Day 8 Morning Assignment

By Manoj Karnatapu - NBHealthCareTechnologies

Assignment 1

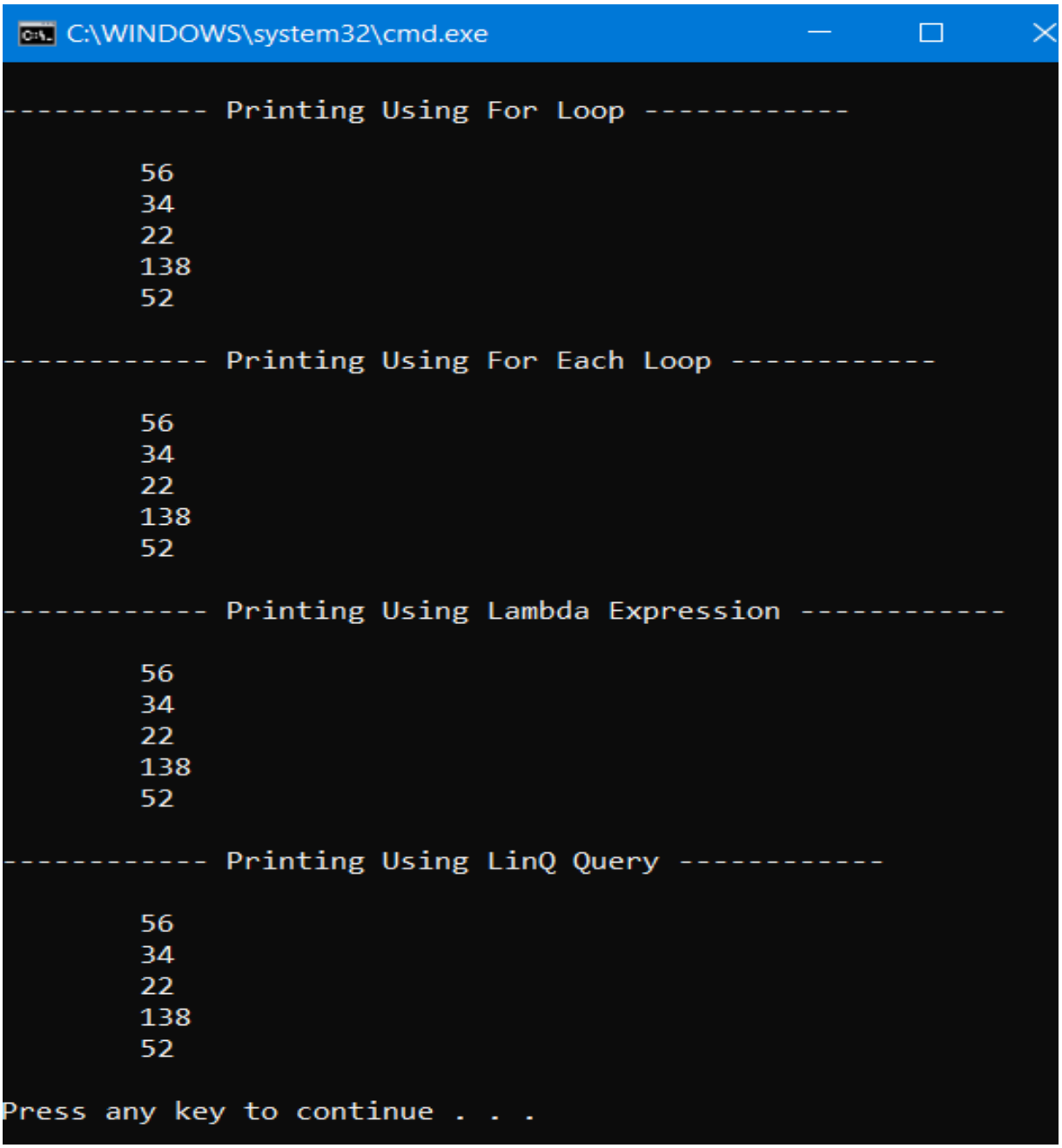
Create a List with 8 Values & find Even Numbers from the List Using for, foreach, Lambda & LINQ.

