



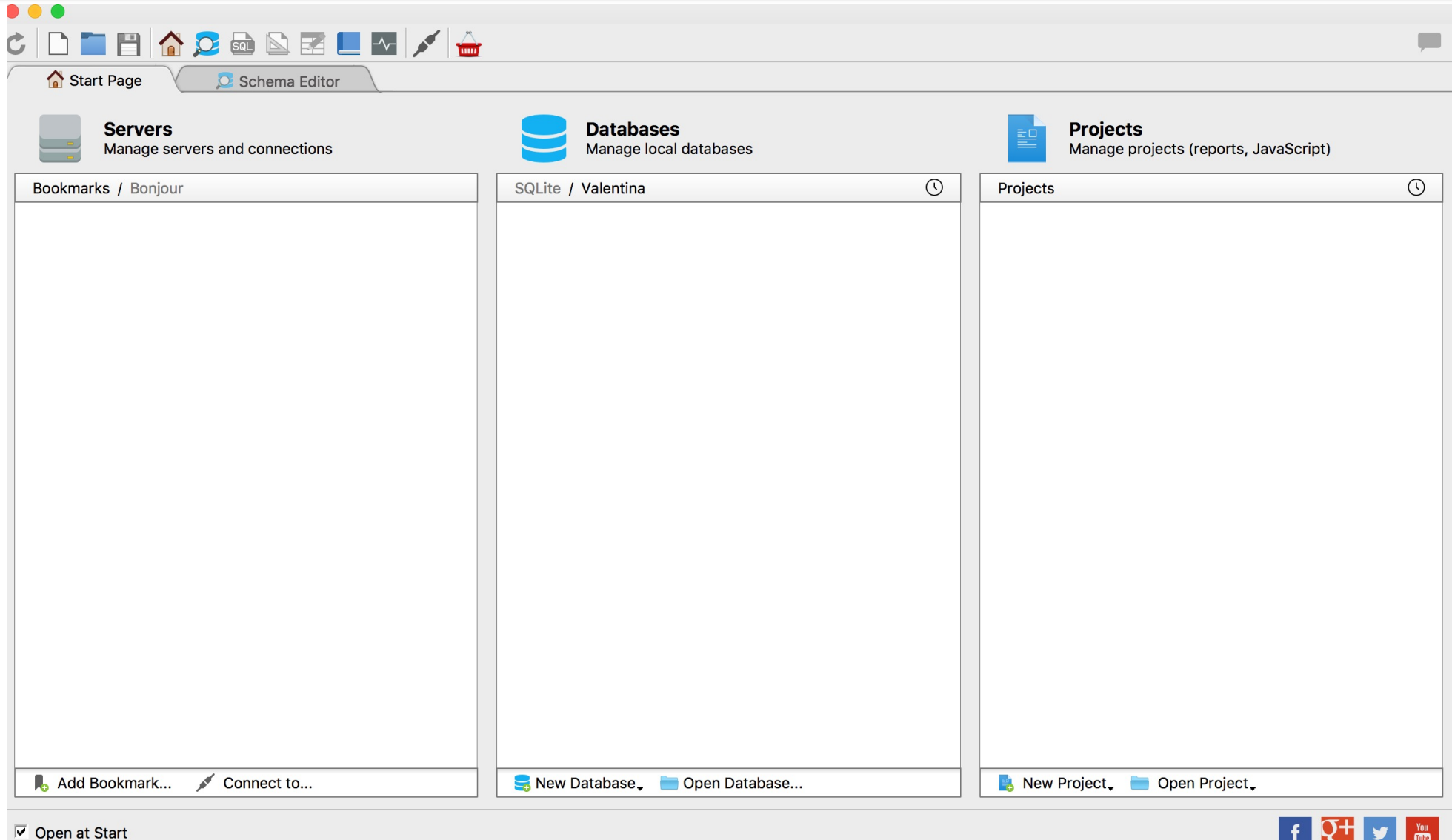
Introduction to Relational Databases

Valentino Software Installation and Database Access
Class Instructor: Bijoy Bora

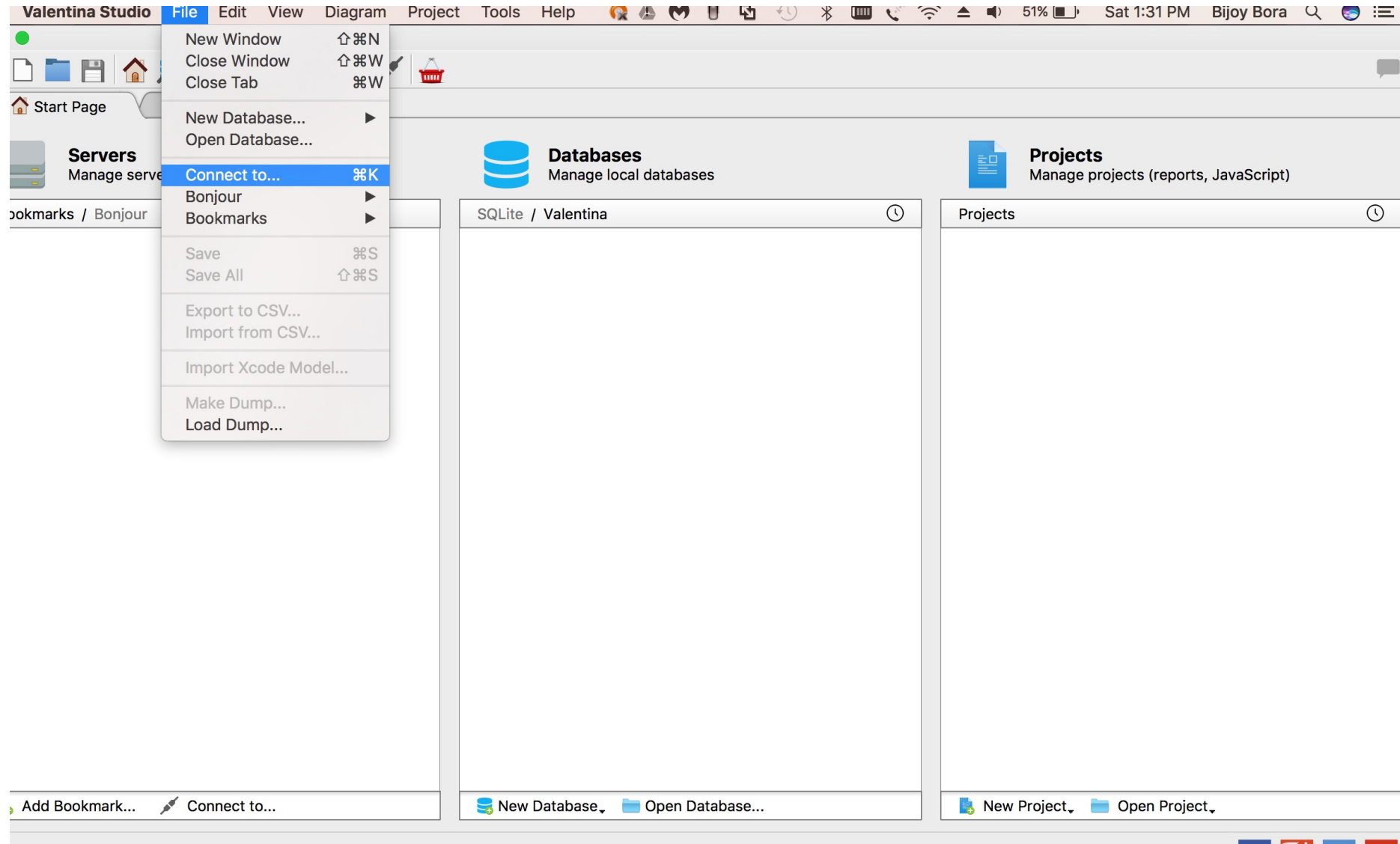
Accessing PetStore Database

- The following slides steps through how to connect to the MSSQL database using the Valentino Software.
- And shows the steps to query the first question of the Sample PetStore queries discussed in the class

