Day 8 Morning Assignment

By

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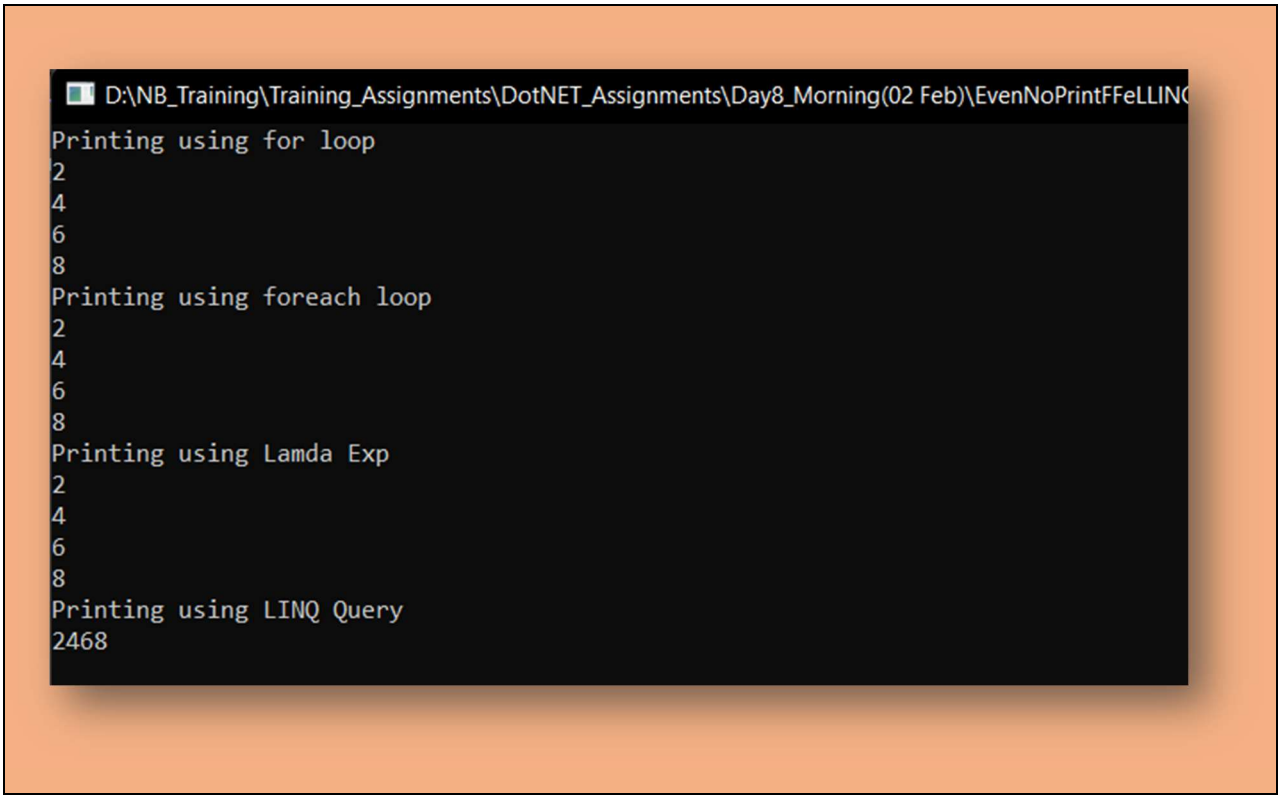
1. Declare and Initialize list with 8 values. Write for loop, foreach loop, lambda , LINQ query to print even numbers.

Code :

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

namespace EvenNoPrintFFeLLINQ
{
    internal class Program
    {
        static void Main(string[] args)
        {

/*************************************************************************
        * Author : Varun Sai Kumar Chegoni.
        * Purpose : print even number using for, foreach loop, lambda expression,
LINQ Query.

