TAAZAA TRAINING

ASSIGNMENT- 5

SUBMITTED BY- DAS SUKHDEV

1. COLLECTION WITH PROPER NAMING CONVENTION

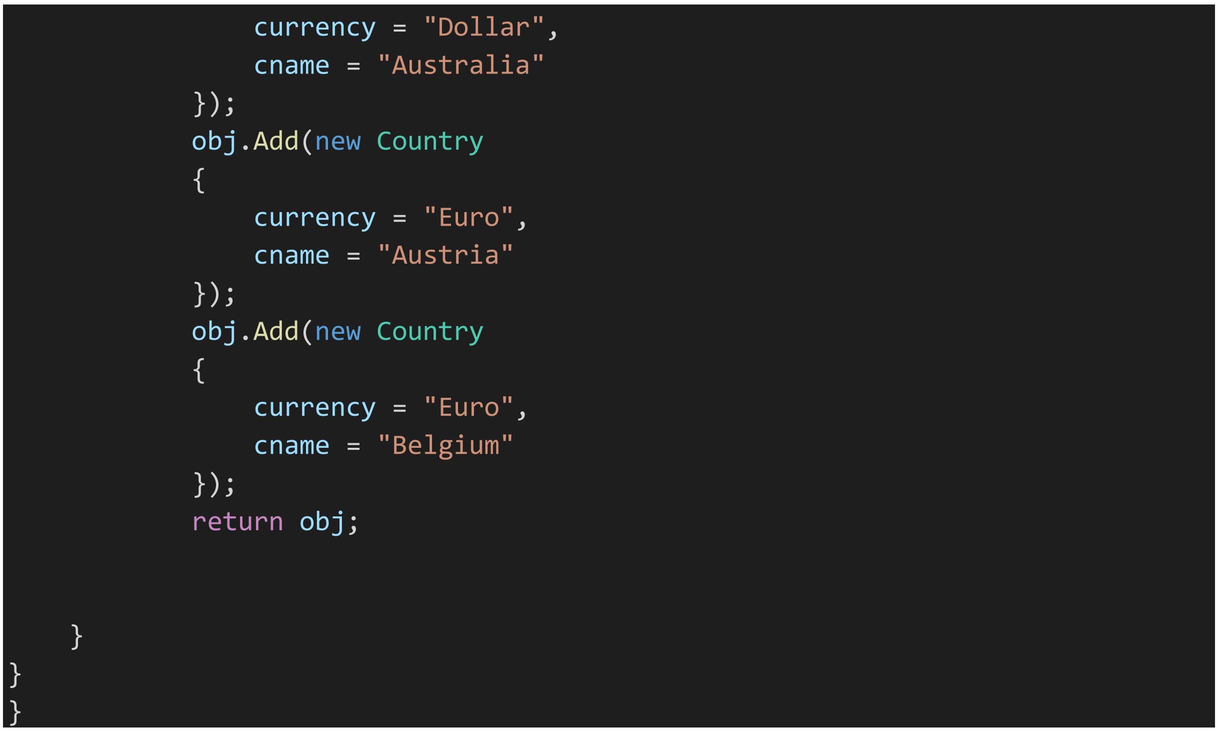
country.cs

```
namespace collection_demo.Model
{
    public class Country  //pascal case
    {
        public string currency{get;set;}//camel case
        public string cname{get;set;}//camel case

    }
}
```

