(T26)討論 LinqPad 輔助軟體
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(T26)討論 LinqPad 輔助軟體
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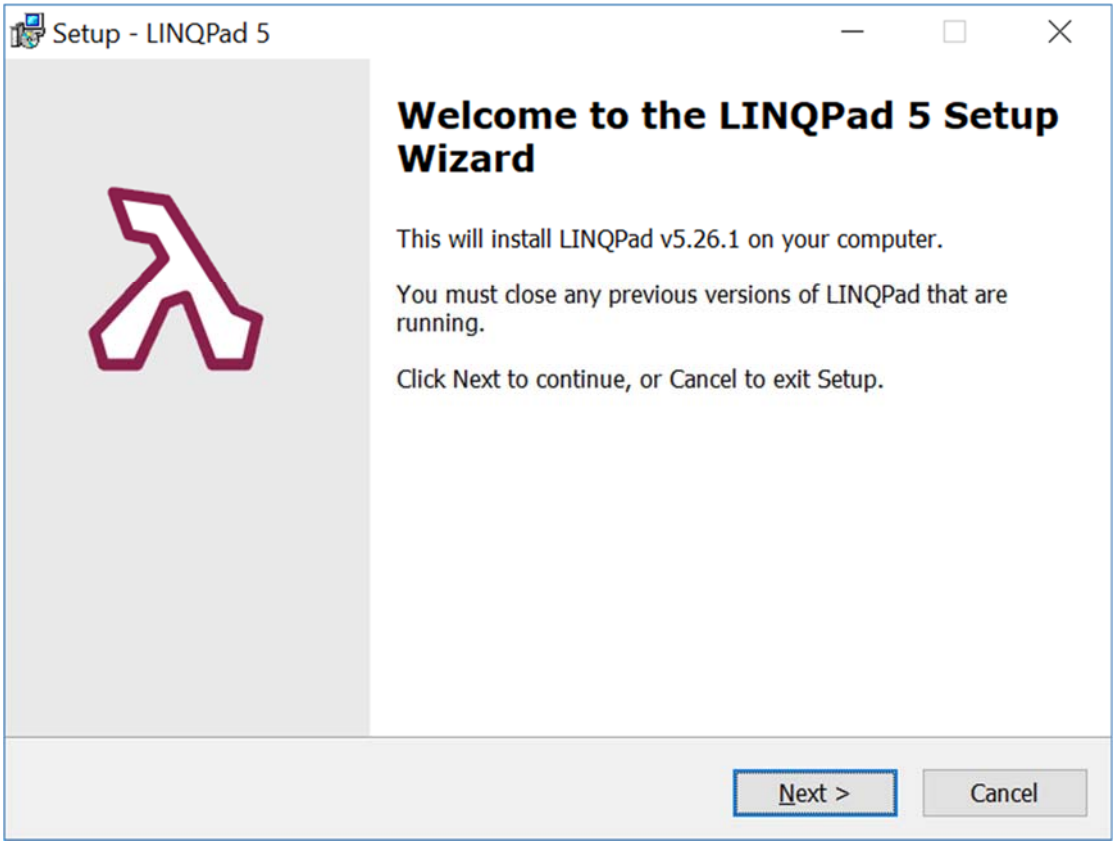
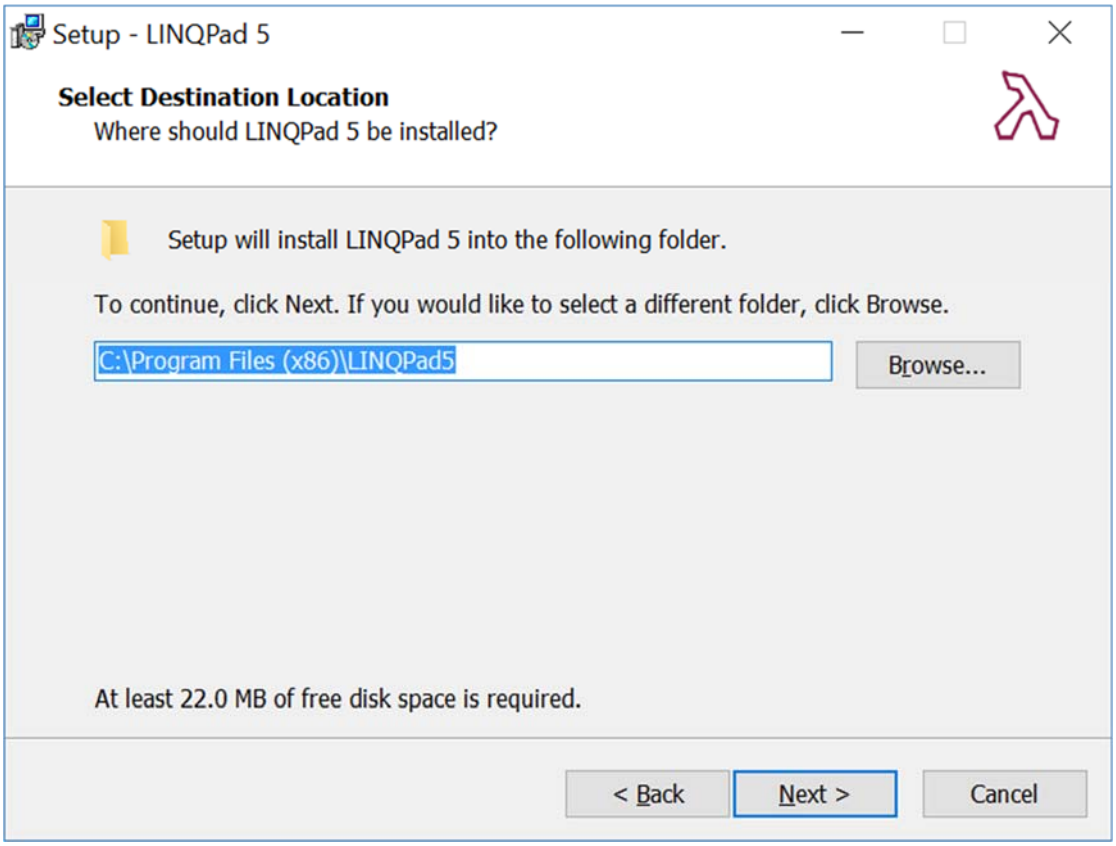
0. Summary

