**DAY 7 : Morning Assignment**
**By**
**Vihar D.**

## Assignment 1

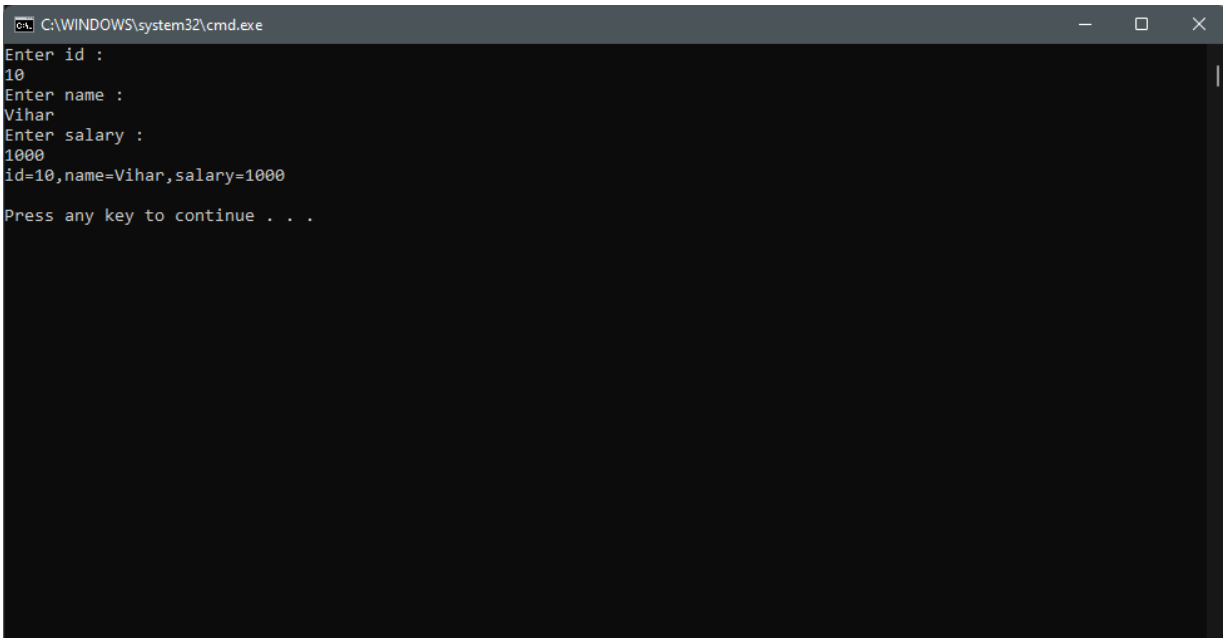
**Create an Employee class with 3 variables and 2 methods ReadEmployee() and PrintEmployee() and create an object and call methods.**

**Code :**

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

namespace _3var2meth_read_print
{
   class Employee
   {
      public int id;
      public string name;
      public int salary;

      public void ReadEmp()
      {
         Console.WriteLine("Enter id :");
         id = Convert.ToInt32(Console.ReadLine());

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

         Console.WriteLine("Enter salary :");
         salary = Convert.ToInt32(Console.ReadLine());
      }

      public void PrintEmp()
```

```
    {
        Console.WriteLine($"id={id},name={name},salary={salary}");
        //Console.WriteLine("id={0},name={1},salary={2}", id, name, salary);
        //Console.WriteLine("id =" + id + ", Name =" + name + ", salary =" + salary);
    }
}

internal class Program
{
    static void Main(string[] args)
    {
        Employee emp1 = new Employee();
        emp1.ReadEmp();
        emp1.PrintEmp();

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

**Output :**



## Assignment 2

**Write the 3 definitions of class and 4 points about objects discussed in Day 7 morning session.**

## Answer :

Class :

- It’s a collection of variables and methods.
- It's a blueprint to create objects as per requirements.
- It consists of a State and Behavior where State is basically variables and Behavior deals with the methods inside the given class.