CountryDetails.cs

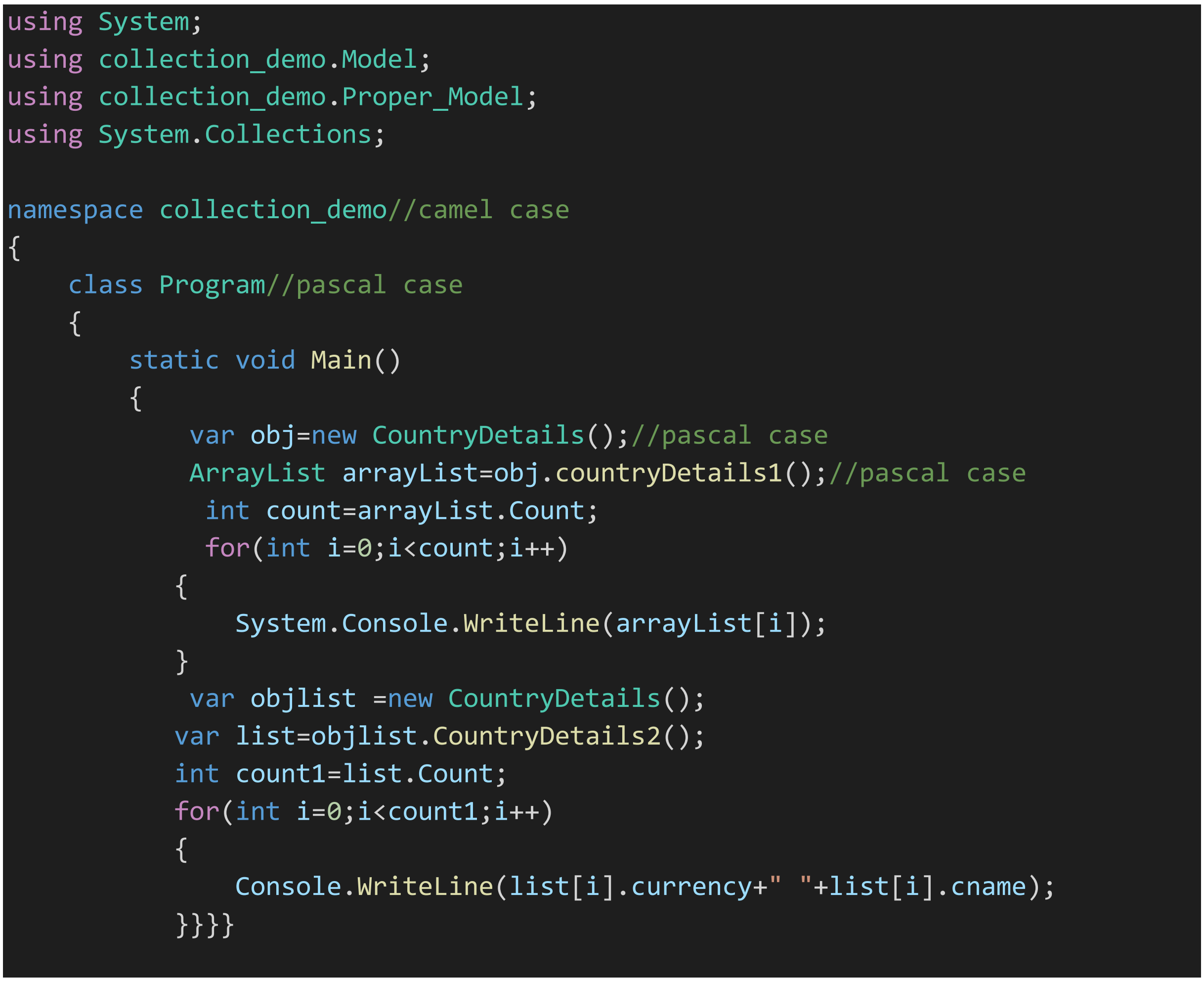
```
using collection_demo.Model;
using System.Collections;
using System.Collections.Generic;
namespace collection_demo.Proper_Model
{
    public class CountryDetails//pascal case
    {
         public ArrayList countryDetails1()//camel case
        {
            ArrayList arrayList = new ArrayList();//pascal case
            arrayList.Add("Ruppess");
            arrayList.Add("India");
            arrayList.Add("America");
            arrayList.Add("Dollar");
            arrayList.Add("Cameroon");
            arrayList.Add("Franc");
            return arrayList;
        }
         public List<Country> CountryDetails2()
        {
            List<Country> obj = new List<Country>();
            obj.Add(new Country
            {
```



```
                currency = "Dollar",
                cname = "Australia"
            });
            obj.Add(new Country
            {
                currency = "Euro",
                cname = "Austria"
            });
            obj.Add(new Country
            {
                currency = "Euro",
                cname = "Belgium"
            });
            return obj;


    }
}
}
```