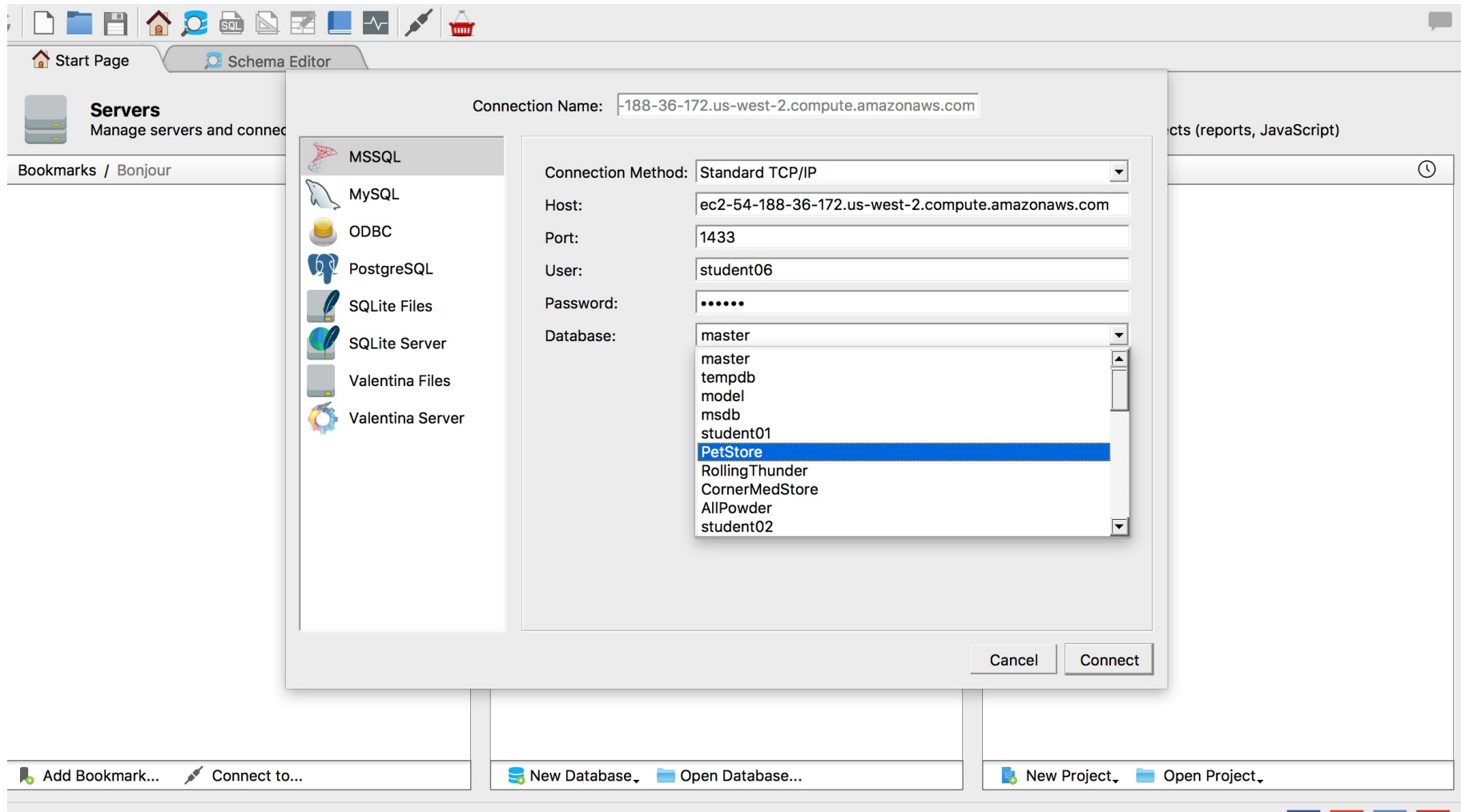
Open Valentino app



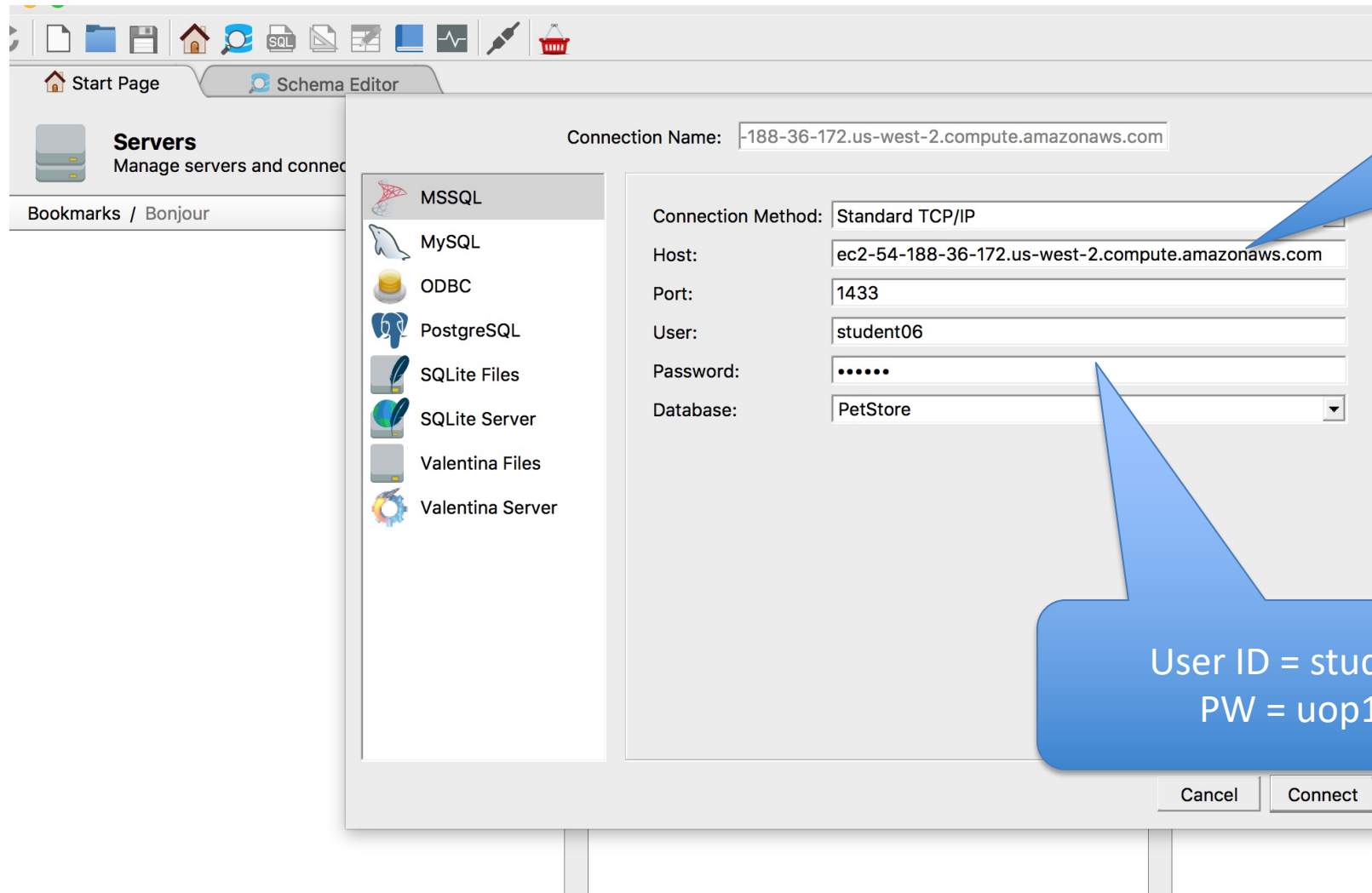