Object :

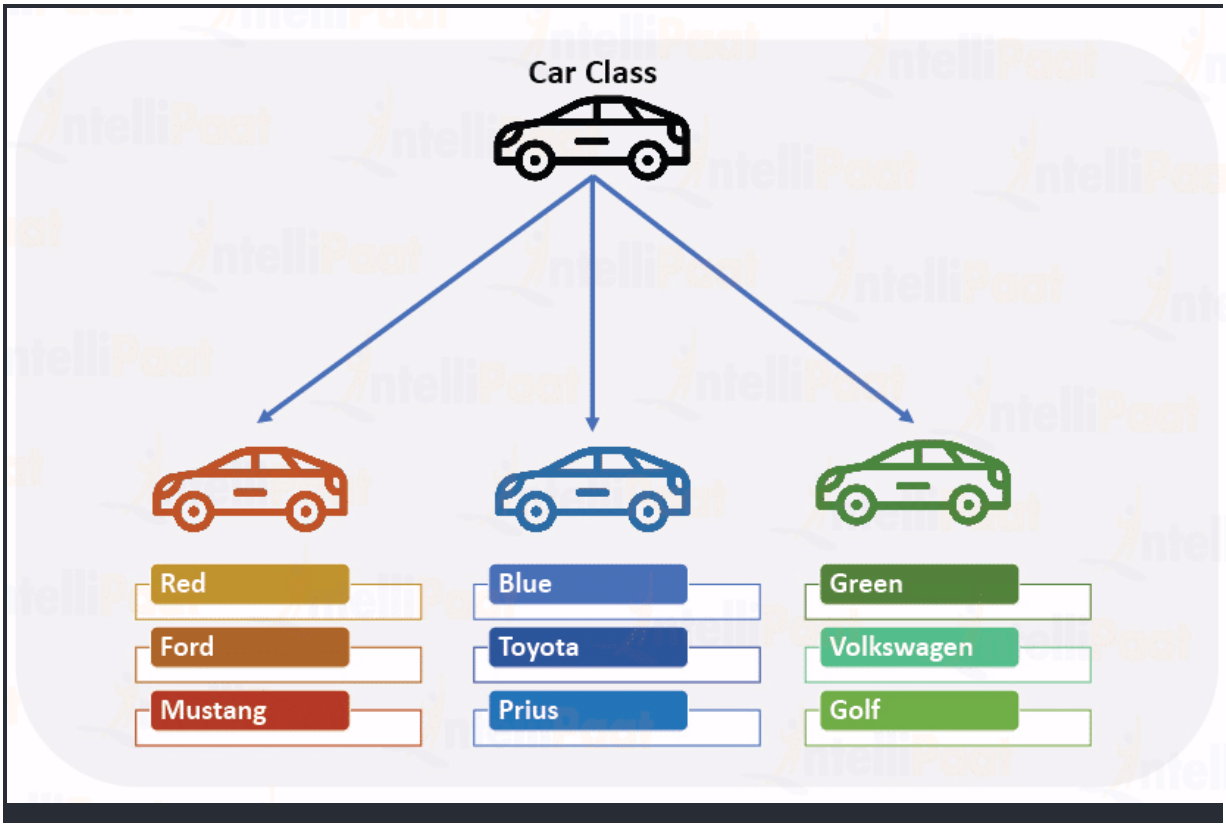
- An object is an instance of a class.
- Any number of objects can be created.
- Memory is occupied by objects when they are created.
- Objects are of reference types in general.

