# LINQ query examples using method and query syntax

Introduction: Basically you can write LINQ queries using method syntax (some time called as Lambda Expressions) and query syntax. So, here I have tried to gather 36 T-Sql queries along with their equivalent LINQ queries in both method and query syntax.

Scenario: Let us consider a scenario where we have two tables in Sql Server database **MyOrg** i.e., **tbl_Dept** and **tbl_Emp** and say we have generated an entity data model with these two tables as **MyOrg.edmx** as shown below and we have created **dev** as an object of **MyOrgEntities** context object i.e.,
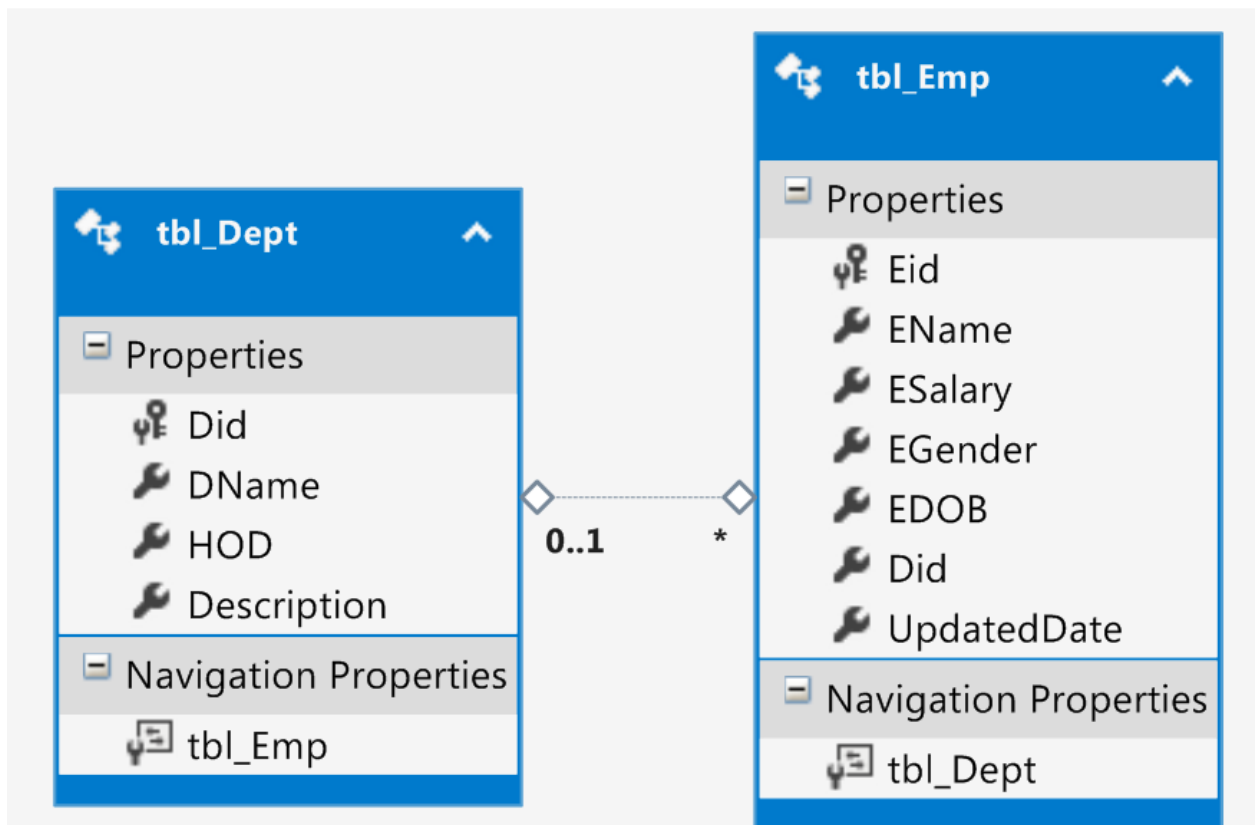
Queries:

MyOrgEntites dev=new MyOrgEntities();

1. Select * from dbo.tbl_Dept

```
var res= dev.tbl_Dept.ToList();   //lambda

var res=from res in dev.tbl_Dept select res;   //query
```

2. Select Did as 'Department Id', DName as 'Department Name' from dbo.tbl_Dept

```
var res = dev.tbl_Dept.Select(x => new { DepartmentId = x.Did, DepartmentName =
x.DName });      //lambda

var res=from re in dev.tbl_Dept select
new{Department_Id=re.Did,Department_Name=re.DName};   //query
```

3. Select top(2) * from tbl_Dept

```
 var res = dev.tbl_Dept.Take(2).ToList();       //lambda

 var res = from re in dev.tbl_Dept.Take(2) select re;  // query
```

4. select * from tbl_Dept order by Did

```
var res = dev.tbl_Dept.OrderBy(x => x.Did).ToList();//lambda

var res = from re in dev.tbl_Dept orderby (re.Did) select re;//query
```

