using System;

using System.Collections;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading;

using System.Threading.Tasks;

namespace Cs\_Lesson14

{

public class Program

{

public class Student

{

public string Name { get; set; }

public int Age { get; set; }

}

class Point<T>

{

public Point(T first, T second)

{

First = first;

Second = second;

}

public T First { get; set; }

public T Second { get; set; }

public Point()

{

First = default(T);

Second = default(T);

}

public void Show()

{

Console.WriteLine($"First : {First}");

Console.WriteLine($"Second : {Second}");

}

public override string ToString()

{

return $"First : {First} Second : {Second}";

}

}

class Test<T1, T2>

{

public Test(T1 data1, T2 data2)

{

Data1 = data1;

Data2 = data2;

}

public T1 Data1 { get; set; }

public T2 Data2 { get; set; }

public void Show()

{

Console.WriteLine($"Data 1 : {Data1}");

Console.WriteLine($"Data 2 : {Data2}");

}

}

static void Main(string[] args)

{

#region Generic & Non-Generic

// Generic And Non-Generic

//ArrayList arrayList= new ArrayList();

//arrayList.Add(10);

//arrayList.Add(20);

//arrayList.Add(30);

//arrayList.Add(30);

//arrayList.Add(30);

//arrayList.Add(10);

//arrayList.Add(20);

//arrayList.Add(30);

//arrayList.Add(30);

//arrayList.Add(30);

//arrayList.Add("Salam");

//Console.WriteLine(arrayList.Capacity);

//foreach (var a in arrayList)

//{

// Console.WriteLine(a);

// Console.WriteLine(a.GetType());

//}

//string text = "Salam";

//object obj = text;

//Console.WriteLine(obj);

//int a = 100;

//object obj = a;

//Console.WriteLine(obj);

////unboxing

//int data = (int)obj;

//ArrayList arrayList = new ArrayList();

//arrayList.Add(20);

//arrayList.Add(10.5);

//arrayList.Add(1.1234m);

//arrayList.Add(1.6f);

//arrayList.Add("Good Morning");

//arrayList.Add(true);

//foreach (var item in arrayList)

//{

// Console.WriteLine(item);

//}

//Console.WriteLine("Count : {0}",arrayList.Count);

//Console.WriteLine("Capacity : {0}",arrayList.Capacity);

//arrayList.TrimToSize();

//Console.WriteLine("Capacity After TrimToSize() : {0}",arrayList.Capacity);

//arrayList.AddRange(new ArrayList { 1, 2, 3, 4 });

//foreach (var item in arrayList)

//{

// Console.Write(item + " ");

//}

////arrayList.RemoveAt(6);

////arrayList.Remove("Good Morning");

//arrayList.RemoveRange(0, 2);

//Console.WriteLine();

//foreach (var item in arrayList)

//{

// Console.Write(item + " ");

//}

#endregion

#region Stack

//Stack stack = new Stack();

//stack.Push(10);

//stack.Push(20);

//foreach (var item in stack)

//{

// Console.WriteLine(item);

//}

//Console.WriteLine(stack.Pop());

//Stack<string> mystack = new Stack<string>();

//mystack.Push("Hi");

//mystack.Push("Hola");

//mystack.Push("Namaste");

//mystack.Push("Privet");

//mystack.Push("Konichiva");

//mystack.Push("Salam");

//foreach (var item in mystack)

//{

// Console.WriteLine(item);

//}

#endregion

#region Queue

//Queue<string> queue = new Queue<string>();

//queue.Enqueue("A-1");

//queue.Enqueue("B-1");

//queue.Enqueue("B-2");

//foreach (var item in queue)

//{

// Console.WriteLine(item);

//}

//for (int i = 0; i < 10; i++)

//{

// int no = 65;

// var result = (char)no + i.ToString();

// Console.Write(result + " ");

// queue.Enqueue(result);

// Thread.Sleep(1500);

//}

//Console.WriteLine();

//Console.WriteLine();

//while (queue.Count != 0)

//{

// Console.WriteLine("[ " + queue.Dequeue() + " ]");

// Thread.Sleep(1500);

// foreach (var item in queue)

// {

// Console.Write(item + " ");

// }

//}

//Queue<Student> students = new Queue<Student>();

//students.Enqueue(new Student

//{

// Name = "John",

// Age = 23

//});

//students.Enqueue(new Student

//{

// Name = "John",

// Age = 23

//});

#endregion

#region HashTable

//Hashtable hashtable = new Hashtable();

//hashtable.Add("Apple", 11.2);

//hashtable.Add("Pear", 1.5);

//hashtable.Add("Orange", 4.5);

//foreach (var key in hashtable.Keys)

//{

// Console.WriteLine(key + " - " + hashtable[key]);

//}

//foreach (var value in hashtable.Values)

//{

// Console.WriteLine(value);

//}

//hashtable.Remove("Apple");

//Console.WriteLine();

//foreach (var key in hashtable.Keys)

//{

// Console.WriteLine(key + " - " + hashtable[key]);

//}

#endregion

#region SortedList

//SortedList<string,string> mylist = new SortedList<string, string>();

//mylist.Add("Nar", "Pomegranate");

//mylist.Add("Alma", "Apple");

//mylist.Add("Ananas", "Pineapple");

//mylist.Add("Banan", "Banana");

//foreach (var item in mylist)

//{

// Console.WriteLine(item.Key + " - " + item.Value);

//}

//Console.WriteLine(mylist.ContainsKey("Nar"));

//Console.WriteLine(mylist.ContainsValue("Apple"));

//string key = Console.ReadLine();

//bool hasValue = mylist.TryGetValue(key.Trim(), out string value);

//if (hasValue)

//{

// Console.WriteLine(value);

//}

//else

//{

// Console.WriteLine("We did not find key like this {0}",key);

//}

#endregion

#region Dictionary

//Dictionary<string, double> mydictionary = new Dictionary<string, double>();

//mydictionary["C#"] = 8.5;

//mydictionary["C++"] = 11.3;

//mydictionary["JD"] = 7.6;

//foreach (var item in mydictionary)

//{

// Console.WriteLine(item);

//}

//Dictionary<string, List<string>> ypx = new Dictionary<string, List<string>>();

//ypx["99-CE-099"] = new List<string>()

// {

// "Dayanma-Durma",

// "Suret Heddi 90-100"

// };

//ypx.Add("10-LL-010", new List<string>

//{

// "Eks Istiqamet",

// "Suret Heddi 120-130"

//});

//ypx.Add("11-TT-111", new List<string>

//{

// "Kemer",

// "Qosha Xett"

//});

//Console.Write("Enter car no : ");

//string car\_no = Console.ReadLine();

//bool hasCar = ypx.TryGetValue(car\_no, out var penalties);

//if (hasCar)

//{

// Console.WriteLine("Penalties : ");

// foreach (var item in penalties)

// {

// Console.WriteLine(item);

// }

//}

//else

//{

// Console.WriteLine($"This car {car\_no} has no penalties");

//}

#endregion

#region GenericClass

//Point<int> point = new Point<int>();

//point.Show();

//point.First = 12;

//point.Second = 13;

//point.Show();

//Point<int> point2 = new Point<int>(12,34);

//point2.Show();

//Point<string> point3 = new Point<string>("Apple", "Rolex");

//point3.Show();

//Console.ReadKey();

//Console.WriteLine(point);

//Console.WriteLine(point2);

//Console.WriteLine(point3);

//Test<string, int> obj = new Test<string, int>("Apple", 12);

//obj.Show();

#endregion

}

}

}