

Practical 11

Aim: Illustrate delegate, Indexer and property in C#

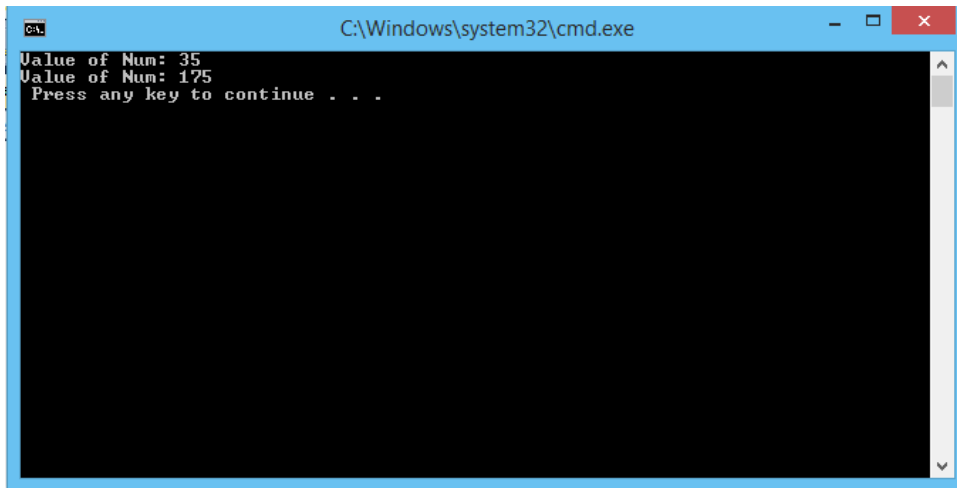
#PROGRAM (Delegate)

```
using System;
delegate int NumberChanger(int n);
namespace DelegateAppl
{
    class TestDelegate
    {
        static int num = 10;
        public static int AddNum(int p)
        {
            num += p;
            return num;
        }

        public static int MultNum(int q)
        {
            num *= q;
            return num;
        }
        public static int getNum()
        {
            return num;
        }
        static void Main(string[] args)
        {
            NumberChanger nc1 = new NumberChanger(AddNum);
            NumberChanger nc2 = new NumberChanger(MultNum);

            //calling the methods using the delegate objects
            nc1(25);
            Console.WriteLine("Value of Num: {0}", getNum());
            nc2(5);
            Console.WriteLine("Value of Num: {0}", getNum());
            Console.ReadKey();
        }
    }
}
```

#OUTPUT

A screenshot of a Windows command prompt window. The title bar is blue and contains the text 'C:\Windows\system32\cmd.exe'. The command prompt area is black with white text. The output displayed is: 'Value of Num: 35', 'Value of Num: 175', and 'Press any key to continue . . .'. The cursor is positioned at the end of the third line.

```
C:\Windows\system32\cmd.exe
Value of Num: 35
Value of Num: 175
Press any key to continue . . .
```

#PROGRAM (Indexer)

```
using System;
namespace IndexerApplication
{
    class IndexedNames
    {
        private string[] namelist = new string[size];
        static public int size = 10;
        public IndexedNames()
        {
            for (int i = 0; i < size; i++)
                namelist[i] = "N. A.";
        }

        public string this[int index]
        {
            get
            {
                string tmp;

                if (index >= 0 && index <= size - 1)
                {
                    tmp = namelist[index];
                }
                else
                {
                    tmp = "";
                }
            }
        }
    }
}
```

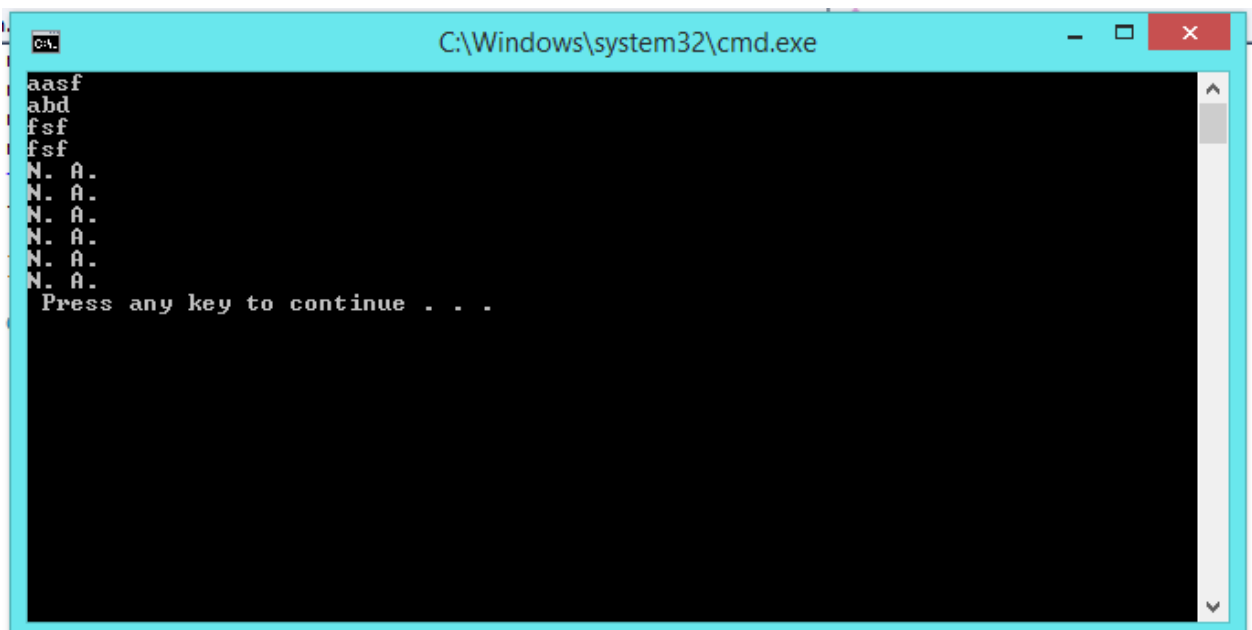
```

        return (tmp);
    }
    set
    {
        if (index >= 0 && index <= size - 1)
        {
            namelist[index] = value;
        }
    }
}
static void Main(string[] args)
{
    IndexedNames names = new IndexedNames();
    names[0] = "aasf";
    names[1] = "abd";
    names[2] = "fsf";
    names[3] = "fsf";
    for (int i = 0; i < IndexedNames.size; i++)
    {
        Console.WriteLine(names[i]);
    }

    Console.ReadKey();
}
}
}

```

#OUTPUT



The screenshot shows a Windows Command Prompt window titled "C:\Windows\system32\cmd.exe". The output of the program is displayed as follows:

```

aasf
abd
fsf
fsf
N. A.
N. A.
N. A.
N. A.
N. A.
N. A.
Press any key to continue . . .

```