|  |
| --- |
| Feb 2nd Morning Assignment  By Surya Teja Chandolu |

|  |
| --- |
| 1. Declare and initialize a 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 EvenNumbersUsingList  {  internal class Program  {  static void Main(string[] args)  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* Author: Surya Teja  \* Purpose: Declare and initialize a list with 8 values. write for loop, foreach loop, lambda, linq query to print even numbers.  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/    List<int> data = new List<int>() { 2, 5, 88, 66, 3, 44, 97, 11 };  //For Loop  Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*For Loop\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  Console.Write($"Even numbers are: ");  for (int i = 0; i < data.Count; i++)  {  if (data[i]%2 == 0)  Console.Write($"{data[i]}, ");  }  //ForEach Loop  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*ForEach Loop\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  Console.Write($"Even numbers are: ");  foreach (int d in data)  {  if(d%2 == 0)  Console.Write($"{d}, ");  }  //Lambda Expression  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Lambda Expression\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  Console.Write($"Even numbers are: ");  data.Where(d=>d%2 == 0).ToList().ForEach(d=>Console.Write($"{d}, "));  //LINQ Query  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*LINQ Query\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");  Console.Write($"Even numbers are: ");  var result = from d in data  where d%2 == 0  select d;  result.ToList().ForEach(d => Console.Write($"{d}, "));    Console.ReadLine();  }  }  } |
| Output: |
|  |

|  |
| --- |
| 1. Create a class Employee with three variables as discussed in the class and create a list of Employees.(for loop, foreach loop, lambda expression, linq query)   public int id;  public string name;  public int salary; |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace PrintUsingClass  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* Author: Surya Teja  \* Purpose: Create a class Employee with three variables as discussed in the class and create a list of Employees.  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  class Employee  {  public int id;  public string name;  public float salary;  }  internal class Program  {  static void Main(string[] args)  {  List<Employee> empData = new List<Employee>()  {  new Employee(){id = 1, name = "Surya", salary = 5000},  new Employee(){id = 2, name = "Prudhvi", salary = 6000},  new Employee(){id = 3, name = "Bhanu", salary = 7000},  new Employee(){id = 4, name = "Charan", salary = 8000},  new Employee(){id = 5, name = "Joe", salary = 9000}  };  //For Loop  Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*For Loop\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  for (int i = 0; i < empData.Count; i++)  Console.WriteLine($"Employee Id is: {empData[i].id}, Employee Name is: {empData[i].name}, Employee Salary is: {empData[i].salary}.");  //For Each Loop  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*ForEach Loop\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  foreach (Employee emp in empData)  Console.WriteLine($"Employee Id is: {emp.id}, Employee Name is: {emp.name}, Employee Salary is: {emp.salary}.");  //Lambda Expression  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Lambda Expression\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  empData.ForEach(e => Console.WriteLine($"Employee Id is: {e.id}, Employee Name is: {e.name}, Employee Salary is: {e.salary}."));    //LINQ Query  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*LINQ Query\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  var result = from emp in empData  select emp;  result.ToList().ForEach(e => Console.WriteLine($"Employee Id is: {e.id}, Employee Name is: {e.name}, Employee Salary is: {e.salary}."));  Console.ReadLine();  }  }  } |
| Output: |
|  |

|  |
| --- |
| 1. 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 ProductPriceGreater500  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* Author: Surya Teja  \* Purpose: 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)  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  class Product  {  public int id;  public string name;  public int price;  public string brand;  }  internal class Program  {  static void Main(string[] args)  {  List<Product> prodData = new List<Product>()  {  new Product() { id = 1, name = "Shoes", price = 1500, brand = "Nike"},  new Product() { id = 2, name = "Cap", price = 1200, brand = "Adidas"},  new Product() { id = 3, name = "Pen", price = 450, brand = "Parker"},  new Product() { id = 4, name = "Book", price = 100, brand = "Classmate"},  new Product() { id = 5, name = "Laptop", price = 50000, brand = "Dell"}  };  //For Loop  Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*For Loop\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");    for (int i = 0; i < prodData.Count; i++)  {  if (prodData[i].price >= 500)  Console.WriteLine($"Name is {prodData[i].name} and Brand is {prodData[i].brand}.");  }  //For Each Loop  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*ForEach Loop\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  foreach (Product prod in prodData)  {  if(prod.price >= 500)  Console.WriteLine($"Name is {prod.name} and Brand is {prod.brand}.");  }    //Lambda Expression  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Lambda Expression\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  prodData.Where(p => p.price >= 500).ToList().ForEach(p => Console.WriteLine($"Name is {p.name} and Brand is {p.brand}."));  //LINQ Query  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*LINQ Query\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  var result = from prod in prodData  where prod.price >= 500  select prod;  result.ToList().ForEach(p => Console.WriteLine($"Name is {p.name} and Brand is {p.brand}."));  Console.ReadLine();  }  }  } |
| Output: |
|  |

