**Linq demo 1**

namespace linqdemo\_pre

{

internal class Program

{

static void Main(string[] args)

{

int[] arr = { 44, 33, 52, 11, 23 };

// var result = from a in arr select a;

//System.Collections.Generic.IEnumerable<int> result = from a in arr select a;

// var result = from a in arr where a>20 select a;

//var result = from a in arr where a > 20 && a<50 select a;

// var result = from a in arr orderby a select a;

//var result = from a in arr orderby a descending select a;

//var result = (from a in arr select a).Reverse();

// var result = (from a in arr select a).Distinct();

// var result = (from a in arr select a).Take(3);

// var result = (from a in arr select a).Skip(3);

//var result = from a in arr where a%2==0 select a;

//foreach (int n in result)

//{

// Console.WriteLine(n);

//}

// var result = (from a in arr select a).Count();

//var result = (from a in arr select a).Average();

//var result = (from a in arr select a).Sum();

// var result = (from a in arr select a).Max();

// var result = (from a in arr select a).ElementAt(2);

// var result = (from a in arr select a).First();

// var result = (from a in arr select a).FirstOrDefault();

// Console.WriteLine(result);

string[] str = { "Sumanth", "Hinduja", "Kaif", "Anjali", "Akshay" };

var result = from s in str where s.Length>6 select s;

foreach ( string item in result )

{

Console.WriteLine( item );

}

Console.ReadKey();

}

}

}

**Linq demo 2**

namespace linqdemo2\_pre

{

internal class Program

{

static void Main(string[] args)

{

List<int> li=new List<int>() { 10,20,30,40,50};

var result=from l in li select l;

foreach (int n in result)

{

Console.WriteLine(n);

}

Console.ReadKey();

}

}

}

**Linq Demo 3**

using System.ComponentModel.Design;

namespace linqdemo3\_pre

{

class Employee

{

public int empno { get; set; }

public string empname { get; set; }

public double salary { get; set; }

public int dno { get; set; }

}

internal class Program

{

static void Main(string[] args)

{

List<Employee> elist = new List<Employee>()

{

new Employee(){ empno=101,empname="ram",salary=56000,dno=10},

new Employee(){ empno=102,empname="pooja",salary=32000,dno=20},

new Employee(){ empno=103,empname="rahul",salary=66000,dno=30},

new Employee(){ empno=104,empname="sonam",salary=9000,dno=10},

new Employee(){ empno=105,empname="rakesh",salary=88000,dno=20},

new Employee(){ empno=106,empname="laxman",salary=44000,dno=10},

};

// var result = from em in elist select em;

// var result = from em in elist where em.dno==10 select em;

// var result = from em in elist where em.empno == 103 select em;

// var result = from em in elist where em.salary>40000 select em;

// var result = from em in elist where em.salary > 40000 && em.salary<60000 select em;

// var result = from em in elist orderby em.salary select em;

// var result = from em in elist orderby em.salary descending select em;

// var result = from em in elist where em.empname.Length>5 select em;

// var result = (from em in elist select em).Take(3);

//var result = (from em in elist select em).Skip(3);

//foreach (Employee e in result)

//{

// Console.WriteLine(e.empno+"\t"+e.empname+"\t"+e.dno+"\t"+e.salary);

//}

//Employee e = (from em in elist where em.empno == 103 select em).SingleOrDefault();

//Employee e = (from em in elist where em.empno == 103 select em).ElementAt(2);

// Employee e = (from em in elist select em).First();

//Employee e = (from em in elist select em).FirstOrDefault();

//if (e != null)

//{

// Console.WriteLine(e.empno + "\t" + e.empname + "\t" + e.dno + "\t" + e.salary);

//}

// var result = (from em in elist select em).Count();

// Console.WriteLine(result);

//var result = from em in elist select new {enm= em.empname,em.dno};

//foreach (var e in result)

//{

// Console.WriteLine(e.enm + "\t" + e.dno);

//}

var result = from em in elist group em by em.dno;

foreach (var r in result)

{

Console.WriteLine("\nDept No:"+r.Key);

Console.WriteLine("Employee Count:" + r.Count());

foreach (Employee e in r)

{

Console.WriteLine(e.empno + "\t" + e.empname + "\t" + e.dno + "\t" + e.salary);

}

}

Console.ReadKey();

}

}

}

**Linq demo 4:**

namespace linqdemo4\_pre

{

class Employee

{

public int empno { get; set; }

public string empname { get; set; }

public int dno { get; set; }

}

class Dept

{

public int dno { get; set; }

public string dname{ get; set; }

}

internal class Program

{

static void Main(string[] args)

