Day 8 Morning Assignments

By

Praveen Chakravarthi

2-2-22

NB HealthCare

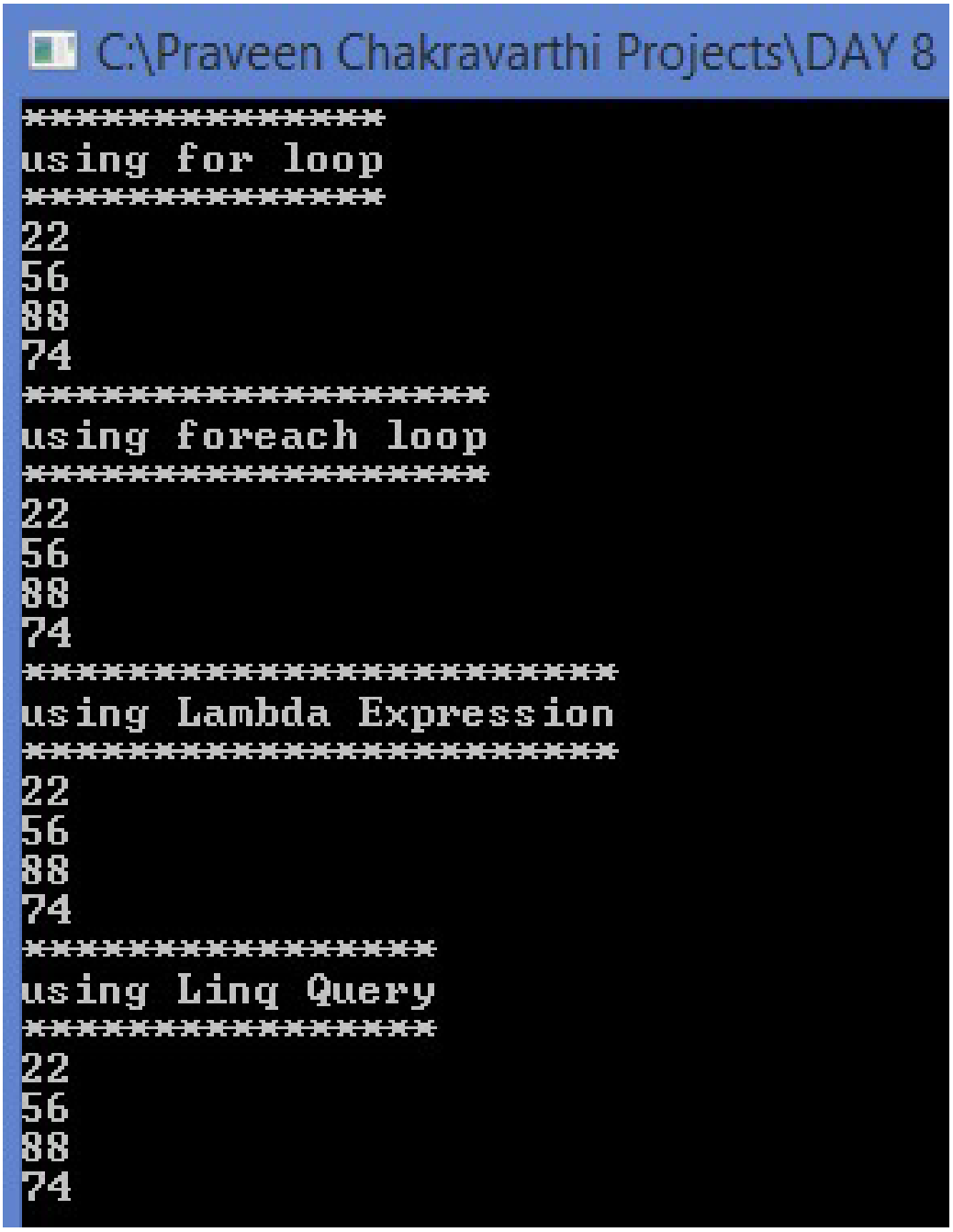
1. Declare and initialise a list with 8 values write for loop, foreach loop, lambda, linq query to print even numbers

Code:

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

namespace Day_8_Project_1
{
    // Author : Praveen Chakravarthi
    // Purpose : Print Even Numbers using Loops
    internal class Program
    {
        static void Main(string[] args)
        {
            List<int> Numb = new List<int>() { 22, 43, 56, 67, 88, 47, 74, 89 };

            // using for Loop
            Console.WriteLine("***************");
            Console.WriteLine("using for loop");
            Console.WriteLine("***************");

            for (int i=0; i<Numb.Count; i++)
            {
                if(Numb[i]%2 == 0)
                Console.WriteLine(Numb[i]);
            }

            // using foreach Loop
            Console.WriteLine("*******************");
            Console.WriteLine("using foreach loop");
            Console.WriteLine("*******************");

            foreach (var d in Numb)
            {
                if (d%2==0)
                    Console.WriteLine(d);
            }

            // using Lambda Expression
            Console.WriteLine("************************");
            Console.WriteLine("using Lambda Expression");
            Console.WriteLine("************************");

            Numb.Where(d => d % 2 == 0).ToList().ForEach(d => Console.WriteLine(d));

            // using Linq Query
            Console.WriteLine("*****************");
            Console.WriteLine("using Linq Query");
```

```
        Console.WriteLine("****************");

        var Result = from d in Numb
                     where d%2==0
                     select d;
        Result.ToList().ForEach(d => Console.WriteLine(d));
        Console.ReadLine();
    }
  }
}
```

Output:



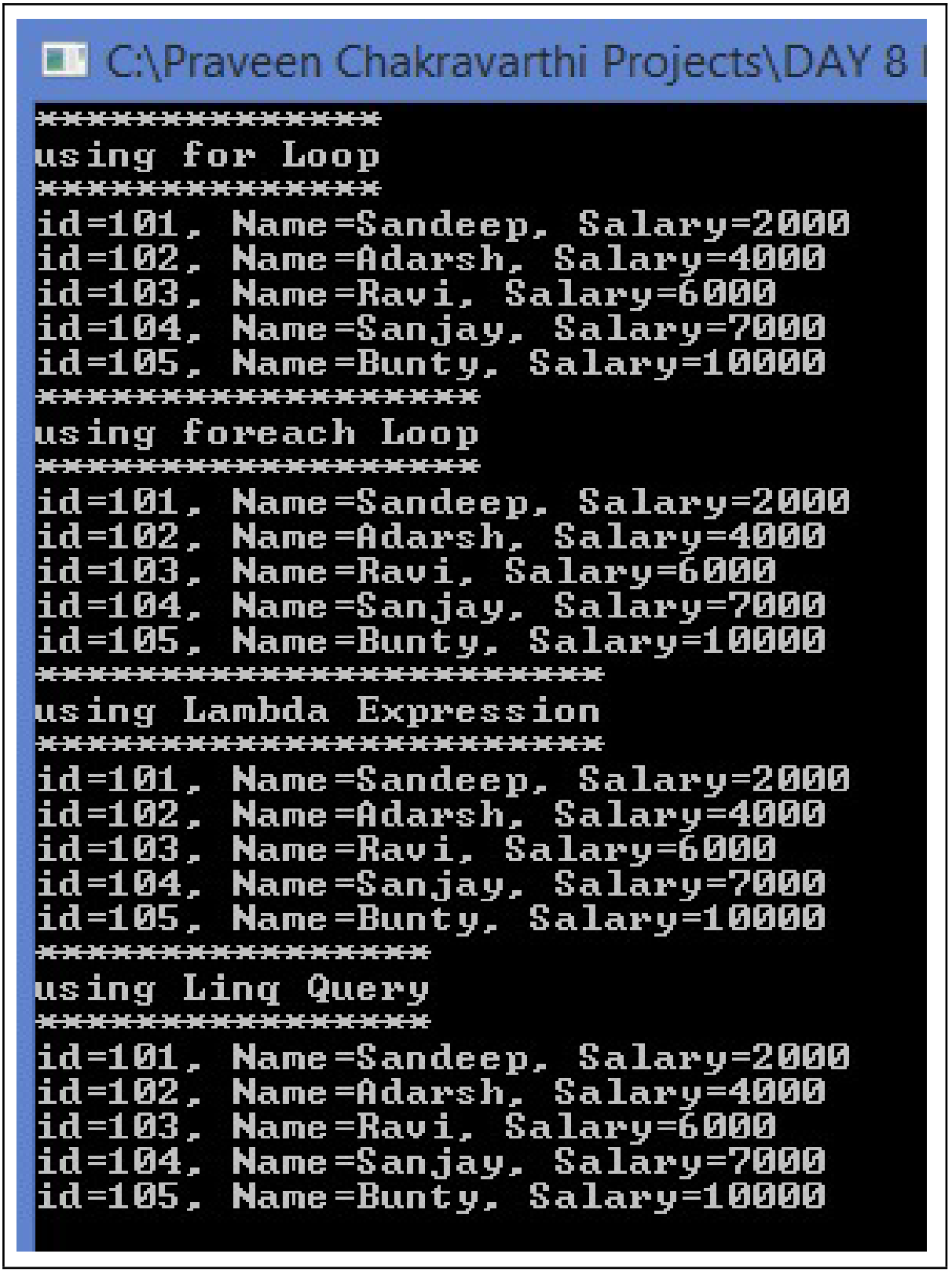
2. Create a class Employee with three variables as discussed in the class and create a list of Employees
public int id;
public string name;
public int salary;
write for loop, foreach loop, lambda expression, linq query

Code:

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

namespace Day_8_Project_2
{
    // Author : Praveen Chakravarthi
    // Purpose : Employee Class list

    class Employee
    {
        public int id;
        public string Name;
        public int Salary;
    }

    internal class Program
    {
        static void Main(string[] args)
        {
            List<Employee> emp = new List<Employee>()
            {
              new Employee(){id=101, Name="Sandeep", Salary=2000},
