**LINQ**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace linqAssignment

{

public class Employee

{

public int EmployeeID { get; set; }

public string FirstName { get; set; }

public string LastName { get; set; }

public string Title { get; set; }

public DateTime DOB { get; set; }

public DateTime DOJ { get; set; }

public string City { get; set; }

internal class Program

{

public static List<Employee> empList = new List<Employee>

{

//new Employee() {EmployeeID = 1001,FirstName = "Malcolm",LastName = "Daruwalla",Title = "Manager",DOB = DateTime.Parse("1984-01-02"),DOJ = DateTime.Parse("2011-08-09"),City = "Mumbai"},

//new Employee() {EmployeeID = 1002,FirstName = "Asdin",LastName = "Dhalla",Title = "AsstManager",DOB = DateTime.Parse("1984-08-20"),DOJ = DateTime.Parse("2012-7-7"),City = "Mumbai"},

//new Employee() {EmployeeID = 1003,FirstName = "Madhavi",LastName = "Oza",Title = "Consultant",DOB = DateTime.Parse("1987/11/14"),DOJ = DateTime.Parse("2015/4/12"),City = "Pune"},

//new Employee() {EmployeeID = 1004,FirstName = "Saba",LastName = "Shaikh",Title = "SE",DOB = DateTime.Parse("1990/6/3"),DOJ = DateTime.Parse("2016/2/2"),City = "Pune"},

//new Employee() {EmployeeID = 1005,FirstName = "Nazia",LastName = "Shaikh",Title = "SE",DOB = DateTime.Parse("1991/3/8"),DOJ = DateTime.Parse("2016/2/2"),City = "Mumbai"},

//new Employee() {EmployeeID = 1006,FirstName = "Suresh",LastName = "Pathak",Title = "Consultant",DOB = DateTime.Parse("1998/11/7"),DOJ = DateTime.Parse("2014/8/8"),City = "Chennai"},

//new Employee() {EmployeeID = 1007,FirstName = "Vijay",LastName = "Natrajan",Title = "Consultant",DOB = DateTime.Parse("1989/12/2"),DOJ = DateTime.Parse("2015/6/1"),City = "Mumbai"},

//new Employee() {EmployeeID = 1008,FirstName = "Rahul",LastName = "Dubey",Title = "Associate",DOB = DateTime.Parse("1993/11/11"),DOJ = DateTime.Parse("2014/11/6"),City = "Chennai"},

//new Employee() {EmployeeID = 1009,FirstName = "Amit",LastName = "Mistry",Title = "Associate",DOB = DateTime.Parse("1992/8/12"),DOJ = DateTime.Parse("2014/12/3"),City = "Chennai"},

//new Employee() {EmployeeID = 1010,FirstName = "Sumit",LastName = "Shah",Title = "Manager",DOB = DateTime.Parse("1991/4/12"),DOJ = DateTime.Parse("2016/1/2"),City = "Pune"},

new Employee() {EmployeeID = 1001,FirstName = "Malcolm",LastName = "Daruwalla",Title = "Manager",DOB = DateTime.Parse("1984-01-02"),DOJ = DateTime.Parse("2011-08-09"),City = "Mumbai"},

new Employee() {EmployeeID = 1002,FirstName = "Asdin",LastName = "Dhalla",Title = "AsstManager",DOB = DateTime.Parse("1984-08-20"),DOJ = DateTime.Parse("2012-7-7"),City = "Mumbai"},

new Employee() {EmployeeID = 1003,FirstName = "Madhavi",LastName = "Oza",Title = "Consultant",DOB = DateTime.Parse("1987-11-14"),DOJ = DateTime.Parse("2015-4-12"),City = "Pune"},

new Employee() {EmployeeID = 1004,FirstName = "Saba",LastName = "Shaikh",Title = "SE",DOB = DateTime.Parse("6/3/1990"),DOJ = DateTime.Parse("2/2/2016"),City = "Pune"},

new Employee() {EmployeeID = 1005,FirstName = "Nazia",LastName = "Shaikh",Title = "SE",DOB = DateTime.Parse("3/8/1991"),DOJ = DateTime.Parse("2/2/2016"),City = "Mumbai"},

new Employee() {EmployeeID = 1006,FirstName = "Suresh",LastName = "Pathak",Title = "Consultant",DOB = DateTime.Parse("11/7/1989"),DOJ = DateTime.Parse("8/8/2014"),City = "Chennai"},

new Employee() {EmployeeID = 1007,FirstName = "Vijay",LastName = "Natrajan",Title = "Consultant",DOB = DateTime.Parse("12/2/1989"),DOJ = DateTime.Parse("6/1/2015"),City = "Mumbai"},

new Employee() {EmployeeID = 1008,FirstName = "Rahul",LastName = "Dubey",Title = "Associate",DOB = DateTime.Parse("11/11/1993"),DOJ = DateTime.Parse("11/6/2014"),City = "Chennai"},

new Employee() {EmployeeID = 1009,FirstName = "Amit",LastName = "Mistry",Title = "Associate",DOB = DateTime.Parse("8/12/1992"),DOJ = DateTime.Parse("12/3/2014"),City = "Chennai"},

new Employee() {EmployeeID = 1010,FirstName = "Sumit",LastName = "Shah",Title = "Manager",DOB = DateTime.Parse("4/12/1991"),DOJ = DateTime.Parse("1/2/2016"),City = "Pune"}

