

# Creating a Code Based Model and Database



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# In This Module



Define a Code-Based Model from Classes

Create a database from the model

Modify the model

Migrate the DB using model changes

Code-based & visual models from a DB

# Creating an EF Model for a Set of Domain Classes

# Validating Your EF Model

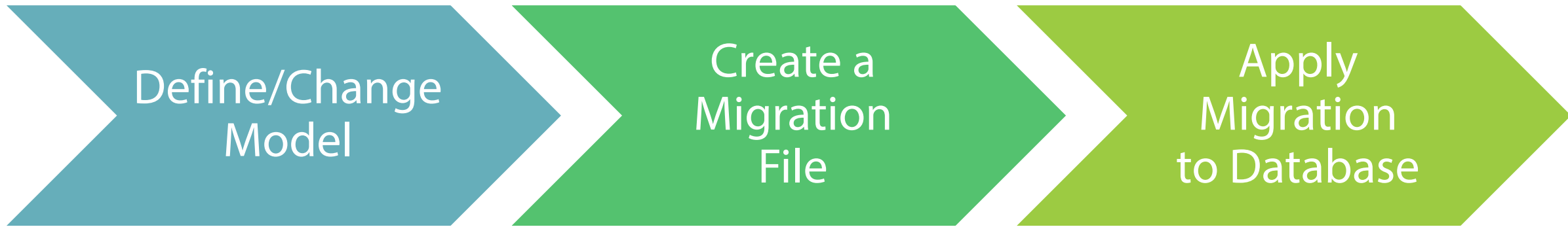
# **Fixing & Re-Validating the Relationship**

# **Creating Databases from Your EF Model using Code First Migrations**

# Database Migration

Evolving the database schema  
as the model changes.

# Code First Database Migrations

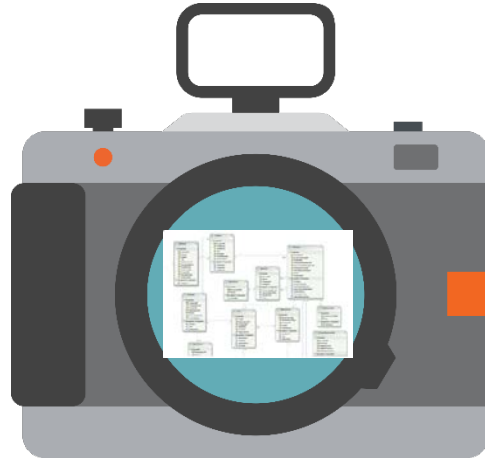




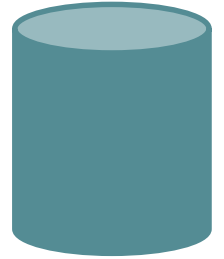
# **Migrating Databases When Your Model Changes**

# Determining Migrations

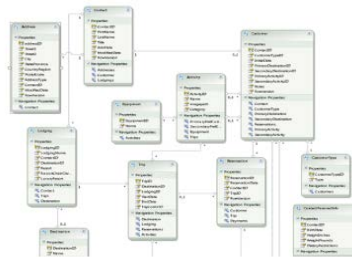
"Update-Database"



```
0x1F8B080000000000400ED5ACD6EE336108E17E83B083AB545364AB29736807791759222E82
FFDF3EFE8ED2A64CE3D2482467CEC1EEE1F880E703F0A285F8ED0542E5EFDE88E7DF3ED37A383
40112ECA729CD175CA25021F8825F2711F7219629619751004C14EDD833CBA43A57240411131
B750C386E4198806208C7F5F0A1B839385288F1EA89A5283F151275D84EE0E1E8C23C9E3E7D27
3D679232992630E690CA84B03DE7433A67D4FF05D637D11FC0C73C65ACA921EA8B7DAD066CFA9
01009C1072225245CC980CC84C6EADA5ACA46EA538922A20E63C8752EC9EA3DF0A58C18B8F8D1
FA3C89C2EB889513B2D6DB10922C41A2B291D1358B02C407D4187935907AE195C9D9165F59D85
```



