Day 7 Morning Assignment

By

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NB Healthcare and Technology

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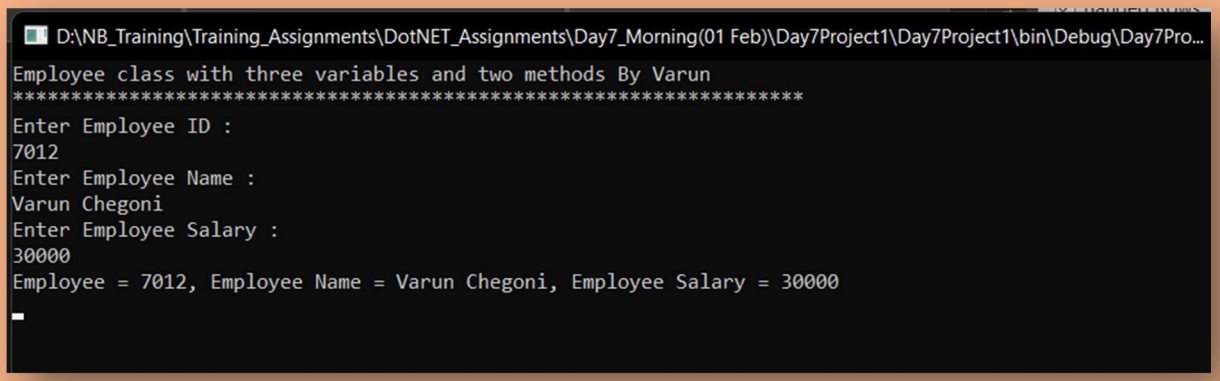
1. Create Employee class with three variables and two methods ReadEmployee and PrintEmployee and create an object and call methods.

Code :

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

namespace Day7Project1
{
   class Employee
   {
/*****************************************************************************
        * Author : Varun Sai Kumar Chegoni
        * Purpose : Create Employee class with three variables and two methods
   ReadEmployee and PrintEmployee and create an object and call methods.

*****************************************************************************/
      private int id;
      private string name;
      private int salary;
      public void ReadEmployee()
      {
         Console.WriteLine("Enter Employee ID :");
         id = Convert.ToInt32(Console.ReadLine());

         Console.WriteLine("Enter Employee Name :");
         name = Console.ReadLine();

         Console.WriteLine("Enter Employee Salary :");
         salary = Convert.ToInt32(Console.ReadLine());
      }
      public void PrintEmployee()
      {
         Console.WriteLine($"Employee ID = {id}, Employee Name = {name}, Employee Salary =
{salary}");
      }
   }
   internal class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Employee class with three variables and two methods By Varun");