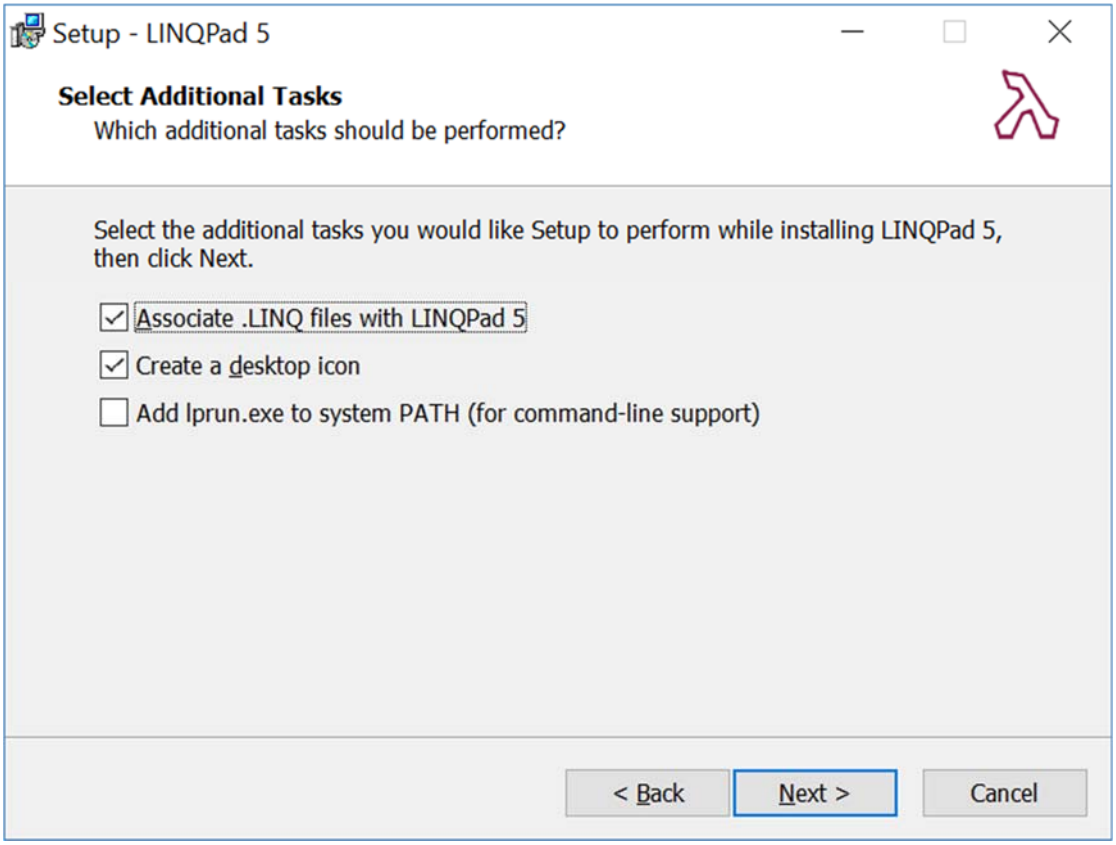
* 我的 Linq 課程最後一堂課 Linqpad，LinqPad 的 免費版 功能其實蠻陽春的，
但是因為我平常都在用 Resharper，所以其實 LinqPad 我真的還蠻少用的，
因此免費版已經算是夠我用的。這個 video 我使用了免費版來介紹 Linqpad 功能，
如果你覺得 auto complete 功能對你很重要，就花個 USD45 可以買單機版。
該 tutorial 介紹了 Sql like Linq Query 轉成 Lambda expression linq query，
也介紹了 Linq 轉成 sql (其實我通常都是用 sql profiler 來看更多資訊)