              new Employee(){id=102, Name="Adarsh", Salary=4000},
              new Employee(){id=103, Name="Ravi", Salary=6000},
              new Employee(){id=104, Name="Sanjay", Salary=7000},
              new Employee(){id=105, Name="Bunty", Salary=10000}
            };

            // using for Loop
            Console.WriteLine("***************");
            Console.WriteLine("using for Loop");
            Console.WriteLine("***************");

            for (int i = 0; i < emp.Count; i++)
            {
                Console.WriteLine($"id={emp[i].id}, Name={emp[i].Name},
Salary={emp[i].Salary}");
```

```
        }

        // using foreach Loop
        Console.WriteLine("******************");
        Console.WriteLine("using foreach Loop");
        Console.WriteLine("******************");

        foreach (var e in emp)
        {
           Console.WriteLine($"id={e.id}, Name={e.Name}, Salary={e.Salary}");
        }

        // using Lambda Expression
        Console.WriteLine("************************");
        Console.WriteLine("using Lambda Expression");
        Console.WriteLine("************************");

        emp.ToList().ForEach(e => Console.WriteLine($"id={e.id}, Name={e.Name},
Salary={e.Salary}"));

        // using Linq Query
        Console.WriteLine("*****************");
        Console.WriteLine("using Linq Query");
        Console.WriteLine("*****************");

        var Result= from e in emp
                    select e;
        Result.ToList().ForEach(e => Console.WriteLine($"id={e.id}, Name={e.Name},
Salary={e.Salary}"));

        Console.ReadLine();
    }
  }
}
```

Output:


C:\Praveen Chakravarthi Projects\DAY 8
****
using for Loop
****
id=101, Name=Sandeep, Salary=2000
id=102, Name=Adarsh, Salary=4000
id=103, Name=Ravi, Salary=6000
id=104, Name=Sanjay, Salary=7000
id=105, Name=Bunty, Salary=10000
****
using foreach Loop
****
id=101, Name=Sandeep, Salary=2000
id=102, Name=Adarsh, Salary=4000
id=103, Name=Ravi, Salary=6000
id=104, Name=Sanjay, Salary=7000
id=105, Name=Bunty, Salary=10000
****
using Lambda Expression
****
id=101, Name=Sandeep, Salary=2000
id=102, Name=Adarsh, Salary=4000
id=103, Name=Ravi, Salary=6000
id=104, Name=Sanjay, Salary=7000
id=105, Name=Bunty, Salary=10000
****
using Linq Query
****
id=101, Name=Sandeep, Salary=2000
id=102, Name=Adarsh, Salary=4000
id=103, Name=Ravi, Salary=6000
id=104, Name=Sanjay, Salary=7000
id=105, Name=Bunty, Salary=10000

