==

1. Create a console application and add class named Employee with following field.

   Employee Class
   EmployeeID (Integer)
   FirstName (String)
   LastName (String)
   Title (String)
   DOB (Date)
   DOJ (Date)
   City (String)

2. Create a Generic List Collection empList and populate it with the following records.

EmployeeID	FirstName	LastName	Title	DOB	DOJ	City
1001	Malcolm	Daruwalla	Manager	16/11/1984	8/6/2011	Mumbai
1002	Asdin	Dhalla	AsstManager	20/08/1984	7/7/2012	Mumbai
1003	Madhavi	Oza	Consultant	14/11/1987	12/4/2015	Pune
1004	Saba	Shaikh	SE	3/6/1990	2/2/2016	Pune
1005	Nazia	Shaikh	SE	8/3/1991	2/2/2016	Mumbai
1006	Amit	Pathak	Consultant	7/11/1989	8/8/2014	Chennai
1007	Vijay	Natrajan	Consultant	2/12/1989	1/6/2015	Mumbai
1008	Rahul	Dubey	Associate	11/11/1993	6/11/2014	Chennai
1009	Suresh	Mistry	Associate	12/8/1992	3/12/2014	Chennai
1010	Sumit	Shah	Manager	12/4/1991	2/1/2016	Pune

3. Now once the collection created write down and execute the LINQ queries for collection as follows
   a. Display detail of all the employee
   b. Display details of all the employee whose location is not Mumbai
   c. Display details of all the employee whose title is AsstManager
   d. Display details of all the employee whose Last Name start with S
   e. Display a list of all the employee who have joined before 1/1/2015

   f. Display a list of all the employee whose date of birth is after 1/1/1990
   g. Display a list of all the employee whose designation is Consultant and Associate
   h. Display total number of employees
   i. Display total number of employees belonging to "Chennai"
   j. Display highest employee id from the list
   k. Display total number of employee who have joined after 1/1/2015
   l. Display total number of employee whose designation is not "Associate"
   m. Display total number of employee based on City
   n. Display total number of employee based on city and title
   o. Display total number of employee who is youngest in the list