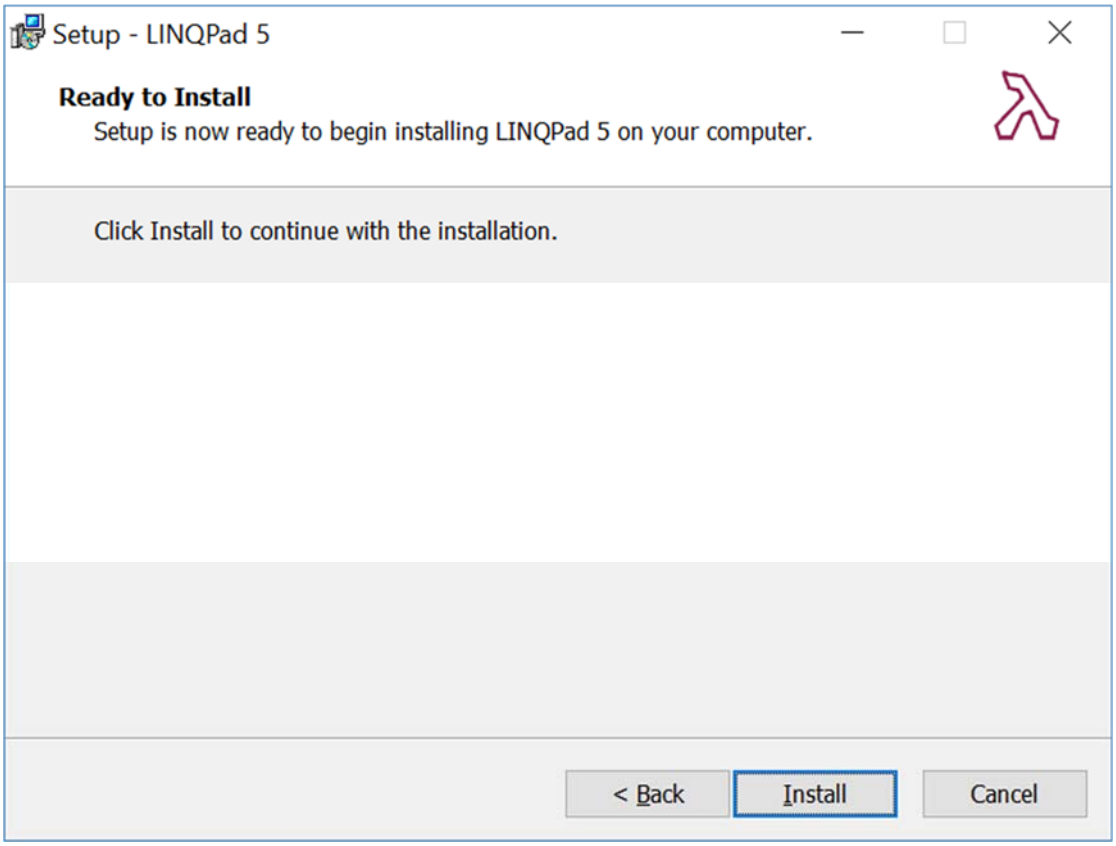
1. Download Linqpad

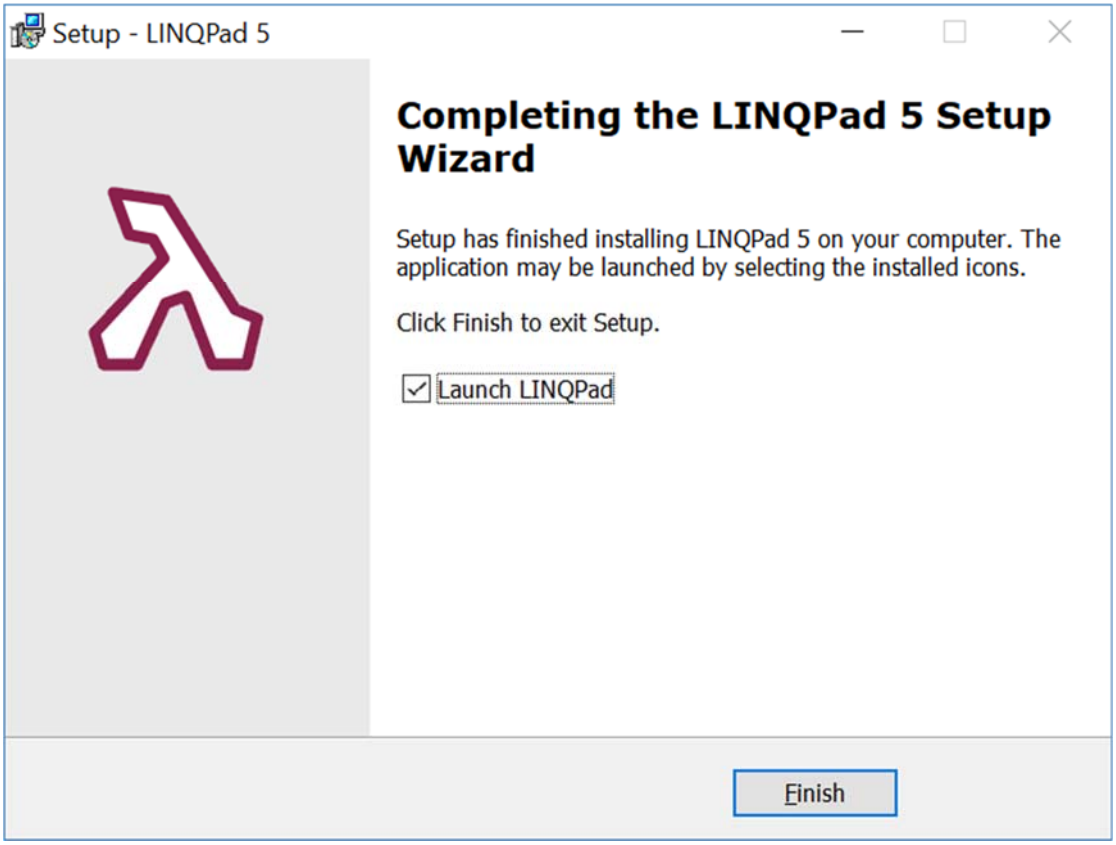
https://www.linqpad.net/


Setup - LINQPad 5
Welcome to the LINQPad 5 Setup Wizard
This will install LINQPad v5.26.1 on your computer.
You must close any previous versions of LINQPad that are running.
Click Next to continue, or Cancel to exit Setup.
Next >
Cancel


Setup - LINQPad 5
Select Destination Location
Where should LINQPad 5 be installed?
Setup will install LINQPad 5 into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
C:\Program Files (x86)\LINQPad5
Browse...
At least 22.0 MB of free disk space is required.
< Back
Next >
Cancel

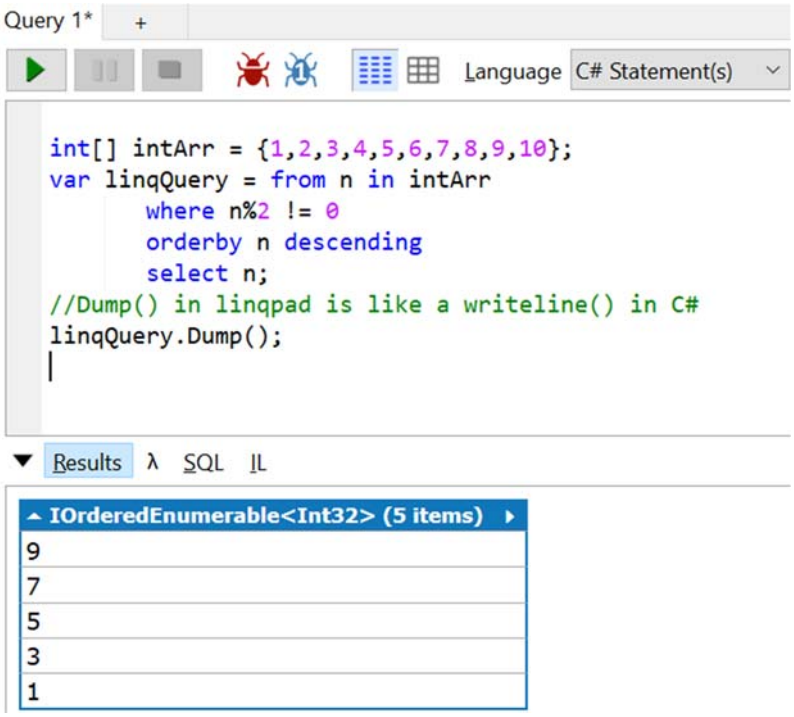

Setup - LINQPad 5
Select Additional Tasks
Which additional tasks should be performed?
Select the additional tasks you would like Setup to perform while installing LINQPad 5, then click Next.
Associate .LINQ files with LINQPad 5
Create a desktop icon
Add lprun.exe to system PATH (for command-line support)
< Back
Next >
Cancel

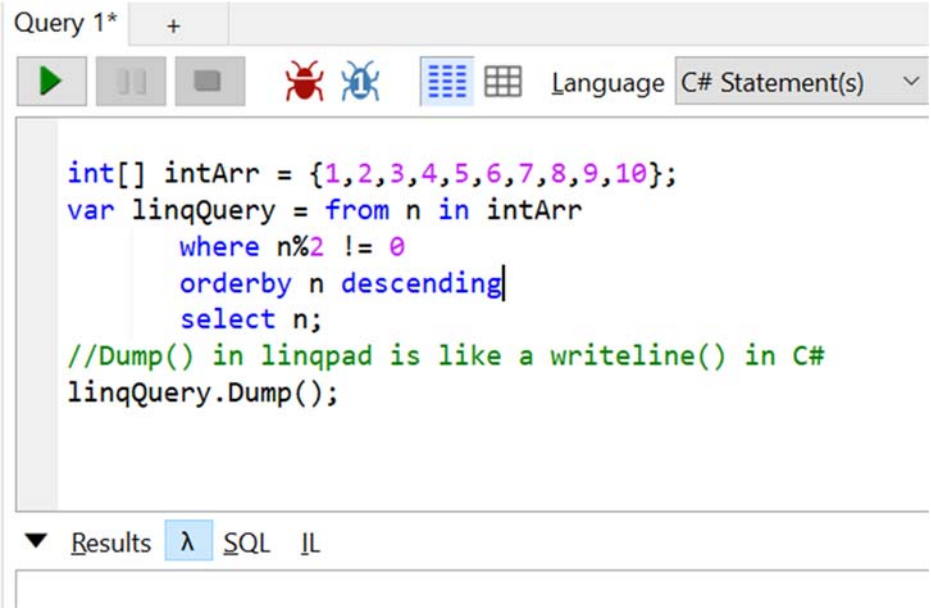

Setup - LINQPad 5
Ready to Install
Setup is now ready to begin installing LINQPad 5 on your computer.
Click Install to continue with the installation.
< Back
Install
Cancel