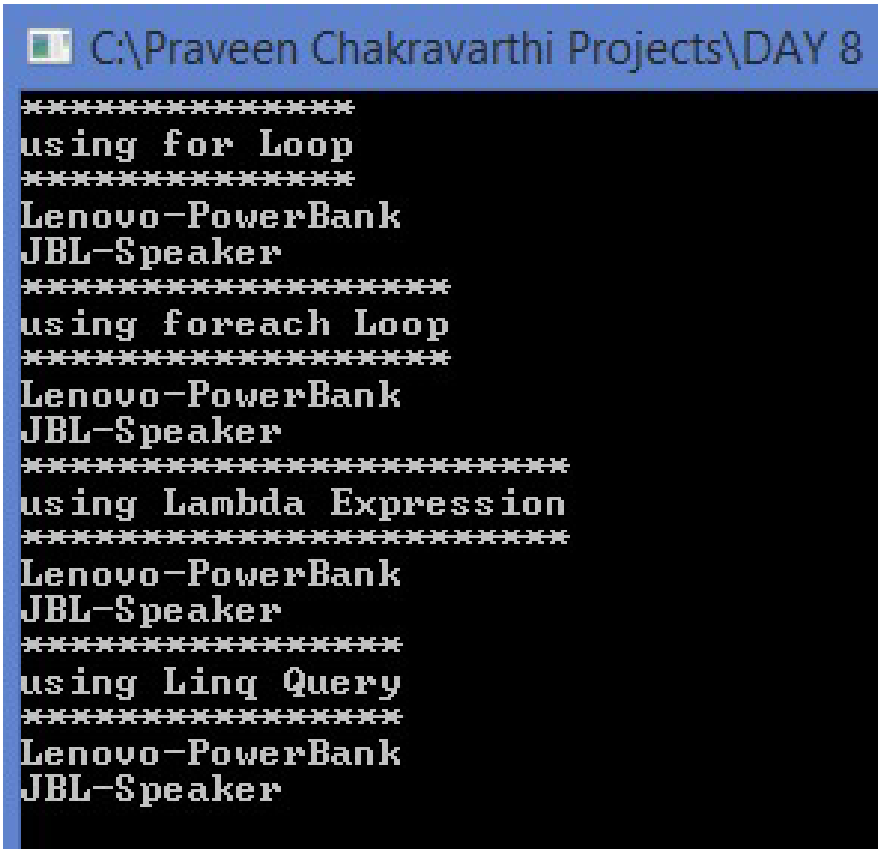
3. Create a class Product and add variables id, name, price, brand
print product (name and brand) whose price is more than 500 using for, foreach loop, lambda, linq query

Code:

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

namespace Day_8_Project_3
{
    // Author : Praveen Chakravarthi
    // Purpose : Product Class (if Condition)

    class Product
    {
        public int Id;
        public string Name;
        public string Brand;
        public int Price;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            List<Product> Prod = new List<Product>
            {
                new Product() { Id = 11, Name = "HeadPhones", Brand = "Boat", Price = 400 },
                new Product() { Id = 12, Name = "PowerBank", Brand = "Lenovo", Price = 650 },
                new Product() { Id = 13, Name = "Speaker", Brand = "JBL", Price = 800 },
                new Product() { Id = 14, Name = "Adapter", Brand = "pTron", Price = 450 }
            };

            // using for Loop
            Console.WriteLine("***************");
            Console.WriteLine("using for Loop");
            Console.WriteLine("***************");

            for (int i= 0; i < Prod.Count; i++)
            {
                if (Prod[i].Price>500)
                    Console.WriteLine(Prod[i].Brand + "-" + Prod[i].Name);
            }