Connect to MSSQL



Enter connection details



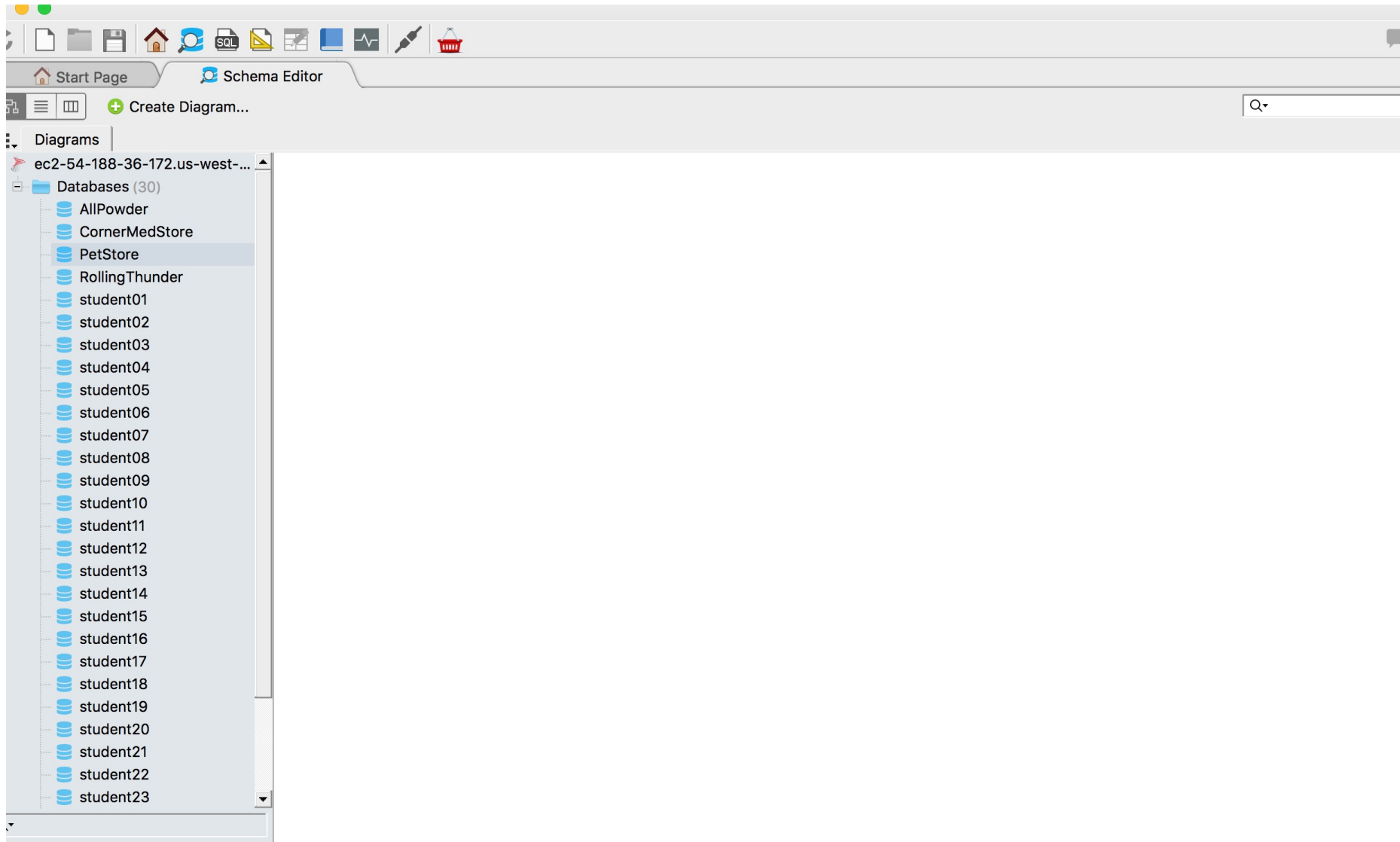
Select 'PetStore' as database



