Assignments 1 to 4

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;
```

```
        }
    }

}
```

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;

    }
  }

}
```

Assignment 3

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();
        }
    }
}
```

Assignment 4

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;
        }
    }
  }
}
```