            // using foreach Loop
            Console.WriteLine("*******************");
            Console.WriteLine("using foreach Loop");
            Console.WriteLine("*******************");

            foreach (var p in Prod)
            {
```

```
            if (p.Price>500)
                Console.WriteLine(p.Brand + "-" + p.Name);
        }

        // using Lambda Expression
        Console.WriteLine("************************");
        Console.WriteLine("using Lambda Expression");
        Console.WriteLine("************************");

        Prod.Where(p => p.Price > 500).ToList().ForEach(p => Console.WriteLine(p.Brand
+ "-" + p.Name));

        // using Linq Query
        Console.WriteLine("*****************");
        Console.WriteLine("using Linq Query");
        Console.WriteLine("*****************");

        var Result = from p in Prod
                     where p.Price > 500
                     select p;
        Result.ToList().ForEach(p => Console.WriteLine(p.Brand + "-" + p.Name));

        Console.ReadLine();
    }
  }
}
```

Output:



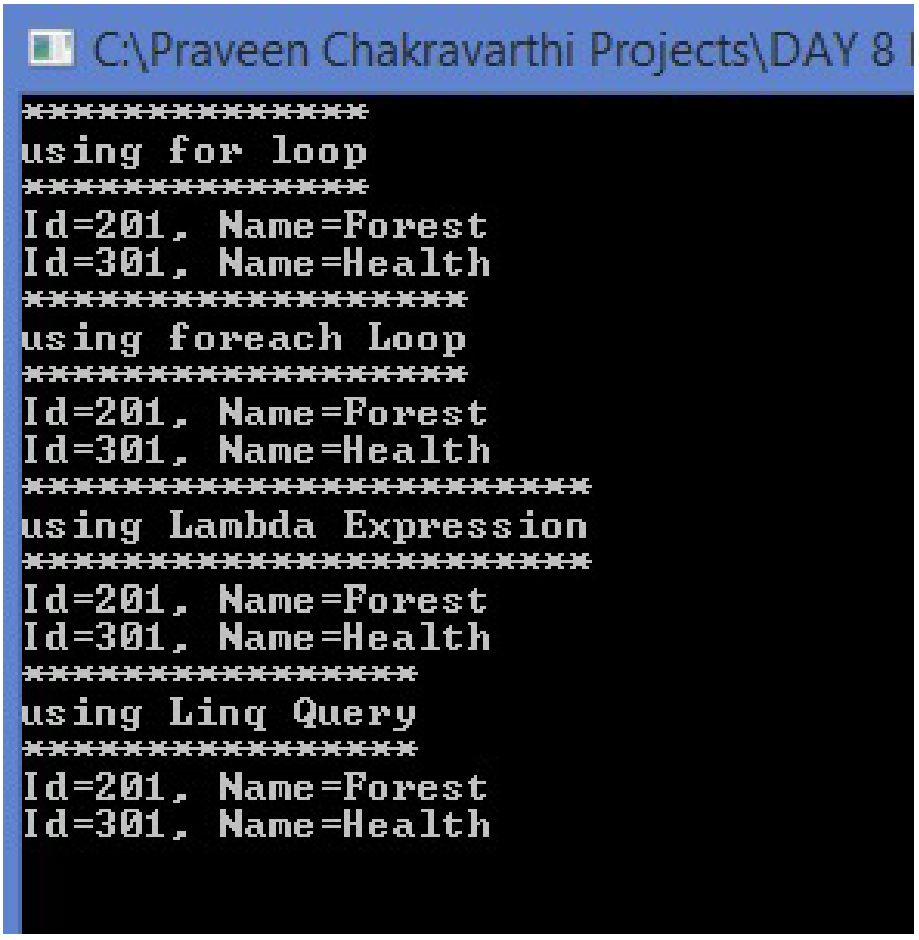
4. Create a Department class and add variables id, name , empcount
write code to print id, name of departments whose empcount is greater than 50
using for, foreach, lambda, linq query

Code:

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

namespace Day_8_project_4
{
    // Author : Praveen Chakravarthi
    // Purpose : Department Class (if Condition)

    class Department
    {
        public int Id;
        public string Name;
        public int EmpCount;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            List<Department> Dept = new List<Department>()
            {
                new Department() {Id = 201, Name = "Forest", EmpCount = 65},
                new Department() {Id = 301, Name = "Health", EmpCount = 70},
                new Department() {Id = 401, Name = "IncomeTax", EmpCount = 45},
                new Department() {Id = 501, Name = "Food", EmpCount = 35}
            };

            // using for loop
            Console.WriteLine("**************");
            Console.WriteLine("using for loop");
            Console.WriteLine("**************");

            for (int i = 0; i < Dept.Count; i++)
            {
                if (Dept[i].EmpCount > 50)
                    Console.WriteLine($"Id={Dept[i].Id}, Name={Dept[i].Name}");
            }

            // using foreach Loop
            Console.WriteLine("******************");
            Console.WriteLine("using foreach Loop");
            Console.WriteLine("******************");

            foreach (var d in Dept)
                if (d.EmpCount > 50)
```

```
                Console.WriteLine($"Id={d.Id}, Name={d.Name}");

            // using Lambda Expression
            Console.WriteLine("************************");
            Console.WriteLine("using Lambda Expression");
            Console.WriteLine("************************");

            Dept.Where(d => d.EmpCount > 50).ToList().ForEach(d =>
Console.WriteLine($"Id={d.Id}, Name={d.Name}"));

            // using Linq Query
            Console.WriteLine("*****************");
            Console.WriteLine("using Linq Query");
            Console.WriteLine("*****************");

            var Result = from d in Dept
                         where d.EmpCount>50
                         select d;
            Result.ToList().ForEach(d => Console.WriteLine($"Id={d.Id}, Name={d.Name}"));
            Console.ReadLine();
        }
    }
}
```