Code

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

// Author : Manoj.Karnatapu
// Purpose : Create a List of 8 Random Numbers, Find Even Numbers using for loop, foreach
loop, lambda expression & LINQ Querry.

// For Reference Please Do Check With Day8Project1 Code in the Same Repository.

namespace Day8Project1
{
    internal class Program
    {
        static void Main(string[] args)
        {
            List<int> data = new List<int>() { 49, 56, 34, 22, 77, 95, 138, 139, 52};

            // Printing The Even Numbers From List Using For Loop
            Console.WriteLine("\n------------ Printing Using For Loop ------------\n");
            for(int i = 0; i < data.Count; i++)
            {
                if(data[i]%2 == 0)
                    Console.WriteLine("\t{0}",data[i]);
            }

            // Printing The Even Numbers From List Using For Each Loop
            Console.WriteLine("\n------------ Printing Using For Each Loop ------------
\n");
            foreach(var d in data)
            {
                if(d%2 == 0)
                    Console.WriteLine("\t{0}",d);
            }

            // Printing The Even Numbers From List Using Lambda Expression
            Console.WriteLine("\n------------ Printing Using Lambda Expression ------------
\n");
            data.Where(x => x % 2 == 0).ToList().ForEach(x =>
Console.WriteLine("\t{0}",x));

            // Printing The Even Numbers From List Using Linq Query
            Console.WriteLine("\n------------ Printing Using LinQ Query ------------\n");

            var result = from d in data
                         where d % 2 == 0
                         select d;

            result.ToList().ForEach(x => Console.WriteLine("\t{0}",x));