5. Select * from tbl_Dept order by Did desc

```
var res = from re in dev.tbl_Dept orderby (re.Did) descending select re;   //query

var res = dev.tbl_Dept.OrderByDescending(x => x.Did).ToList();     //lambda
```

6. Select top(1) * from tbl_Dept order by Did desc

```
var res = dev.tbl_Dept.OrderByDescending(x => x.Did).Take(1);     //lambda

var res = from re in dev.tbl_Dept orderby (re.Did) descending select re;
GridView1.DataSource = res.Take(1).ToList();        //query
```

8. Select * from tbl_Dept order by DName, Did

```
var res =dev.tbl_Dept.OrderBy(X => X.DName).OrderBy(X => X.Did);    //lambda
```

```
var res = from re in dev.tbl_Dept orderby (re.DName) orderby (re.Did) select re;
//query
```

9. Select * from tbl_Dept Where Did <= 4

```
var res = dev.tbl_Dept.Where(x => x.Did <= 4);     //lambda
```

```
var res = from re in dev.tbl_Dept where (re.Did <= 4) select re;     //query
```

10. Select * from tbl_Dept Where Did = 4 OR Did = 7

```
var res = dev.tbl_Dept.Where(x => x.Did == 4 || x.Did == 7).ToList();  //lambda
```

```
var res = from re in dev.tbl_Dept where (re.Did == 4 || re.Did == 7) select re;     //query
```

11. select * from tbl_Dept Where Did IN (1, 5, 6)

```
var res = from re in dev.tbl_Dept where (re.Did == 1 || re.Did == 5||re.Did==6) select
re;     //query
```

```
var res = dev.tbl_Dept.Where(x => x.Did == 1 || x.Did == 5||x.Did==6).ToList();
//lambda
```

12. select * from tbl_Dept Where Did <> 3 and Did <> 4

```
var res = dev.tbl_Dept.Where(x => x.Did != 3 && x.Did != 4).ToList(); //lambda
```

```
var res = from re in dev.tbl_Dept where (re.Did != 3 && re.Did != 4) select re;     //query
```

13. select * from tbl_Dept Where Did NOT IN (1, 5, 6)

```
var res = from re in dev.tbl_Dept where (re.Did != 1 && re.Did != 5&& re.Did!=6) select
re;     //query
```

```
var res = dev.tbl_Dept.Where(x => x.Did != 1 && x.Did != 5 && x.Did!=6).ToList();
//lambda
```

14. select * from tbl_Dept Where Did >= 2 and Did <= 4

```
var res = dev.tbl_Dept.Where(x => x.Did>=2 && x.Did<=4).ToList();    //lambda
```

```
var res = from re in dev.tbl_Dept where (re.Did >= 2 && re.Did <=4) select re;     //query
```

15. select * from tbl_Dept Where Did between 2 and 4

var res = from re in dev.tbl_Dept where (re.Did > 2 && re.Did <4) select re;//query

var res = dev.tbl_Dept.Where(x => x.Did>2 && x.Did<4).ToList();

16. select * from tbl_Dept Where Did < 2 and Did > 4

var res = dev.tbl_Dept.Where(x => x.Did<2 || x.Did>4).ToList();   //lambda

var res = from re in dev.tbl_Dept where (re.Did < 2 || re.Did >4) select re;   //query

17. select * from tbl_Dept Where Did not between 2 and 4

var res = dev.tbl_Dept.Where(x => x.Did <= 2 || x.Did >= 4).ToList(); //lambda

var res = from re in dev.tbl_Dept where (re.Did <= 2 || re.Did >= 4) select re;   //query

18. select * from tbl_Dept Where [Description] IS NULL

var res = from re in dev.tbl_Dept where (re.Description =="") select re; //query

var res = dev.tbl_Dept.Where(x => x.Description == "");   //lambda

19. select * from tbl_Dept Where [Description] IS NOT NULL

var res = dev.tbl_Dept.Where(x => x.Description != "");   //lambda

var res = from re in dev.tbl_Dept where (re.Description !="") select re; //query

20. select * from tbl_Emp

var res = from re in dev.tbl_Emp select re;   //query

var res = dev.tbl_Emp;   //lambda

21. select SUM(ESalary) AS SumOfTheSalaries from tbl_Emp

var res = dev.tbl_Emp.Sum(x => x.ESalary);//lambda

var res = (from re in dev.tbl_Emp select re.ESalary).Sum(); //query

22. select AVG(ESalary) AS SumOfTheSalaries from tbl_Emp

var res = dev.tbl_Emp.Average(x => x.ESalary);//lambda

var res = (from re in dev.tbl_Emp select re.ESalary).Average();//query

23. select MAX(ESalary) AS SumOfTheSalaries from tbl_Emp

var res = dev.tbl_Emp.Max(x => x.ESalary);//lambda

var res = (from re in dev.tbl_Emp select re.ESalary).Max();//query

24. select MIN(ESalary) AS SumOfTheSalaries from tbl_Emp

var res = dev.tbl_Emp.Min(x => x.ESalary); //lambda

var res = (from re in dev.tbl_Emp select re.ESalary).Min(); //query

25. select Eid, EName, ESalary from tbl_Emp

var res= dev.tbl_Emp.Select(x=>new{x.Eid,x.EName,x.ESalary}); //lambda

var res = from re in dev.tbl_Emp select new { re.Eid, re.EName, re.ESalary };   //query