*************************************************************************/

            List<int> num = new List<int> { 1, 2, 3, 4, 5, 6, 7, 8 }; //
Declaration ans Initialization
            //Print Using For Loop
            Console.WriteLine("Printing using for loop");
            for (int i = 0; i < num.Count; i++)
            {
                if (num[i]%2 == 0)
                    Console.WriteLine(num[i]);
            }
            // Print using Foreach Loop
            Console.WriteLine("Printing using foreach loop");
            foreach (int n in num)
            {
                if (n%2 == 0)
                    Console.WriteLine(n);
            }
            // Print using lamda Expression
            Console.WriteLine("Printing using Lamda Exp");
            num.Where(x => x % 2 == 0).ToList().ForEach(x => Console.WriteLine(x));
            // Print using LINQ Query
            Console.WriteLine("Printing using LINQ Query");
            var result = from n in num
                         where n % 2 == 0
                         select n;
            result.ToList().ForEach(n => Console.Write(n));
            Console.ReadLine();
        }
    }
}
```

Output :


D:\NB_Training\Training_Assignments\DotNET_Assignments\Day8_Morning(02 Feb)\EvenNoPrintFFeLLINQ
Printing using for loop
2
4
6
8
Printing using foreach loop
2
4
6
8
Printing using Lamda Exp
2
4
6
8
Printing using LINQ Query
2468

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

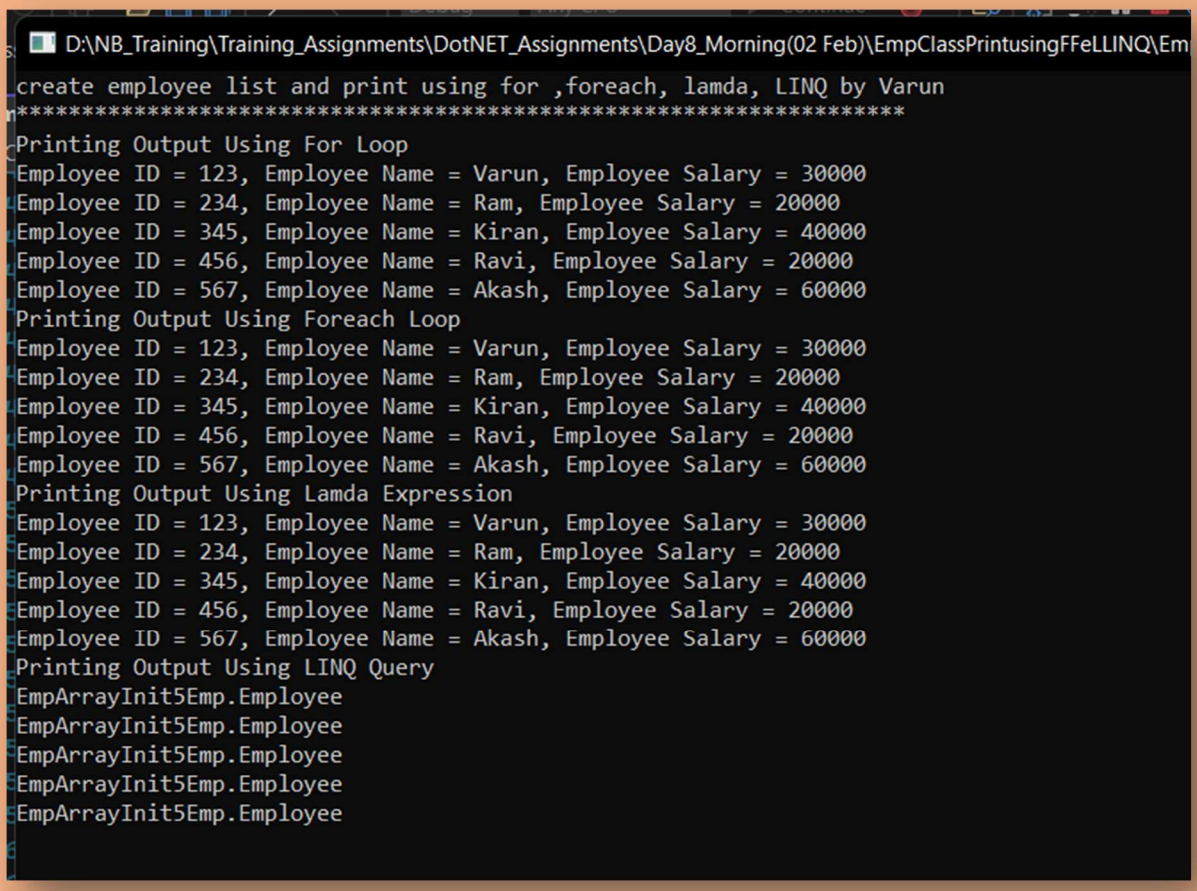
for loop
foreach loop
lambda expression
LINQ query

Code :

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

namespace EmpArrayInit5Emp
{
    /*************************************************************************
        * Author : Varun Sai Kumar Chegoni.
        * Purpose : create employee list and print using for ,foreach, lamda, LINQ
       *************************************************************************/
    public class Employee
    {
        public int id;
        public string name;
        public int salary;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("create employee list and print using for ,foreach,
lamda, LINQ by Varun");

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

            List<Employee> emp = new List<Employee>()
            {
                new Employee() { id=123, name="Varun", salary=30000 },
                new Employee() { id=234, name="Ram", salary=20000 },
                new Employee() { id=345, name="Kiran", salary=40000 },
                new Employee() { id=456, name="Ravi", salary=20000 },
                new Employee() { id=567, name="Akash", salary=60000 },
            };

            Console.WriteLine("Printing Output Using For Loop");
            // using for loop
            for (int i = 0; i<emp.Count; i++)
            {
                Console.WriteLine($"Employee ID = {emp[i].id}, Employee Name =
{emp[i].name}, Employee Salary = {emp[i].salary}");
            }

            Console.WriteLine("Printing Output Using Foreach Loop");
            // using foreach loop
            foreach (var e in emp)
```

```
            {
                Console.WriteLine($"Employee ID = {e.id}, Employee Name = {e.name},
Employee Salary = {e.salary}");
            }

            Console.WriteLine("Printing Output Using Lamda Expression");
            // using lamda expression
            emp.ToList().ForEach(e => Console.WriteLine($"Employee ID = {e.id},
Employee Name = {e.name}, Employee Salary = {e.salary}"));

            Console.WriteLine("Printing Output Using LINQ Query");
            // using LINQ Query
            var result = from e in emp
                         where e.id >= 1
                         select e;
            result.ToList().ForEach(a => Console.WriteLine(a));
            Console.ReadLine();
        }
    }
}
```