2. LinqPad Introduction

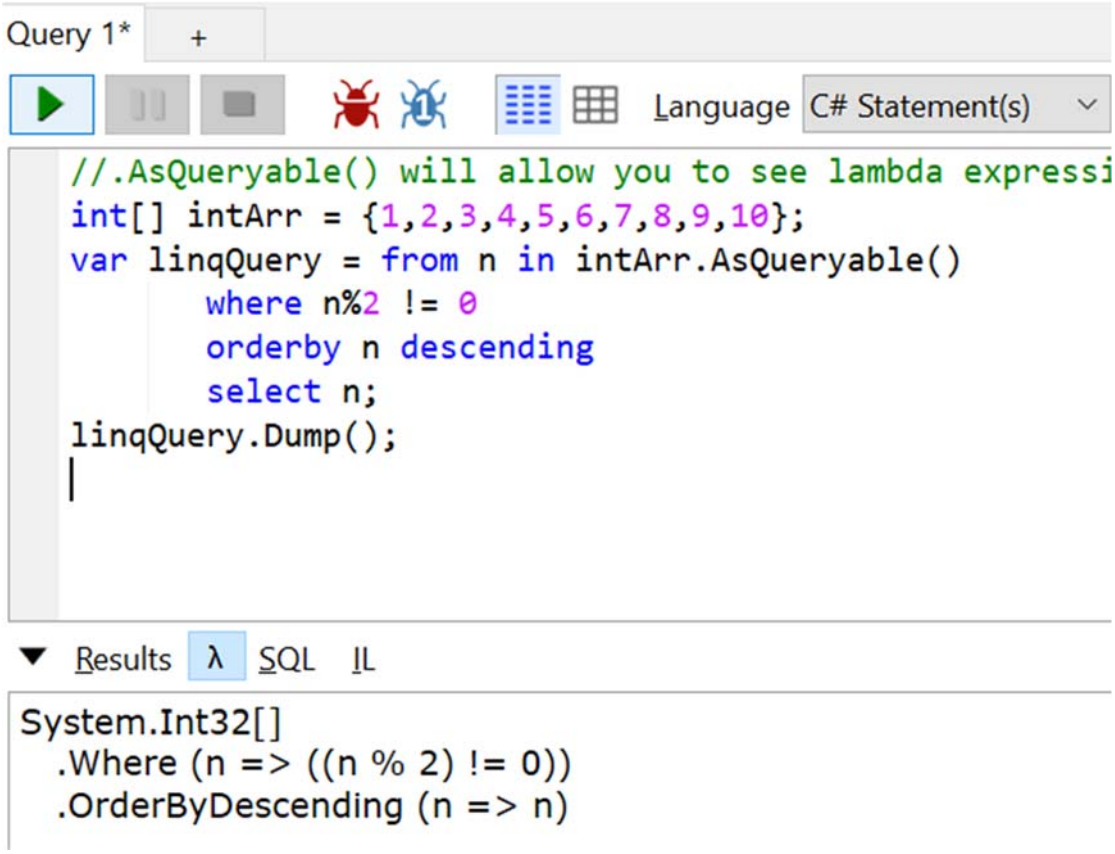
```
int[] intArr = {1,2,3,4,5,6,7,8,9,10};
var linqQuery = from n in intArr
        where n%2 != 0
        orderby n descending
        select n;
//Dump() in linqpad is like a writeline() in C#
linqQuery.Dump();
```



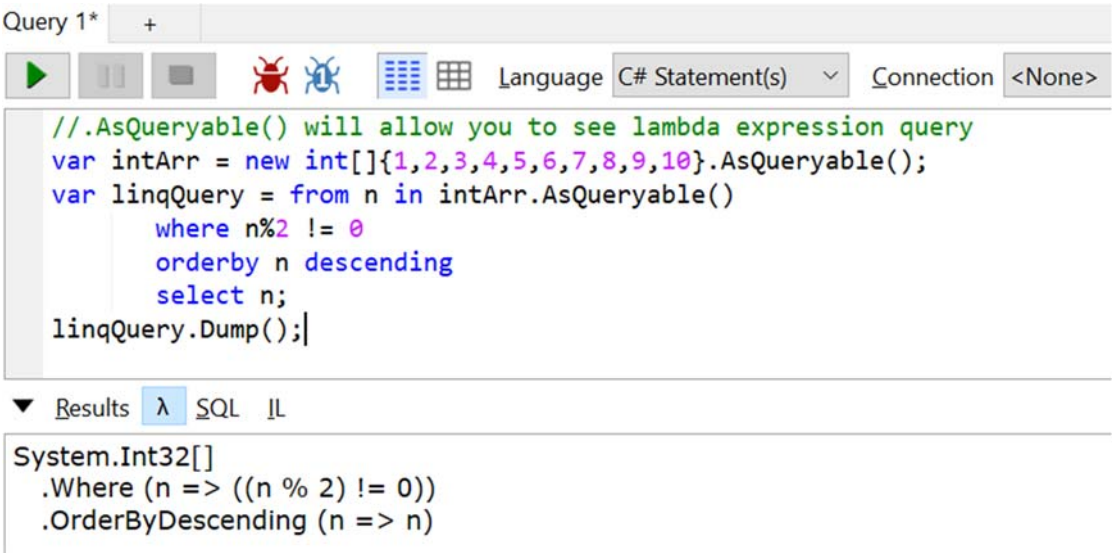


//.AsQueryable() will allow you to see lambda expression query

```
int[] intArr = {1,2,3,4,5,6,7,8,9,10};
var linqQuery = from n in intArr.AsQueryable()
        where n%2 != 0
        orderby n descending
        select n;
linqQuery.Dump();
```



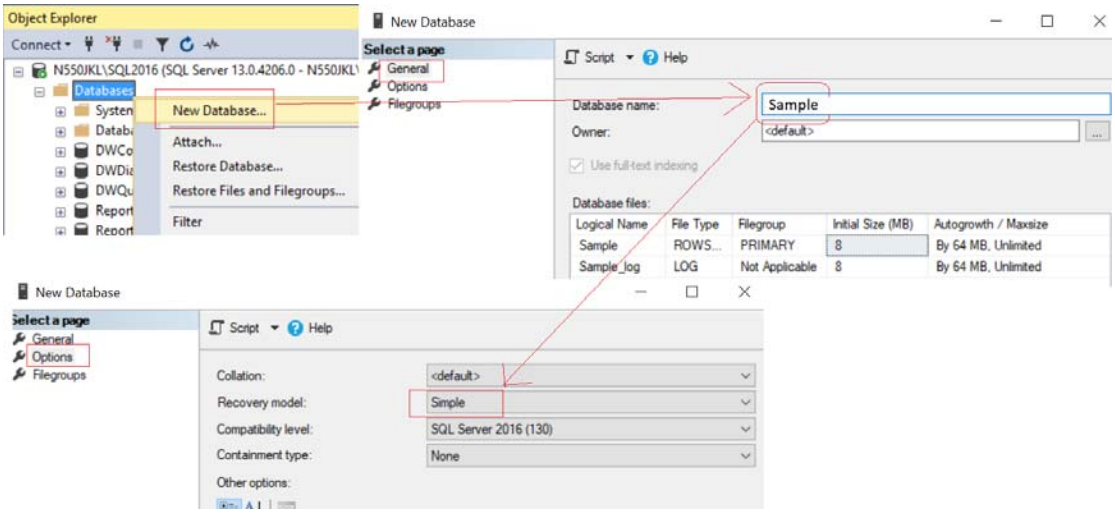

```
//.AsQueryable() will allow you to see lambda expression query
var intArr = new int[]{1,2,3,4,5,6,7,8,9,10}.AsQueryable();
var linqQuery = from n in intArr.AsQueryable()
       where n%2 != 0
       orderby n descending
       select n;
linqQuery.Dump();
```



3. LinqPad : Linq to Sql

3.1. TSQL

Database --> Right Click --> New Database -->
Database Name : Sample
Options --> Recovery Model : Simple



