Day 8(1-02-2022) Morning Assignment

By

Sudha Kumari Sugasani

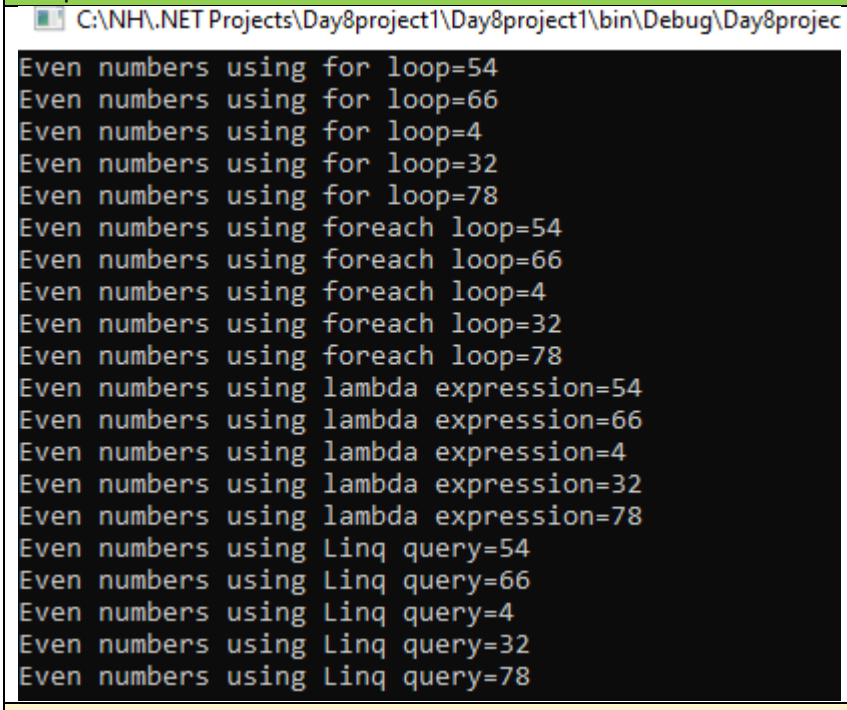
Q1.Declare and initialise a list with 8 values.
Write for loop,foreach loop,lambda expression,linq query to print even numbers.

Code:

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

namespace Day8project1
{

/**************************************************************************************
**********************
     *Author:Sudha Sugasani
     *Purpose:Program to find even numbers by list using for loop,foreach
loop,lambda expression,Linq query

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

    internal class Program
    {
        static void Main(string[] args)
        {
            List<int> data = new List<int>() { 54, 25, 87, 66, 4, 987, 32, 78};

            //Even numbers using for loop
            for(int i=0;i<data.Count;i++)
            {
                if(data[i]%2==0)
                    Console.WriteLine($"Even numbers using forloop={data[i]}");
            }

            //Even numbers using foreach loop
            foreach(var d in data)
            {
                if (d%2==0)
                    Console.WriteLine($"Even numbers using foreach loop={d}");
            }

            //Even numbers using lambda expression
            data.Where(d => d % 2 == 0).ToList().ForEach(d =>
Console.WriteLine($"Even numbers using lambda expression={d}"));

            //Even numbers using Linq query
            var result = from d in data
                         where d % 2 == 0
                         select d;
            result.ToList().ForEach(d=>Console.WriteLine($"Even numbers using
Linq query={d}"));

            Console.ReadLine();
```

```
        }
    }
}
```

Output:



Q2.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 a.for loop ,b.foreach loop,c.lambda expression,d.linq query

Code:

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

namespace Day8project2
{


/**************************************************************************************
************************
         *Author:Sudha Sugasani
         *Purpose:Create Employee class with three variables,create list of
employees print values using for loop,
         *         foreach loop,lambda expression,linq query

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


    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=1,name="sudha",salary=5000 },
                    new Employee(){id=2,name="lehana",salary=6000 },
                    new Employee(){id=3,name="neeraja",salary=8000 },
                    new Employee(){id=4,name="puja",salary=4500 },
                    new Employee(){id=5,name="gayathri",salary=3000 }
                };

                //Employees names using for loop
                for (int i = 0; i < emp.Count; i++)
                {
                    if (emp[i].salary>5000)
                        Console.WriteLine($"Employees whose salary is >5000 using
for loop={emp[i].name}");
                }

                //Employees names using foreach loop
                foreach (var e in emp)
                {
                    if (e.salary>5000)
                        Console.WriteLine($"Employees whose salary is >5000 using
foreach loop={e.name}");
                }

                //Employees names using lambda expression
                emp.Where(e=> e.salary>5000).ToList().ForEach(e =>
Console.WriteLine($"Employees names whose salary is >5000 using lambda
expression={e.name}"));

                //Employees names using Linq query
                var result = from e in emp
                             where e.salary>5000
                             select e.name;
                result.ToList().ForEach(e => Console.WriteLine($"Employees names
whose salary is >5000 using Linq query={e}"));

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

Output:

```
C:\NH\.NET Projects\Day8project2\Day8project2\bin\Debug\Day8project2.exe
Employees whose salary is >5000 using for loop=lehana
Employees whose salary is >5000 using for loop=neeraja
Employees whose salary is >5000 using foreach loop=lehana
Employees whose salary is >5000 using foreach loop=neeraja
Employees names whose salary is >5000 using lambda expression=lehana
Employees names whose salary is >5000 using lambda expression=neeraja
Employees names whose salary is >5000 using Linq query=lehana
Employees names whose salary is >5000 using Linq query=neeraja
```

Q3.Create a class Product and add variables id,name,price,brand
Print product(name and brand) whose price is morethan 500
Using
a.forloop,
b.foreach loop,
c.lambda expression,
d.linq query

Code:

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

namespace day8project3
{



/*************************************************************************************
************************
         *Author:Sudha Sugasani
         *Purpose:Create product class whose product price is >500 print values
using for loop,
         *         foreach loop,lambda expression,linq query

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


        class Product
        {
            public int id;
            public string name;
            public int price;
            public string brand;
        }
        internal class Program
        {
            static void Main(string[] args)
            {
                List<Product> p1 = new List<Product>()
                {
                    new Product(){id=1,name="mobile",price=15000,brand="oppo" },
                    new Product(){id=2,name="watch",price=450,brand="sonata" },
                    new Product(){id=3,name="wallet",price=350,brand="lynx" },
                    new Product(){id=4,name="bag",price=1000,brand="sky" },
                    new
Product(){id=5,name="chocolate",price=250,brand="dairymilk" }
                };

                //Product names,brands using for loop
                for (int i = 0; i < p1.Count; i++)
                {
                    if (p1[i].price > 500)
                        Console.WriteLine($"Products whose price is >500 using for
loop={p1[i].name},{p1[i].brand}");
                }

                //product names,brands using foreach loop
                foreach (var p in p1)
```

```
                {
                    if (p.price > 500)
                        Console.WriteLine($"Products whose price is >500 using
foreach loop={p.name},{p.brand}");
                }

                //Products names,brands using lambda expression
                p1.Where(p =>p. price > 500).ToList().ForEach(p =>
Console.WriteLine($"Products  whose price is >500 using lambda
expression={p.name},{p.brand}"));

                //Products names,brands using Linq query
                var result = from p in p1
                             where p.price > 500
                             select p.name+","+p.brand;
                result.ToList().ForEach(p => Console.WriteLine($"Products  whose
price is >500 using Linq query={p}"));

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

Output:

```
C:\NH\.NET Projects\day8project3\day8project3\bin\Debug\day8project3.exe
Products whose price is >500 using for loop=mobile,oppo
Products whose price is >500 using for loop=bag,sky
Products whose price is >500 using foreach loop=mobile,oppo
Products whose price is >500 using foreach loop=bag,sky
Products  whose price is >500 using lambda expression=mobile,oppo
Products  whose price is >500 using lambda expression=bag,sky
Products  whose price is >500 using Linq query=mobile,oppo
Products  whose price is >500 using Linq query=bag,sky
```

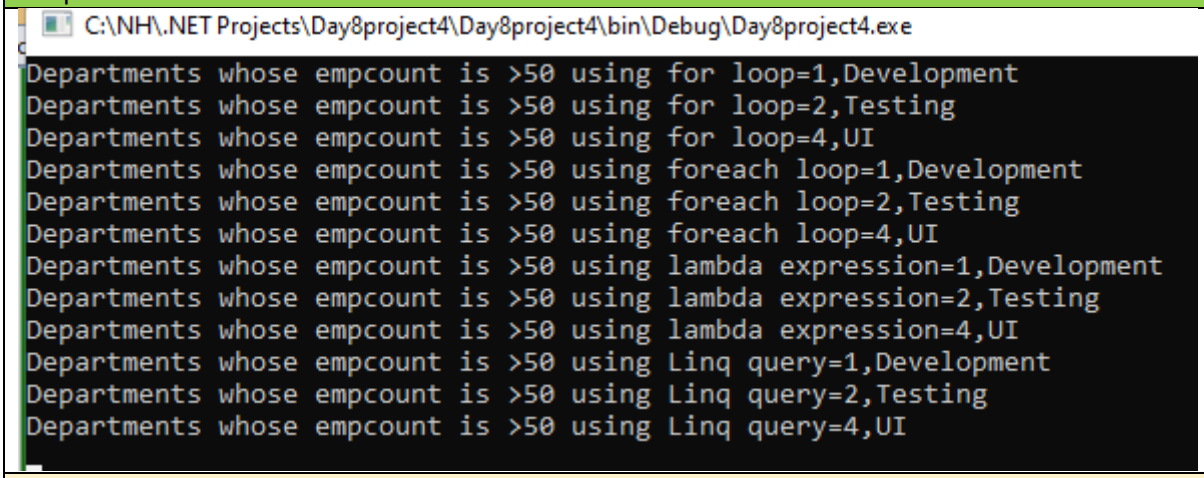
Q4.Create a Department class and add variables id,name,empcount
Write code to print id,name of department whose empcount is >50
Using
a.for loop,
b.foreach loop,
c.lambda expression,
d.linq query

Code:

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

namespace Day8project4
{




/*************************************************************************************
************************
         *Author:Sudha Sugasani
```

```
         *Purpose:Create Department class whose empcount is >50 print values using
for loop,
         *         foreach loop,lambda expression,linq query

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


        class Department
        {
            public int id;
            public string name;
            public int empcount;

        }
        internal class Program
        {
            static void Main(string[] args)
            {
            List<Department> dep = new List<Department>()
                {
                    new Department() {id=1,name="Development",empcount=60 },
                    new Department() { id = 2, name = "Testing", empcount = 55 },
                    new Department() { id = 3, name = "HR", empcount = 5 },
                    new Department() { id = 4, name = "UI", empcount = 80},
                    new Department() { id = 5, name = "BA", empcount = 20 },

                };

               //Department id,names using for loop
                for (int i = 0; i <dep.Count; i++)
                {
                    if (dep[i].empcount > 50)
                        Console.WriteLine($"Departments whose empcount is >50
using for loop={dep[i].id},{dep[i].name}");
                }

                //Department id,name using foreach loop
                foreach (var d in dep)
                {
                    if (d.empcount > 50)
                        Console.WriteLine($"Departments whose empcount is >50
using foreach loop={d.id},{d.name}");
                }

                //Department  id,names using lambda expression
                dep.Where(d => d.empcount > 50).ToList().ForEach(d =>
Console.WriteLine($"Departments  whose empcount is >50 using lambda
expression={d.id},{d.name}"));

                //Department id,names using Linq query
                var result = from d in dep
                             where d.empcount > 50
                             select d.id + "," + d.name;
                result.ToList().ForEach(d => Console.WriteLine($"Departments whose
empcount is >50 using Linq query={d}"));

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

Output:



Q5.Create a Mobile Class and add variables
Print name,price whose price >=25000
Using
a.for loop,
b.foreach loop,
c.lambda expression,
d.linq query

Code:

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

namespace Day8project5
{


/**************************************************************************************
************************
         *Author:Sudha Sugasani
         *Purpose:Create Mobile class whose price is >=25000 print values using
for loop,
         *         foreach loop,lambda expression,linq query

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


        class Mobile
        {

            public string name;
            public int price;
            public string warrenty;

        }
        internal class Program
        {
            static void Main(string[] args)
            {
                List<Mobile> mob = new List<Mobile>()
                {
                    new Mobile() {name="Oppo",price=20000,warrenty="1year" },
```

```
                    new Mobile() {name="Samsung",price=15000,warrenty="6months" },
                    new Mobile() {name="Apple",price=85000,warrenty="1year" },
                    new Mobile() {name="Redmi",price=18000,warrenty="10months" },
                    new Mobile() {name="LG",price=25000,warrenty="1year" }
                };

                //Mobile names,price using for loop
                for (int i = 0; i < mob.Count; i++)
                {
                    if (mob[i].price >= 25000)
                        Console.WriteLine($"Mobiles whose price is >=25000 using
for loop={mob[i].name},{mob[i].price}");
                }

                //Mobile names,price using foreach loop
                foreach (var m in mob)
                {
                    if (m.price >=25000)
                        Console.WriteLine($"Mobiles whose price is >=25000 using
foreach loop={m.name},{m.price}");
                }

                //Mobile  names,price using lambda expression
                mob.Where(m => m.price >= 25000).ToList().ForEach(m =>
Console.WriteLine($"Mobiles whose price is >=25000 using lambda
expression={m.name},{m.price}"));

                //Mobile names,price using Linq query
                var result = from m in mob
                             where m.price >=25000
                             select m.name + "," + m.price;
                result.ToList().ForEach(m => Console.WriteLine($"Mobiles whose
price is >=25000 using Linq query={m}"));

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

Output:

```
C:\NH\.NET Projects\Day8project5\Day8project5\bin\Debug\Day8project5.exe
Mobiles whose price is >=25000 using for loop=Apple,85000
Mobiles whose price is >=25000 using for loop=LG,25000
Mobiles whose price is >=25000 using foreach loop=Apple,85000
Mobiles whose price is >=25000 using foreach loop=LG,25000
Mobiles whose price is >=25000 using lambda expression=Apple,85000
Mobiles whose price is >=25000 using lambda expression=LG,25000
Mobiles whose price is >=25000 using Linq query=Apple,85000
Mobiles whose price is >=25000 using Linq query=LG,25000
```