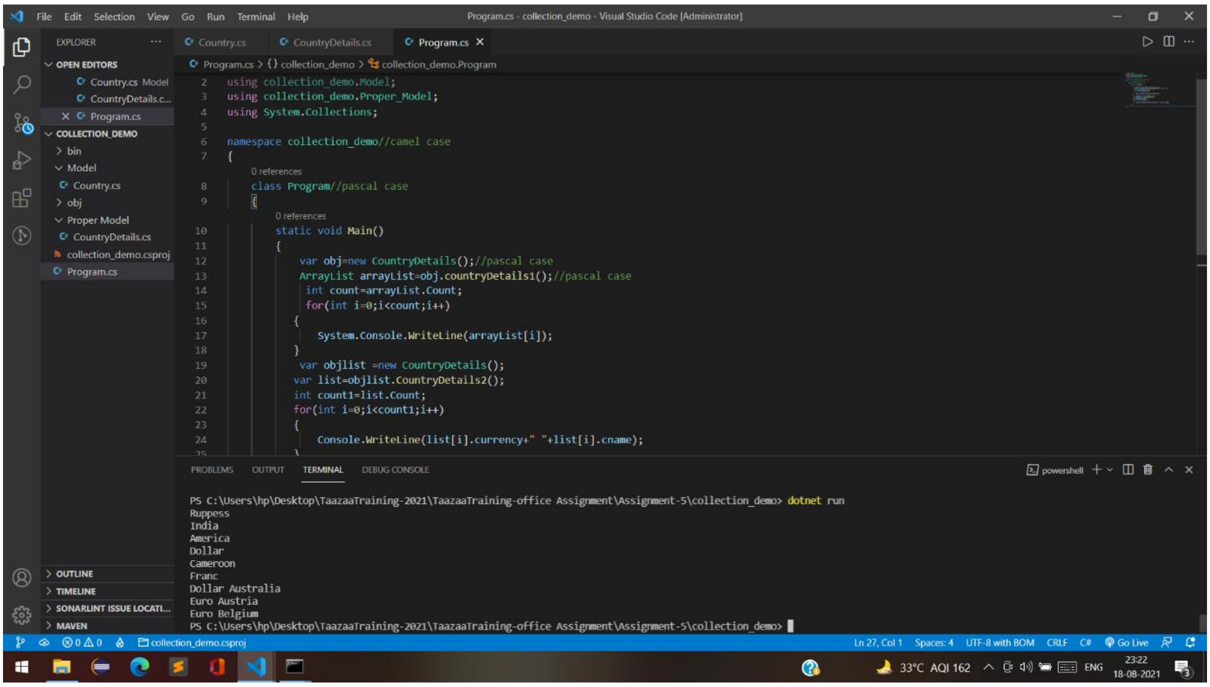
Program.cs



```
using System;
using collection_demo.Model;
using collection_demo.Proper_Model;
using System.Collections;

namespace collection_demo//camel case
{
    class Program//pascal case
    {
        static void Main()
        {
            var obj=new CountryDetails();//pascal case
            ArrayList arrayList=obj.countryDetails1();//pascal case
             int count=arrayList.Count;
             for(int i=0;i<count;i++)
           {
               System.Console.WriteLine(arrayList[i]);
           }
            var objlist =new CountryDetails();
           var list=objlist.CountryDetails2();
           int count1=list.Count;
           for(int i=0;i<count1;i++)
           {
               Console.WriteLine(list[i].currency+" "+list[i].cname);
           }}}}
```

Output of collections



```
using collection_demo.Model;
using collection_demo.Proper_Model;
using System.Collections;

namespace collection_demo//camel case
{
    0 references
    class Program//pascal case
    {
        0 references
        static void Main()
        {
          var obj=new CountryDetails();//pascal case
          ArrayList arrayList=obj.countryDetails1();//pascal case
           int count=arrayList.Count;
           for(int i=0;i<count;i++)
            {
               System.Console.WriteLine(arrayList[i]);
            }
          var objlist =new CountryDetails();
            var list=objlist.CountryDetails2();
            int count1=list.Count;
            for(int i=0;i<count1;i++)
            {
               Console.WriteLine(list[i].currency+" "+list[i].cname);
```

```
PS C:\Users\hp\Desktop\TaazaaTraining-2021\TaazaaTraining-office Assignment\Assignment-5\collection_demo> dotnet run
Ruppess
India
America
Dollar
Cameroon
Franc
Dollar Australia
Euro Austria
Euro Belgium
PS C:\Users\hp\Desktop\TaazaaTraining-2021\TaazaaTraining-office Assignment\Assignment-5\collection_demo>
```