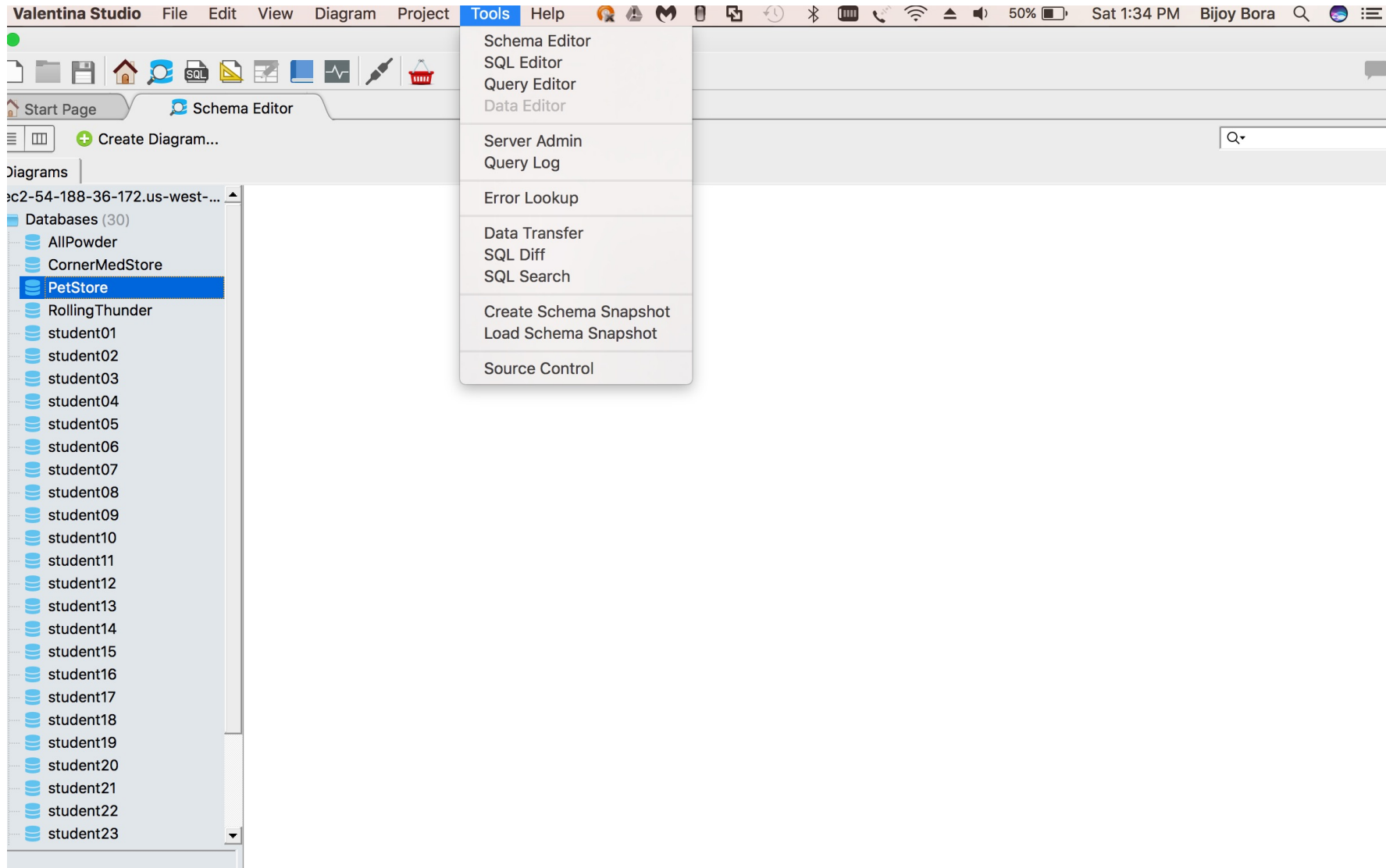
Server name =
ec2-54-148-238-113.us-west-
2.compute.amazonaws.com, 1433

