**Day 2**

|  |  |  |
| --- | --- | --- |
| **Object Relational Mapping with NHibernate, part 1** | | **65 minutes** |
| *Module* | *Components* | |
| Introduction | What is an ORM?  What is NHibernate?  Mapping concepts  Domain classes  Mapping metadata | |
| Basic Mapping and Persistence | Mapping concepts  Data Type Mapping  Key generation | |
| Configuration | Common configuration options  Batch size  Caching | |
| Labs: | Getting started  Mapping and persistence  Configuration | |

|  |  |
| --- | --- |
| **Break** | **15 minutes** |

|  |  |  |
| --- | --- | --- |
| **Object Relational Mapping with NHibernate, part 2** | | **70 minutes** |
| *Module* | *Components* | |
| Relationships | Understanding ORM’s and relationships  One-to-one associations  Sets, lists and bags  Cascading relationships  Lazy retrieval  Inverted relationships | |
| Query | Query with LINQ  Query with Hibernate Query Language  Criteria based queries | |
| Lab: | Working with relationships  Performing queries | |

|  |  |
| --- | --- |
| **Break** | **60 minutes** |

|  |  |  |
| --- | --- | --- |
| **Object Relational Mapping with Entity Framework, part I** | | **150 minutes, with 15 min break** |
| *Module* | *Components* | |
| Introduction | Why EF?  The EF conceptual model  DB First, Model First, or Code First | |
| Database First Modeling | Creating a model  Mapping the model to database  Model updates  Stored procedure modeling  Enums and models  Spatial modeling | |
| Lab: | Creating a database first EF application | |
| Data Access Techniques with DbContext | The DbContext  Querying data  CRUD operations | |
| Lab: | Querying data with EF DbContext  CRUD operations  Checking state of objects | |
| Code First Modeling | Creating domain classes  Creating a DbContext  Configuring the model  Initializing a database  Handling model changes with migrations  Configuring mappings with data annotations  Configuring mappings with the fluent API | |
| Lab: | Examining Code First and Creating a Database from POCO’s | |
| Model First Modeling | Creating a model  Entity properties and attributes  Strings, default values, spatial data and enums  Adding relationships to the model  Many-to-many relationships  Generating database schema  Handling model and database changes | |