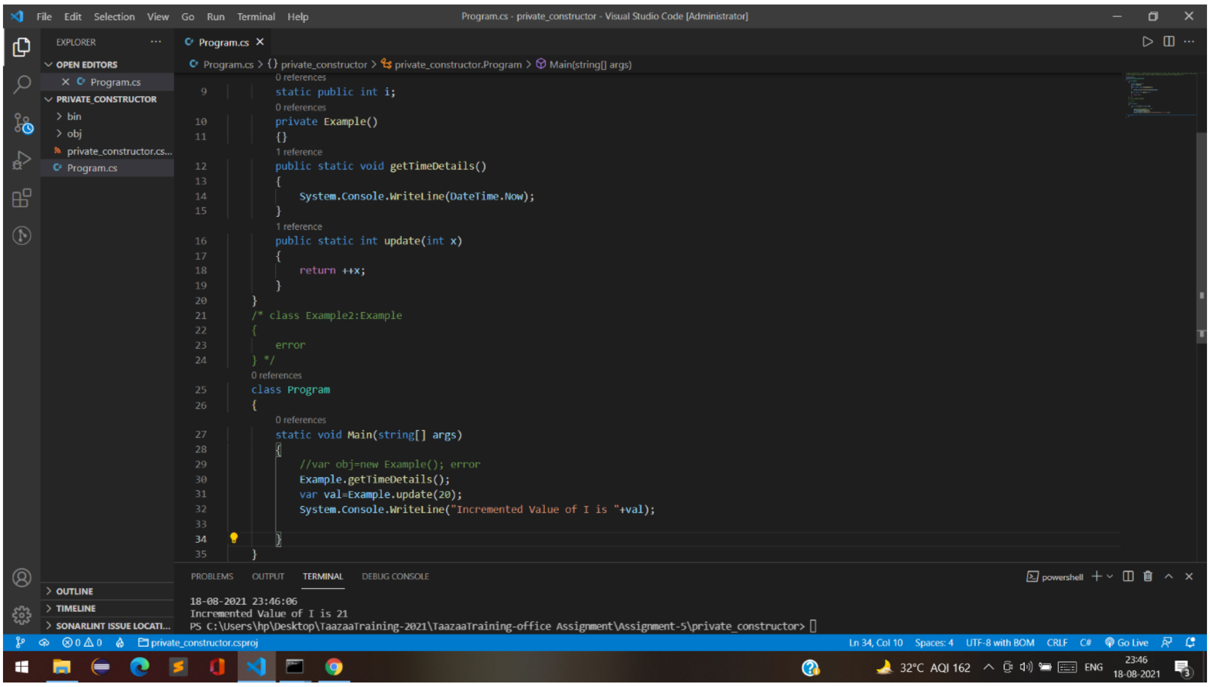
2 Private Constructor

```
/* when a constructor is created with private keyword in a class, and we can’t
 create child class of that class neither it is possible to
create instance of that class. They are used in classes that contain static me
mbers only. */

using System;
namespace private_constructor
{
    class Example
    {
        static public int i;
        private Example()
        {}
        public static void getTimeDetails()
        {
            System.Console.WriteLine(DateTime.Now);
        }
        public static int update(int x)
        {
            return ++x;
        }
    }
    /* class Example2:Example
    {
        error
    } */
    class Program
    {
        static void Main(string[] args)
        {
            //var obj=new Example(); error
            Example.getTimeDetails();
            var val=Example.update(20);
            System.Console.WriteLine("Incremented Value of I is "+val);

        }
    }
}
```