--Create a Sample DataBase and Run the following TSQL

```
/*
1.
One Team can have many Gamers
One Gamer can have One Team.
This is One to Many Relationship.
2.
Team Id==4 has no Gamer.
Gamer Id==7 has no Team.
*/
--1 ------------------------------------------------------------
--Drop Table if it exists.
--IF OBJECT_ID('Gamer') IS NOT NULL
IF ( EXISTS ( SELECT    *
              FROM      INFORMATION_SCHEMA.TABLES
              WHERE     TABLE_NAME = 'Gamer' ) )
    BEGIN
        TRUNCATE TABLE Gamer;
        DROP TABLE Gamer;
    END;
GO -- Run the previous command and begins new batch
--Drop Table if it exists.
--IF OBJECT_ID('Team') IS NOT NULL
IF ( EXISTS ( SELECT    *
              FROM      INFORMATION_SCHEMA.TABLES
              WHERE     TABLE_NAME = 'Team' ) )
    BEGIN
        TRUNCATE TABLE Team;
        DROP TABLE Team;
    END;
GO -- Run the previous command and begins new batch
--Create Tables
CREATE TABLE Team
    (
      Id INT PRIMARY KEY
```

```
            IDENTITY ,
      Name NVARCHAR(100) ,
      Type NVARCHAR(100)
    );
GO -- Run the previous command and begins new batch
CREATE TABLE Gamer
    (
      Id INT PRIMARY KEY
            IDENTITY ,
      Name NVARCHAR(50) ,
      Gender NVARCHAR(50) ,
      Score INT ,
      Type NVARCHAR(50) ,
      TeamId INT FOREIGN KEY REFERENCES Team ( Id )
    );
GO -- Run the previous command and begins new batch
--2 ------------------------------------------------------------
--Insert Data
INSERT  INTO Team
VALUES  ( 'Team1_Guardian', 'Guardian' );
INSERT  INTO Team
VALUES  ( 'Team2_Assassinator', 'Assassinator' );
INSERT  INTO Team
VALUES  ( 'Team3_Soldier', 'Soldier' );
INSERT  INTO Team
VALUES  ( 'Team4_Civilian', 'Civilian' );
GO -- Run the previous command and begins new batch
INSERT  INTO Gamer
VALUES  ( 'Name1 ABC', 'Male', 5000, 'Water', 1 );
INSERT  INTO Gamer
VALUES  ( 'Name2 ABCDE', 'Female', 4500, 'Fire', 3 );
INSERT  INTO Gamer
VALUES  ( 'Name3 EFGH', 'Male', 6500, 'Fire', 2 );
INSERT  INTO Gamer
VALUES  ( 'Name4 HIJKLMN', 'Female', 45000, 'Water', 2 );
INSERT  INTO Gamer
VALUES  ( 'Name5 NOP', 'Male', 3000, 'Wood', 1 );
INSERT  INTO Gamer
VALUES  ( 'Name6 PQRSTUVW', 'Male', 4000, 'Earth', 3 );
INSERT  INTO Gamer
VALUES  ( 'Name7 XYZ', 'Male', 4500, 'Metal', NULL );
GO -- Run the previous command and begins new batch
```

3.2. Set up SQL Authentication

In SQL server

Object Explorer --> Security --> Logins --> New Logins

-->

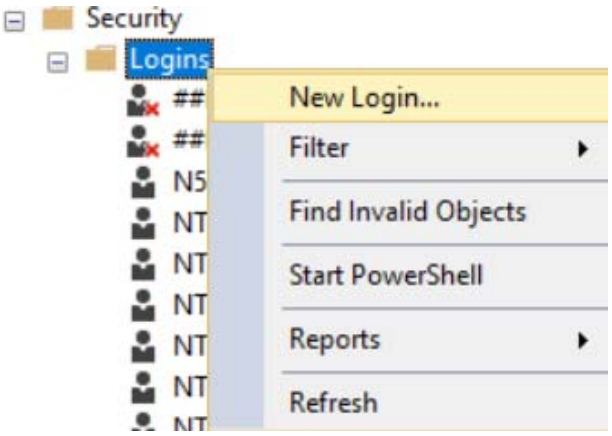
General Tab

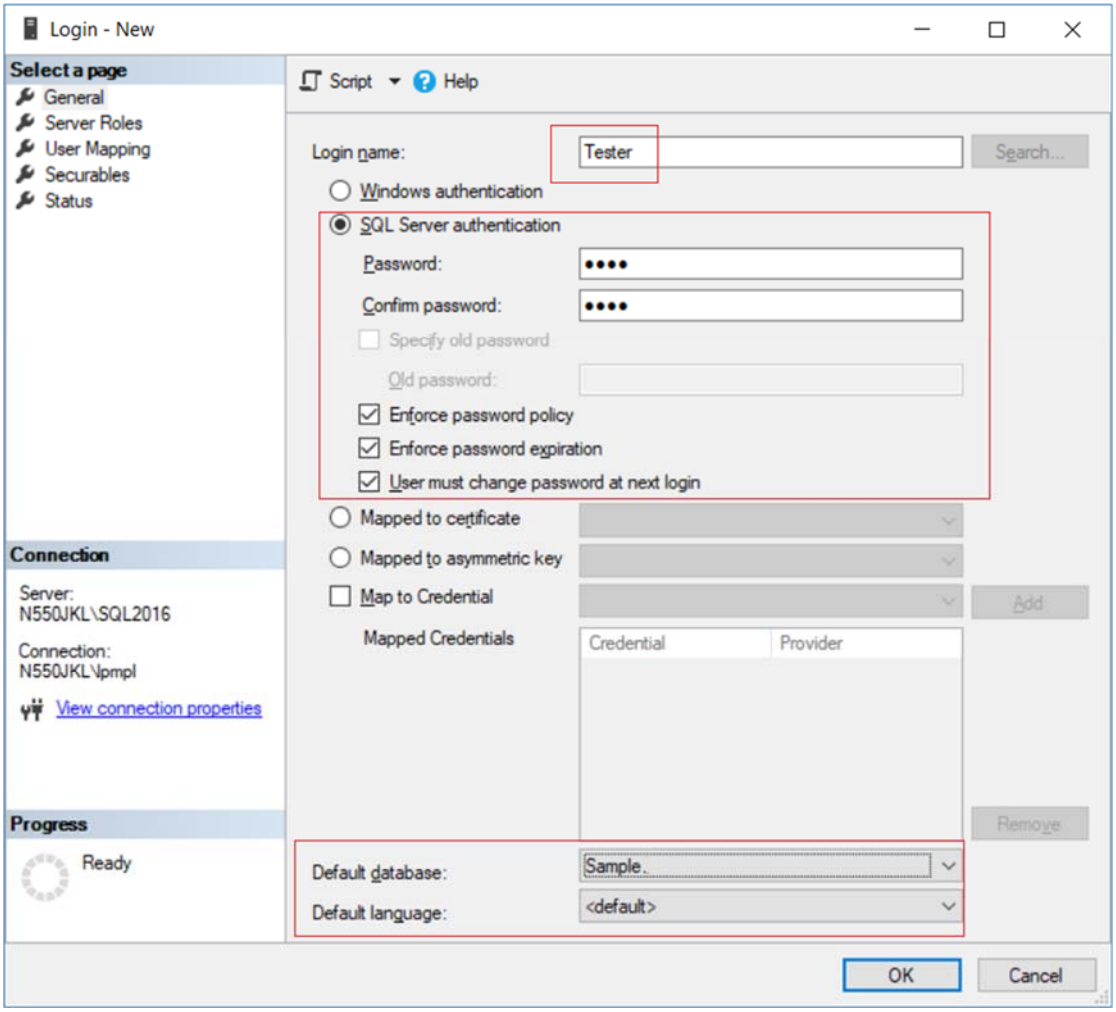
Login Name :