Output:



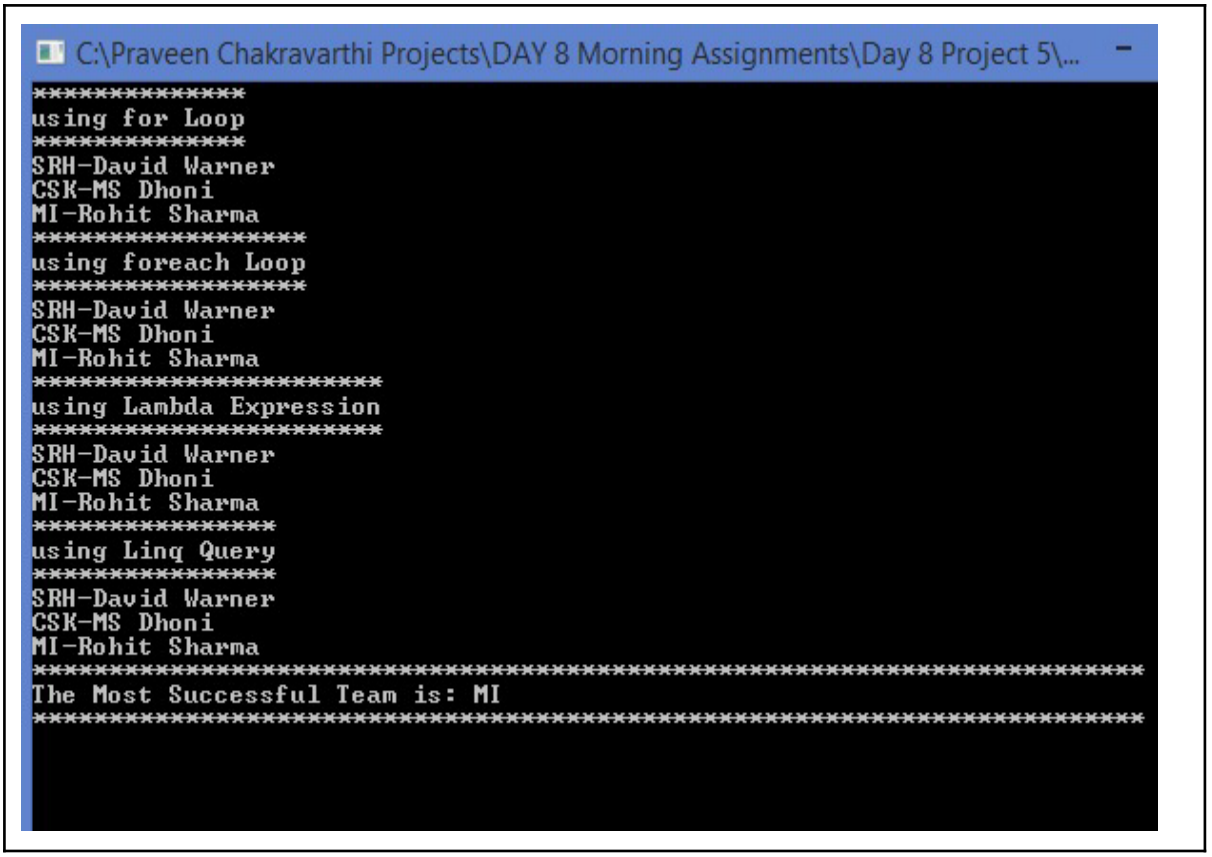
5. Create your own class and variables and initialise with some values for, foreach, lambda, linq query