            Console.ReadLine();
        }
```

```
    }
}
```

Output


C:\WINDOWS\system32\cmd.exe
---------- Printing Using For Loop ----------
56
34
22
138
52
---------- Printing Using For Each Loop ----------
56
34
22
138
52
---------- Printing Using Lambda Expression ----------
56
34
22
138
52
---------- Printing Using LinQ Query ----------
56
34
22
138
52
Press any key to continue . . .

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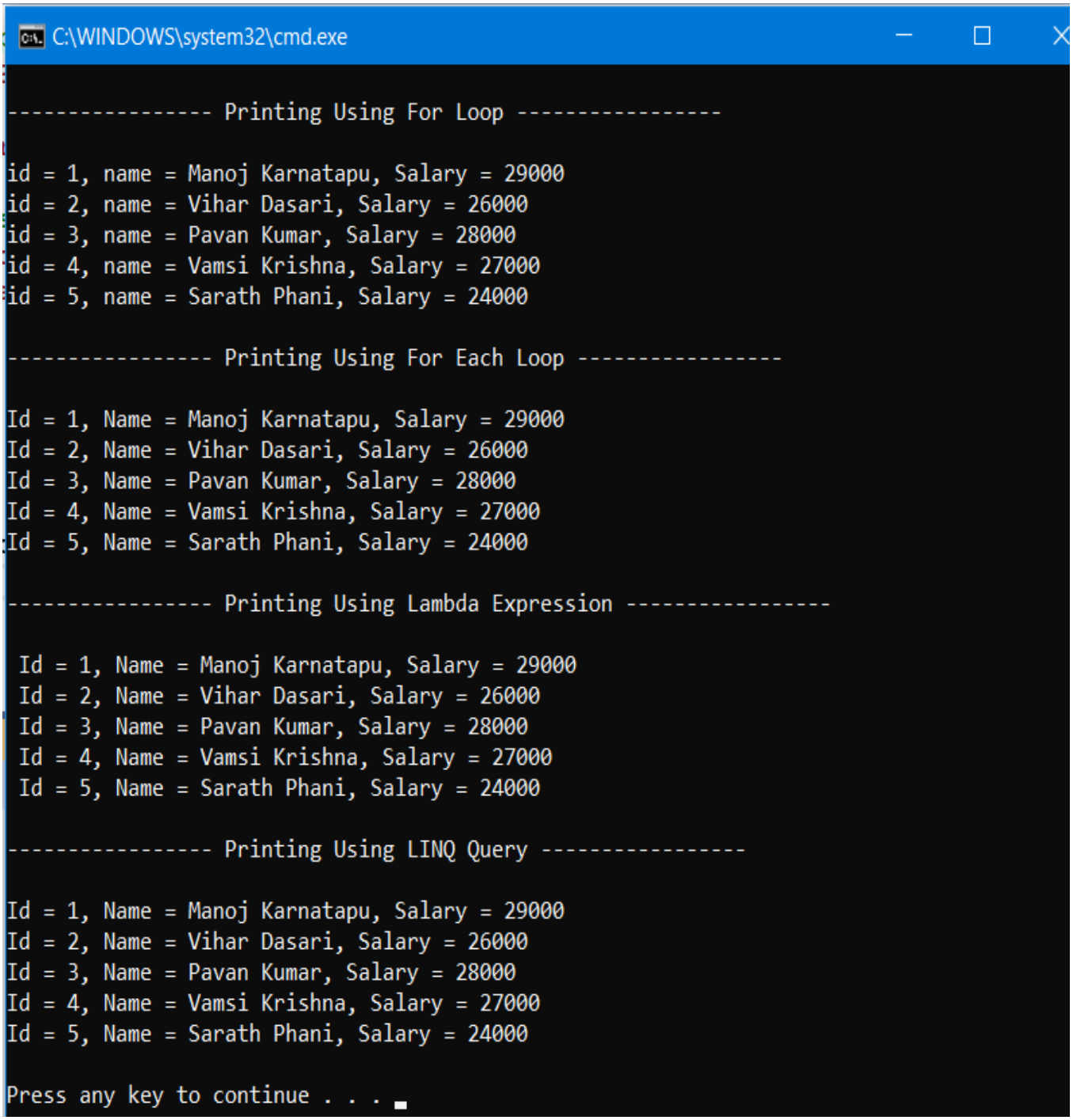
Assignment 2

Create Class of List Employees, & print Using for loop, For Each Loop, Lambda Expression & LINQ query.

Code

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

// Author : Manoj.Karnatapu
// Purpose : Create Class of List Employees, & print Using for loop, For Each Loop, Lambda
Expression & LINQ query

// For reference Please Do Check With Day8Project2 Code in the Same Repository.
namespace Day8Project2
{
    class Employee
    {
        public int id;
        public string name;
        public int salary;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            List<Employee> employees = new List<Employee>()
            {
                new Employee(){ id = 1, name = "Manoj Karnatapu", salary = 29000},
                new Employee(){ id = 2, name = "Vihar Dasari", salary = 26000},
                new Employee(){ id = 3, name = "Pavan Kumar", salary = 28000},
                new Employee(){ id = 4, name = "Vamsi Krishna", salary = 27000},
                new Employee(){ id = 5, name = "Sarath Phani", salary = 24000}
            };

            // Printing Employee Data from the List Using For Loop
            Console.WriteLine("\n----------------- Printing Using For Loop ----------------
-\n");
            for(int i = 0; i < employees.Count; i++)
            {
                Console.WriteLine($"id = {employees[i].id}, name = {employees[i].name},
Salary = {employees[i].salary}");
            }
            // Printing Employee Data from the List Using For Each Loop
            Console.WriteLine("\n----------------- Printing Using For Each Loop -----------
------\n");
            foreach(var e in employees)
                Console.WriteLine($"Id = {e.id}, Name = {e.name}, Salary = {e.salary}");

            // Printing Employee Data from the List Using Lambda Expression
            Console.WriteLine("\n----------------- Printing Using Lambda Expression -------