Console.WriteLine("*************************************************************
******");
         Employee emp = new Employee();
         emp.ReadEmployee();
         emp.PrintEmployee();
```

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

Output :



2. Write the 3 definitions of class and 4 points about object discussed in the class.

Answer:

Class

1. A class is group of variables and method.
2. A class is like a design to create object.
3. A class consists of state and behaviour.

Object

1. An object is an instance of a class.
2. We can create any number of objects.
3. Object occupy memory.
4. Objects are reference type.

4. Create below classes.
    1. Customer class.
    2. Product class.
    3. Seller class.
    4. Department class.

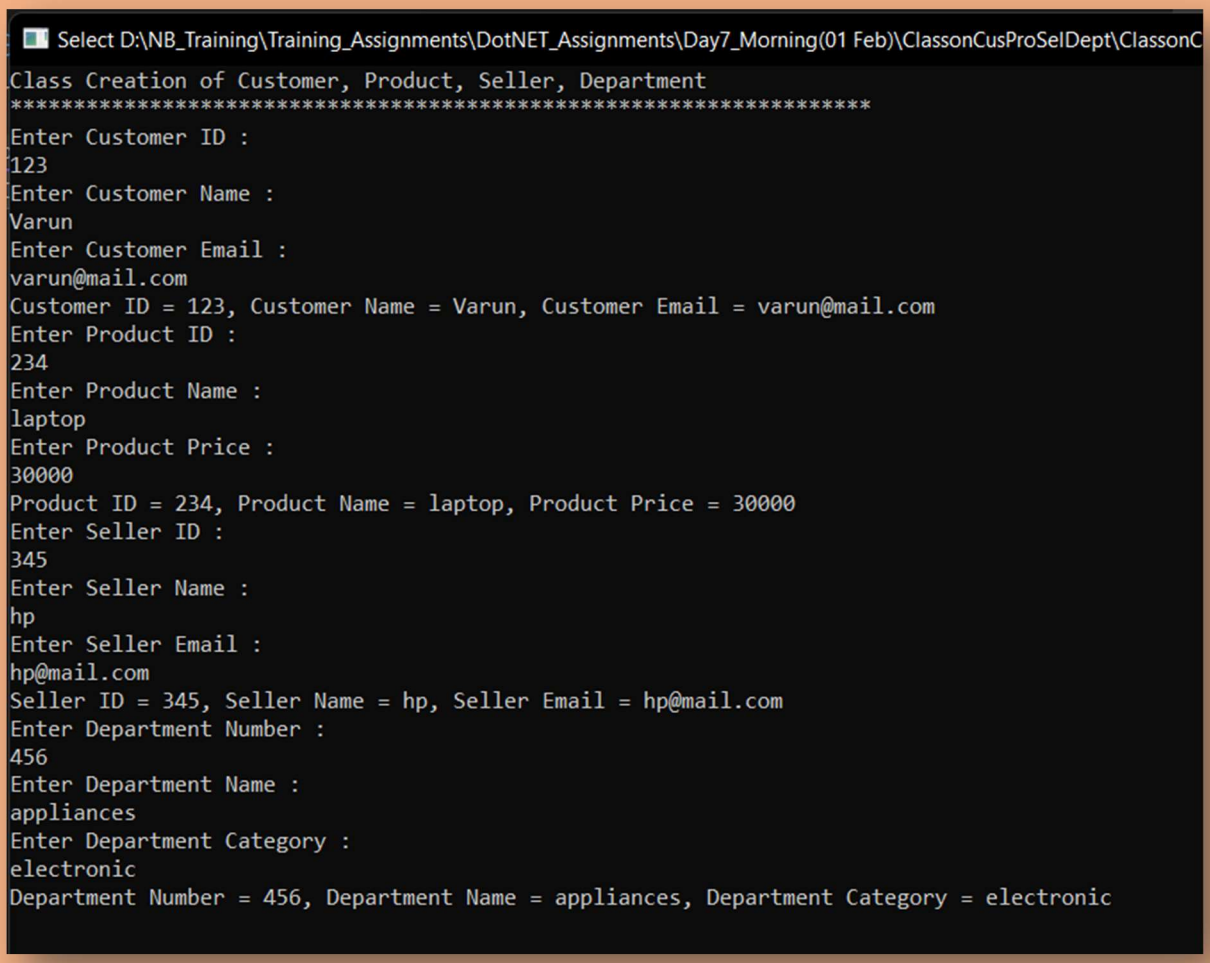
Code :

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

namespace ClassonCusProSelDept
{
   internal class Customer
    {
        private int cusid;
        private string cusname;
        private string cusemail;
        public void ReadCustomer()
        {

            Console.WriteLine("Enter Customer ID :");
            cusid = Convert.ToInt32(Console.ReadLine());

            Console.WriteLine("Enter Customer Name :");
            cusname = Console.ReadLine();

            Console.WriteLine("Enter Customer Email :");
            cusemail = Console.ReadLine();
        }
        public void PrintCustomer()
        {
            Console.WriteLine($"Customer ID = {cusid}, Customer Name = {cusname},
Customer Email = {cusemail}");
        }
    }
    internal class Product
    {
        private int proid;
        private string proname;
        private int proprice;
        public void ReadProduct()
        {
            Console.WriteLine("Enter Product ID :");
            proid = Convert.ToInt32(Console.ReadLine());

            Console.WriteLine("Enter Product Name :");
            proname = Console.ReadLine();

            Console.WriteLine("Enter Product Price :");
            proprice = Convert.ToInt32(Console.ReadLine());
        }
        public void PrintProduct()
        {
            Console.WriteLine($"Product ID = {proid}, Product Name = {proname},
Product Price = {proprice}");
        }
    }
    internal class Seller
    {
```

```
        private int selid;
        private string selname;
        private string selemail;
        public void ReadSeller()
        {
            Console.WriteLine("Enter Seller ID :");
            selid = Convert.ToInt32(Console.ReadLine());

            Console.WriteLine("Enter Seller Name :");
            selname = Console.ReadLine();

            Console.WriteLine("Enter Seller Email :");
            selemail = Console.ReadLine();
        }
        public void PrintSeller()
        {
            Console.WriteLine($"Seller ID = {selid}, Seller Name = {selname}, Seller
Email = {selemail}");
        }
    }
    internal class Department
    {
        private int deptno;
        private string deptname;
        private string deptcat;
        public void ReadDepartment()
        {

            Console.WriteLine("Enter Department Number :");
            deptno = Convert.ToInt32(Console.ReadLine());

            Console.WriteLine("Enter Department Name :");
            deptname = Console.ReadLine();

            Console.WriteLine("Enter Department Category :");
            deptcat = Console.ReadLine();
        }
        public void PrintDepartment()
        {
            Console.WriteLine($"Department Number = {deptno}, Department Name =
{deptname}, Department Category = {deptcat}");
        }
    }
    internal class Program
    {
        /*****************************************************************************
         * Author : Varun Sai Kumar Chegoni
         * Purpose : Class Creation of Customer, Product, Seller, Department.

*****************************************************************************/
        static void Main(string[] args)
        {
            Console.WriteLine("Class Creation of Customer, Product, Seller,
Department");

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

            Customer cus = new Customer();
            cus.ReadCustomer();
            cus.PrintCustomer();

            Product pro = new Product();
```

```
            pro.ReadProduct();
            pro.PrintProduct();

            Seller sel = new Seller();
            sel.ReadSeller();
            sel.PrintSeller();

            Department dept = new Department();
            dept.ReadDepartment();
            dept.PrintDepartment();

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

Output :

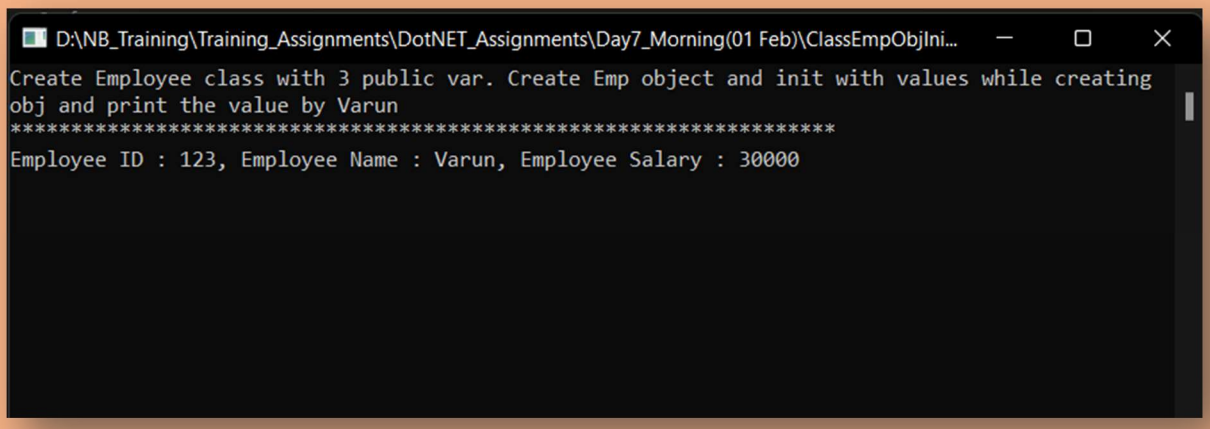


5. Create Employee class with three public variables. Create Employee object and initialize with values while creating object and print the value.

Code :

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

namespace ClassEmpObjInitValue
{
    /*****************************************************************************
        * Author : Varun Sai Kumar Chegoni.
        * Purpose : Create Employee class with 3 public var. Create Emp object and
init with values while creating obj and print the value.
       *****************************************************************************/
    public class Employee
    {
        public int id;
        public string name;
        public int salary;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Create Employee class with 3 public var. Create Emp
object and init with values while creating obj and print the value by Varun");

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

            Employee emp = new Employee() { id = 123, name = "Varun", salary = 30000
};
            Console.WriteLine($"Employee ID : {emp.id}, Employee Name : {emp.name},
Employee Salary : {emp.salary}");
            Console.ReadLine();
        }
    }
}
```

Output :



6. Create Employee class as shown below:

```
class Employee
{
    public int id;
    public string name;
    public int salary;
}
```

now create employees array object and initialize with 5 employees

write code using

a. for loop

b. foreach loop

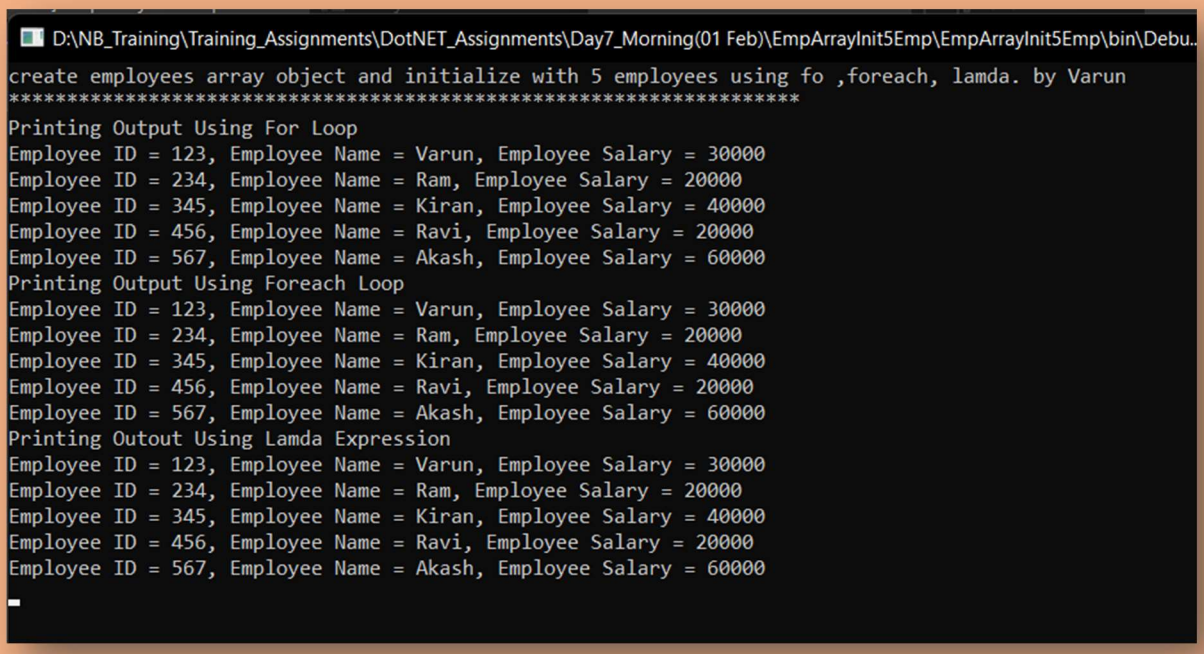
c. lambda expression.

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 employees array object and initialize with 5 employees
using fo ,foreach, lamda.
       *************************************************************************/
    public class Employee
    {
        public int id;
        public string name;
        public int salary;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("create employees array object and initialize with 5
employees using fo ,foreach, lamda. by Varun");

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

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

Output :



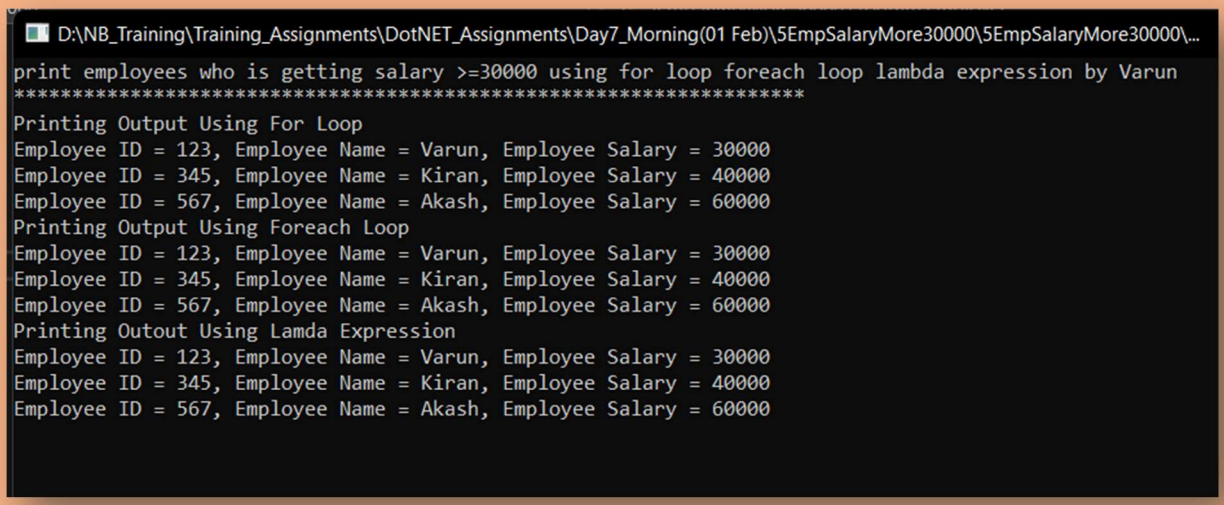
7. For the above project, write code to print employees who is getting salary >=5000 using
for loop
foreach loop
lambda expression.

Code :

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

namespace _5EmpSalaryMore30000
{
    /*************************************************************************
        * Author : Varun Sai Kumar Chegoni.
        * Purpose : print employees who is getting salary >=30000 using for loop
foreach loop lambda expression.
       *************************************************************************/
    public class Employee
    {
        public int id;
        public string name;
        public int salary;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("print employees who is getting salary >=30000 using
for loop foreach loop lambda expression by Varun");

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

            Employee[] emp = new 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.Length; i++)
            {
                if(emp[i].salary >= 30000 )
                    Console.WriteLine($"Employee ID = {emp[i].id}, Employee Name =
{emp[i].name}, Employee Salary = {emp[i].salary}");
            }
            Console.WriteLine("Printing Output Using Foreach Loop");
            // using foreach loop
            foreach (var e in emp)
            {
                if(e.salary>=30000)
                    Console.WriteLine($"Employee ID = {e.id}, Employee Name =
{e.name}, Employee Salary = {e.salary}");
            }
            Console.WriteLine("Printing Outout Using Lamda Expression");
            // using lamda expression
```

```
            emp.ToList().Where(e=>e.salary>=30000).ToList().ForEach(e =>
Console.WriteLine($"Employee ID = {e.id}, Employee Name = {e.name}, Employee Salary =
{e.salary}"));
            Console.ReadLine();
        }
    }
}
```

Output :



8. Similar to 6 and 7 projects create list of Customer and Product Arrays and practice for, foreach and lambda expression.

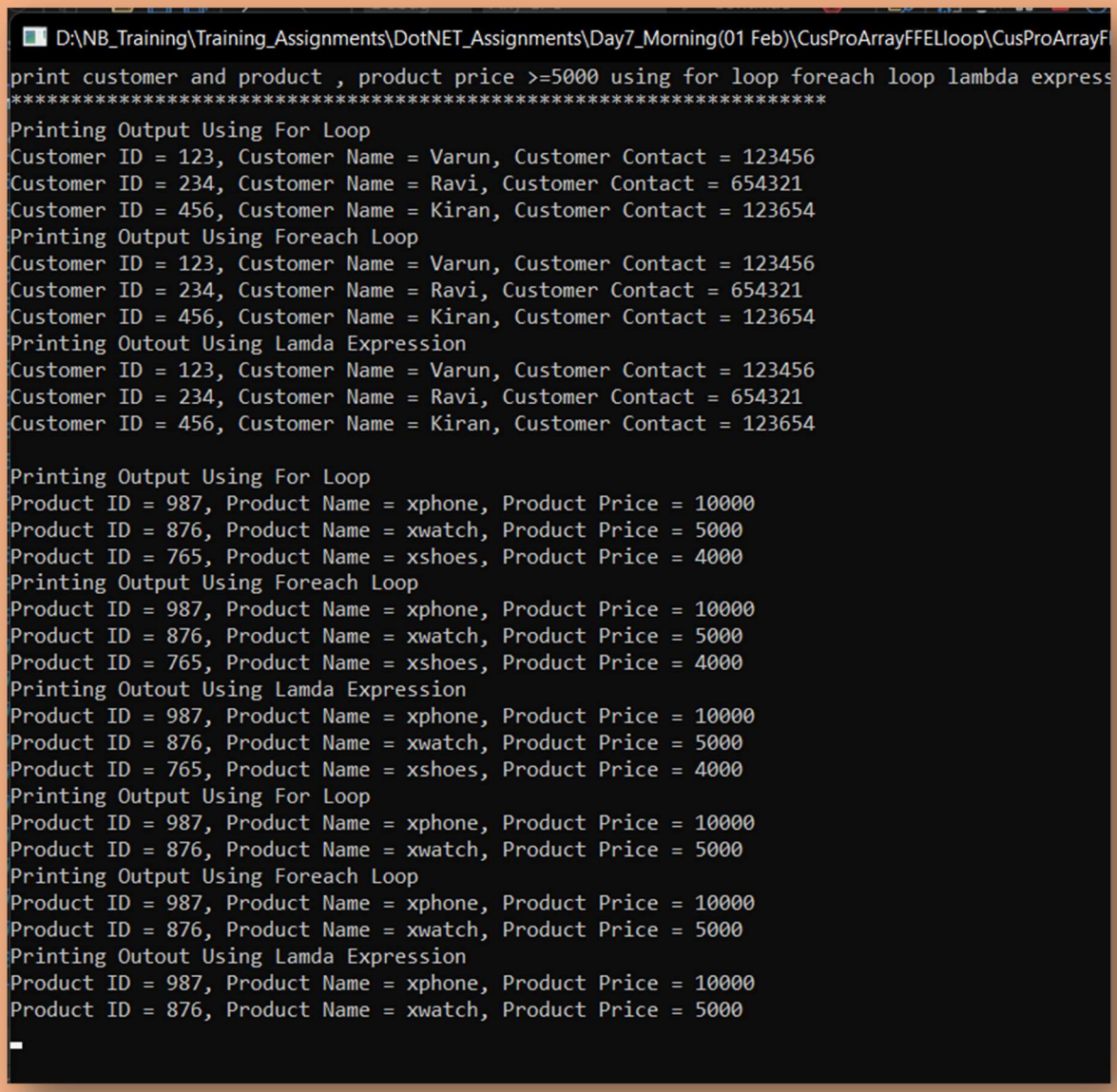
Code :

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

namespace CusProArrayFFELloop
{
    /*************************************************************************
        * Author : Varun Sai Kumar Chegoni.
        * Purpose : print customer and product , product price >=5000 using for loop
foreach loop lambda expression.
       *************************************************************************/
    public class Customer
    {
        public int cusid;
        public string cusname;
        public int cusno;
    }
    public class Product
    {
        public int proid;
        public string proname;
        public int proprice;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("print customer and product , product price >=5000
using for loop foreach loop lambda expression by Varun");

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

            Customer[] cus = new Customer[]
            {
                new Customer(){cusid=123, cusname="Varun",cusno=123456},
                new Customer(){cusid=234, cusname="Ravi",cusno=654321},
                new Customer(){cusid=456, cusname="Kiran",cusno=123654},
            };
            Product[] pro = new Product[]
            {
                new Product(){proid=987, proname="xphone",proprice=10000},
                new Product(){proid=876, proname="xwatch",proprice=5000},
                new Product(){proid=765, proname="xshoes",proprice=4000},
            };
            Console.WriteLine("Printing Output Using For Loop");
            // using for loop
            for (int i = 0; i<cus.Length; i++)
            {
                    Console.WriteLine($"Customer ID = {cus[i].cusid}, Customer Name =
{cus[i].cusname}, Customer Contact = {cus[i].cusno}");
            }

            // Customer
Print*************************************************************************
*******************************
            Console.WriteLine("Printing Output Using Foreach Loop");
```

```
            // using foreach loop
            foreach (var c in cus)
            {
                    Console.WriteLine($"Customer ID = {c.cusid}, Customer Name =
{c.cusname}, Customer Contact = {c.cusno}");
            }
            Console.WriteLine("Printing Outout Using Lamda Expression");
            // using lamda expression
            cus.ToList().ForEach(c => Console.WriteLine($"Customer ID = {c.cusid},
Customer Name = {c.cusname}, Customer Contact = {c.cusno}"));
            Console.ReadLine();

            // Product
Print**********************************************************************************
******************
            Console.WriteLine("Printing Output Using For Loop");
            // using for loop
            for (int i = 0; i<pro.Length; i++)
            {
                    Console.WriteLine($"Product ID = {pro[i].proid}, Product Name =
{pro[i].proname}, Product Price = {pro[i].proprice}");
            }
            Console.WriteLine("Printing Output Using Foreach Loop");
            // using foreach loop
            foreach (var p in pro)
            {
                    Console.WriteLine($"Product ID = {p.proid}, Product Name =
{p.proname}, Product Price = {p.proprice}");
            }
            Console.WriteLine("Printing Outout Using Lamda Expression");
            // using lamda expression
            pro.ToList().ForEach(p => Console.WriteLine($"Product ID = {p.proid},
Product Name = {p.proname}, Product Price = {p.proprice}"));

            // Product Print >=5000
**********************************************************************************
**************
            Console.WriteLine("Printing Output Using For Loop");
            // using for loop
            for (int i = 0; i<pro.Length; i++)
            {
                if (pro[i].proprice >= 5000)
                    Console.WriteLine($"Product ID = {pro[i].proid}, Product Name =
{pro[i].proname}, Product Price = {pro[i].proprice}");
            }
            Console.WriteLine("Printing Output Using Foreach Loop");
            // using foreach loop
            foreach (var p in pro)
            {
                if (p.proprice>=5000)
                    Console.WriteLine($"Product ID = {p.proid}, Product Name =
{p.proname}, Product Price = {p.proprice}");
            }
            Console.WriteLine("Printing Outout Using Lamda Expression");
            // using lamda expression
            pro.ToList().Where(p => p.proprice>=5000).ToList().ForEach(p =>
Console.WriteLine($"Product ID = {p.proid}, Product Name = {p.proname}, Product Price
= {p.proprice}"));

            Console.ReadLine();

        }
    }
```

```
}
```

Output :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print customer and product , product price >=5000 using for loop foreach loop lambda express
Printing Output Using For Loop
Customer ID = 123, Customer Name = Varun, Customer Contact = 123456
Customer ID = 234, Customer Name = Ravi, Customer Contact = 654321
Customer ID = 456, Customer Name = Kiran, Customer Contact = 123654
Printing Output Using Foreach Loop
Customer ID = 123, Customer Name = Varun, Customer Contact = 123456
Customer ID = 234, Customer Name = Ravi, Customer Contact = 654321
Customer ID = 456, Customer Name = Kiran, Customer Contact = 123654
Printing Outout Using Lamda Expression
Customer ID = 123, Customer Name = Varun, Customer Contact = 123456
Customer ID = 234, Customer Name = Ravi, Customer Contact = 654321
Customer ID = 456, Customer Name = Kiran, Customer Contact = 123654
Printing Output Using For Loop
Product ID = 987, Product Name = xphone, Product Price = 10000
Product ID = 876, Product Name = xwatch, Product Price = 5000
Product ID = 765, Product Name = xshoes, Product Price = 4000
Printing Output Using Foreach Loop
Product ID = 987, Product Name = xphone, Product Price = 10000
Product ID = 876, Product Name = xwatch, Product Price = 5000
Product ID = 765, Product Name = xshoes, Product Price = 4000
Printing Outout Using Lamda Expression
Product ID = 987, Product Name = xphone, Product Price = 10000
Product ID = 876, Product Name = xwatch, Product Price = 5000
Product ID = 765, Product Name = xshoes, Product Price = 4000
Printing Output Using For Loop
Product ID = 987, Product Name = xphone, Product Price = 10000
Product ID = 876, Product Name = xwatch, Product Price = 5000
Printing Output Using Foreach Loop
Product ID = 987, Product Name = xphone, Product Price = 10000
Product ID = 876, Product Name = xwatch, Product Price = 5000
Printing Outout Using Lamda Expression
Product ID = 987, Product Name = xphone, Product Price = 10000
Product ID = 876, Product Name = xwatch, Product Price = 5000