## Output :

**Assignment 3**

**Pictorially represent class and multiple objects**

**Answer :**




**Output :**

**Assignment 4**

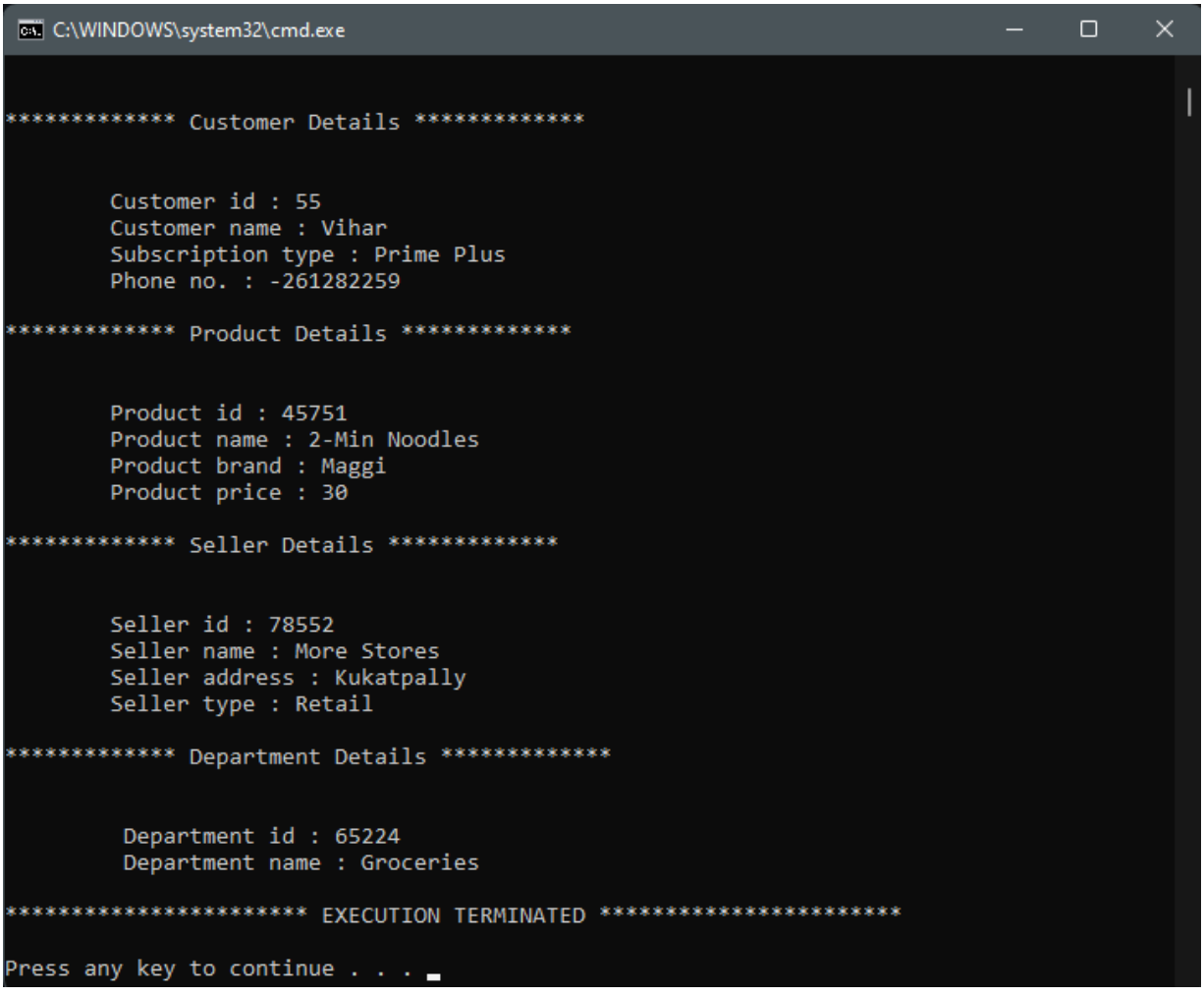
**Create the given classes : 1.Customer  2.Product  3.Seller  4.Department**

**Answer :**

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

namespace _4classes
{
    internal class Program
    {
        static void Main(string[] args)
        {
            //Customer----------------------------------------
            customer cust1 = new customer();
            Console.WriteLine("Enter Customer Details : ");
            cust1.CreateCustData();

            //Product-----------------------------------------
            product prod1 = new product();
            Console.WriteLine("Enter Product Details : ");
            prod1.CreateProdData();

            //Seller------------------------------------------
            seller sell1 = new seller();
            Console.WriteLine("Enter Seller Details : ");
            sell1.CreateSellData();

            //Department--------------------------------------
            department dept1 = new department();
            Console.WriteLine("Enter Department Details : ");
            dept1.CreateDeptData();

            cust1.DisplayCustData();
```

```
        prod1.DisplayProdData();
        sell1.DisplaySellData();
        dept1.DisplayDeptData();