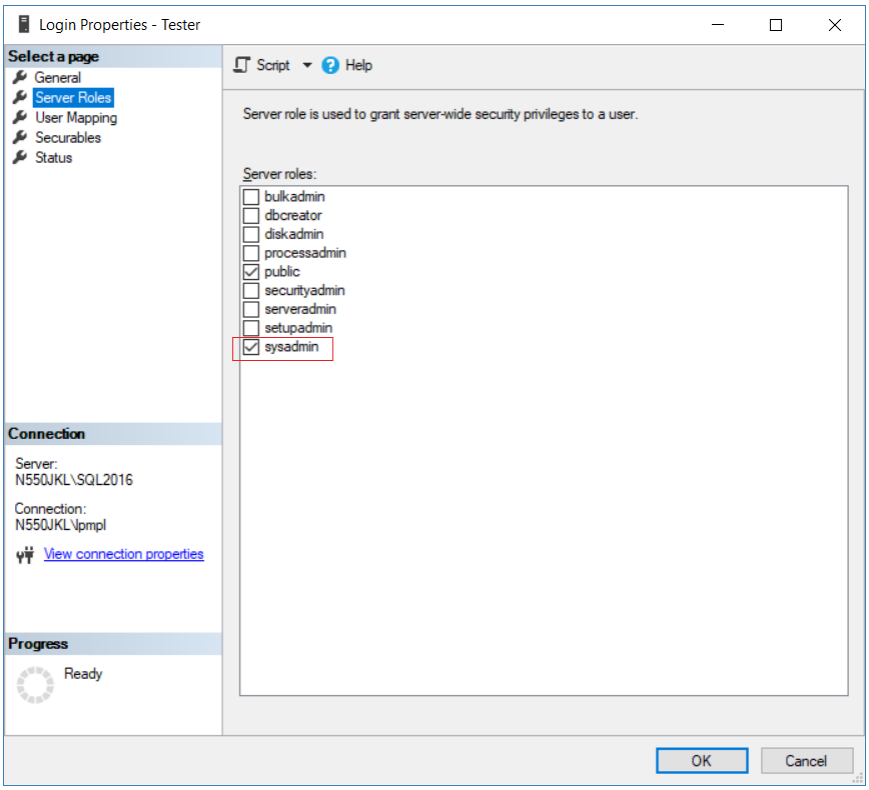
Tester

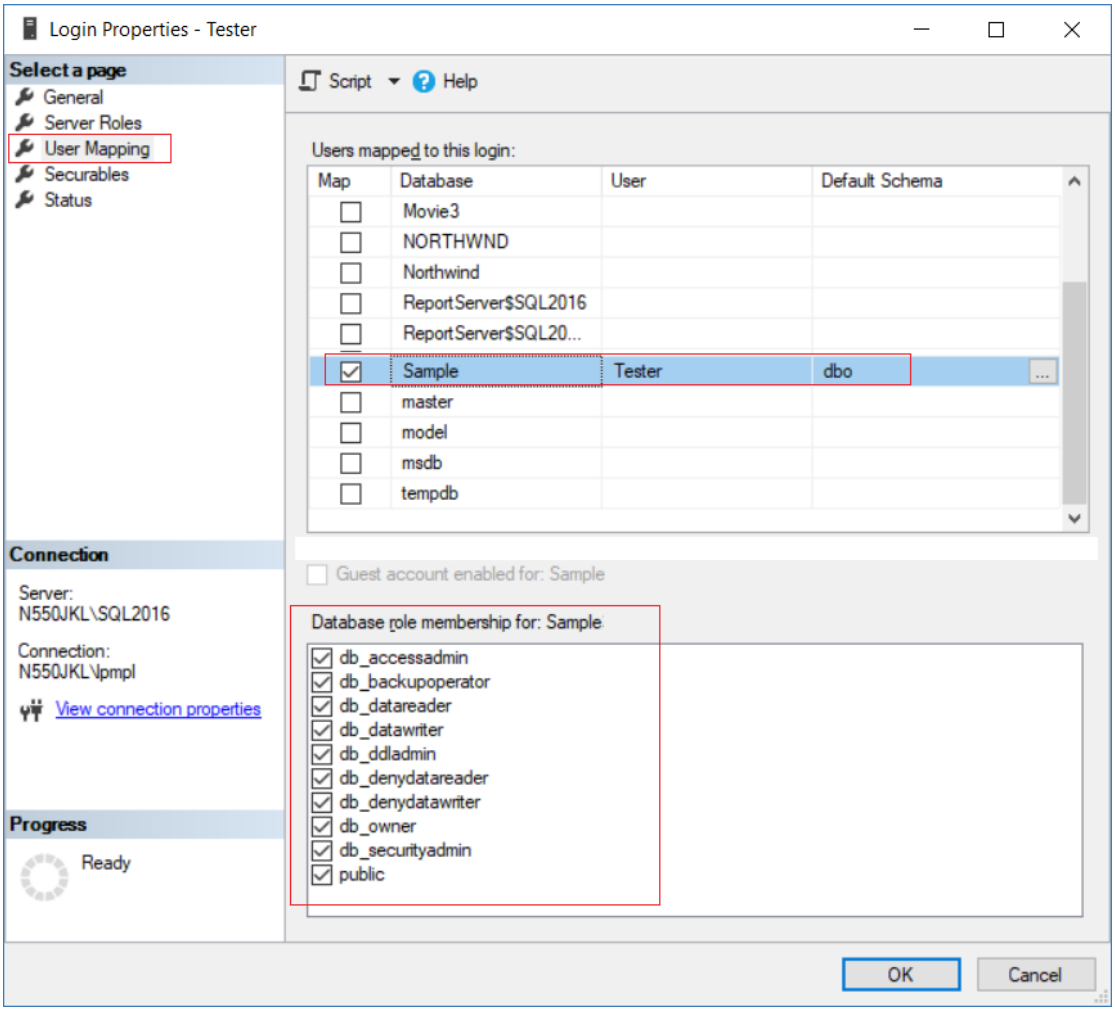
Password:

1234
Default Database:
Sample
-->
Server Roles Tab
Select
sysadmin
-->
User Mapping Tab
Select **Sample**
Select every Roles.

