

C# .Net Programming Assignment 3

- Create single visual Studio project.
- For Business logic write separate class.
- Use Object Oriented concepts while writing the program.

1. Write C# application which contains following things as :

One class named as Numbers.

Which contains array of integers and its size as a characteristics.

Write default, parametrised and copy constructor to allocate memory for array dynamically.

Class should contains following behaviours as

1. Accept() - Accept elements of array from user.
2. Display() - Display contents of array on screen.

Example :

```
class Numbers
{
    public int iSize;
    public int arr[];

    public Numbers()
    {
        // Logic
    }

    public Numbers(int )
    {
        // Logic
    }

    public Numbers( Numbers obj)
    {
        // Logic
    }

    public void Accept()
    {
        // Logic
    }

    public void Display()
    {
        // Logic
    }
}
```

```
class Marvellous
{
    public static void Main(String []arg)
    {
        Numbers obj1 = new Numbers();
        obj2.Accept();

        Numbers obj2 = new Numbers(10);
        obj2.Accept();
        obj2.Display();

        Numbers obj1 = new Numbers(obj2);
    }
}
```

2. Write C# application which contains following things as :

Design one class named as ArrayOperations which derives above class i.e. Numbers.

Class should contains following behaviours as

1. Maximum() - Find out the largest element from array.
2. Minimum() - Find out smallest element from array.

Example :

```
class ArrayOperations : Numbers
{
    public int Maximum()
    {
    }

    public int Minimum()
    {
    }
}
```

3. Write C# application which contains following things as :

Design one class named as ArrayCobine which derives above class from question 1 i.e. Numbers.

Class should contains following behaviours as

1. Search(int) - Accept one number and return position at which it occurs.
2. Frequency(int) - Accept one number and return frequency of that number.
3. Summation()- Return summation of all elements of array.
4. Average()- Return average of all the elements of array.

Example :

```
class ArrayCobine : Numbers
{
    public int Search(int no)
    {
    }

    public int Frequency(int no)
    {
    }

    public int Summation()
    {
    }

    public int Average()
    {
    }
}
```

Note : All the above classes should be in C# project.
Invoke all methods from classes.