Output of private constructor


File Edit Selection View Go Run Terminal Help
Program.cs - private_constructor - Visual Studio Code [Administrator]
EXPLORER
OPEN EDITORS
Program.cs
PRIVATE_CONSTRUCTOR
bin
obj
private_constructor.cs...
Program.cs
Program.cs > {} private_constructor > private_constructor.Program > Main(string[] args)
OUTLINE
TIMELINE
SONARLINT ISSUE LOCATI...
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
powershell
private_constructor.csproj
Ln 34, Col 10 Spaces: 4 UTF-8 with BOM CRLF C# Go Live
32°C AQI 162 ENG 23:46 18-08-2021

```
        static public int i;
        private Example()
        {}
        public static void getTimeDetails()
        {
            System.Console.WriteLine(DateTime.Now);
        }
        public static int update(int x)
        {
            return ++x;
        }
    }
    /* class Example2:Example
    {
        error
    } */
    class Program
    {
        static void Main(string[] args)
        {
            //var obj=new Example(); error
            Example.getTimeDetails();
            var val=Example.update(20);
            System.Console.WriteLine("Incremented Value of I is "+val);

        }
    }
```

```
18-08-2021 23:46:06
Incremented Value of I is 21
PS C:\Users\hp\Desktop\TaazaaTraining-2021\TaazaaTraining-office Assignment\Assignment-5\private_constructor>
```

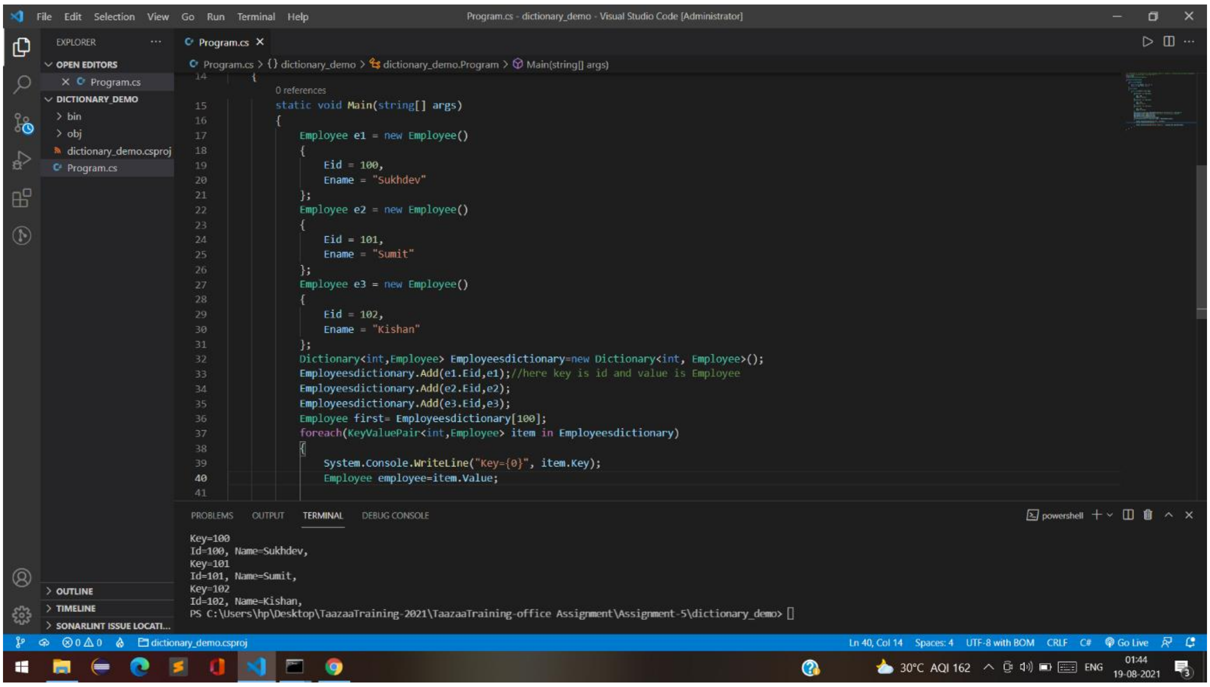
3 Dictionary

```
/* A dictionary is a collection of (key,value)pairs and it is present in (system.collection.Genericnamespace),
here we need to specify types of key and value. */
using System;
using System.Collections.Generic;

namespace dictionary_demo
{
    public class Employee
    {
        public string Ename { get; set; }
        public int Eid { get; set; }
    }
    class Program
    {
        static void Main(string[] args)
        {
            Employee e1 = new Employee()
            {
                Eid = 100,
                Ename = "Sukhdev"
            };
            Employee e2 = new Employee()
            {
                Eid = 101,
                Ename = "Sumit"
            };
            Employee e3 = new Employee()
            {
                Eid = 102,
                Ename = "Kishan"
            };
            Dictionary<int,Employee> Employeesdictionary=new Dictionary<int, Employee>();
            Employeesdictionary.Add(e1.Eid,e1);//here key is id and value is Employee
            Employeesdictionary.Add(e2.Eid,e2);
            Employeesdictionary.Add(e3.Eid,e3);
            Employee first= Employeesdictionary[100];
            foreach(KeyValuePair<int,Employee> item in Employeesdictionary)
            {
                System.Console.WriteLine("Key={0}", item.Key);
                Employee employee=item.Value;

                System.Console.WriteLine("Id={0}, Name={1}, ", employee.Eid,employee.Ename);
            }}}}
```