Output :



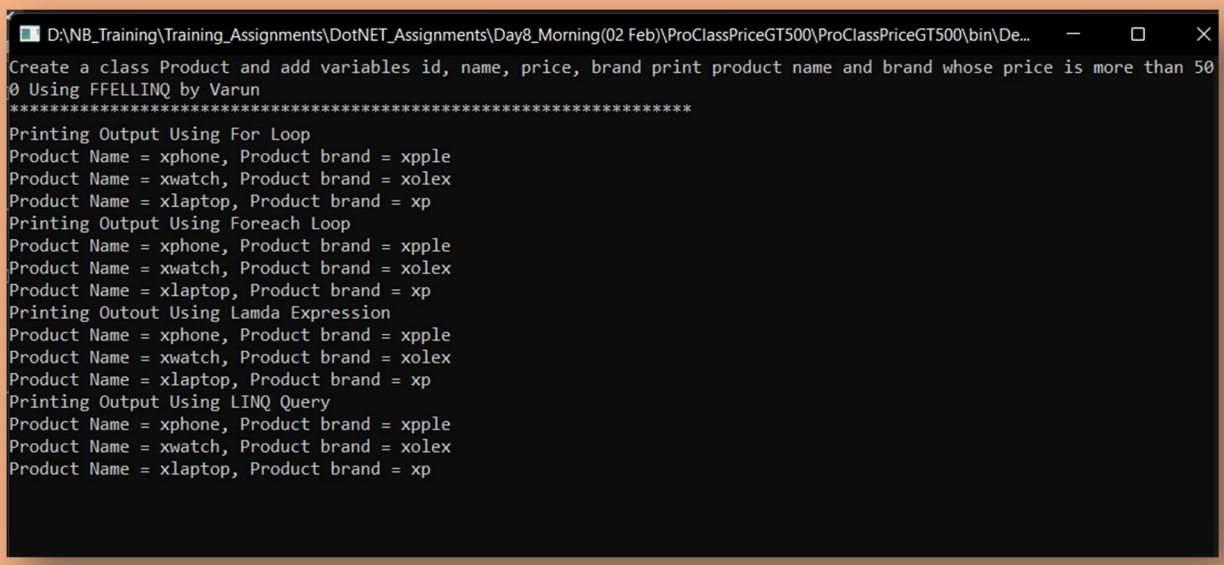
3. Create a class Product and add variables id, name, price, brand print product (name and brand) whose price is more than 500.
using
for
foreach loop
lambda
LINQ query