};

public static void displayAll()

{

var result = from Employee in empList select Employee;

foreach (var obj in result)

{

Console.WriteLine(obj.EmployeeID + " " +obj.FirstName + " "+obj.LastName + " " +obj.Title+" "+obj.DOB+" "+obj.DOJ+" "+obj.City);

}

}

public static void notMubai()

{

var r = from emp in empList where emp.City != "Mumbai" select emp;

foreach (var obj in r)

{

Console.WriteLine(obj.EmployeeID + " " + obj.FirstName + " " + obj.LastName + " " + obj.Title + " " + obj.DOB + " " + obj.DOJ + " " + obj.City);

}

}

public static void display()

{

var r = from emp in empList where emp.Title == "AsstManager" select emp;

foreach (var obj in r)

{

Console.WriteLine(obj.EmployeeID + " " + obj.FirstName + " " + obj.LastName + " " + obj.Title + " " + obj.DOB + " " + obj.DOJ + " " + obj.City);

}

}

public static void lastName()

{

var r = from emp in empList where emp.LastName.StartsWith("S") select emp;

foreach (var obj in r)

{

Console.WriteLine(obj.EmployeeID + " " + obj.FirstName + " " + obj.LastName + " " + obj.Title + " " + obj.DOB + " " + obj.DOJ + " " + obj.City);

}

}

public static void doj()

{

var r = from emp in empList where emp.DOJ < DateTime.Parse("1/1/2015") select emp;

foreach (var obj in r)

{

Console.WriteLine(obj.EmployeeID + " " + obj.FirstName + " " + obj.LastName + " " + obj.Title + " " + obj.DOB + " " + obj.DOJ + " " + obj.City);

}

}

public static void dob()

{

var r = from emp in empList where emp.DOB > DateTime.Parse("1/1/1990") select emp;

foreach (var obj in r)

{

Console.WriteLine(obj.EmployeeID + " " + obj.FirstName + " " + obj.LastName + " " + obj.Title + " " + obj.DOB + " " + obj.DOJ + " " + obj.City);

}

}

public static void designation()

{

var r = from emp in empList where emp.Title == "Consultant" || emp.Title == "Associate" select emp;

foreach (var obj in r)

{

Console.WriteLine(obj.EmployeeID + " " + obj.FirstName + " " + obj.LastName + " " + obj.Title + " " + obj.DOB + " " + obj.DOJ + " " + obj.City);

}

}

public static void numOfemployee()

{

var result = from Employee in empList select Employee;

Console.WriteLine(result.Count());

}

public static void Chennai()

{

var r = from emp in empList where emp.City == "Chennai" select emp;

foreach (var obj in r)

{

Console.WriteLine(obj.EmployeeID + " " + obj.FirstName + " " + obj.LastName + " " + obj.Title + " " + obj.DOB + " " + obj.DOJ + " " + obj.City);

}

}

public static void highestID()

{

var result = (from Employee in empList select Employee.EmployeeID).Max();

Console.WriteLine(result);

}

public static void numOFEmpdoj()

{

var r = from emp in empList where emp.DOJ > DateTime.Parse("1/1/2015") select emp;

Console.WriteLine(r.Count());

}

public static void noOfnonAssosiate()

{

var r = from emp in empList where emp.Title != "Associate" select emp;

Console.WriteLine(r.Count());

}

public static void basedOnCity()

{

var result = from emp in empList group emp by emp.City into emp select emp;

Console.WriteLine("Total no of Employee Details based on City is : " + result.Count());

}

public static void basedOnCityandTitle()

{

var result = from emp in empList group emp by new { emp.City, emp.Title } into emp select emp;

Console.WriteLine("Total no of Employee Details based on City and Title is : " + result.Count());

}

public static void empYoungest()

{

var result = (from e in empList select e.DOB).Max();

Console.WriteLine(" Employee Who is Youngest is : " + result);

}

public static void Main(string[] args)

{

try

{

displayAll();

//notMubai();

//display();

//doj();

//dob();

//designation();

//numOfemployee();

//Chennai();

//highestID();

//numOFEmpdoj();

//noOfnonAssosiate();

//basedOnCity();

//basedOnCityandTitle();

//empYoungest();

}

catch (Exception ex)

{

Console.WriteLine(ex.Message);

}

Console.ReadKey();

}

}

}

}

Output:



