C# OOP's Concept
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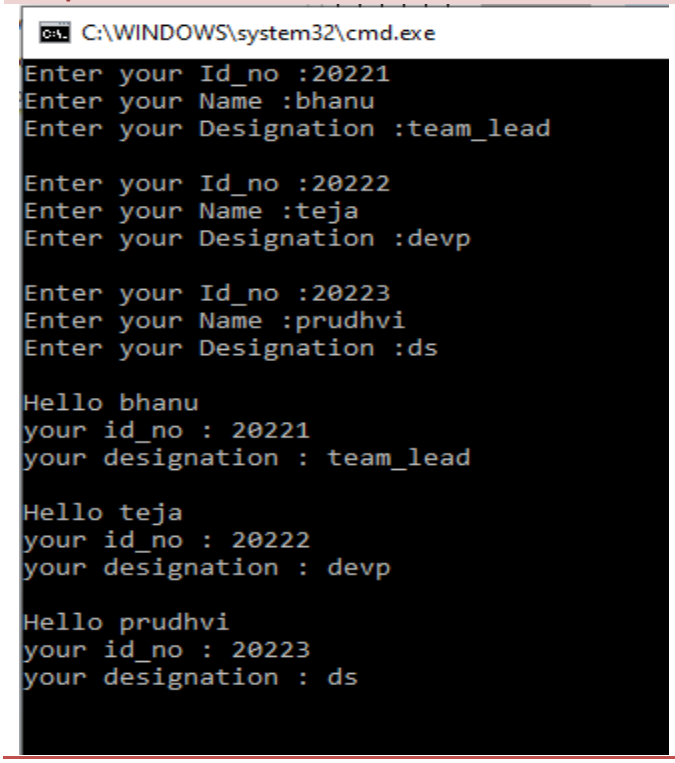
NB_HEALTH_CARE_TECH

Q1. employee class with 3 var and 2 methods, create objects and print them.

Code:

```
internal class employe
    {
        private int employeID;
        private string employeName;
        private string employeDesignation;

        public void Employe_data()
        {
            Console.Write("Enter your Id_no :");
            employeID = Convert.ToInt32(Console.ReadLine());
            Console.Write("Enter your Name :");
            employeName = Console.ReadLine();
            Console.Write("Enter your Designation :");
            employeDesignation = Console.ReadLine();
            Console.WriteLine();

        }
        public void Employe_print_data()
        {
            Console.WriteLine($"Hello {employeName}");
            Console.WriteLine($"your id_no : {employeID}");
            Console.WriteLine($"your designation : {employeDesignation}");
            Console.WriteLine();
        }

    }
static void Main(string[] args)
        {/*
*********************************************************************************
**                                                                              **
*   * *Author  : Nalli_Prudhvi                                                  *
*                                                                               *
*   * *Purpose: Employe class with 3 var and 2 methods, create objects and print  *
*                them.                                                          *
**                                                                              **
*********************************************************************************
**/
            var emp1 = new employe();
            var emp2 = new employe();
            var emp3 = new employe();
            emp1.Employe_data();
            emp2.Employe_data();
            emp3.Employe_data();
            emp1.Employe_print_data();
            emp2.Employe_print_data();
            emp3.Employe_print_data();
            Console.Read();


     }
```

Output:


C:\WINDOWS\system32\cmd.exe
Enter your Id_no :20221
Enter your Name :bhanu
Enter your Designation :team_lead
Enter your Id_no :20222
Enter your Name :teja
Enter your Designation :devp
Enter your Id_no :20223
Enter your Name :prudhvi
Enter your Designation :ds
Hello bhanu
your id_no : 20221
your designation : team_lead
Hello teja
your id_no : 20222
your designation : devp
Hello prudhvi
your id_no : 20223
your designation : ds

2 Q. write 3 Def. of class and 4 points about object discussed in class

Answer:

Class:

A. A class is group of variables and method.
B. A class is like a design to create objects.
C. A class consists of state and behavior.

Object

D. Object is instance of class.
E. We can create any number of Objects
F. An object occupy memory.
G. Objects are reference type.

3Q. Write classes for : customer, product, seller, department.

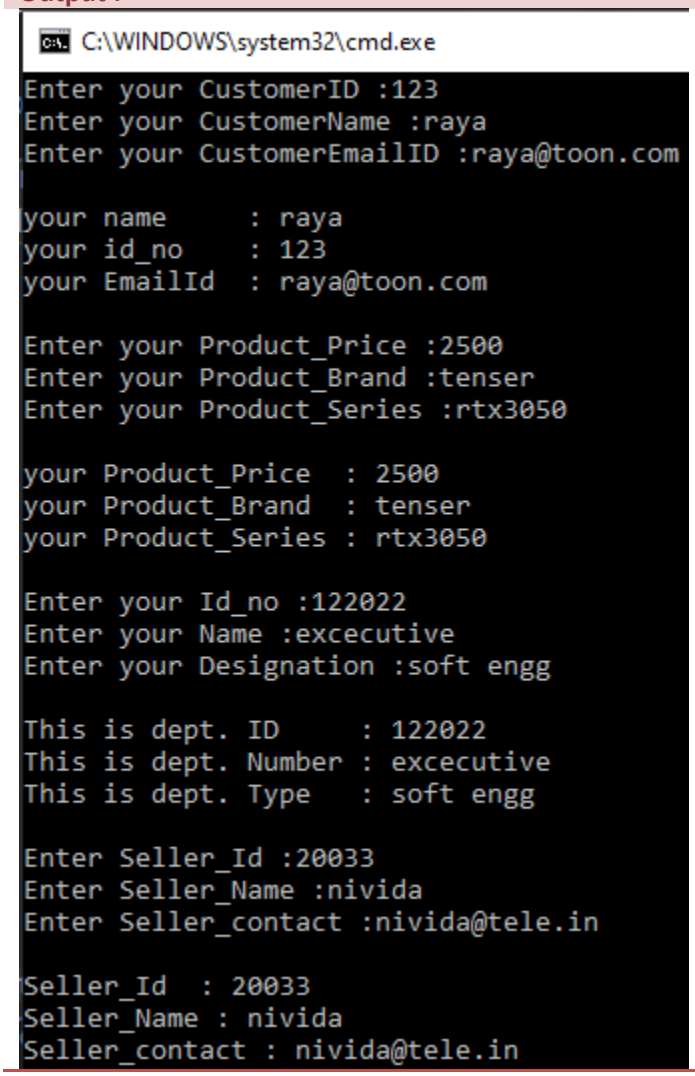
Code:

```
internal class Program
    {
        static void Main(string[] args)
 {/*
*****************************************************************************************
**                                                                                      **
*   * *Author  : Nalli_Prudhvi                                                         *
*                                                                                       *
*   * *Purpose:  Write classes for : customer, product, seller, department.           *
*                them.                                                                 *
**                                                                                      **
*****************************************************************************************
**/
            var cust1 = new Customer();
            var product1 = new Product();
            var Dept1 = new Department();
            var Seller1 = new Seller();
            cust1.Customer_data();
            cust1.Customer_print_data();
            product1.Product_data();
            product1.Product_print_data();
            Dept1.Department_data();
            Dept1.Department_print_data();
            Seller1.Seller_data();
            Seller1.Seller_print_data();
            Console.ReadLine();
        }
    }
internal class Customer
    {
        private int CustomerID;
        private string CustomerName;
        private string CustomerEmail;

        public void Customer_data()
        {
            Console.Write("Enter your CustomerID :");
            CustomerID = Convert.ToInt32(Console.ReadLine());
            Console.Write("Enter your CustomerName :");
            CustomerName = Console.ReadLine();
            Console.Write("Enter your CustomerEmailID :");
            CustomerEmail = Console.ReadLine();
            Console.WriteLine();

        }
        public void Customer_print_data()
        {
            Console.WriteLine($"your name     : {CustomerName}");
            Console.WriteLine($"your id_no    : {CustomerID}");
            Console.WriteLine($"your EmailId  : {CustomerEmail}");
            Console.WriteLine();

        }
    }
internal class Product
```

```
    {
        private int Product_Price;
        private string Product_Brand;
        private string Product_Series;

        public void Product_data()
        {
            Console.Write("Enter your Product_Price :");
            Product_Price = Convert.ToInt32(Console.ReadLine());
            Console.Write("Enter your Product_Brand :");
            Product_Brand = Console.ReadLine();
            Console.Write("Enter your Product_Series :");
            Product_Series = Console.ReadLine();
            Console.WriteLine();

        }
        public void Product_print_data()
        {
            Console.WriteLine($"your Product_Price  : {Product_Price}");
            Console.WriteLine($"your Product_Brand  : {Product_Brand}");
            Console.WriteLine($"your Product_Series : {Product_Series}");
            Console.WriteLine();

        }
    }
internal class Seller
    {
        private int Seller_Id;
        private string Seller_Name;
        private string Seller_contact;

        public void Seller_data()
        {
            Console.Write("Enter Seller_Id :");
            Seller_Id = Convert.ToInt32(Console.ReadLine());
            Console.Write("Enter Seller_Name :");
            Seller_Name = Console.ReadLine();
            Console.Write("Enter Seller_contact :");
            Seller_contact = Console.ReadLine();
            Console.WriteLine();

        }
        public void Seller_print_data()
        {
            Console.WriteLine($"Seller_Id  : {Seller_Id}");
            Console.WriteLine($"Seller_Name : {Seller_Name}");
            Console.WriteLine($"Seller_contact : {Seller_contact}");
            Console.WriteLine();

        }
    }
internal class Department
    {
        private int DeptID;
        private string DeptNumber;
        private string DeptType;

        public void Department_data()
```

```
        {
            Console.Write("Enter your Id_no :");
            DeptID = Convert.ToInt32(Console.ReadLine());
            Console.Write("Enter your Name :");
            DeptNumber = Console.ReadLine();
            Console.Write("Enter your Designation :");
            DeptType = Console.ReadLine();
            Console.WriteLine();

        }
        public void Department_print_data()
        {
            Console.WriteLine($"This is dept. ID     : {DeptID}");
            Console.WriteLine($"This is dept. Number : {DeptNumber}");
            Console.WriteLine($"This is dept. Type   : {DeptType}");
            Console.WriteLine();

        }
    }
```

