,Triangle,Rectangle,Square
        }

        static void Main(string[] args)
        {
            double area=0;
            Console.WriteLine("Choose the Shape");
            Console.WriteLine("Press 1 for "+Shapes.Circle );
            Console.WriteLine("Press 2 for " + Shapes.Triangle);
            Console.WriteLine("Press 3 for " + Shapes.Rectangle);
            Console.WriteLine("Press 4 for " + Shapes.Square);
            int shape = Convert.ToInt32(Console.ReadLine());

            switch (shape)
            {
                case 1:
                    Console.WriteLine("Enter Rdius ");
```



```
double radius = Convert.ToDouble(Console.ReadLine());  
area = 3.14 * radius * radius;  
Console.WriteLine("Area is :" + area);  
break;
```

case 2:

```
Console.WriteLine("Enter Base and Height");  
int bases = Convert.ToInt32(Console.ReadLine());  
int height = Convert.ToInt32(Console.ReadLine());  
area = (1 / 2) * (bases * height);  
Console.WriteLine("Area is :" + area);  
break;
```

case 3:

```
Console.WriteLine("Enter lengrh and breadth");  
int length = Convert.ToInt32(Console.ReadLine());  
int breadth = Convert.ToInt32(Console.ReadLine());  
area = length * breadth;  
Console.WriteLine("Area is :" + area);  
break;
```

case 4:

```
Console.WriteLine("Enter side of square");  
int side = Convert.ToInt32(Console.ReadLine());  
area = side * side;
```

```
        Console.WriteLine("Area is :" + area);  
        break;  
  
        default: Console.WriteLine("Enter Valid input");  
        break;  
  
    }  
    Console.ReadLine();  
  
    }  
  
    }  
  
    }
```

Program 10 -

```
using System;  
using System.Collections.Generic;  
using System.Linq;  
using System.Security.Cryptography;  
using System.Text;
```

```
using System.Threading.Tasks;
```

```
[Flags]
```

```
public enum permission { read=1,  
    write=2,  
    Execute=4  
}
```

```
namespace Assignment4
```

```
{
```

```
    internal class Program
```

```
    {
```

```
        static void Main(string[] args)
```

```
        {
```

```
            Console.WriteLine("enter the which domain you belong as  
(user,admin,authority) ");
```

```
            string input=Console.ReadLine().ToLower();
```

```
            switch(input)
```

```
            {
```

```
                case "user":
```

```
                    permission us =permission.read;
```

```
                    Console.WriteLine($"you only have {us} permission of file : ");
```

```
                    break;
```

```
                case "admin":
```

```
                    permission ad = permission.read | permission.write;
```

```
        Console.WriteLine($"you have {ad} permission of file : ");  
        break;  
    case "authority":  
        permission aut = (permission)7;  
        Console.WriteLine($"you only have {aut} permission of file : ");  
        break;  
    }  
}  
}  
}
```