

Querying and Saving Related Data



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Module Overview



Inserting, update & deleting related data

Saving related data that wasn't tracked

Retrieving related data with parent data

Shaping query results with projections

Filtering queries with related data



Inserting Related Data



My advice

Use the foreign key.
Don't waste your time & patience.



Eager Loading Related Data



Methods to Load Related Data

Eager Loading

Include related objects in query

Query Projections

Define the shape of query results

Explicit Loading

Request related data of objects in memory

Future version

Lazy Loading

On-the-fly retrieval of related data

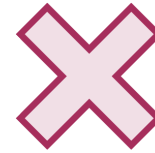


Use Include Method

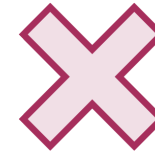
DbSet.Include



[LINQ Methods].Include()



Find.Include()



FromSql.Include()



```
_context.Samurais  
    .Include(s=>s.Quotes)
```

```
_context.Samurais  
    .Include(s=>s.Quotes)  
    .ThenInclude(q=>q.Translations)
```

```
_context.Samurais  
    .Include(s=>s.Quotes.Translations)
```

```
_context.Samurais  
    .Include(s=>s.Quotes)  
    .Include(s=>s.SecretIdentity)
```

◀ Include child objects

◀ Include children & grandchildren

◀ Include just grandchildren

◀ Include different children

...Various combinations...



Include always loads the entire set of related objects.



Projecting Related Data in Queries



Using Related Data to Filter Objects



Modifying Related Data



Connected

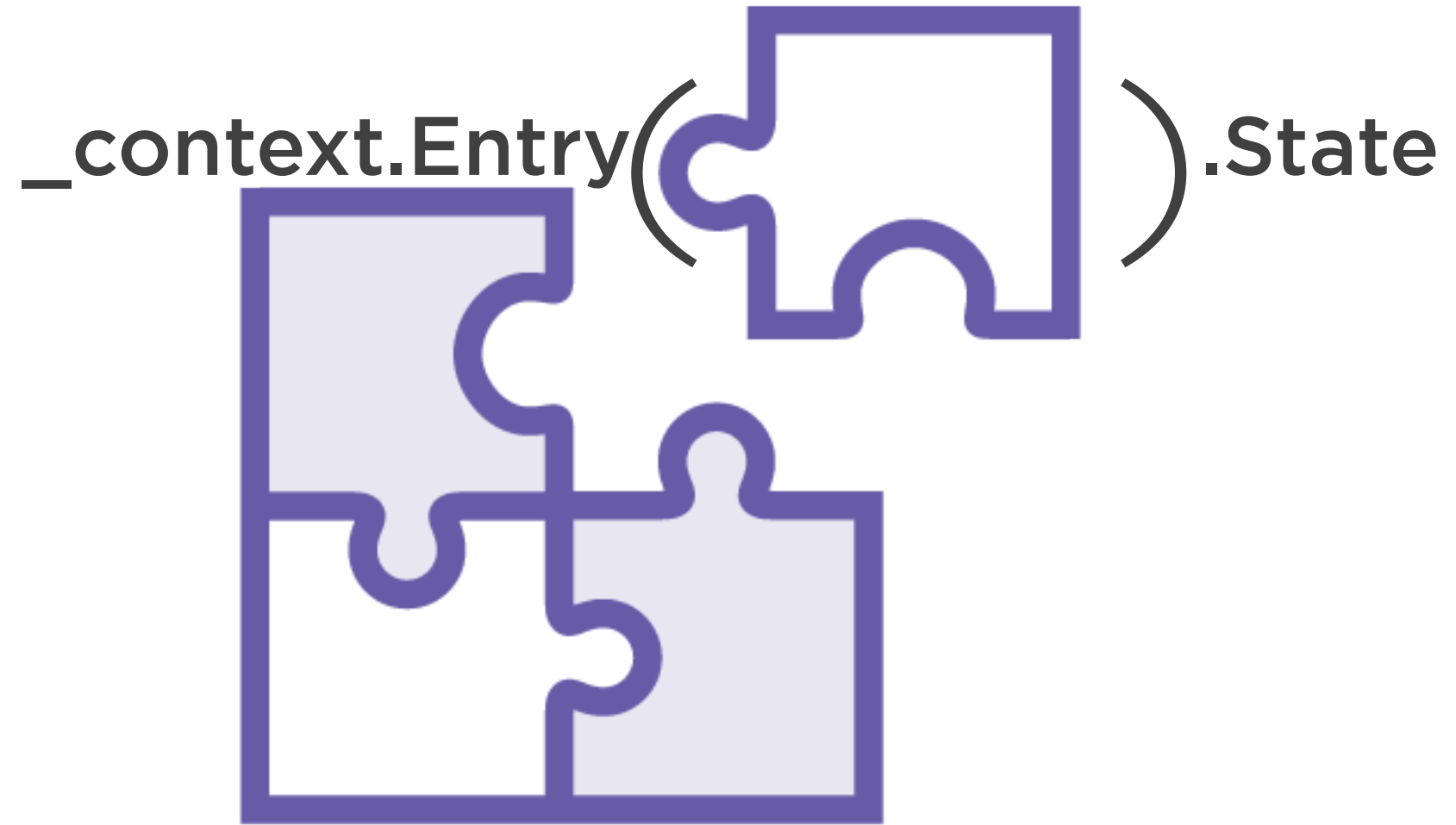
DbContext
is aware
of all changes
made to objects
that is it tracking

Disconnected

DbContext
has no clue
about
history of objects
before they are
attached



The Challenge



Review

You can eager load related data or load after the fact

Filtering children currently requires multiple queries

Navigations can be used to filter parent data

DbContext tracking objects as they are modified makes database update easy

Important to understand how EF Core treats graphs that were not being tracked

DbContext.Entry() isolates the object you care about

Resources

Entity Framework Core on GitHub github.com/aspnet/entityframework

EF Core Roadmap bit.ly/efcoreroadmap

EF Core Documentation docs.efproject.net

Entity Framework Core: Getting Started (for EF Core 1.1) bit.ly/PS_EFCoreStart

EF Core GitHub Issue

Query: projected collection navigations don't get tracked if the collection is composed on
github.com/aspnet/EntityFrameworkCore/issues/8999



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