User ID = studentxx
PW = uop123

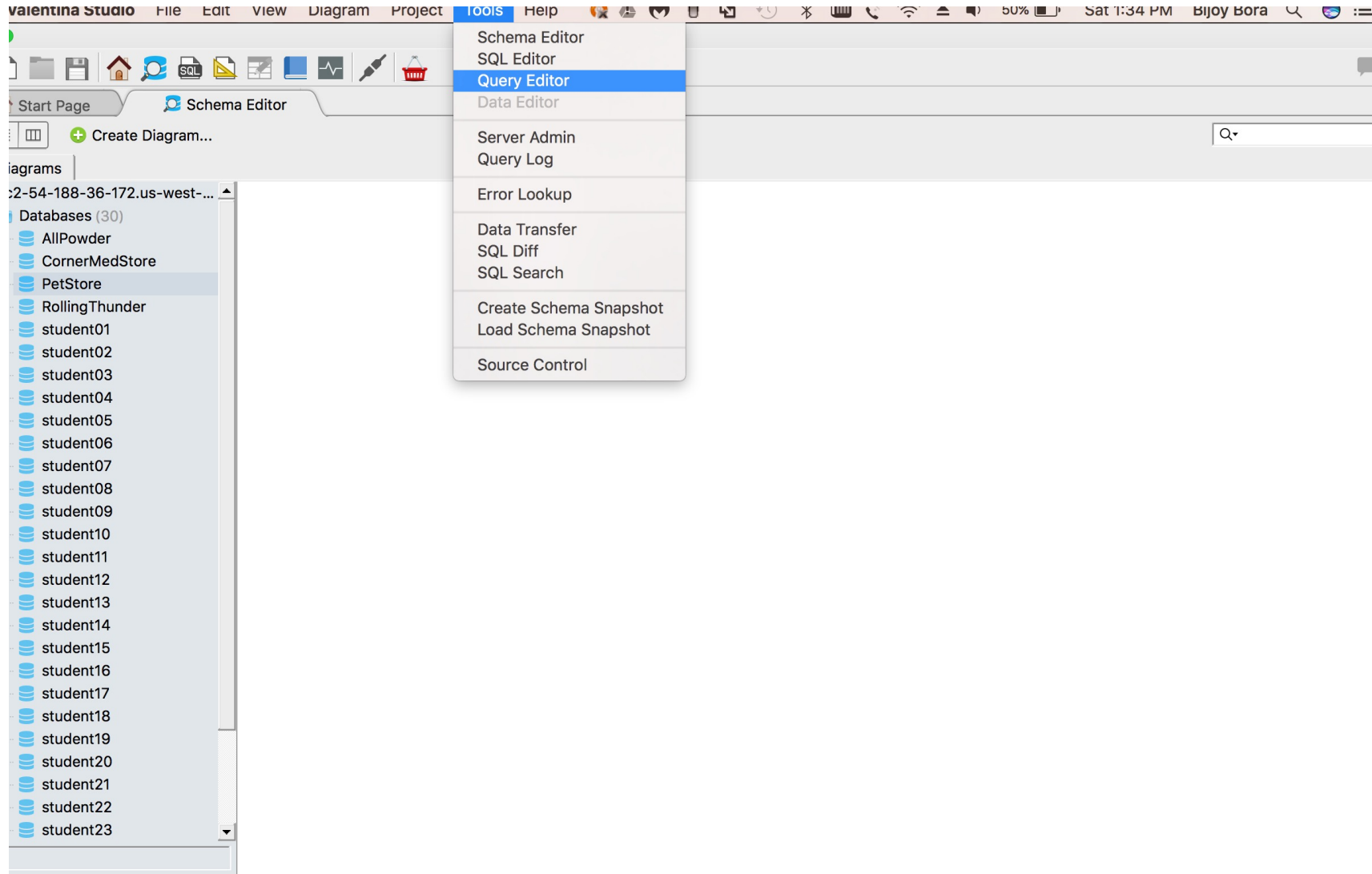
Check 'PetStore' is in the list



Go to Tools



Select Query Editor



Query editor

Database: Query:

Related Objects | Relationship

Select	Query	Function	Column	Alias	Object	Filter	Group By	Sort Type	Sort Order

Limit: Offset:

Select Animal from under dbo

The screenshot shows a SQL IDE window with the following components:

- Toolbar:** Includes icons for file operations, home, SQL, and other database-related functions.
- Navigation:** Tabs for 'Start Page', 'Schema Editor', and '*Untitled1'.
- Database:** 'PetStore' is selected in the 'Database' dropdown.
- Table List (Left):** A tree view showing the 'dbo' schema with the following tables: Customer, Supplier, Merchandise, MerchandiseOrder, OrderItem, Sale, SaleItem, SuperBowl, USstates, teams, students, eval_items, evaluations, eval_items_scores, sysdiagrams, Event, Venue, Track, Speaker, SessionSpeaker, Session, Room, Preferences, Revision, Category, Breed, City, AdoptionGroup, Animal, Employee, and guest.
- Query Grid (Bottom):** A table with columns for 'Function', 'Column', 'Alias', 'Object', 'Filter', 'Group By', 'Sort Type', and 'Sort Order'. The grid is currently empty.

Select Name, Category, Breed, DateBorn

The screenshot shows a SQL Server Enterprise Manager window with the following components:

- Left Pane (Server Explorer):** Shows a tree view of the 'dbo' schema with tables including Customer, Supplier, Merchandise, OrderItem, Sale, SaleItem, SuperBowl, USStates, teams, students, eval_items, evaluations, eval_items_scores, sysdiagrams, Event, Venue, Track, Speaker, SessionSpeaker, Session, Room, Preferences, Revision, Category, Breed, City, AdoptionGroup, **Animal** (highlighted), Employee, and guest.
- Right Pane (Schema Editor):** Displays the schema for the selected table [dbo].[Animal]. The fields and their data types are:
 - AnimalID (Int:I:U)
 - Name (NVarChar[100]:N)
 - Category (NVarChar[100]:N)
 - Breed (NVarChar[100]:N)
 - DateBorn (SmallDateTime:N)
 - Gender (NVarChar[50]:N)
 - Registered (NVarChar[50]:N)
 - Color (NVarChar[100]:N)
 - Photo (Image:N)
 - ImageFile (NVarChar[250]:N)
- Bottom Pane (Query Editor):** Shows a 'Query' tab with a grid for defining a query. The grid has the following columns: Function, Column, Alias, Object, Filter, Group By, Sort Type, and Sort Order. The grid is currently empty.
- Top Bar:** Includes 'Execute', 'SQL Open in SQL Editor', 'Database: PetStore', and 'Query:'.