----------\n");
            employees.ForEach(e => Console.WriteLine($" Id = {e.id}, Name = {e.name},
Salary = {e.salary}"));

            // Printing Employee Data from the List Using LINQ Query
            Console.WriteLine("\n----------------- Printing Using LINQ Query --------------
---\n");
            var result = from e in employees
                         select e;

            result.ToList().ForEach(e => Console.WriteLine($"Id = {e.id}, Name = {e.name},
Salary = {e.salary}"));

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

Output


C:\WINDOWS\system32\cmd.exe
---------- Printing Using For Loop ----------
id = 1, name = Manoj Karnatapu, Salary = 29000
id = 2, name = Vihar Dasari, Salary = 26000
id = 3, name = Pavan Kumar, Salary = 28000
id = 4, name = Vamsi Krishna, Salary = 27000
id = 5, name = Sarath Phani, Salary = 24000
---------- Printing Using For Each Loop ----------
Id = 1, Name = Manoj Karnatapu, Salary = 29000
Id = 2, Name = Vihar Dasari, Salary = 26000
Id = 3, Name = Pavan Kumar, Salary = 28000
Id = 4, Name = Vamsi Krishna, Salary = 27000
Id = 5, Name = Sarath Phani, Salary = 24000
---------- Printing Using Lambda Expression ----------
Id = 1, Name = Manoj Karnatapu, Salary = 29000
Id = 2, Name = Vihar Dasari, Salary = 26000
Id = 3, Name = Pavan Kumar, Salary = 28000
Id = 4, Name = Vamsi Krishna, Salary = 27000
Id = 5, Name = Sarath Phani, Salary = 24000
---------- Printing Using LINQ Query ----------
Id = 1, Name = Manoj Karnatapu, Salary = 29000
Id = 2, Name = Vihar Dasari, Salary = 26000
Id = 3, Name = Pavan Kumar, Salary = 28000
Id = 4, Name = Vamsi Krishna, Salary = 27000
Id = 5, Name = Sarath Phani, Salary = 24000
Press any key to continue . . .

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Assignment 3

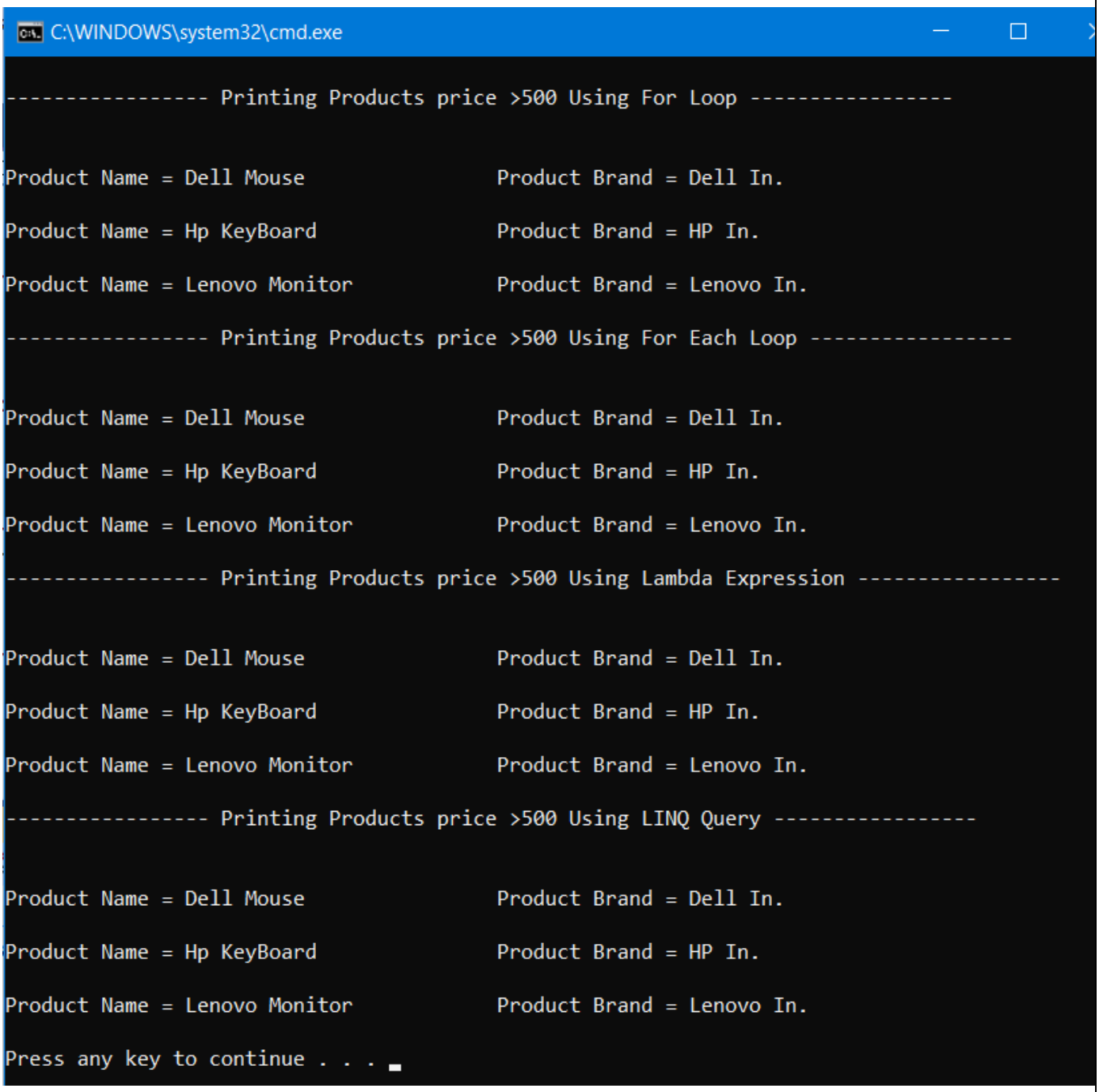
Create a Class of List Products & Print Product (Name & Brand) Whose Price is > 500,Using for, foreach, Lambda & LINQ.

Code

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

// Author : Manoj.Karnatapu
// Purpose : Create Class of List Products, & print Product(Name & Brand) Whose Price is >
500,Using for loop, For Each Loop, Lambda Expression & LINQ query

// For Reference Please Do Check, Day8Project3 Code in the Same Repository.
namespace Day8Project3
{
    class Product
    {
        public int id;