Code :

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

namespace ProClassPriceGT500
{
    /*************************************************************************
        * Author : Varun Sai Kumar Chegoni.
        * Purpose : Create a class Product and add variables id, name, price, brand
print product name and brand whose price is more than 500 Using FFELLINQ.
       *************************************************************************/
    public class Product
    {
        public int id;
        public string name;
        public int price;
        public string brand;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Create a class Product and add variables id, name,
price, brand print product name and brand whose price is more than 500 Using FFELLINQ
by Varun");

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

            List<Product> pro = new List<Product>()
            {
                new Product(){id=987, name="xshoes",price=100, brand="xuna"},
                new Product(){id=876, name="xphone",price=900, brand="xpple"},
                new Product(){id=765, name="xwatch",price=600, brand="xolex"},
                new Product(){id=654, name="xlaptop",price=1100, brand="xp"}
            };
            // Product Print >=500
            Console.WriteLine("Printing Output Using For Loop");
            // using for loop
            for (int i = 0; i<pro.Count; i++)
            {
                if (pro[i].price >= 500)
                    Console.WriteLine($"Product Name = {pro[i].name}, Product brand =
{pro[i].brand}");
            }
            Console.WriteLine("Printing Output Using Foreach Loop");
            // using foreach loop
            foreach (var p in pro)
            {
                if (p.price>500)
```

