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

Employee Class

EmployeelD (Integer)

FirstName (String)

LastName (String)

Title (String)

DOB (Date)

DOJ (Date)

City (String)

Solution:

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


namespace LinQ_Assignment
{
   public class Program
   {
      static public void Main(String[] args)
      {
         Employee e = new Employee();
         List<Employee> empList = new List<Employee>{
      new Employee{EmployeeId = 1001, FirstName="Malcolm", LastName="Daruwalla", Title="Manager",DOB= new DateTime(1984,11,16), DOJ= new DateTime(2011,06,08), City="Mumbai" },
      new Employee{EmployeeId = 1002, FirstName="Asdin", LastName="Dhalla", Title="AsstManager",DOB= new DateTime(1984,08,20), DOJ= new DateTime(2012,07,07), City="Mumbai" },
      new Employee{EmployeeId = 1003, FirstName="Madhavi", LastName="Oza", Title="Consultant",DOB= new DateTime(1987,11,14), DOJ= new DateTime(2015,04,12), City="Pune" },
      new Employee{EmployeeId = 1004, FirstName="Saba", LastName="Shaikh", Title="SE",DOB= new DateTime(1990,06,13), DOJ= new DateTime(2016,02,02), City="Pune" },
```

```
        new Employee{EmployeeId = 1005, FirstName="Nazia", LastName="Shaikh",
Title="SE",DOB= new DateTime(1991,03,08), DOJ= new DateTime(2016,02,02),
City="Mumbai" },

        new Employee{EmployeeId = 1006, FirstName="Amit", LastName="Pathak",
Title="Consultant",DOB= new DateTime(1989,11,07), DOJ= new DateTime(2014,08,08),
City="Chennai" },

        new Employee{EmployeeId = 1007, FirstName="Vijay", LastName="Natrajan",
Title="Consultant",DOB= new DateTime(1989,12,02), DOJ= new DateTime(2015,02,02),
City="Pune" },

        new Employee{EmployeeId = 1008, FirstName="Rahul", LastName="Dubey",
Title="Associate",DOB= new DateTime(1993,11,11), DOJ= new DateTime(2014,11,06),
City="Chennai" },

        new Employee{EmployeeId = 1009, FirstName="Suresh", LastName="Mistery",
Title="Associate",DOB= new DateTime(1992,12,02), DOJ= new DateTime(2014,03,12),
City="Chennai" },

        new Employee{EmployeeId=1010, FirstName="Sumit", LastName="Shah",
Title="Manager", DOB=new DateTime(1991,04,12), DOJ = new DateTime(2016, 01,02),
City="Pune"}

    };


        Console.WriteLine("------------------------------------------------------------------------");

        Console.WriteLine("Display All Employees");

        Console.WriteLine("");


        var query = from i in empList

                    select i;

        foreach (var h in query)

        {

            Console.WriteLine(h.EmployeeId + " " + h.FirstName + " " + h.LastName + " " + h.Title
+ " " + h.DOB + " " + h.DOJ + " " + h.City);

        }

        Console.WriteLine("------------------------------------------------------------------------");

        Console.WriteLine("Display Employees Except from Mumbai city");

        Console.WriteLine("");

        var query1 = from i in empList

                     where i.City != "Mumbai"

                     select i;
```

```
        foreach (var h in query1)
        {
            Console.WriteLine(h.EmployeeId + " " + h.FirstName + " " + h.LastName + " " + h.Title
+ " " + h.DOB + " " + h.DOJ + " " + h.City);
        }
        Console.WriteLine("------------------------------------------------------------------------");
        Console.WriteLine("Display Employees Except AsstManger");
        Console.WriteLine("");
        var query2 = from i in empList
                     where i.Title != "AsstManager"
                     select i;
        foreach (var h in query2)
        {
            Console.WriteLine(h.EmployeeId + " " + h.FirstName + " " + h.LastName + " " + h.Title
+ " " + h.DOB + " " + h.DOJ + " " + h.City);
        }
        Console.WriteLine("------------------------------------------------------------------------");
        Console.WriteLine("Display Employees Whose Lastname starts with S");
        Console.WriteLine("");
        var query3 = from i in empList
                     where i.LastName.StartsWith("S")
                     select i;
        foreach (var h in query3)
        {
            Console.WriteLine(h.EmployeeId + " " + h.FirstName + " " + h.LastName + " " + h.Title
+ " " + h.DOB + " " + h.DOJ + " " + h.City);
        }
        Console.WriteLine("------------------------------------------------------------------------");
        Console.WriteLine("Display Employees Who were joined before 01-01-2015");
        Console.WriteLine("");
        var query4 = from i in empList
                     where i.DOJ < new DateTime(2015, 01, 01)
                     select i;
```