        public string name;
        public int price;
        public string brand;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            List<Product> products = new List<Product>()
            {
                new Product() { id = 1, name = "Dell Mouse", price = 780, brand = "Dell
In."},
                new Product() { id = 2, name = "Hp KeyBoard", price = 630, brand = "HP
In."},
                new Product() { id = 3, name = "Lenovo Monitor", price= 2500, brand =
"Lenovo In."},
                new Product() { id = 4, name = "Type-c to Type-A USB Convertor", price =
20, brand = "China Mall"}
            };

            // Printing Product (Name & Brand), Where price>500 Using For Loop
            Console.WriteLine("\n----------------- Printing Products price >500 Using For
Loop -----------------\n");
            for(int i = 0; i < products.Count; i++)
            {
                if(products[i].price > 500)
                {
                    Console.WriteLine($"\nProduct Name = {products[i].name}\t\t Product
Brand = {products[i].brand}");
                }
            }


            // Printing Product (Name & Brand), Where price>500 Using For Each Loop
            Console.WriteLine("\n----------------- Printing Products price >500 Using For
Each Loop -----------------\n");
            foreach(var p in products)
            {
                if (p.price > 500)
                    Console.WriteLine($"\nProduct Name = {p.name}\t\t Product Brand =
{p.brand}");
            }

            // Printing Product (Name & Brand), Where price>500 Using Lambda Expression
            Console.WriteLine("\n----------------- Printing Products price >500 Using
Lambda Expression -----------------\n");
            products.Where(p => p.price > 500).ToList().ForEach(p =>
Console.WriteLine($"\nProduct Name = {p.name}\t\t Product Brand = {p.brand}"));

            // Printing Product (Name & Brand), Where price>500 Using LINQ Query.
```

```
            Console.WriteLine("\n----------------- Printing Products price >500 Using LINQ
Query -----------------\n");
            var result = from p in products
                         where p.price > 500
                         select p;

            result.ToList().ForEach(p => Console.WriteLine($"\nProduct Name = {p.name}\t\t
Product Brand = {p.brand}"));
            Console.ReadLine();
        }
    }
}
```