{

List<Employee> elist = new List<Employee>()

{

new Employee(){ empno=101,empname="ram",dno=10},

new Employee(){ empno=102,empname="pooja",dno=20},

new Employee(){ empno=103,empname="rahul",dno=30}

};

List<Dept> dlist = new List<Dept>()

{

new Dept(){ dno=10,dname="Sales"},

new Dept(){ dno=20,dname="Purchase"},

new Dept(){ dno=30,dname="Account"},

};

var result = from el in elist join dl in dlist on el.dno equals dl.dno select new { el, dl };

foreach (var r in result)

{

Console.WriteLine(r.el.empno + "\t" + r.el.empname + "\t" + r.dl.dno + "\t" + r.dl.dname);

}

Console.ReadKey();

}

}

}

**Linq Demo 5:**

namespace linqdemo5\_pre

{

class Address

{

public string city { get; set; }

public string state { get; set; }

public string country { get; set; }

}

class Employee

{

public int empno { get; set; }

public string empname { get; set; }

public Address adr { get; set; }

}

internal class Program

{

static void Main(string[] args)

{

List<Employee> elist = new List<Employee>()

{

new Employee {empno=101,empname="pooja",adr=new Address(){ city="pune",state="mah",country="india"} },

new Employee {empno=102,empname="ram",adr=new Address(){ city="mumbai",state="mah",country="india"} },

new Employee {empno=103,empname="roshan",adr=new Address(){ city="balysri",state="karntaka",country="india"} }

};

var result = from em in elist select em;

foreach(Employee e in result)

{

Console.WriteLine(e.empno+"\t"+e.empname+"\t"+e.adr.city+"\t"+e.adr.state+"\t"+e.adr.country);

}

Console.ReadKey();

}

}

}

**Linq Demo 6**

namespace linqdemo6\_pre

{

internal class Program

{

static void Main(string[] args)

{

int[] arr = { 50, 40, 30, 20, 10 };

// var result=from a in arr select a;

//var result = arr.Select(a=>a);

//var result = from a in arr where a>20 select a;

// var result = arr.Where(a => a > 20);

// var result = from a in arr orderby a select a;

// var result = arr.OrderBy(a => a);

// var result = from a in arr orderby a descending select a;

var result = arr.OrderByDescending(a => a);

foreach (int n in result)

{

Console.WriteLine(n);

}

Console.ReadKey();

}

}

}

Linq demo 7:

//join using lambda

namespace linqdemo7\_pre

{

class Employee

{

public int empno { get; set; }

public string empname { get; set; }

public int dno { get; set; }

}

class Dept

{

public int dno { get; set; }

public string dname { get; set; }

}

internal class Program

{

static void Main(string[] args)

{

List<Employee> elist = new List<Employee>()

{

new Employee { empno=101,empname="pooja",dno=10},

new Employee { empno=102,empname="rahul",dno=20},

new Employee { empno=103,empname="suman",dno=30}

};

List<Dept> dlist = new List<Dept>()

{

new Dept{ dno=10,dname="sales"},

new Dept{ dno=20,dname="purchase"},

new Dept{ dno=30,dname="account"}

};

//var result = from el in elist join dl in dlist on el.dno equals dl.dno select new { el, dl };

var result = elist.Join(dlist, el => el.dno, dl => dl.dno, (el, dl) => new { el, dl });

foreach (var r in result)

{

Console.WriteLine(r.el.empno+"\t"+r.el.empname+"\t"+r.dl.dno+"\t"+r.dl.dname);

}

Console.ReadKey();

}

}

}

**Linq demo 8:**

//group by using lambda expression

namespace linqdemo8\_pre

{

class Employee

{

public int empno { get; set; }

public string empname { get; set; }

public int dno { get; set; }

}

internal class Program

{

static void Main(string[] args)

{

List<Employee> elist = new List<Employee>()

{

new Employee{empno=101,empname="pooja",dno=10 },

new Employee{empno=102,empname="rahul",dno=20 },

new Employee{empno=103,empname="nisha",dno=30 },

new Employee{empno=104,empname="poonam",dno=10 },

new Employee{empno=105,empname="raj",dno=20 },

new Employee{empno=106,empname="sneha",dno=10 },

};

//var result = from el in elist group el by el.dno;

var result = elist.GroupBy(el => el.dno);

foreach ( var r in result )

{

Console.WriteLine("\nDept No:" + r.Key);

Console.WriteLine("Employee Count:" + r.Count());

foreach (Employee e in r)

{

Console.WriteLine(e.empno + "\t" + e.empname + "\t" + e.dno);

}

}

Console.ReadKey();

}

}

}