Code:

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

namespace Day_8_Project_5
{
    // Author : Praveen Chakravarthi
    // Purpose : IPL Class

    class IPL
    {
        public string TeamName;
        public int NoOfWins;
        public string Captain;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            List<IPL> data = new List<IPL>()
            {
                new IPL(){TeamName="SRH", NoOfWins=2, Captain="David Warner"},
                new IPL(){TeamName="CSK", NoOfWins=4, Captain="MS Dhoni"},
                new IPL(){TeamName="MI", NoOfWins=5, Captain="Rohit Sharma"},
                new IPL(){TeamName="RR", NoOfWins=1, Captain="Shane Warne"},
            };

            // using for Loop
            Console.WriteLine("***************");
            Console.WriteLine("using for Loop");
            Console.WriteLine("***************");

            for (int i = 0; i < data.Count; i++)
            {
                if (data[i].NoOfWins >= 2)
                    Console.WriteLine(data[i].TeamName + "-" + data[i].Captain);
            }
            // using foreach Loop
            Console.WriteLine("*******************");
            Console.WriteLine("using foreach Loop");
            Console.WriteLine("*******************");
```

```
        foreach (var d in data)
        {
            if (d.NoOfWins >= 2)
                Console.WriteLine(d.TeamName + "-" + d.Captain);
        }

        // using Lambda Expression
        Console.WriteLine("************************");
        Console.WriteLine("using Lambda Expression");
        Console.WriteLine("************************");

        data.Where(d => d.NoOfWins >= 2).ToList().ForEach(d =>
Console.WriteLine(d.TeamName + "-" + d.Captain));


        // using Linq Query
        Console.WriteLine("*****************");
        Console.WriteLine("using Linq Query");
        Console.WriteLine("*****************");

        var Result = from d in data
                     where d.NoOfWins >= 2
                     select d;
        Result.ToList().ForEach(d => Console.WriteLine(d.TeamName + "-" + d.Captain));

        var Result1 = from d in data
                     where d.NoOfWins ==5
                     select d;

Console.WriteLine("*********************************************************************************");
        Result1.ToList().ForEach(d => Console.WriteLine("The Most Successful Team is: "
+ d.TeamName));

Console.WriteLine("*********************************************************************************");
        Console.ReadLine();
    }
  }
}
```

Output:


C:\Praveen Chakravarthi Projects\DAY 8 Morning Assignments\Day 8 Project 5\...
****
using for Loop
****
SRH-David Warner
CSK-MS Dhoni
MI-Rohit Sharma
****
using foreach Loop
****
SRH-David Warner
CSK-MS Dhoni
MI-Rohit Sharma
****
using Lambda Expression
****
SRH-David Warner
CSK-MS Dhoni
MI-Rohit Sharma
****
using Linq Query
****
SRH-David Warner
CSK-MS Dhoni
MI-Rohit Sharma
****
The Most Successful Team is: MI
****