|  |
| --- |
| 1. Create a Department class and add variables id, name, empcount write code to print id, name of departments whose empcount is greater than 50.(for, foreach, lambda, linq query) |
| Code: |
| using System;  using System.Collections.Generic;  using System.Linq;  using System.Text;  using System.Threading.Tasks;  namespace EmployeeCount  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* Author: Surya Teja  \* 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.(for, foreach, lambda, linq query)  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  class Department  {  public int id;  public string name;  public int empCount;  }  internal class Program  {  static void Main(string[] args)  {  List<Department> deptData= new List<Department>()  {  new Department(){ id = 1, name ="CSE", empCount = 80},  new Department(){ id = 2, name ="Mech", empCount = 75},  new Department(){ id = 3, name ="EEE", empCount = 60},  new Department(){ id = 4, name ="Civil", empCount = 20},  new Department(){ id = 5, name ="ECE", empCount = 25}  };  //For Loop  Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*For Loop\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");    for (int i = 0; i < deptData.Count; i++)  {  if (deptData[i].empCount >= 50)  Console.WriteLine($"Department Id is: {deptData[i].id} and Department Name is: {deptData[i].name}.");  }  //For Each Loop  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*ForEach Loop\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  foreach (Department dept in deptData)  {  if (dept.empCount >= 50)  Console.WriteLine($"Department Id is: {dept.id} and Department Name is: {dept.name}.");  }  //Lambda Expression  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Lambda Expression\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  deptData.Where(d => d.empCount >= 50).ToList().ForEach(d => Console.WriteLine($"Department Id is: {d.id} and Department Name is: {d.name}."));    //LINQ Query  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*LINQ Query\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  var result = from dept in deptData  where dept.empCount >= 50  select dept;  result.ToList().ForEach(d => Console.WriteLine($"Department Id is: {d.id} and Department Name is: {d.name}."));  Console.ReadLine();  }  }  } |
| Output: |
|  |

|  |
| --- |
| 1. 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 HospitalCount  {  /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*  \* Author: Surya Teja  \* Purpose: Create your own class and variables and initialize with some values(for, foreach, lambda, linq query)  \* \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/  class Hospital  {  public int id;  public string city;  public int count;  }  internal class Program  {  static void Main(string[] args)  {  List<Hospital> hpt= new List<Hospital>()  {  new Hospital(){ id = 1, city = "Hyderabad", count = 150},  new Hospital(){ id = 2, city = "Chennai", count = 125},  new Hospital(){ id = 3, city = "Banglore", count = 200},  new Hospital(){ id = 4, city = "Coimbatore", count = 50},  new Hospital(){ id = 5, city = "Ongole", count = 75}  };  //For Loop  Console.WriteLine("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*For Loop\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  for(int i = 0; i < hpt.Count; i++)  {  if(hpt[i].count >= 100)  Console.WriteLine($"Hospital Id is: {hpt[i].id} and Hospital City is: {hpt[i].city}.");  }  //For Each Loop  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*ForEach Loop\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  foreach(Hospital hp in hpt)  {  if(hp.count >= 100)  Console.WriteLine($"Hospital Id is: {hp.id} and Hospital City is: {hp.city}.");  }    //Lambda Expression  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Lambda Expression\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  hpt.Where(hp => hp.count >= 100).ToList().ForEach(hp => Console.WriteLine($"Hospital Id is: {hp.id} and Hospital City is: {hp.city}."));  //LINQ Query  Console.WriteLine("\n\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*LINQ Query\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n");  var result = from hp in hpt  where hp.count >= 100  select hp;  result.ToList().ForEach(hp => Console.WriteLine($"Hospital Id is: {hp.id} and Hospital City is: {hp.city}."));  Console.ReadLine();  }  }  } |
| Output: |
|  |