**Day 8 Morning Assignment**

**By**

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**Date: 02 Feb 2022**

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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 : |
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| 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 : |
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| 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($"Product Name = {p.name}, Product brand = {p.brand}"));  Console.ReadLine();  }  }  } |
| Output : |
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| 4. Create a Department class and add variables id,name,empcount write code to print id,name of departments whose empcount is greater than 50  using  for  foreach  lambda  LINQ query |
| Code : |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace DeptClassEmpCountGT50  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* Author : Varun Sai Kumar Chegoni.  \* Purpose : Create a Department class and add variables id,name,empcount write code to print id,name of departments whose empcount is greater than 50  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  public class Department  {  public int id;  public string name;  public int count;  }  internal class Program  {  static void Main(string[] args)  {  Console.WriteLine("Create a Department class and add variables id,name,empcount write code to print id,name of departments whose empcount is greater than 50 by Varun");  Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  List<Department> dept = new List<Department>()  {  new Department() { id=123, name="Analyst", count=60 },  new Department() { id=234, name="Developer", count=70 },  new Department() { id=345, name="Support", count=40 },  new Department() { id=456, name="Recruiter", count=20 }  };  // Employee count > 50  Console.WriteLine("Printing Output Using For Loop");  // using for loop  for (int i = 0; i<dept.Count; i++)  {  if (dept[i].count > 50)  Console.WriteLine($"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($"Department Name = {d.name}, Department Employee Count = {d.count}"));  Console.ReadLine();  }  }  } |
| Output : |
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| 5. Create your own class and variables and initialize with some values for  foreach  lambda  LINQ query |
| Code : |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace OwnClassInitValues  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* Author : Varun Sai Kumar Chegoni.  \* Purpose : Create your own class and variables and initialize with some values for print using for ,foreach, lamda, LINQ  \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  public class NHTraining  {  public string name;  public int id;  public int contact;  }  internal class Program  {  static void Main(string[] args)  {  List<NHTraining> nh = new List<NHTraining>()  {  new NHTraining() { name ="Arun", id = 01, contact = 123456},  new NHTraining() { name ="Varun", id = 02, contact = 234567},  new NHTraining() { name ="Vinay", id = 01, contact = 345678}  };  Console.WriteLine("Printing Output Using For Loop");  // using for loop  for (int i = 0; i<nh.Count; i++)  {  Console.WriteLine($"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 : |
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