Select Edit>Execute

Valentina Studio File Edit View Diagram Project Tools Help

Database: PetStore Query:

Related Objects Relationship

- dbo
 - Customer
 - Supplier
 - Merchandise
 - MerchandiseOrder
 - OrderItem
 - Sale
 - SaleItem
 - SuperBowl
 - USstates
 - teams
 - students
 - eval_items
 - evaluations
 - eval_items_scores
 - sysdiagrams
 - Event
 - Venue
 - Track
 - Speaker
 - SessionSpeaker
 - Session
 - Room
 - Preferences
 - Revision
 - Category
 - Breed
 - City
 - AdoptionGroup
 - Animal
 - Employee
- guest

Execute ⌘E

[dbo].[Animal]

- AnimalID Int:I:U
- Name NVarChar[100]:N
- Category NVarChar[100]:N
- Breed NVarChar[100]:N
- DateBorn SmallDateTime:N
- Gender NVarChar[50]:N
- Registered NVarChar[50]:N
- Color NVarChar[100]:N
- Photo Image:N
- ImageFile NVarChar[250]:N

Select	Function	Column	Alias	Object	Filter	Group By	Sort Type	Sort Order
<input checked="" type="checkbox"/>		Name		[dbo].[Animal]				
<input checked="" type="checkbox"/>		Category		[dbo].[Animal]				
<input checked="" type="checkbox"/>		Breed		[dbo].[Animal]				
<input checked="" type="checkbox"/>		DateBorn		[dbo].[Animal]				

Execute SQL Open in SQL Editor

Database: PetStore Query:

Tables Links Views

- dbo
 - Customer
 - Supplier
 - Merchandise
 - MerchandiseOrder
 - OrderItem
 - Sale
 - SaleItem
 - SuperBowl
 - USstates
 - teams
 - students
 - eval_items
 - evaluations
 - eval_items_scores
 - sysdiagrams
 - Event
 - Venue
 - Track
 - Speaker
 - SessionSpeaker
 - Session
 - Room
 - Preferences
 - Revision
 - Category
 - Breed
 - City
 - AdoptionGroup
 - Animal
 - Employee
- guest

[dbo].[Animal]

<input type="checkbox"/>	AnimalID	Int!:U
<input checked="" type="checkbox"/>	Name	NVarchar[100]:N
<input checked="" type="checkbox"/>	Category	NVarchar[100]:N
<input checked="" type="checkbox"/>	Breed	NVarchar[100]:N
<input checked="" type="checkbox"/>	DateBorn	SmallDateTime:N
<input type="checkbox"/>	Gender	NVarchar[50]:N
<input type="checkbox"/>	Registered	NVarchar[50]:N
<input type="checkbox"/>	Color	NVarchar[100]:N
<input type="checkbox"/>	Photo	Image:N
<input type="checkbox"/>	ImageFile	NVarchar[250]:N

Related Objects Relationship

- dbo
- guest

Select Query SELECT...

	Name	Category	Breed	DateBorn
1	<NULL>	Fish	Angel	May 5 2013 12:...
2	Simon	Dog	Vizsla	Mar 2 2013 12:...
3	<NULL>	Fish	Shark	Jan 1 2013 12:...
4	Rosie	Cat	Oriental ...	Aug 2 2013 12:...
5	Eugene	Cat	Bombay	Jan 25 2013 12:...
6	Miranda	Dog	Norfolk ...	Jan 4 2013 12:...
7	<NULL>	Fish	Guppy	Jan 10 2013 12:...
8	Sherri	Dog	Siberian...	Sep 13 2013 1:...

Check query Result

The screenshot shows the SQL Server Enterprise Manager interface. The left pane displays the database schema for 'PetStore', with the 'Animal' table selected. The center pane shows the table structure for '[dbo].[Animal]' with the following columns:

- AnimalID (Int:I:U)
- Name (NVarChar[100]:N)
- Category (NVarChar[100]:N)
- Breed (NVarChar[100]:N)
- DateBorn (SmallDateTime:N)
- Gender (NVarChar[50]:N)
- Registered (NVarChar[50]:N)
- Color (NVarChar[100]:N)
- Photo (Image:N)
- ImageFile (NVarChar[250]:N)

The bottom pane shows the query result for the 'SELECT * FROM Animal' query. The result set contains 8 rows of data:

	Name	Category	Breed	DateBorn
1	<NULL>	Fish	Angel	May 5 2013 12:...
2	Simon	Dog	Vizsla	Mar 2 2013 12:...
3	<NULL>	Fish	Shark	Jan 1 2013 12:...
4	Rosie	Cat	Oriental ...	Aug 2 2013 12:...
5	Eugene	Cat	Bombay	Jan 25 2013 12:...
6	Miranda	Dog	Norfolk ...	Jan 4 2013 12:...
7	<NULL>	Fish	Guppy	Jan 10 2013 12:...
8	Sherri	Dog	Siberian...	Sep 13 2013 1...