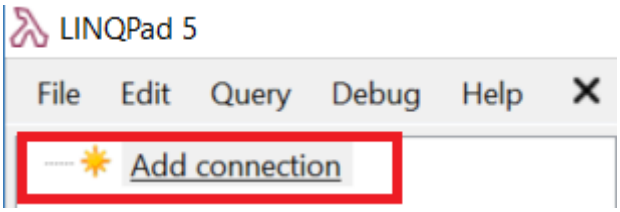


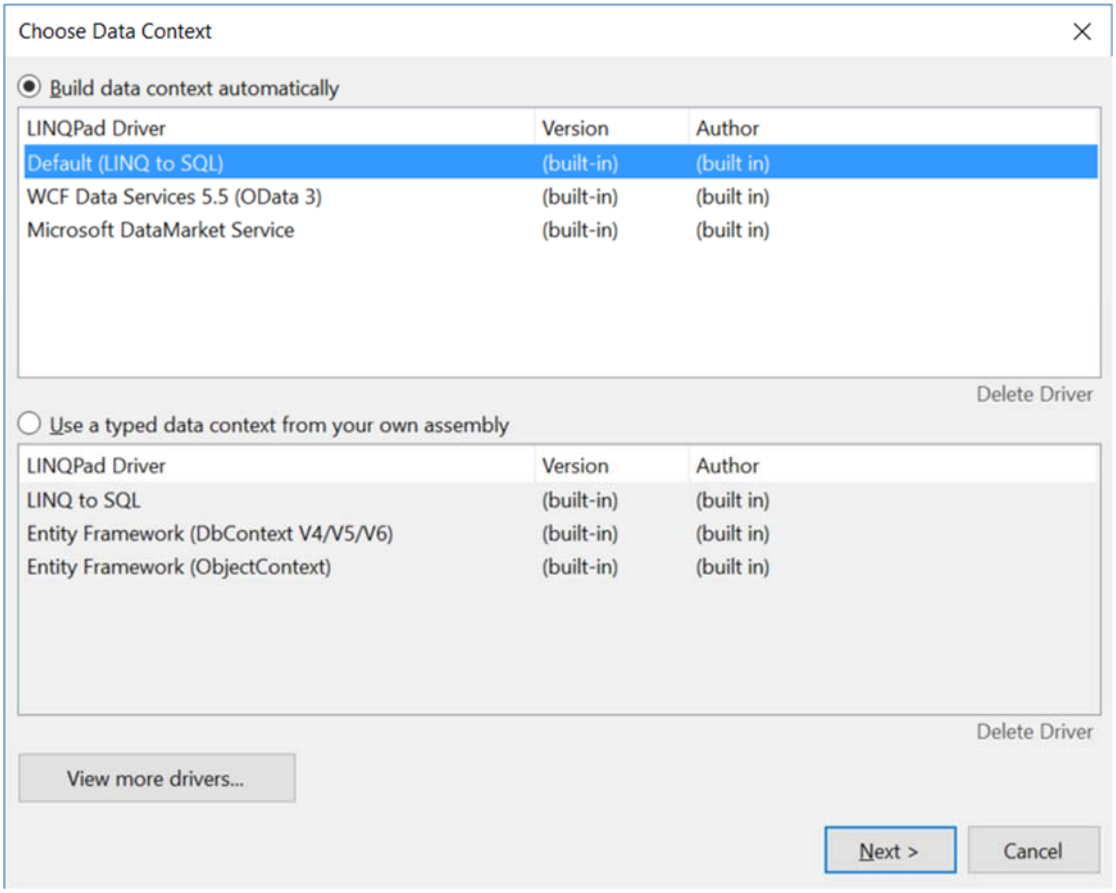

Login - New
Select a page
General
Server Roles
User Mapping
Securables
Status
Script
Help
Login name:
Tester
Search...
Windows authentication
SQL Server authentication
Password:
Confirm password:
Specify old password
Old password:
Enforce password policy
Enforce password expiration
User must change password at next login
Mapped to certificate
Mapped to asymmetric key
Map to Credential
Add
Mapped Credentials
Credential
Provider
Remove
Default database:
Sample
Default language:
<default>
Connection
Server:
N550JKL\SQL2016
Connection:
N550JKL\lpmpl
View connection properties
Progress
Ready
OK
Cancel

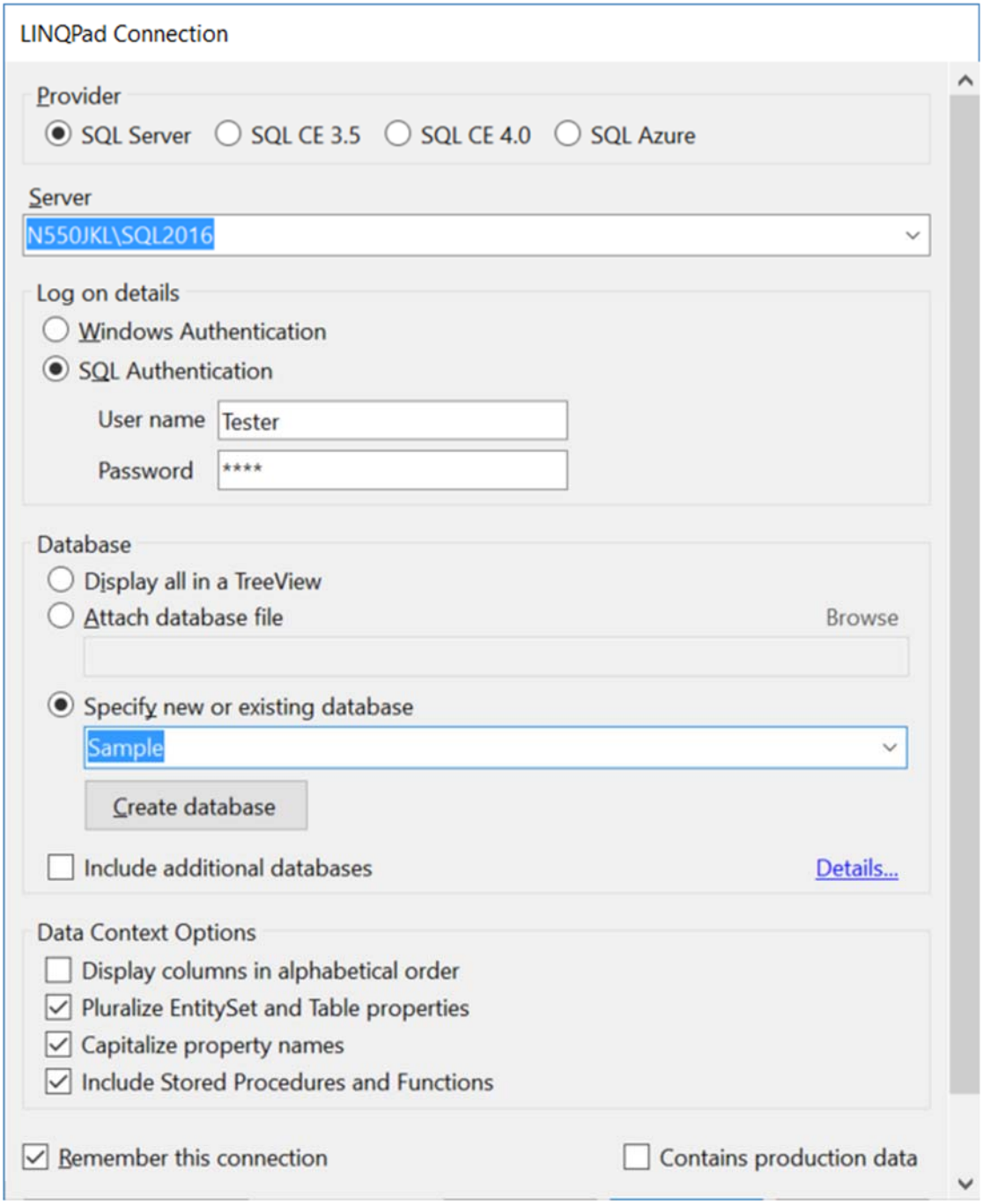

Login Properties - Tester
Select a page
General
Server Roles
User Mapping
Securables
Status
Script
Help
Server role is used to grant server-wide security privileges to a user.
Server roles:
bulkadmin
dbcreator
diskadmin
processadmin
public
securityadmin
serveradmin
setupadmin
sysadmin
Connection
Server:
N550JKL\SQL2016
Connection:
N550JKL\lpmpl
View connection properties
Progress
Ready
OK
Cancel