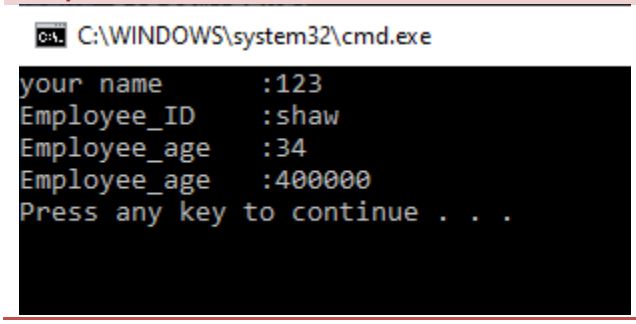
Output :



4Q. To create class with 3 var and initializing the values with the object and print them.

```
internal class Employee
    {
        public int Employee_ID;
        public string Employee_name;
        public int Employee_age;
        public int Employee_salary;

        public void Employee_Data()
        {
            Console.WriteLine($"your name      :{Employee_ID}");

            Console.WriteLine($"Employee_ID    :{Employee_name}");

            Console.WriteLine($"Employee_age   :{Employee_age}");

            Console.WriteLine($"Employee_age   :{Employee_salary}");

        }

    }
internal class Program
    {
        static void Main(string[] args)
 {/*
*****************************************************************************
**                                                                         **
*   * *Author  : Nalli_Prudhvi                                            *
*                                                                         *
*   * *Purpose:  To create calss with 3 var and initializing the values with in   *
**                the object and print them.                               **
*****************************************************************************
**/
var emp1 = new Employee() { Employee_ID = 123, Employee_name = "shaw", Employee_age
= 34, Employee_salary = 400000 };
emp1.Employee_Data();
Console.ReadLine();

        }
     }
```

Output :



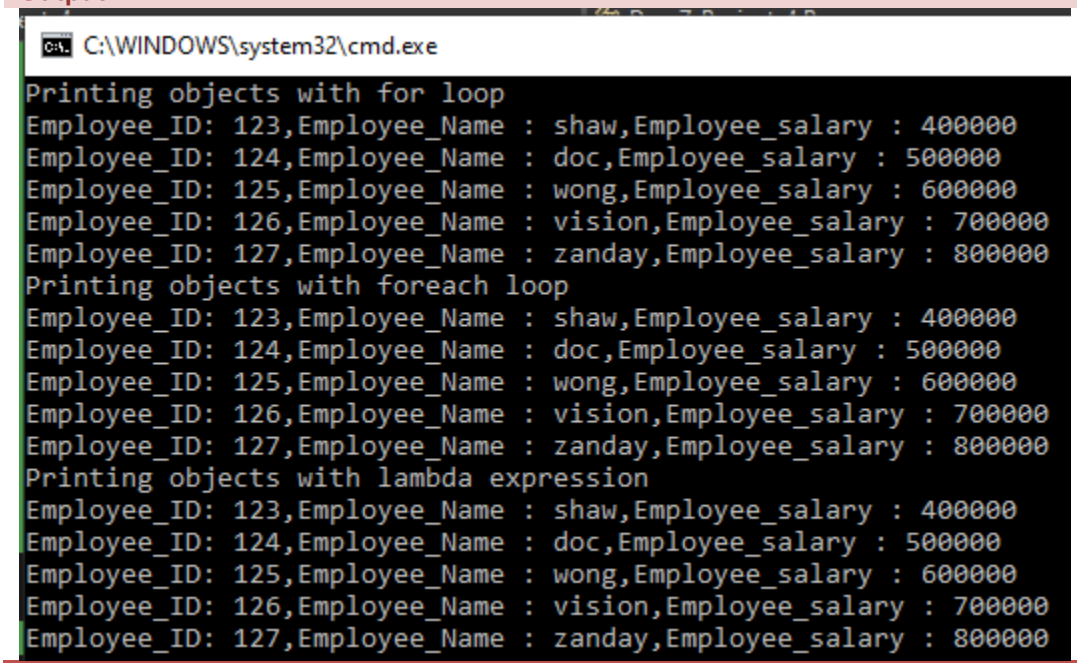
5Q. To create class with 3 var and create employees array object initialize the values of 5 employees.

Code:

```
internal class Employee
    {

        public int Employee_ID;
        public string Employee_name;
        public int Employee_salary;

    }
    internal class Program
    {
        static void Main(string[] args)
        {
/*
*********************************************************************************
**                                                                              **
*   * *Author  : Nalli_Prudhvi                                                 *
*                                                                               *
*   * *Purpose: To create calss with 3 var and create employees array object and  *
**       initialize the values of 5 employees.                                  **
*********************************************************************************
**/

//**********__Array_Declaration__***********
Employee[] emp_b1 = new Employee[]{
                                    new Employee(){ Employee_ID = 123, Employee_name
= "shaw", Employee_salary = 400000 },
                                    new Employee(){ Employee_ID = 124, Employee_name
= "doc", Employee_salary = 500000 },
                                    new Employee(){ Employee_ID = 125, Employee_name
= "wong", Employee_salary = 600000 },
                                    new Employee(){ Employee_ID = 126, Employee_name
= "vision", Employee_salary = 700000 },
                                    new Employee(){ Employee_ID = 127, Employee_name
= "zanday", Employee_salary = 800000 },
            };
            //*************for loop************************
Console.WriteLine("Printing objects with for loop");
for(int i =0; i<emp_b1.Length;i++)
            {
                Console.WriteLine($"Employee_ID:
{emp_b1[i].Employee_ID},Employee_Name : {emp_b1[i].Employee_name},Employee_salary :
{emp_b1[i].Employee_salary}");
            }
            Console.WriteLine("Printing objects with foreach loop");
            //*************for_each loop?*********************
            foreach (var e in emp_b1)
            {
                Console.WriteLine($"Employee_ID: {e.Employee_ID},Employee_Name :
{e.Employee_name},Employee_salary : {e.Employee_salary}");
            }
            //**************lambda expressions******************
            Console.WriteLine("Printing objects with lambda expression");
            emp_b1.ToList().ForEach(f => Console.WriteLine($"Employee_ID:
{f.Employee_ID},Employee_Name : {f.Employee_name},Employee_salary :
```

```
{f.Employee_salary}"));
            Console.ReadLine();
        }
    }
```

Output:



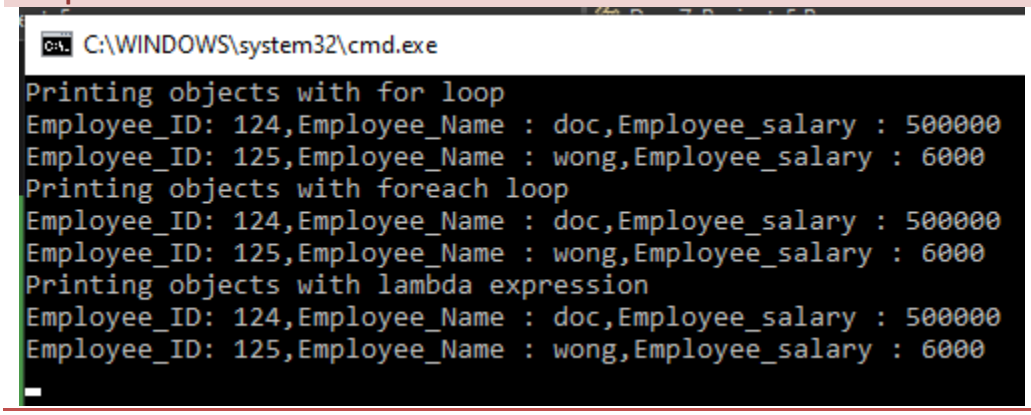
Q6. To create calss with 3 var and create employees array object and intialize the values of 5 employees.

Code:

```
amespace Day_7_Project_5
{
    internal class Employee
    {

        public int Employee_ID;
        public string Employee_name;
        public int Employee_salary;

    }
    internal class Program
    {
        static void Main(string[] args)
        {
/*
*********************************************************************************
**                                                                             **
*   * *Author  : Nalli_Prudhvi                                                 *
*                                                                              *
*   * *Purpose: To create calss with 3 var and create employees array object   *
**       and intialize the values of 5 employees.                              **
*********************************************************************************
**/


            Employee[] emp_b1 = new Employee[]{
                                    new Employee(){ Employee_ID = 123, Employee_name
= "shaw", Employee_salary = 4000 },
                                    new Employee(){ Employee_ID = 124, Employee_name
= "doc", Employee_salary = 500000 },
                                    new Employee(){ Employee_ID = 125, Employee_name
= "wong", Employee_salary = 6000 },
                                    new Employee(){ Employee_ID = 126, Employee_name
= "vision", Employee_salary = 3000 },
                                    new Employee(){ Employee_ID = 127, Employee_name
= "zanday", Employee_salary = 2000 },
            };
            //*************for loop************************
            Console.WriteLine("Printing objects with for loop");
            for (int i = 0; i < emp_b1.Length; i++)
            {
                if (emp_b1[i].Employee_salary >= 5000)
                    Console.WriteLine($"Employee_ID:
{emp_b1[i].Employee_ID},Employee_Name : {emp_b1[i].Employee_name},Employee_salary :
{emp_b1[i].Employee_salary}");
            }
            Console.WriteLine("Printing objects with foreach loop");
            //*************for_each loop?*********************
            foreach (var e in emp_b1)
            {
                if(e.Employee_salary>=5000)
                    Console.WriteLine($"Employee_ID: {e.Employee_ID},Employee_Name :
{e.Employee_name},Employee_salary : {e.Employee_salary}");
            }
```

```
            //**************lambda expressions*****************
            Console.WriteLine("Printing objects with lambda expression");
            emp_b1.ToList().Where(f => f.Employee_salary >= 5000).ToList().ForEach(f
=> Console.WriteLine($"Employee_ID: {f.Employee_ID},Employee_Name :
{f.Employee_name},Employee_salary : {f.Employee_salary}"));
            Console.ReadLine();
        }
    }
}
```

Output:



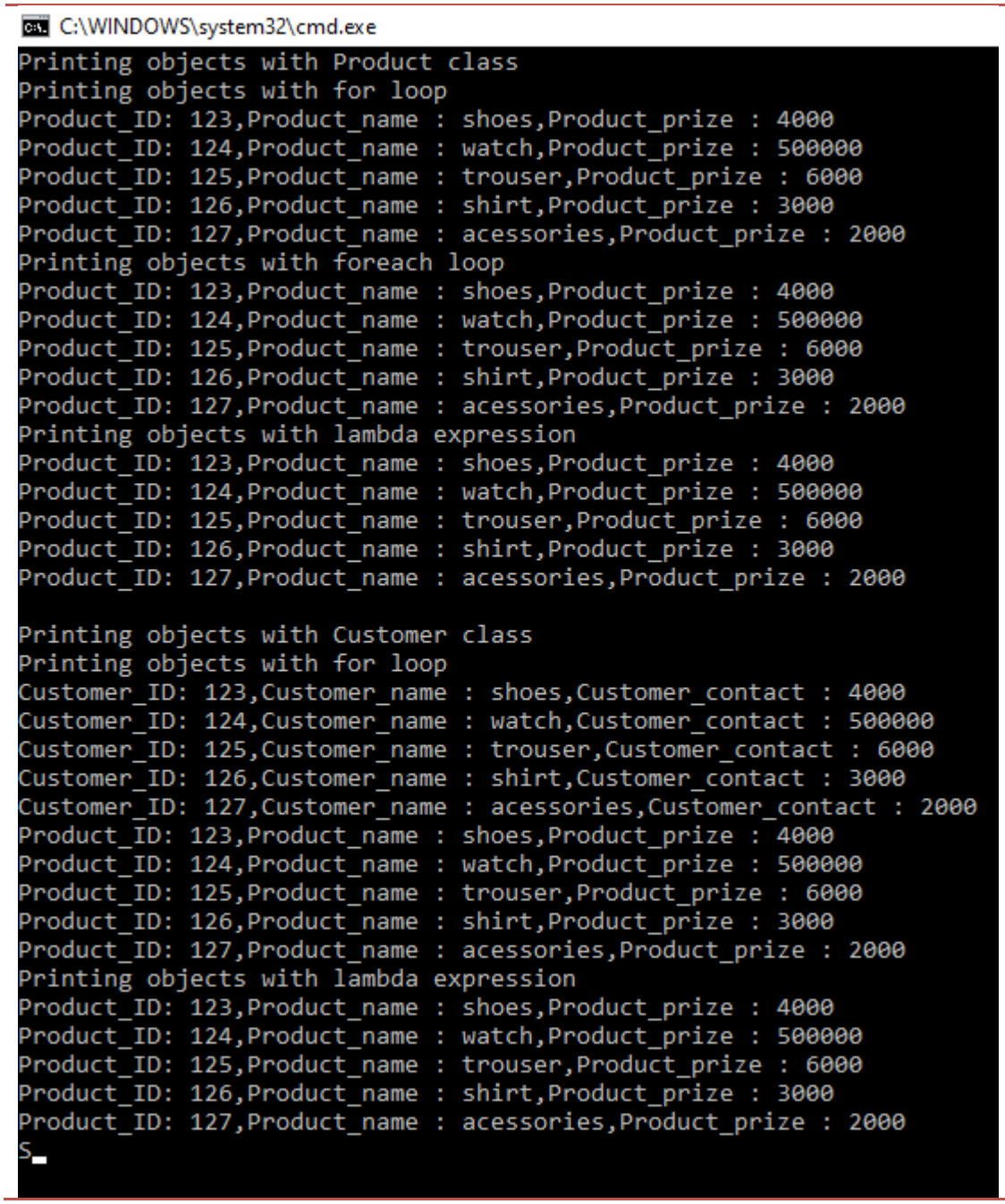
Q7. To create calss of cutomer and product similar to above projects