Output



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Assignment 4

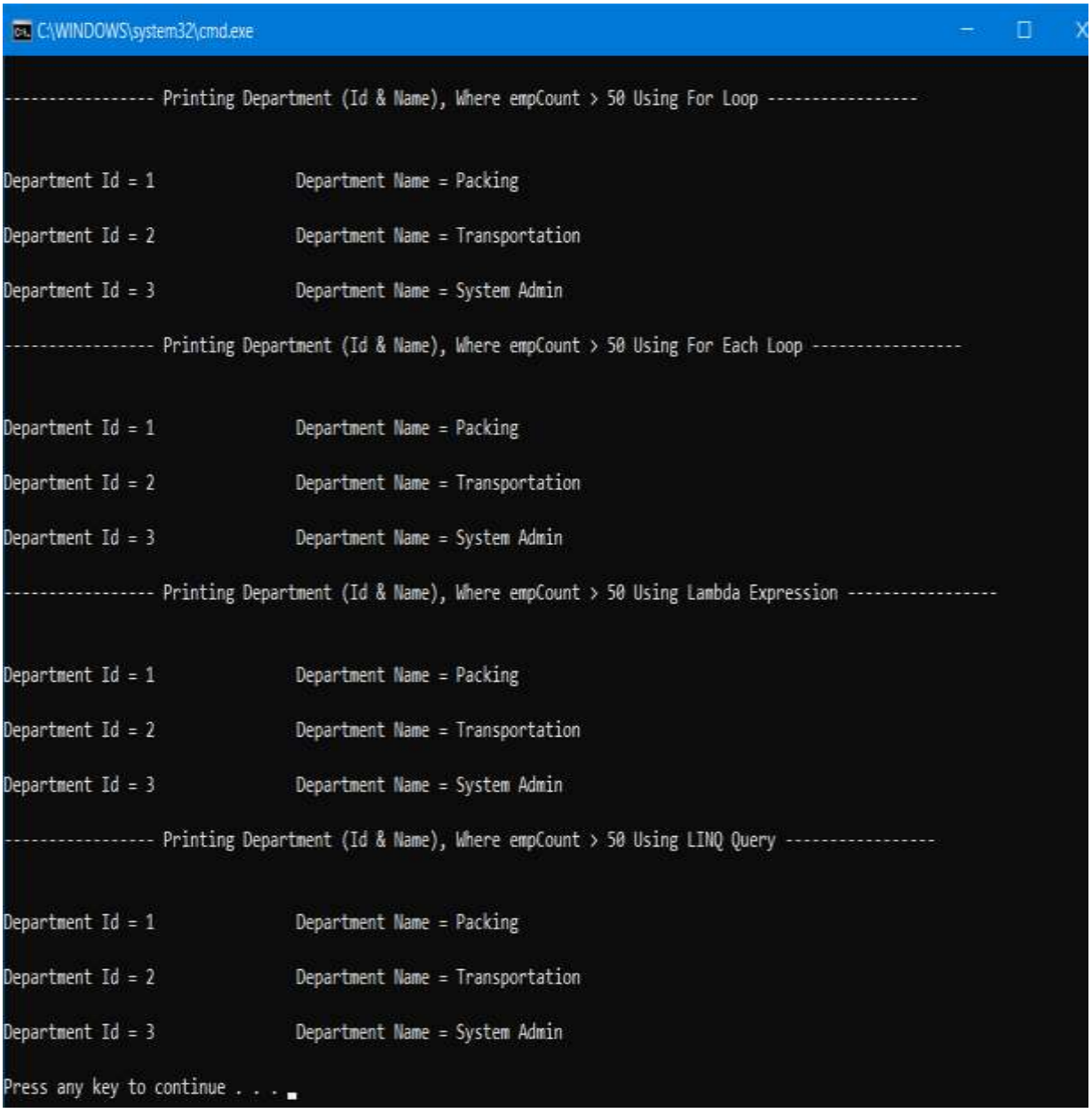
Create Class of List Departments, & print Department (Id & Name) Whose EmpCount is > 50,Using for, foreach, Lambda & LINQ.