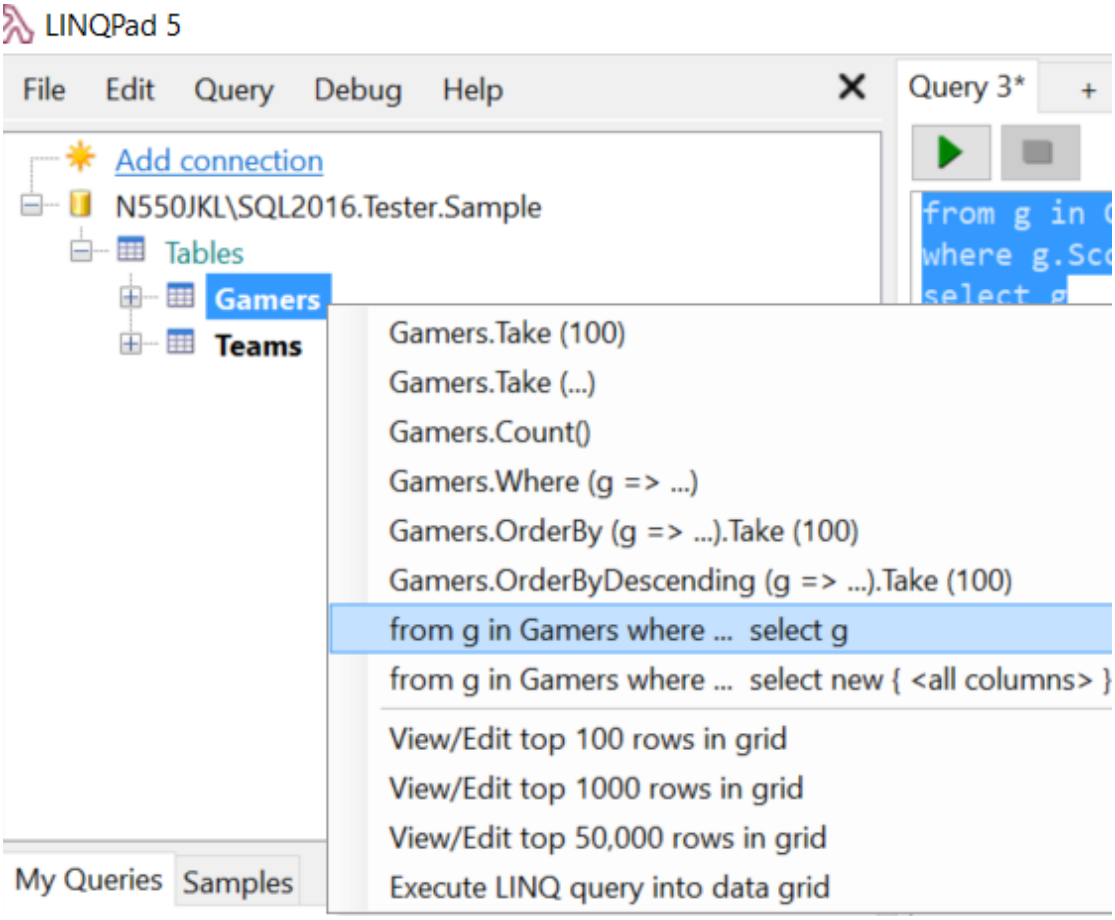


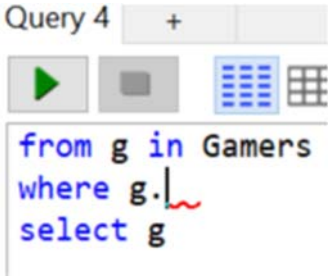
3.3. Set up Linqpad



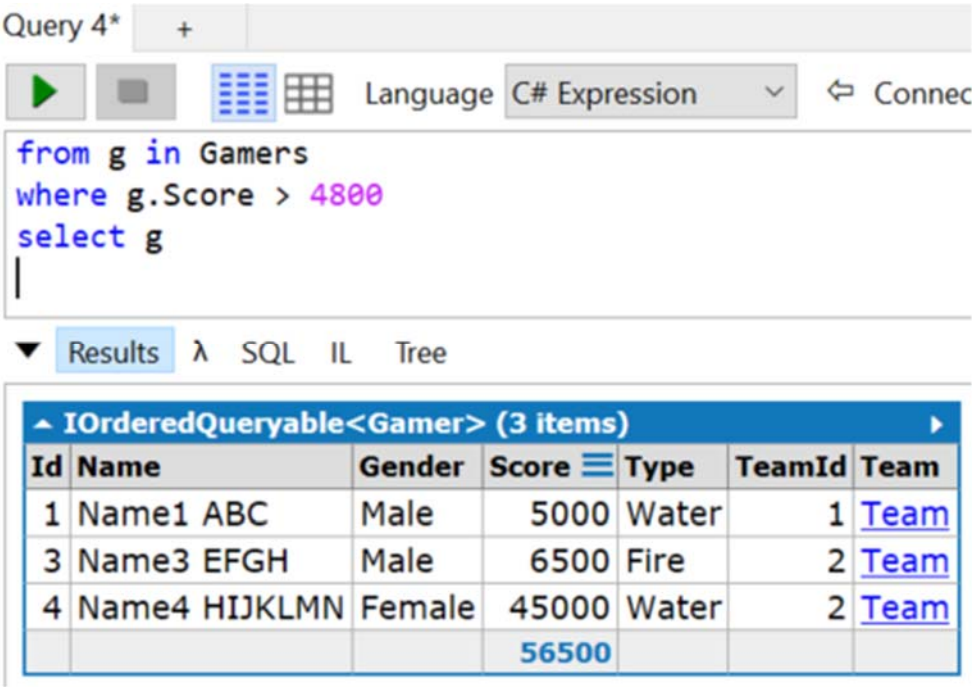

Choose Data Context
Build data context automatically
LINQPad Driver
Version
Author
Default (LINQ to SQL)
(built-in)
(built in)
WCF Data Services 5.5 (OData 3)
(built-in)
(built in)
Microsoft DataMarket Service
(built-in)
(built in)
Delete Driver
Use a typed data context from your own assembly
LINQPad Driver
Version
Author
LINQ to SQL
(built-in)
(built in)
Entity Framework (DbContext V4/V5/V6)
(built-in)
(built in)
Entity Framework (ObjectContext)
(built-in)
(built in)
Delete Driver
View more drivers...
Next >
Cancel


LINQPad Connection
Provider
SQL Server
SQL CE 3.5
SQL CE 4.0
SQL Azure
Server
N550JKL\SQL2016
Log on details
Windows Authentication
SQL Authentication
User name
Tester
Password
****
Database
Display all in a TreeView
Attach database file
Browse
Specify new or existing database
Sample
Create database
Include additional databases
Details...
Data Context Options
Display columns in alphabetical order
Pluralize EntitySet and Table properties
Capitalize property names
Include Stored Procedures and Functions
Remember this connection
Contains production data






```
from g in Gamers
where g.Score > 4800
select g
```



Id	Name	Gender	Score	Type	TeamId	Team
1	Name1 ABC	Male	5000	Water	1	Team
3	Name3 EFGH	Male	6500	Fire	2	Team
4	Name4 HIJKLMN	Female	45000	Water	2	Team
			56500