Tab back to Select tab

The screenshot shows the SQL Server Enterprise Manager interface. The 'Schema Editor' tab is active, displaying the structure of the [dbo].[Animal] table. A pop-up window shows the table's columns and their data types:

Column Name	Data Type
AnimalID	Int:I:U
Name	NVarChar[100]:N
Category	NVarChar[100]:N
Breed	NVarChar[100]:N
DateBorn	SmallDateTime:N
Gender	NVarChar[50]:N
Registered	NVarChar[50]:N
Color	NVarChar[100]:N
Photo	Image:N
ImageFile	NVarChar[250]:N

The 'Select' tab is active, showing a query grid with the following columns selected:

Select	Function	Column	Alias	Object	Filter	Group By	Sort Type	Sort Order
<input checked="" type="checkbox"/>		Name		[dbo].[Animal]				
<input checked="" type="checkbox"/>		Category		[dbo].[Animal]				
<input checked="" type="checkbox"/>		Breed		[dbo].[Animal]				
<input checked="" type="checkbox"/>		DateBorn		[dbo].[Animal]				

Add filter > August 1

- SuperBowl
- USstates
- teams
- students
- eval_items
- evaluations
- eval_items_scores
- sysdiagrams
- Event
- Venue
- Track
- Speaker
- SessionSpeaker
- Session
- Room
- Preferences
- Revision
- Category
- Breed
- City
- AdoptionGroup
- Animal**
- Employee
- ast

<input checked="" type="checkbox"/>	DateBorn	SmallDateTime:N
<input type="checkbox"/>	Gender	NVarChar[50]:N
<input type="checkbox"/>	Registered	NVarChar[50]:N
<input type="checkbox"/>	Color	NVarChar[100]:N
<input type="checkbox"/>	Photo	Image:N
<input type="checkbox"/>	ImageFile	NVarChar[250]:N

		Function	Column	Alias	Object	Filter	Group By	Sort Type	Sort Order
↕	<input checked="" type="checkbox"/>		◆ Name		[dbo].[Animal]				
↕	<input checked="" type="checkbox"/>		◆ Category		[dbo].[Animal]				
↕	<input checked="" type="checkbox"/>		◆ Breed		[dbo].[Animal]				
↕	<input checked="" type="checkbox"/>		◆ DateBorn		[dbo].[Animal]	[dbo].[Animal].[DateBorn] > '8.1.2013'			

Execute query

The screenshot shows the SQL Server Enterprise Manager interface. A context menu is open over the table definition for [dbo].[Animal]. The 'Execute' option is highlighted. The table definition shows the following columns and data types:

- AnimalID: Int
- Name: NVarChar[100]
- Category: NVarChar[100]
- Breed: NVarChar[100]
- DateBorn: SmallDateTime
- Gender: NVarChar[50]
- Registered: NVarChar[50]
- Color: NVarChar[100]
- Photo: Image
- ImageFile: NVarChar[250]

The 'Related Objects' pane shows the database 'dbo' and the user 'guest'. The 'Query' pane shows a SELECT query with the following columns:

Select	Query	Function	Column	Alias	Object	Filter	Or...	Group By	Sort Type	Sort Order
<input checked="" type="checkbox"/>			Name		[dbo].[Animal]					
<input checked="" type="checkbox"/>			Category		[dbo].[Animal]					
<input checked="" type="checkbox"/>			Breed		[dbo].[Animal]					
<input checked="" type="checkbox"/>			DateBorn		[dbo].[Animal]	[dbo].[Animal...				

Query result for Q1

The screenshot displays a SQL database management tool interface. The main window shows the schema editor for the 'PetStore' database. A pop-up window displays the structure of the '[dbo].[Animal]' table, listing columns such as AnimalID (Int:I:U), Name (NVarChar[100]:N), Category (NVarChar[100]:N), Breed (NVarChar[100]:N), DateBorn (SmallDateTime:N), Gender (NVarChar[50]:N), Registered (NVarChar[50]:N), Color (NVarChar[100]:N), Photo (Image:N), and ImageFile (NVarChar[250]:N).

The query result is displayed in a grid below the schema editor. The query executed is 'SELECT...'. The result shows 8 rows of data:

	Name	Category	Breed	DateBorn
1	Rosie	Cat	Orienta...	Aug 2 2013 12...
2	Sherri	Dog	Siberia...	Sep 13 2013 1...
3	Oakley	Dog	Jack R...	Aug 9 2013 12...
4	Bill	Cat	Scottis...	Aug 6 2013 12...
5	Wallace	Cat	Other	Aug 9 2013 12...
6	<NULL>	Fish	Snail	Aug 2 2013 12...
7	Bruce	Dog	Jack R...	Sep 20 2013 1...
8	Lorene	Dog	Coon H...	Sep 11 2013 12...

Other Software Options

for Mac, Linux, and Windows

- SQuirreL - <http://squirrel-sql.sourceforge.net/> (open source)
- DB Visualizer - <http://www.dbvis.com/> (freemium)
- Database Beaver - <http://dbeaver.jkiss.org/> - (Open source)
- Adminer - <http://www.adminer.org/> - (linux oriented)
- Valentina Studio - <http://valentina-db.com/en/studio/download> - Easy install on Mac

Valentina Studio Mac Install

- Download Mac version
- Double click on disk image
- Choose get a free serial and enter it. Provide a valid email account. The serial # will be sent to this email account
- Copy and paste the serial number
- Click on Connect To. Select MSSQL as the server type
- Specify
 - Hostname = ec2-54-148-238-113.us-west-2.compute.amazonaws.com
 - Port = 1433
 - UserID = studentxx (xx = use any id from '01' to '60')
 - Password = uop123
 - Database = PetStore