ENTITY FRAMEWORK CODE FIRST END TO END

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- ENTITY FRAMEWORK IN MICROSOFT'S ORM TOOL
 - HAS BEEN OUT SINCE 2008
 - CODE FIRST HAS BEEN OUT SINCE 2011



WHY ENTITY FRAMEWORK CODE FIRST

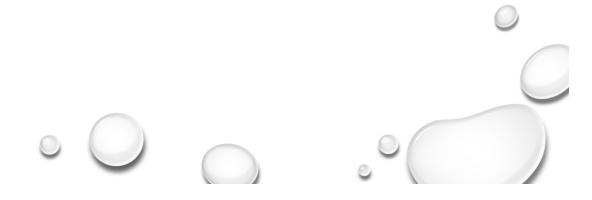
• ORM

- CODE / TYPE SAFETY
- RAPID APPLICATION DEVELOPMENT AND PROTOTYPING
- SUPPORTED AND DEVELOPED BY MICROSOFT
- CONTINUOUS COMMITMENT FROM MICROSOFT
- OPEN SOURCED
- TESTABLE
- FLEXIBLE / CONVENTIONS AND CONFIGURATIONS





- DAL?
- BUSINESS LAYER?





- EF IS DAL TECHNOLOGY
- ISOLATION FROM OTHER LAYERS
- PATTERNS
 - **REPOSITORY**
 - DATA MAPPER
 - TABLE DATA GATEWAY
 - ROW DATA GATEWAY
 - DATA MAPPER





DAL STRATEGY

- KEEP DATA (TABLE) OBJECTS CLEAN
- SEPARATE DATA ACCESS FROM DTOS
- CREATE ACCESS INTERFACE
- EXPOSE DATA ACCESS IN A SERVICE LAYER WITH BUSINESS OBJECTS
- USING MAPPERS TO CUT DOWN ON CODE





- CONFIGURATION OPTIONS
 - CONFIGURATION CLASSES
 - ATTRIBUTES?
- HANDLING RELATIONSHIPS
 - RELATIONSHIP TYPES
 - USING FOREIGN KEY COLUMNS
- USING COMPLEX TYPES
- LEGACY DATABASES / EXPLICIT MAPPINGS

HANDLING SCHEMA CHANGES

CODE FIRST MIGRATIONS

- CREATE DATABASE
- MAINTAIN SCHEMA
- COMMAND LINE MIGRATIONS
- EXPLICIT VS. IMPLICIT MIGRATIONS
- INITIALIZERS (FOR RAPID PROTOTYPING)
- MIGRATING INITIALIZER

CREATING DATA ACCESS LAYER

- **REPOSITORY PATTERN**
 - MEDIATES BETWEEN THE DOMAIN AND DATA MAPPING LAYERS USING A
 COLLECTION-LIKE INTERFACE FOR ACCESSING DOMAIN OBJECTS.
 - INTERFACE BASED REPOSITORY
 - CQRS

- WRITE VS. READ REPOSITORY
- TAKING DEPENDENCY ON IQUERYABLE?

WORKING WITH VIEWS AND STORED PROCEDURES

- EF IS NOT ALL-OR-NOTHING ANSWERS
- WRITING CLASSES FOR MATERIALIZATION
- AVOIDING SQL INJECTION



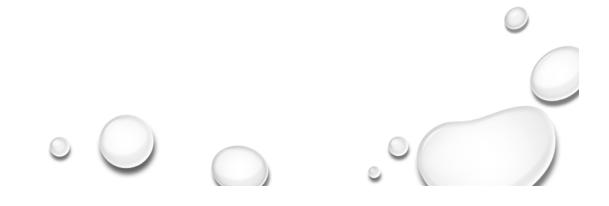


PERFORMANCE

- CACHING CONTEXT
 - WEB ENVIRONMENTS
- CRUD EFFICIENCIES
 - UPDATE
 - DELETE
 - SELECT
- LAZY LOADING
 - BEWARE OF MULTIPLE QUERIES



- ASP.NET MVC
- LAYER SEPARATION VIA PROJECTS





- ASYNCHRONOUS SUPPORT
- CONNECTION RESILIENCY
- IMPROVED PERFORMANCE
- MANY MORE



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