Output of dictionary program


File Edit Selection View Go Run Terminal Help
Program.cs - dictionary_demo - Visual Studio Code [Administrator]
EXPLORER
OPEN EDITORS
Program.cs
DICTIONARY_DEMO
bin
obj
dictionary_demo.csproj
Program.cs
Program.cs > {} dictionary_demo > dictionary_demo.Program > Main(string[] args)
OUTLINE
TIMELINE
SONARLINT ISSUE LOCATI...
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
powershell
dictionary_demo.csproj
Ln 40, Col 14 Spaces: 4 UTF-8 with BOM CRLF C# Go Live
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```
    {
        0 references
        static void Main(string[] args)
        {
            Employee e1 = new Employee()
            {
                Eid = 100,
                Ename = "Sukhdev"
            };
            Employee e2 = new Employee()
            {
                Eid = 101,
                Ename = "Sumit"
            };
            Employee e3 = new Employee()
            {
                Eid = 102,
                Ename = "Kishan"
            };
            Dictionary<int,Employee> Employeesdictionary=new Dictionary<int, Employee>();
            Employeesdictionary.Add(e1.Eid,e1);//here key is id and value is Employee
            Employeesdictionary.Add(e2.Eid,e2);
            Employeesdictionary.Add(e3.Eid,e3);
            Employee first= Employeesdictionary[100];
            foreach(KeyValuePair<int,Employee> item in Employeesdictionary)
            {
                System.Console.WriteLine("Key={0}", item.Key);
                Employee employee=item.Value;

```

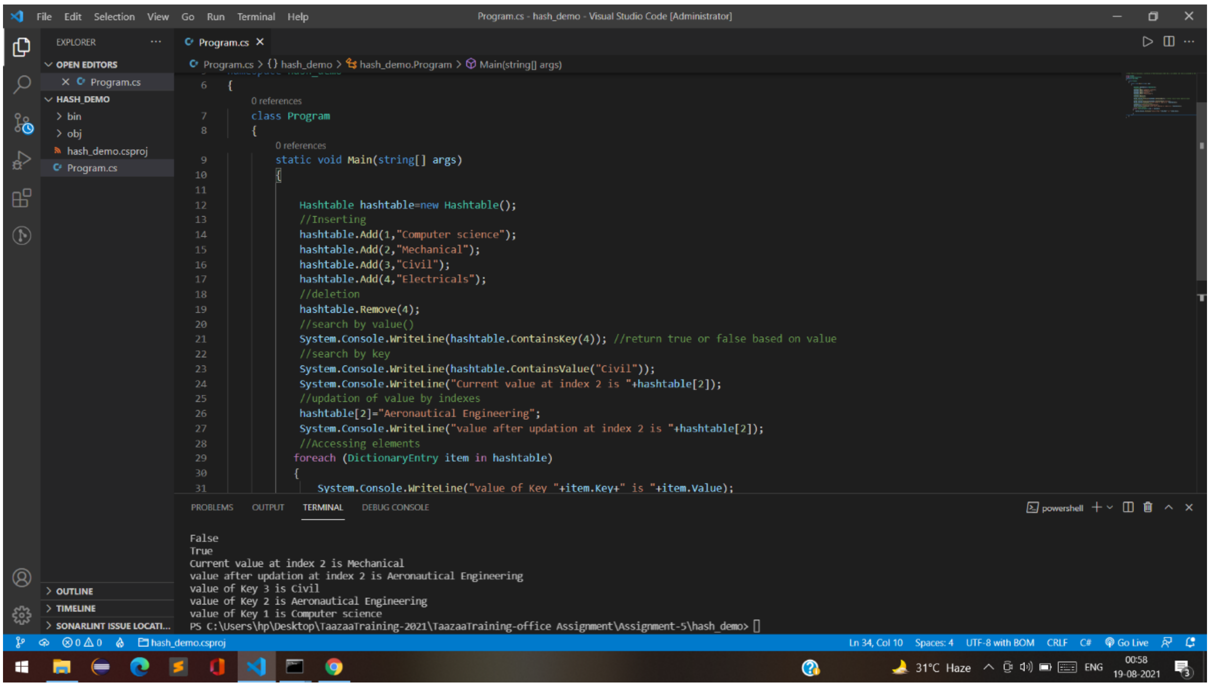
```
Key=100
Id=100, Name=Sukhdev,
Key=101
Id=101, Name=Sumit,
Key=102
Id=102, Name=Kishan,
PS C:\Users\hp\Desktop\TaazaaTraining-2021\TaazaaTraining-office Assignment\Assignment-5\dictionary_demo> 
```

4 HashTable

