# Answers (WORK IN PROGRESS)

## Lab Re-store

### Solution to Exercise Ten Minutes SQL Script

TBA!!!!

* Try to remove one or two assemblies. Which error messages appear? What do they mean?
* DomainObject.NewObject<Person>() is a Factory Method to create a new object instance. Can you explain the advantages of using factories to create objects via constructors within a few sentences? Does it make sense? If so, how would you try to convince a fellow developer to use factories instead of construction?
* Investigate the StringProperty attribute via Intellisense. What is probably the meaning of MaximumLength and IsNullable?
* What happens if you delete the StringProperties attribute, rebuild and rerun the dbschema.exe? Does it build? What has changed in the SetupSB.sql?
* Try to add an attribute Age
* Explore the other parameter dbschema.exe provides? What does the verbose parameter do?
* “The easiest way is to…”: You could call sqlcmd from the command line
* Why do we call our domainobject PhoneBook.Domain and not just Domain? Does this make sense?
* Automate dbschema: You could write a command file/batch file
* Expert question: dbschema collects data from compiled assemblies not from source file. In theory, you could also read out c# files. Does this make sense?
* Expert question: What would happen if you would use dbschema on Assemblies compiled in release mode?
* Expert question: If you have the Redgate Reflector available, open it and explore the assemblies. Try to find BindableDomainObject and investigate it. Can you explain, what this class do?

### Solution to Exercise Adding Relations

TBA

* Does it make sense to organize the source code? Such as putting properties, relations or factory methods in regions?
* If you open SetupSQL.db: Why is LocationID nullable?
* Which of the following is a value object? Person / Country? How would the other entity be called?
* In the last example, we saw that probably, you run into problems if you do not generate you classes via dbschema.exe. What can you do to make sure that this Mapping validation error is detected as soon as possible?
* Re-store is heavily focusing on GUIDs? Does this make sense? Is an INT a better alternative?
* Expert Question: There are inheritance modes for databases: Single Table Inheritance / Class Table Inheritance / Concrete Table Inheritance. Find out what they do? Which model are we using?

### Solution to Exercise Sample Console App

TBA

* What is required to add Intellisense to the app.config file?
* What happens if the connection string does not match to the database?
* Expert question: Try to remove the virtual key word from one of the properties of Person and try to restart the app. There is an exception. Can you explain this behaviour?

## ClientTransactions

### Solution to Understanding ClientTransactions

The example will lead to an exception. The reason is that every domain object has to be associated with at least one ClientTransaction.

#### Task 1

In the using scope the ClientTransactionScope returned by EnterDiscardingScope is only valid within the using scope. The Location Object cannot be edited after the using scope.

#### Task 2

The variables differ. In the code, a transaction is created, the new object is added to the first client transaction. Then, a second transaction is created. The location object is not part of the second transaction.

The ClientTransaction.Current.EnlistDomainObject(l) would add the domain object to the second transaction.

With ClientTransaction.Current.GetEnlistedDomainObjects(); we could get the object.

#### Task 3

The object is not stored yet. So it has to be commited first.

#### Task 4

There will be an exception after the ClientTransactionScope is automatically discarded after the using.

The AutoRollbackBehaviour parameter adds a third behavior to EnterNondiscardingScope and EnterDiscardingScope: It adds the behavior that the ClientTransactionScope will be rollbacked.

Commit in arbitrary methods are dangerous, as they can be called from different sources.

### Solution SubClientTransactions

In the first sample, the street will be Apple Way, in the second, no record will be stored and in the third.

## Linq

### Solution First re-linq query

## Final Questions