Code

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

// Author : Manoj.Karnatapu
// Purpose : Create Class of List Departments, & print Department(Id & Name) Whose EmpCount
is > 50,Using for, foreach, Lambda & LINQ.

// For Reference Please Do Check, Day8Project4 Code in the Same Repository.

namespace Day8Project4
{
    class Department
    {
        public int id;
        public string name;
        public int empCount;
    }

    internal class Program
    {
        static void Main(string[] args)
        {
            List<Department> departments = new List<Department>()
            {
                new Department() { id = 1, name = "Packing", empCount = 780},
                new Department() { id = 2, name = "Transportation", empCount = 350},
                new Department() { id = 3, name = "System Admin", empCount = 58},
                new Department() { id = 4, name = "Managers", empCount = 20}
            };

            // Printing Department (Id & Name), Where empCount > 50 Using For Loop
            Console.WriteLine("\n----------------- Printing Department (Id & Name), Where
empCount > 50 Using For Loop -----------------\n");
            for (int i = 0; i < departments.Count; i++)
            {
                if (departments[i].empCount > 50)
                {
                    Console.WriteLine($"\nDepartment Id = {departments[i].id}\t\t
Department Name = {departments[i].name}");
                }
            }


            // Printing Department (Id & Name), Where empCount > 50 Using For Each Loop
            Console.WriteLine("\n----------------- Printing Department (Id & Name), Where
empCount > 50 Using For Each Loop -----------------\n");
            foreach (var d in departments)
            {
                if (d.empCount > 50)
                    Console.WriteLine($"\nDepartment Id = {d.id}\t\t Department Name =
{d.name}");
            }

            // Printing Department (Id & Name), Where empCount > 50 Using Lambda Expression
            Console.WriteLine("\n----------------- Printing Department (Id & Name), Where
empCount > 50 Using Lambda Expression -----------------\n");
            departments.Where(d => d.empCount > 50).ToList().ForEach(d =>
Console.WriteLine($"\nDepartment Id = {d.id}\t\t Department Name = {d.name}"));

            // Printing Department (Id & Name), Where empCount > 50 Using LINQ Query.
            Console.WriteLine("\n----------------- Printing Department (Id & Name), Where
empCount > 50 Using LINQ Query -----------------\n");
```

```
            var result = from d in departments
                         where d.empCount > 50
                         select d;