        Console.WriteLine("\n********************** EXECUTION TERMINATED
**********************");
        Console.ReadLine();
    }
  }
}
```

**Output :**



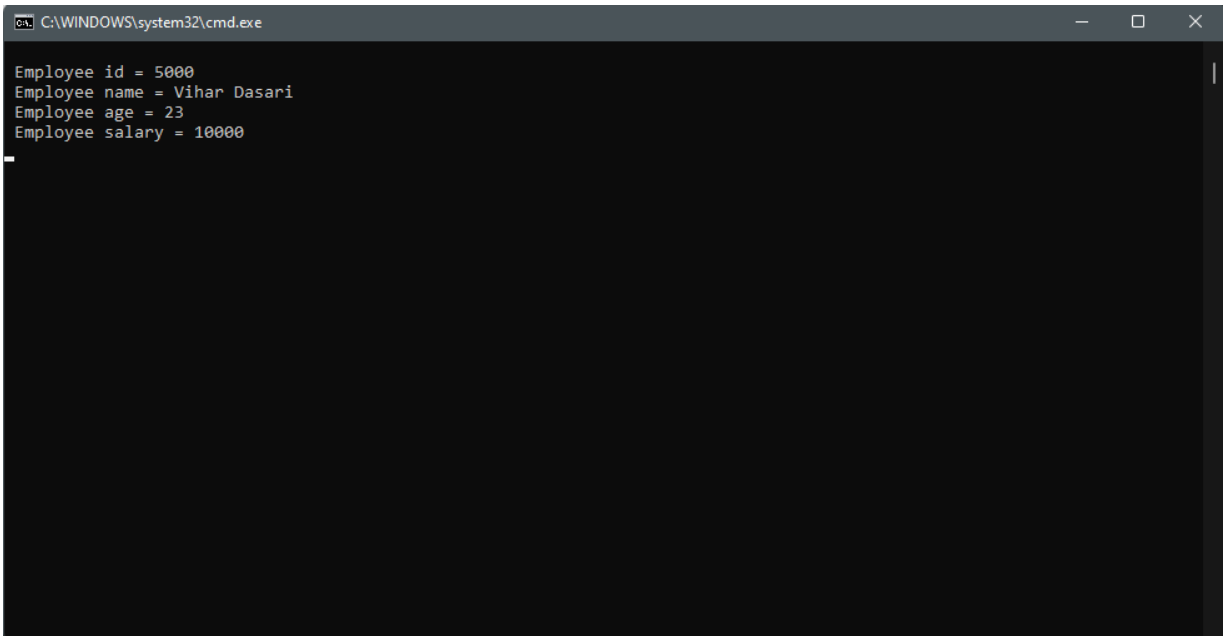
## Assignment 5

**Create an Employee class with 3 public variables. Create an object and initialize with values while creating an object and print the values.**

## Answer :

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

namespace emp_public
{
   class employee
   {
      public int emp_id;
      public string emp_name;
      public int emp_age;
      public int emp_salary;
   }
   internal class Program
   {
      static void Main(string[] args)
      {
         employee emp = new employee()
         {
            emp_id = 5000,
            emp_name = "Vihar Dasari",
            emp_age = 23,
            emp_salary = 10000
         };
         Console.WriteLine($"\n Employee id = {emp.emp_id}" +
                           $"\n Employee name = {emp.emp_name}" +
                           $"\n Employee age = {emp.emp_age}" +
                           $"\n Employee salary = {emp.emp_salary}" );
         Console.ReadLine();
      }
   }
}
```

## Output :


C:\WINDOWS\system32\cmd.exe
Employee id = 5000
Employee name = Vihar Dasari
Employee age = 23
Employee salary = 10000