```
/* Hash Table is basically a collection of key-
value pairs where key is an indexer and value is accessed by the key and it im
plementes IDictionary interface*/

using System;
using System.Collections;
namespace hash_demo
{
    class Program
    {
        static void Main(string[] args)
        {

            Hashtable hashtable=new Hashtable();
            //Inserting
            hashtable.Add(1,"Computer science");
            hashtable.Add(2,"Mechanical");
            hashtable.Add(3,"Civil");
            hashtable.Add(4,"Electricals");
            //deletion
            hashtable.Remove(4);
            //search by value()
            System.Console.WriteLine(hashtable.ContainsKey(4)); //return true
or false based on value
```

```
            //search by key
            System.Console.WriteLine(hashtable.ContainsValue("Civil"));
            System.Console.WriteLine("Current value at index 2 is "+hashtable[
2]);
            //updation of value by indexes
            hashtable[2]="Aeronautical Engineering";
            System.Console.WriteLine("value after updation at index 2 is "+has
htable[2]);
            //Accessing elements
           foreach (DictionaryEntry item in hashtable)
           {
               System.Console.WriteLine("value of Key "+item.Key+" is "+item.V
alue);

           }
        }
    }
}
```

Output of HashTable Program


File Edit Selection View Go Run Terminal Help
Program.cs - hash_demo - Visual Studio Code [Administrator]
EXPLORER
OPEN EDITORS
Program.cs
HASH_DEMO
bin
obj
hash_demo.csproj
Program.cs
Program.cs > {} hash_demo > hash_demo.Program > Main(string[] args)
OUTLINE
TIMELINE
SONARLINT ISSUE LOCATI...
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
powershell
hash_demo.csproj
Ln 34, Col 10 Spaces: 4 UTF-8 with BOM CRLF C# Go Live
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```
{
    0 references
    class Program
    {
        0 references
        static void Main(string[] args)
        {

            Hashtable hashtable=new Hashtable();
            //Inserting
            hashtable.Add(1,"Computer science");
            hashtable.Add(2,"Mechanical");
            hashtable.Add(3,"Civil");
            hashtable.Add(4,"Electricals");
            //deletion
            hashtable.Remove(4);
            //search by value()
            System.Console.WriteLine(hashtable.ContainsKey(4)); //return true or false based on value
            //search by key
            System.Console.WriteLine(hashtable.ContainsValue("Civil"));
            System.Console.WriteLine("Current value at index 2 is "+hashtable[2]);
            //updation of value by indexes
            hashtable[2]="Aeronautical Engineering";
            System.Console.WriteLine("value after updation at index 2 is "+hashtable[2]);
            //Accessing elements
           foreach (DictionaryEntry item in hashtable)
           {
               System.Console.WriteLine("value of Key "+item.Key+" is "+item.Value);
```

```
False
True
Current value at index 2 is Mechanical
value after updation at index 2 is Aeronautical Engineering
value of Key 3 is Civil
value of Key 2 is Aeronautical Engineering
value of Key 1 is Computer science
PS C:\Users\hp\Desktop\TaazaaTraining-2021\TaazaaTraining-office Assignment\Assignment-5\hash_demo> 
```