Code:

```csharp
using System;

using System.Collections.Generic;
using System.Linq;

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; }
}

class Program
{
    public static void Main(string[] args)

    {
        List<Employee> empList = new List<Employee>
        {
            new Employee { EmployeeID = 1001, FirstName = "Malcolm", LastName
= "Daruwalla", Title = "Manager", DOB = DateTime.ParseExact("16/11/1984",
"dd/MM/yyyy", null), DOJ = DateTime.ParseExact("08/06/2011", "dd/MM/yyyy",
null), City = "Mumbai" },
            new Employee { EmployeeID = 1002, FirstName = "Asdin", LastName =
"Dhalla", Title = "AsstManager", DOB = DateTime.ParseExact("20/08/1984",
"dd/MM/yyyy", null), DOJ = DateTime.ParseExact("07/07/2012", "dd/MM/yyyy",
null), City = "Mumbai" },
            new Employee { EmployeeID = 1003, FirstName = "Madhavi", LastName
= "Oza", Title = "Consultant", DOB = DateTime.ParseExact("14/11/1987",
"dd/MM/yyyy", null), DOJ = DateTime.ParseExact("12/04/2015", "dd/MM/yyyy",
null), City = "Pune" },
            new Employee { EmployeeID = 1004, FirstName = "Saba", LastName =
"Shaikh", Title="SE",DOB = DateTime.ParseExact("03/06/1990", "dd/MM/yyyy",
null), DOJ = DateTime.ParseExact("02/02/2016", "dd/MM/yyyy", null), City =
"Pune" },
            new Employee { EmployeeID = 1005, FirstName = "Nazia", LastName =
"Shaikh", Title = "SE", DOB = DateTime.ParseExact("08/03/1991", "dd/MM/yyyy",
null), DOJ = DateTime.ParseExact("02/02/2016", "dd/MM/yyyy", null), City =
"Mumbai" },
            new Employee { EmployeeID = 1006, FirstName = "Amit", LastName =
"Pathak", Title = "Consultant", DOB = DateTime.ParseExact("07/11/1989",
"dd/MM/yyyy", null), DOJ = DateTime.ParseExact("08/08/2014", "dd/MM/yyyy",
null), City = "Chennai" },
```

```csharp
            new Employee { EmployeeID = 1007, FirstName = "Vijay", LastName =
"Natrajan", Title = "Consultant", DOB = DateTime.ParseExact("02/12/1989",
"dd/MM/yyyy", null), DOJ = DateTime.ParseExact("01/06/2015", "dd/MM/yyyy",
null), City = "Mumbai" },
            new Employee { EmployeeID = 1008, FirstName = "Rahul", LastName =
"Dubey", Title = "Associate", DOB = DateTime.ParseExact("11/11/1993",
"dd/MM/yyyy", null), DOJ = DateTime.ParseExact("06/11/2014", "dd/MM/yyyy",
null), City = "Chennai" },
            new Employee { EmployeeID = 1009, FirstName = "Suresh", LastName =
"Mistry", Title = "Associate", DOB = DateTime.ParseExact("12/08/1992",
"dd/MM/yyyy", null), DOJ = DateTime.ParseExact("03/02/2014", "dd/MM/yyyy",
null), City = "Chennai" },
            new Employee { EmployeeID = 1010, FirstName = "Sumit", LastName =
"Shah", Title = "Manager", DOB = DateTime.ParseExact("12/04/1991",
"dd/MM/yyyy", null), DOJ = DateTime.ParseExact("02/01/2016", "dd/MM/yyyy",
null), City = "Pune" }
        };
//a
        Console.WriteLine("All Employees:");
        DisplayEmployees(empList);
//b
        Console.WriteLine("\nEmployees not in Mumbai:");
        DisplayEmployees(empList.Where(e => e.City != "Mumbai"));
//c
        Console.WriteLine("\nEmployees with title 'AsstManager':");
        DisplayEmployees(empList.Where(e => e.Title == "AsstManager"));
//d
        Console.WriteLine("\nEmployees whose last name starts with 'S':");
        DisplayEmployees(empList.Where(e => e.LastName.StartsWith("S")));
//e
        Console.WriteLine("\nEmployees who joined before 1/1/2015:");
        DisplayEmployees(empList.Where(e => e.DOJ < new DateTime(2015, 1,
1)));

//f
        Console.WriteLine("\nEmployees born after 1/1/1990:");
        DisplayEmployees(empList.Where(e => e.DOB > new DateTime(1990, 1,
1)));

//g
        Console.WriteLine("\nEmployees with designation 'Consultant' or
'Associate':");
        DisplayEmployees(empList.Where(e => e.Title == "Consultant" || e.Title
== "Associate"));

//h
        Console.WriteLine($"\nTotal number of employees: {empList.Count}");
//i
```

```csharp
        Console.WriteLine($"\nTotal employees in Chennai: {empList.Count(e =>
e.City == "Chennai")}");

//j

        Console.WriteLine($"\nHighest Employee ID: {empList.Max(e =>
e.EmployeeID)}");

//k
        Console.WriteLine($"\nTotal employees who joined after 1/1/2015:
{empList.Count(e => e.DOJ > new DateTime(2015, 1, 1))}");
//l
        Console.WriteLine($"\nTotal employees whose designation is not
\"Associate\": {empList.Count(e => e.Title != "Associate")}");
//m
        Console.WriteLine("\nTotal employees based on city:");
        var cities = empList.Select(e => e.City).Distinct();
        foreach (var city in cities)
            Console.WriteLine($"{city}: {empList.Count(e => e.City ==
city)}");
//n
        Console.WriteLine("\nTotal employees based on city and title:");
        var cityTitleGroups = empList.Select(e => new { e.City, e.Title
}).Distinct();
        foreach (var group in cityTitleGroups)
            Console.WriteLine($"{group.City} - {group.Title}: {empList.Count(e
=> e.City == group.City && e.Title == group.Title)}");
//o
        var youngestEmployee = empList.OrderByDescending(e => e.DOB).First();
        Console.WriteLine($"\nYoungest Employee: {youngestEmployee.FirstName}
{youngestEmployee.LastName}, DOB: {youngestEmployee.DOB:dd/MM/yyyy}");

        Console.ReadLine();
    }

    static void DisplayEmployees(IEnumerable<Employee> employees)
    {
        foreach (var e in employees)
        {
            Console.WriteLine($"{e.EmployeeID}, {e.FirstName} {e.LastName},
{e.Title}, DOB: {e.DOB:dd/MM/yyyy}, DOJ: {e.DOJ:dd/MM/yyyy}, City: {e.City}");
        }
    }
}
```

Output screen:

Program.cs

CAPGEMINI PREP > SQLAssignment1 > Program.cs > Program > Main

16   class Program

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   NUGET   POLYGLOT NOTEBOOK

Total employees whose designation is not "Associate": 8

Total employees based on city:
Mumbai: 4
Pune: 3
Chennai: 3

Total employees based on city and title:
Mumbai - Manager: 1
Mumbai - AsstManager: 1
Pune - Consultant: 1
Pune - SE: 1
Mumbai - SE: 1
Chennai - Consultant: 1
Mumbai - Consultant: 1
Chennai - Associate: 2
Pune - Manager: 1

Youngest Employee: Rahul Dubey, DOB: 11-11-1993
1
PS E:\CAPGEMINI PREP>