## Assignment 6

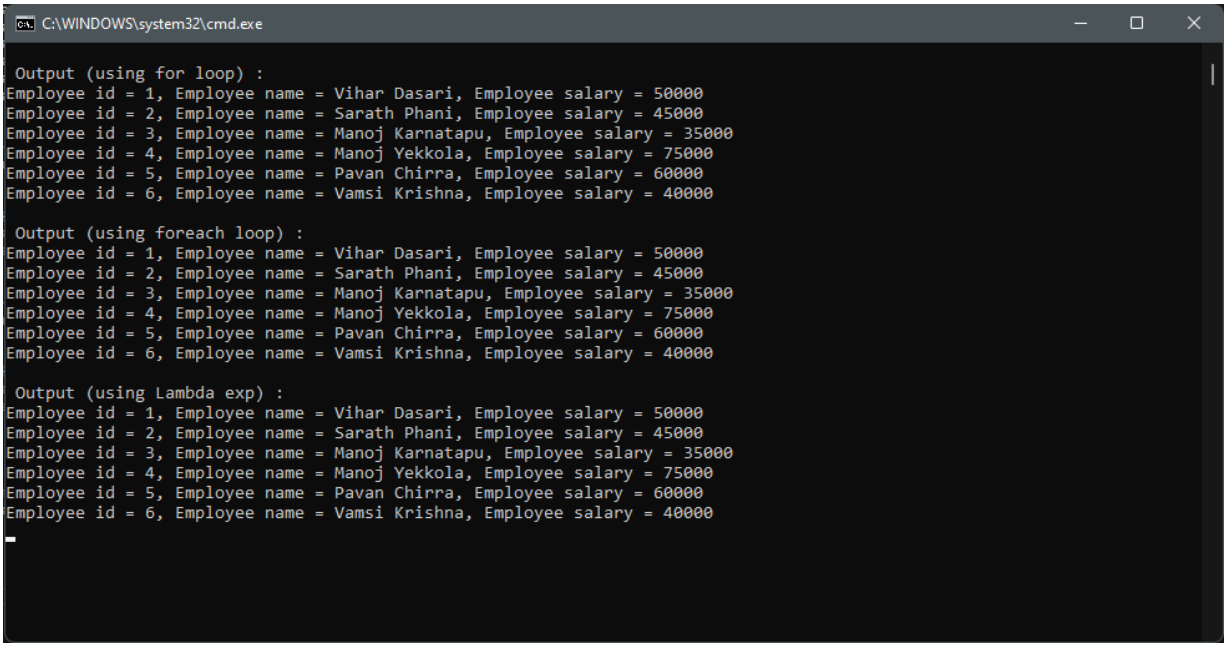
**Create an Employee class with its array object and initialize with 5 employees. Print output using for, foreach and lambda expression loop types.**

## Answer :

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

namespace emp5_3looptypes
{
   internal class Program
   {
      class employee
      {
         public int emp_id;
         public string emp_name;
         public int emp_salary;
      }
      static void Main(string[] args)
      {
         employee[] emp = new employee[]
         {
            new employee(){emp_id = 1, emp_name = "Vihar Dasari", emp_salary = 50000},
            new employee(){emp_id = 2, emp_name = "Sarath Phani", emp_salary = 45000},
            new employee(){emp_id = 3, emp_name = "Manoj Karnatapu", emp_salary = 35000},
            new employee(){emp_id = 4, emp_name = "Manoj Yekkola", emp_salary = 75000},
            new employee(){emp_id = 5, emp_name = "Pavan Chirra", emp_salary = 60000},
            new employee(){emp_id = 6, emp_name = "Vamsi Krishna", emp_salary = 40000},
         };

         //using for loop----------------------------------------------
         Console.WriteLine("\n Output (using for loop) : ");
         for (int i=0;i<emp.Length;i++)
         {
            Console.WriteLine($"Employee id = {emp[i].emp_id}, " +
                              $"Employee name = {emp[i].emp_name}, " +
                              $"Employee salary = {emp[i].emp_salary}");
         }
```

```
        //using foreach loop----------------------------------------
        Console.WriteLine("\n Output (using foreach loop) : ");
        foreach(var e in emp)
        {
           Console.WriteLine($"Employee id = {e.emp_id}, " +
                             $"Employee name = {e.emp_name}, " +
                             $"Employee salary = {e.emp_salary}");