            result.ToList().ForEach(d => Console.WriteLine($"\nDepartment Id = {d.id}\t\t
Department Name = {d.name}"));
            Console.ReadLine();
        }
    }
}
```

Output



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Assignment 5

Create Own Class with variables, & Print Using for loop, For Each Loop, Lambda Expression & LINQ query.

Code

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

// Author : Manoj.Karnatapu
// Purpose : Create Own Class with variables, & Print Using for loop, For Each Loop, Lambda
Expression & LINQ query

// For reference Please Do Check With Day8Project5 Code in the Same Repository

namespace Day8Project5
{
    class Banking
    {
        public string bankName;
        public int accNo;
        public string name;
        public int balance;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            List<Banking> banks = new List<Banking>()
            {
                new Banking(){ bankName = "SBI", accNo = 63242692, name = "Manoj
Karnatapu", balance = 25000},
                new Banking(){ bankName = "HDFC", accNo = 38762643, name = "Vamsi Krishna",
balance = 2000},
                new Banking(){ bankName = "IDFC", accNo = 69364846, name = "Pavan Kumar",
balance = 5080},
                new Banking(){ bankName = "AXIS", accNo = 93142007, name = "Vihar Dasari",
balance = 28000},
                new Banking(){ bankName = "ICICI", accNo = 54385409, name = "Sarath Phani",
balance = 15000}
            };

            // Printing Customer (bankName, Acc.No, Name, Balance), Where balance > 20,000
Using For Loop

            Console.WriteLine("\n----- Printing Customer (bankName, Acc.No, Name, Balance),
Where balance > 20,000 Using For Loop -----\n");
            for (int i = 0; i < banks.Count; i++)
            {
                if (banks[i].balance > 20000)
                {
                    Console.WriteLine($"\nBank : {banks[i].bankName},\t Account No. :
{banks[i].accNo},\t Account Name : {banks[i].name},\t Account Balance :
{banks[i].balance}");
                }
            }


            // Printing Customer (bankName, Acc.No, Name, Balance), Where balance > 20,000
Using For Each Loop

            Console.WriteLine("\n----- Printing Customer (bankName, Acc.No, Name, Balance),
Where balance > 20,000 Using For Each Loop -----\n");
            foreach (var d in banks)
            {
                if (d.balance > 20000)
                    Console.WriteLine($"\nBank : {d.bankName},\t Account No. : {d.accNo},\t
Account Name : {d.name},\t Account Balance : {d.balance}");
```

```
            }

            // Printing Customer (bankName, Acc.No, Name, Balance), Where balance > 20,000
Using Lambda Expression

            Console.WriteLine("\n----- Printing Customer (bankName, Acc.No, Name, Balance),
Where balance > 20,000 Using Lambda Expression -----\n");
            banks.Where(d => d.balance > 20000).ToList().ForEach(d =>
Console.WriteLine($"\nBank : {d.bankName},\t Account No. : {d.accNo},\t Account Name :
{d.name}, Account Balance : {d.balance}"));

            // Printing Customer (bankName, Acc.No, Name, Balance), Where balance > 20,000
Using LINQ Query.
            Console.WriteLine("\n----- Printing Customer (bankName, Acc.No, Name, Balance),
Where balance > 20,000 Using LINQ Query -----\n");
            var result = from d in banks
                         where d.balance > 20000
                         select d;

            result.ToList().ForEach(d => Console.WriteLine($"\nBank : {d.bankName},\t
Account No. : {d.accNo},\t Account Name : {d.name}, Account Balance : {d.balance}"));

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

Output

```
C:\WINDOWS\system32\cmd.exe

----- Printing Customer (bankName, Acc.No, Name, Balance), Where balance > 20,000 Using For Loop -----

Bank : SBI,     Account No. : 63242692,         Account Name : Manoj Karnatapu,         Account Balance : 25000

Bank : AXIS,    Account No. : 93142007,         Account Name :   Vihar Dasari,          Account Balance : 28000

----- Printing Customer (bankName, Acc.No, Name, Balance), Where balance > 20,000 Using For Each Loop -----

Bank : SBI,     Account No. : 63242692,         Account Name : Manoj Karnatapu,         Account Balance : 25000

Bank : AXIS,    Account No. : 93142007,         Account Name :   Vihar Dasari,          Account Balance : 28000

----- Printing Customer (bankName, Acc.No, Name, Balance), Where balance > 20,000 Using Lambda Expression -----

Bank : SBI,     Account No. : 63242692,         Account Name : Manoj Karnatapu, Account Balance : 25000

Bank : AXIS,    Account No. : 93142007,         Account Name :   Vihar Dasari, Account Balance : 28000

----- Printing Customer (bankName, Acc.No, Name, Balance), Where balance > 20,000 Using LINQ Query -----

Bank : SBI,     Account No. : 63242692,         Account Name : Manoj Karnatapu, Account Balance : 25000

Bank : AXIS,    Account No. : 93142007,         Account Name :   Vihar Dasari, Account Balance : 28000

Press any key to continue . . .
```

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