Implementing Optimistic Concurrency

Thomas Claudius Huber

MICROSOFT MVP (WINDOWS DEVELOPMENT)

@thomasclaudiush   www.thomasclaudiushuber.com

Module Outline

Two users saving the same friend

Handle concurrency conflicts

Optimistic concurrency with Entity Framework

Add a row version to the Friend entity

Handle the DbUpdateConcurrencyException

Handle Concurrency Conflicts

Pessimistic Concurrency

Optimistic Concurrency

Optimistic Concurrency with Entity Framework

```csharp
public class Friend
{
    [Timestamp]
    public byte[] RowVersion { get; set; }
}


modelBuilder.Entity<Friend>()

    .Property(f => f.RowVersion).IsConcurrencyToken();
```

Demo

Add a row version to the Friend entity

Handle the DbUpdateConcurrencyException

Client wins

Database wins

Custom logic with a mixture of both

Demo

When another user has deleted an entity

Move the exception handling code to the base class

Summary

Use the TimeStamp attribute for optimistic concurrency

- adds the row version to the where condition of update and delete statements

Handle the DbUpdateConcurrencyException

- client wins

- database wins

- custom logic with a mixture of both