        }

        //using Lambda Expression
        Console.WriteLine("\n Output (using Lambda exp) : ");
        emp.ToList().ForEach(d => Console.WriteLine($"Employee id = {d.emp_id}, " +
                                    $"Employee name = {d.emp_name}, " +
                                    $"Employee salary = {d.emp_salary}"));
        Console.ReadLine();
    }
  }
}
```

**Output :**



## Assignment 7

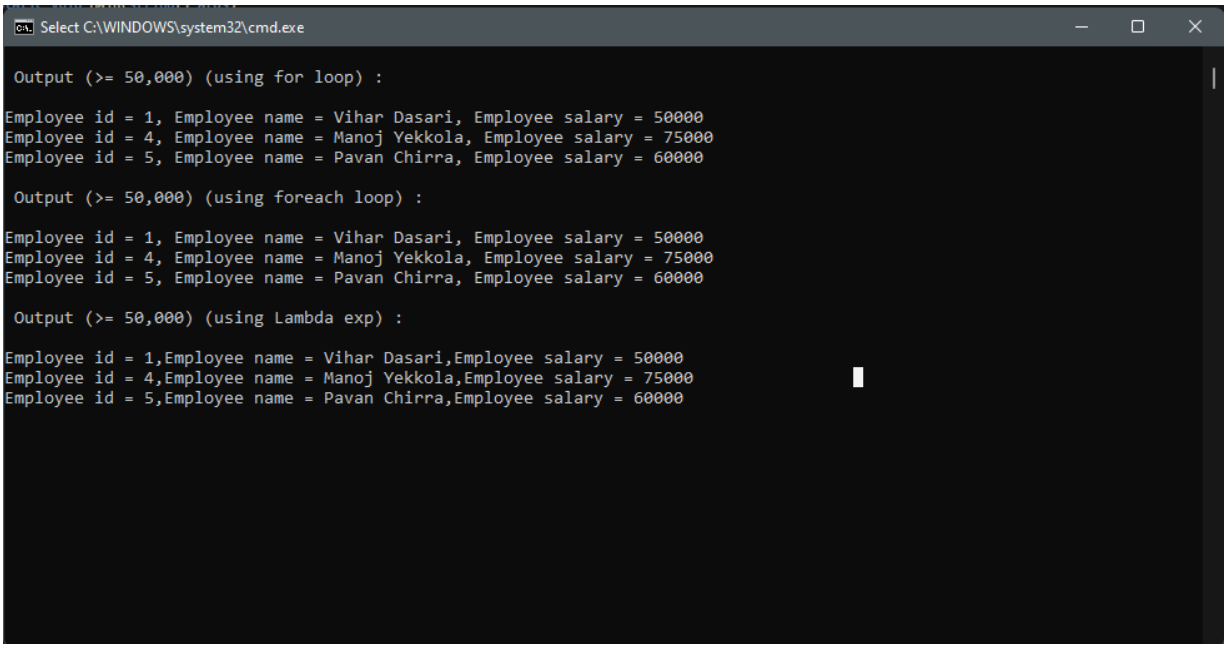
**Similar to Assignment 6, write a C# code to print employees whose salary is >=50000 using for, foreach and lambda expression loop types.**

## Answer :

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

namespace emp5_3looptypes_gt
{
   internal class Program
   {
      class employee
      {
         public int emp_id;
         public string emp_name;
         public int emp_salary;
      }

      static void Main(string[] args)
      {
         employee[] emp = new employee[]
        {
            new employee(){emp_id = 1, emp_name = "Vihar Dasari", emp_salary = 50000},
            new employee(){emp_id = 2, emp_name = "Sarath Phani", emp_salary = 45000},
            new employee(){emp_id = 3, emp_name = "Manoj Karnatapu", emp_salary = 35000},
            new employee(){emp_id = 4, emp_name = "Manoj Yekkola", emp_salary = 75000},
            new employee(){emp_id = 5, emp_name = "Pavan Chirra", emp_salary = 60000},
        };

         //using for loop-------------------------------------------------------------------------------
         Console.WriteLine("\n Output (>= 50,000) (using for loop) :\n");
         for (int i = 0; i < emp.Length; i++)
         {
            if (emp[i].emp_salary >= 50000)
               Console.WriteLine($"Employee id = {emp[i].emp_id}, " +
                                 $"Employee name = {emp[i].emp_name}, " +
                                 $"Employee salary = {emp[i].emp_salary}");
         }
         //using foreach loop---------------------------------------------------------------------------
         Console.WriteLine("\n Output (>= 50,000) (using foreach loop) :\n");
         foreach (var e in emp)
```

```
        {
            if (e.emp_salary >= 50000)
                Console.WriteLine($"Employee id = {e.emp_id}, " +
                                  $"Employee name = {e.emp_name}, " +
                                  $"Employee salary = {e.emp_salary}");
        }
        //Using Lambda Expression-----------------------------------------------------------------------------------------
        Console.WriteLine("\n Output (>= 50,000) (using Lambda exp) :\n");

        emp.ToList().Where(e => e.emp_salary >= 50000).ToList().ForEach(e =>Console.WriteLine($"Employee
id = {e.emp_id}," +
                                                                $"Employee name = {e.emp_name}," +
                                                                $"Employee salary = {e.emp_salary}"));
        Console.ReadLine();

    }
  }
}
```