Code:

```
internal class Product
    {

        public int Product_ID;
        public string Product_name;
        public int Product_prize;

    }

    internal class Program
    {
        static void Main(string[] args)
        {
/*
*********************************************************************************
**                                                                              **
*   * *Author  : Nalli_Prudhvi                                                  *
*                                                                               *
*   * *Purpose: To create calss of cutomer and product similar to above projects  *
**                                                                              **
*********************************************************************************
**/

            Console.WriteLine("Printing objects with Product class");
            Product[] cust_b1 = new Product[]{
                                    new Product(){ Product_ID = 123, Product_name =
"shoes", Product_prize = 4000 },
                                    new Product(){ Product_ID = 124, Product_name =
"watch", Product_prize = 500000 },
                                    new Product(){ Product_ID = 125, Product_name =
"trouser", Product_prize = 6000 },
                                    new Product(){ Product_ID = 126, Product_name =
"shirt", Product_prize = 3000 },
                                    new Product(){ Product_ID = 127, Product_name =
"acessories", Product_prize = 2000 },
            };
            //*************for loop************************
            Console.WriteLine("Printing objects with for loop");
            for (int i = 0; i < cust_b1.Length; i++)
            {
                Console.WriteLine($"Product_ID: {cust_b1[i].Product_ID},Product_name
: {cust_b1[i].Product_name},Product_prize : {cust_b1[i].Product_prize}");
            }
            //*************for_each loop?*********************
            Console.WriteLine("Printing objects with foreach loop");
            foreach (var e in cust_b1)
            {
                Console.WriteLine($"Product_ID: {e.Product_ID},Product_name :
{e.Product_name},Product_prize : {e.Product_prize}");
            }
            //**************lambda expressions*****************
            Console.WriteLine("Printing objects with lambda expression");
            cust_b1.ToList().ForEach(f => Console.WriteLine($"Product_ID:
{f.Product_ID},Product_name : {f.Product_name},Product_prize : {f.Product_prize}"));
            Console.ReadLine();
```

```
            Console.WriteLine("Printing objects with Customer class");
            Customer[] cust_b2 = new Customer[]{
                                    new Customer(){ Customer_ID = 123, Customer_name
= "shoes", Customer_contact = 4000 },
                                    new Customer(){ Customer_ID = 124, Customer_name
= "watch",Customer_contact = 500000 },
                                    new Customer(){ Customer_ID = 125, Customer_name
= "trouser", Customer_contact = 6000 },
                                    new Customer(){ Customer_ID = 126, Customer_name
= "shirt",Customer_contact = 3000 },
                                    new Customer(){ Customer_ID = 127, Customer_name
= "acessories", Customer_contact = 2000 },
            };
            //*************for loop************************
            Console.WriteLine("Printing objects with for loop");
            for (int i = 0; i < cust_b1.Length; i++)
            {
                Console.WriteLine($"Customer_ID:
{cust_b2[i].Customer_ID},Customer_name : {cust_b2[i].Customer_name},Customer_contact
: {cust_b2[i].Customer_contact}");
            }
            //*************for_each loop?*********************
            foreach (var e in cust_b2)
            {
                Console.WriteLine($"Product_ID: {e.Customer_ID},Product_name :
{e.Customer_name},Product_prize : {e.Customer_contact}");
            }
            //**************lambda expressions*****************
            Console.WriteLine("Printing objects with lambda expression");
            cust_b2.ToList().ForEach(f=>Console.WriteLine($"Product_ID:
{f.Customer_ID},Product_name : {f.Customer_name},Product_prize :
{f.Customer_contact}"));
            Console.ReadLine();

        }
    }
```

Output:


C:\WINDOWS\system32\cmd.exe
Printing objects with Product class
Printing objects with for loop
Product_ID: 123,Product_name : shoes,Product_prize : 4000
Product_ID: 124,Product_name : watch,Product_prize : 500000
Product_ID: 125,Product_name : trouser,Product_prize : 6000
Product_ID: 126,Product_name : shirt,Product_prize : 3000
Product_ID: 127,Product_name : acessories,Product_prize : 2000
Printing objects with foreach loop
Product_ID: 123,Product_name : shoes,Product_prize : 4000
Product_ID: 124,Product_name : watch,Product_prize : 500000
Product_ID: 125,Product_name : trouser,Product_prize : 6000
Product_ID: 126,Product_name : shirt,Product_prize : 3000
Product_ID: 127,Product_name : acessories,Product_prize : 2000
Printing objects with lambda expression
Product_ID: 123,Product_name : shoes,Product_prize : 4000
Product_ID: 124,Product_name : watch,Product_prize : 500000
Product_ID: 125,Product_name : trouser,Product_prize : 6000
Product_ID: 126,Product_name : shirt,Product_prize : 3000
Product_ID: 127,Product_name : acessories,Product_prize : 2000
Printing objects with Customer class
Printing objects with for loop
Customer_ID: 123,Customer_name : shoes,Customer_contact : 4000
Customer_ID: 124,Customer_name : watch,Customer_contact : 500000
Customer_ID: 125,Customer_name : trouser,Customer_contact : 6000
Customer_ID: 126,Customer_name : shirt,Customer_contact : 3000
Customer_ID: 127,Customer_name : acessories,Customer_contact : 2000
Product_ID: 123,Product_name : shoes,Product_prize : 4000
Product_ID: 124,Product_name : watch,Product_prize : 500000
Product_ID: 125,Product_name : trouser,Product_prize : 6000
Product_ID: 126,Product_name : shirt,Product_prize : 3000
Product_ID: 127,Product_name : acessories,Product_prize : 2000
Printing objects with lambda expression
Product_ID: 123,Product_name : shoes,Product_prize : 4000
Product_ID: 124,Product_name : watch,Product_prize : 500000
Product_ID: 125,Product_name : trouser,Product_prize : 6000
Product_ID: 126,Product_name : shirt,Product_prize : 3000
Product_ID: 127,Product_name : acessories,Product_prize : 2000
S

Q8.Pictorial class representation

A.