26. select Eid, EName, ESalary * 0.38 AS HRA from tbl_Emp

var res = dev.tbl_Emp.Select(x => new { x.Eid, x.EName, HRA = x.ESalary * 0.38 }).ToList(); //lambda

var res=(from re in dev.tbl_Emp select new{re.Eid,re.EName,HRA=re.ESalary*0.38}).ToList(); //query

27. select Eid, EName, ESalary * 0.38 AS HRA, ESalary + (ESalary * 0.38) As GS

from tbl_Emp

var res = dev.tbl_Emp.Select(x => new { x.Eid, x.EName, HRA = x.ESalary * 0.38, GS = x.ESalary + (x.ESalary * 0.38) }).ToList(); //lambda

 var res = (from re in dev.tbl_Emp select new { re.Eid, re.EName, HRA = re.ESalary * 0.38, GS = re.ESalary + (re.ESalary * 0.38) }).ToList(); //query

28. select * from tbl_Emp where EName like '%l'

```
var res = from re in dev.tbl_Emp where (re.EName.EndsWith("l")) select re; //query

var res = dev.tbl_Emp.Where(x => x.EName.EndsWith("l"));  //lambda
```

29. select * from tbl_Emp where EName like 'rah%'

```
var res = dev.tbl_Emp.Where(x => x.EName.StartsWith("rah")); //lambda

var res = from re in dev.tbl_Emp where (re.EName.StartsWith("rah")) select re;  //lambda
```

30. select COUNT(*) from tbl_Emp where EGender = 'F'

```
var res = dev.tbl_Emp.Where(x => x.EGender == "F").Count();//lambda

var res=(from re in dev.tbl_Emp where(re.EGender=="F") select re).Count();  //query
```

31. select COUNT(*) NoOfEmp, EGender from tbl_Emp Group By EGender

```
var res = dev.tbl_Emp.GroupBy(x => x.EGender).Select(y => new { EGender = y.Key,
count = y.Count() });  //lambda

var res = from c in dev.tbl_Emp

        group c by c.EGender into g

        select new { EGender = g.Key, count = g.Count() }; //query
```

32. select COUNT(*) NoOfEmp, Did from tbl_Emp Group By Did

```
var res=dev.tbl_Emp.GroupBy(x=>x.Did)

     .Select(y=> new{Did=y.Key,numberofemp=y.Count()});  //lambda

var res = from re in dev.tbl_Emp group re by re.Did into k

        select new { Did = k.Key, numberofemp = k.Count() };  //query
```

33. select SUM(ESalary) SumOfSal, Did from tbl_Emp Group By Did

```
var res = dev.tbl_Emp.GroupBy(x => x.Did).Select(y =>

        new { Did = y.Key, sumofsalary = y.Sum(z => z.ESalary) });  //lambda
```

```
var res = from re in dev.tbl_Emp

        group re by re.Did into k

        select new { Did = k.Key, sumofsalary = k.Sum(g =>      g.ESalary) };   //query
```

34. select SUM(ESalary) SumOfSal, EGender from tbl_Emp Group By EGender

```
var res = dev.tbl_Emp.GroupBy(x => x.EGender).Select(y =>

        new { EGender = y.Key, Sumofsalary = y.Sum(z => z.ESalary) }); //lambda

var res = from re in dev.tbl_Emp

        group re by re.EGender into k

        select new { EGender = k.Key, sumofsalary = k.Sum(g => g.ESalary) }; //query
```

35. select SUM(ESalary) SumOfSal, EGender, Did from tbl_Emp Group By Did,

EGender Having Sum(ESalary) >= 20000

```
var res = dev.tbl_Emp.GroupBy(x => new { x.Did, x.EGender }).Select(y => new {
EGender = y.Key.EGender,Did = y.Key.Did, Sumofsalary = y.Sum(z => z.ESalary)
}).Where(s => s.Sumofsalary > 20000);  //lambda

var res = (from re in dev.tbl_Emp group re by new { re.Did, re.EGender }
into k select new { EGender = k.Key.EGender, Did = k.Key.Did, sumofsalary = k.Sum(z =>
z.ESalary) }).Where(z => z.sumofsalary > 20000); //query
```

36. select E.Eid,E.EName,D.DName from tbl_Emp E join tbl_Dept D on

E.Did=D.Did

```
var res = from dep in dev.tbl_Dept join emp in dev.tbl_Emp on dep.Did

        equals emp.Eid select new { emp.Eid, emp.EName, dep.DName };    //query

var res=dev.tbl_Dept.Join(dev.tbl_Emp,x=>x.Did,y=>y.Eid,(x,y)=>

        new{y.Eid,y.EName,x.DName}).ToList();  //lambda
```