**Output :**



## Assignment 8

**Similar to Assignment 6 & 7, Create a list of Customer and Product arrays using for, foreach and lambda expression loop types.**

## Answer :

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

namespace cust_prod_3looptypes
{
    class customer
    {
        public int cust_id;
        public string cust_name;
        public string cust_subtype;
    }
    class product
    {
        public int prod_id;
        public string prod_name;
        public int prod_price;
    }
    internal class Program
    {
        static void Main(string[] args)
        {
            //Customers Class-----------------------------------------------------------------
            customer[] cust = new customer[]
            {
             new customer(){ cust_id = 1, cust_name = "Vihar Dasari", cust_subtype = "Prime"},
             new customer(){ cust_id = 2, cust_name = "Pavan Chirra", cust_subtype = "General"},
             new customer(){ cust_id = 3, cust_name = "Manoj Karnatapu", cust_subtype = "Prime"}
            };

            //using for loop-----------------------------------------------------------------
            Console.WriteLine("\n Output (using for loop) : ");
            for (int i = 0; i < cust.Length; i++)
            {
                Console.WriteLine($"Customer id = {cust[i].cust_id}, " +
                                  $"Customer name = {cust[i].cust_name}, " +
                                  $"Customer subtype = {cust[i].cust_subtype}");
            }
```

```
        //using foreach loop-------------------------------------------------------------------
        Console.WriteLine("\n Output (using foreach loop) : ");
        foreach (var e in cust)
        {
            Console.WriteLine($"Customer id = {e.cust_id}, " +
                              $"Customer name = {e.cust_name}, " +
                              $"Customer subtype = {e.cust_subtype}");
        }

        //using Lambda Expression--------------------------------------------------------------
        Console.WriteLine("\n Output (using lambda exp) : ");
        cust.ToList().ForEach(d => Console.WriteLine($"Customer id = {d.cust_id}, " +
                                            $"Customer name = {d.cust_name}, " +
                                            $"Customer subtype = {d.cust_subtype}"));


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

        //Products Class-----------------------------------------------------------------
        product[] prod = new product[]
        {
            new product(){ prod_id = 10, prod_name = "Asus ROG", prod_price = 80000},
            new product(){ prod_id = 20, prod_name = "MSI Gaming", prod_price = 75000},
            new product(){ prod_id = 30, prod_name = "Gigabyte Gaming", prod_price = 50000}
        };

        //using for loop-----------------------------------------------------------------
        Console.WriteLine("\n Output (using for loop) : ");
        for (int i = 0; i < prod.Length; i++)
        {
            Console.WriteLine($"Product id = {prod[i].prod_id}, " +
                              $"Product name = {prod[i].prod_name}, " +
                              $"Product price = {prod[i].prod_price}");
        }

        //using foreach loop-------------------------------------------------------------------
        Console.WriteLine("\n Output (using foreach loop) : ");
        foreach (var p in prod)
        {
            Console.WriteLine($"Product id = {p.prod_id}, " +
                              $"Product name = {p.prod_name}, " +
                              $"Product price = {p.prod_price}");
        }

        //using Lambda Expression--------------------------------------------------------------
        Console.WriteLine("\n Output (using lambda exp) : ");
```

```
        prod.ToList().ForEach(d => Console.WriteLine($"Product id = {d.prod_id}, " +
                                        $"Product name = {d.prod_name}, " +
                                        $"Product price = {d.prod_price}"));
        Console.ReadLine();
    }
  }
}
```

**Output :**