```
        foreach (var h in query4)
        {
            Console.WriteLine(h.EmployeeId + " " + h.FirstName + " " + h.LastName + " " + h.Title
+ " " + h.DOB + " " + h.DOJ + " " + h.City);
        }
        Console.WriteLine("------------------------------------------------------------------------");
        Console.WriteLine("Display Employees Who were born after 01-01-1990");
        Console.WriteLine("");
        var query5 = from i in empList
                     where i.DOB > new DateTime(1990, 01, 01)
                     select i;
        foreach (var h in query5)
        {
            Console.WriteLine(h.EmployeeId + " " + h.FirstName + " " + h.LastName + " " + h.Title
+ " " + h.DOB + " " + h.DOJ + " " + h.City);
        }
        Console.WriteLine("------------------------------------------------------------------------");
        Console.WriteLine("Display Employees Whose title is Consultant and Associate");
        Console.WriteLine("");
        var query6 = from i in empList
                     where i.Title == "Associate" || i.Title == "Consultant"
                     select i;
        foreach (var h in query6)
        {
            Console.WriteLine(h.EmployeeId + " " + h.FirstName + " " + h.LastName + " " + h.Title
+ " " + h.DOB + " " + h.DOJ + " " + h.City);
        }

        Console.WriteLine("------------------------------------------------------------------------");
        Console.WriteLine("Display Total count of Employees ");
        Console.WriteLine("");
        var query7 = (from i in empList
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                select i).Count();
            Console.WriteLine(query7);
            Console.WriteLine("-----------------------------------------------------------------");
            Console.WriteLine("Display Chennai Employees Count ");
            Console.WriteLine("");
            var query8 = from i in empList
                         where i.City == "Chennai"
                         select i;
            foreach (var h in query8)
            {
               Console.WriteLine(h.EmployeeId + " " + h.FirstName + " " + h.LastName + " " + h.Title
+ " " + h.DOB + " " + h.DOJ + " " + h.City);
            }
            Console.WriteLine("-----------------------------------------------------------------");
            Console.WriteLine("Display Highest employeeId");
            Console.WriteLine("");
            var query9 = from i in empList
                         select i.EmployeeId;
            int max = query9.Max();
            Console.WriteLine(max);
            Console.WriteLine("-----------------------------------------------------------------");
            Console.WriteLine("Display Employees Count Who were joined after 01-01-2015");
            Console.WriteLine("");
            var query10 = from i in empList
                          where i.DOJ > new DateTime(2015, 01, 01)
                          select i.EmployeeId;
            int c = query10.Count();

            Console.WriteLine(c);
            Console.WriteLine("-----------------------------------------------------------------");
            Console.WriteLine("Display Employees Count whose title is other that Associate");
            Console.WriteLine("");
            var query11 = from i in empList
```

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            where i.Title != "Associate"
            select i.EmployeeId;

int j = query11.Count();
Console.WriteLine(j);
Console.WriteLine("-----------------------------------------------------------------------");
Console.WriteLine("Display Employees Count according to their city");
Console.WriteLine("");

var query12 = empList.GroupBy(i => i.City).Select(e => new {

   disnt = e.Select(l => l.EmployeeId).Distinct().Count()
});
foreach (var i in query12)
{
   Console.WriteLine(i.disnt);
}
Console.WriteLine("-----------------------------------------------------------------------");
Console.WriteLine("Display Employees Count according to their city and title");
Console.WriteLine("");

var query13 = empList.GroupBy(i => new { i.City, i.Title }).Select(e => new {
   disnt = e.Select(l => l.EmployeeId).Distinct().Count()
});
foreach (var i in query13)
{
   Console.WriteLine(i.disnt);
}
Console.WriteLine("-----------------------------------------------------------------------");
Console.WriteLine("Display Employees who is younger in the list");
Console.WriteLine("");
```

```
            var query14 = (from i in empList
                           orderby i.DOB descending
                           select i).Take(1);


            foreach (var kk in query14)
            {
                Console.WriteLine(kk.EmployeeId + " " + kk.FirstName + " " + kk.Title + " " +
kk.DOB);
            }


            Console.WriteLine("---------------------------------------------------------------------");
        }
    }
}
```

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

Solution:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;


namespace LinQ_Assignment
```

```
{
    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; }
    }
}
```