```
                    Console.WriteLine($"Product Name = {p.name}, Product brand =
{p.brand}");
            }
            Console.WriteLine("Printing Outout Using Lamda Expression");
            // using lamda expression
            pro.ToList().Where(p => p.price>=500).ToList().ForEach(p =>
Console.WriteLine($"Product Name = {p.name}, Product brand = {p.brand}"));
            Console.WriteLine("Printing Output Using LINQ Query ");
            // using LINQ Query
            var result = from p in pro
                         where p.price>=500
                         select p;
            result.ToList().ForEach(p => Console.WriteLine($"Product Name = {p.name},
Product brand = {p.brand}"));
            Console.ReadLine();
        }
    }
}
```

Output :



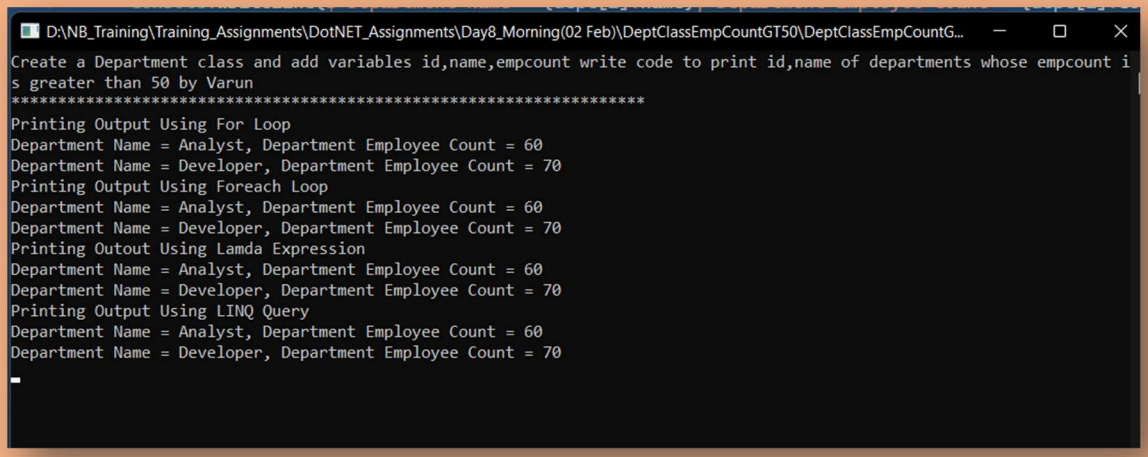
4. Create a Department class and add variables id,name,empcount write code to print id,name of departments whose empcount is greater than 50
using
for
foreach
lambda
LINQ query

Code :

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

namespace DeptClassEmpCountGT50
{
    /*************************************************************************
        * Author : Varun Sai Kumar Chegoni.
        * Purpose : Create a Department class and add variables id,name,empcount
write code to print id,name of departments whose empcount is greater than 50
       *************************************************************************/
    public class Department
    {
        public int id;
        public string name;
        public int count;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Create a Department class and add variables
id,name,empcount write code to print id,name of departments whose empcount is greater
than 50 by Varun");

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

            List<Department> dept = new List<Department>()
            {
                new Department() { id=123, name="Analyst", count=60 },
                new Department() { id=234, name="Developer", count=70 },
                new Department() { id=345, name="Support", count=40 },
                new Department() { id=456, name="Recruiter", count=20 }
            };
            // Employee count > 50
            Console.WriteLine("Printing Output Using For Loop");
            // using for loop
            for (int i = 0; i<dept.Count; i++)
            {
                if (dept[i].count > 50)
                    Console.WriteLine($"Department Name = {dept[i].name}, Department
Employee Count = {dept[i].count}");
            }
            Console.WriteLine("Printing Output Using Foreach Loop");
            // using foreach loop
            foreach (var d in dept)
            {
                if (d.count>50)
                    Console.WriteLine($"Department Name = {d.name}, Department
Employee Count = {d.count}");
```

```
            }
            Console.WriteLine("Printing Outout Using Lamda Expression");
            // using lamda expression
            dept.ToList().Where(d => d.count>50).ToList().ForEach(d =>
Console.WriteLine($"Department Name = {d.name}, Department Employee Count =
{d.count}"));
            Console.WriteLine("Printing Output Using LINQ Query ");
            // using LINQ Query
            var result = from d in dept
                         where d.count>50
                         select d;
            result.ToList().ForEach(d => Console.WriteLine($"Department Name =
{d.name}, Department Employee Count = {d.count}"));
            Console.ReadLine();
        }
    }
}
```

Output :



5. Create your own class and variables and initialize 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 OwnClassInitValues
{
    /*************************************************************************
        * Author : Varun Sai Kumar Chegoni.
        * Purpose : Create your own class and variables and initialize with some
values for print using for ,foreach, lamda, LINQ
       *************************************************************************/

    public class NHTraining
    {
        public string name;
        public int id;
        public int contact;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            List<NHTraining> nh = new List<NHTraining>()
            {
                new NHTraining() { name ="Arun", id = 01, contact = 123456},
                new NHTraining() { name ="Varun", id = 02, contact = 234567},
                new NHTraining() { name ="Vinay", id = 01, contact = 345678}
            };
            Console.WriteLine("Printing Output Using For Loop");
            // using for loop
            for (int i = 0; i<nh.Count; i++)
            {
                Console.WriteLine($"Student Name = {nh[i].name}, Student ID =
{nh[i].id},  Student Contact = {nh[i].contact}");
            }

            Console.WriteLine("Printing Output Using Foreach Loop");
            // using foreach loop
            foreach (var n in nh)
            {
                Console.WriteLine($"Student Name = {n.name}, Student ID = {n.id},
Student Contact = {n.contact}");
            }

            Console.WriteLine("Printing Output Using Lamda Expression");
            // using lamda expression
            nh.ToList().ForEach(n => Console.WriteLine($"Student Name = {n.name},
Student ID = {n.id},  Student Contact = {n.contact}"));

            Console.WriteLine("Printing Output Using LINQ Query");
            // using LINQ Query
            var result = from n in nh
                         where n.contact > 1
                         select n;
```

```
            result.ToList().ForEach(n => Console.WriteLine($"Student Name = {n.name}, Student ID = {n.id},  Student Contact = {n.contact}"));
            Console.ReadLine();
        }
    }
}
```

Output :