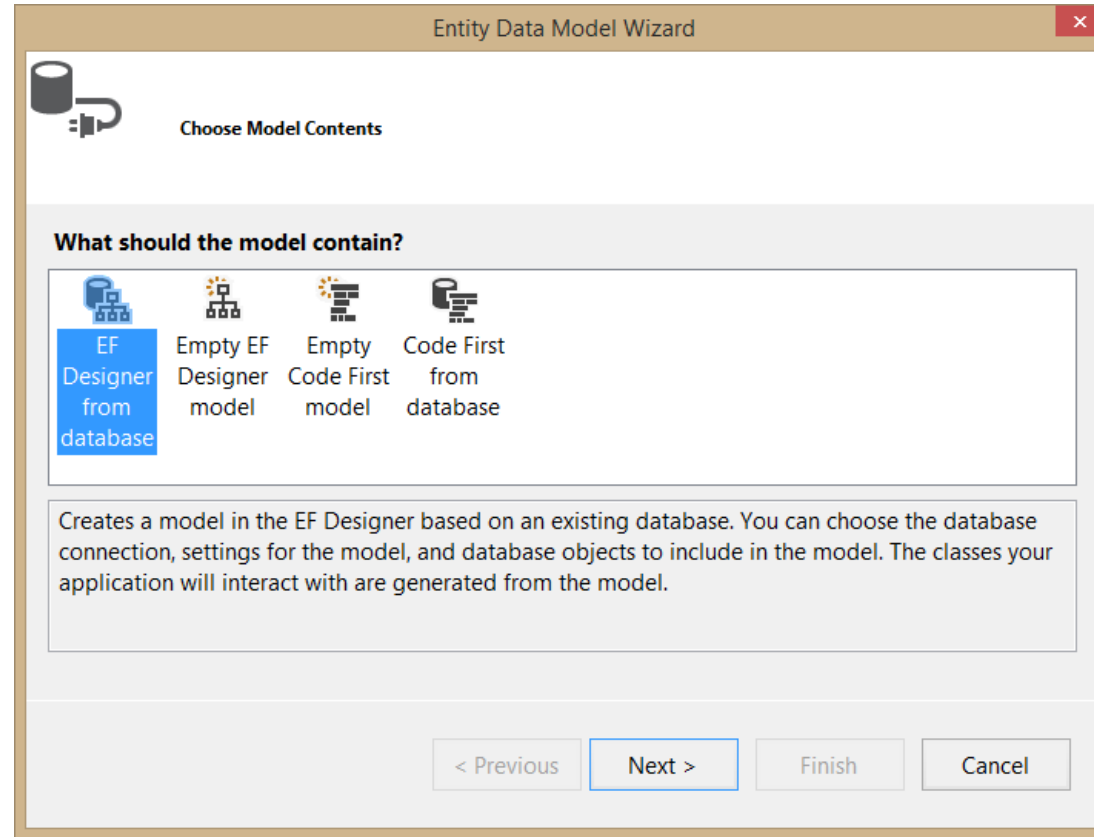
"Add-Migration"



```
public partial class AddBirthdayToNinja : DbMigration
{
    public override void Up()
    {
        AddColumn("dbo.Ninjas", "DateOfBirth", c => c.DateTime(nullable: false));
    }

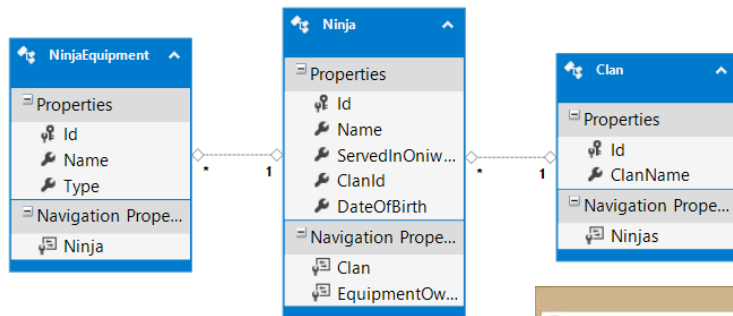
    public override void Down()
    {
        DropColumn("dbo.Ninjas", "DateOfBirth");
    }
}
```

# Models from an Existing Database



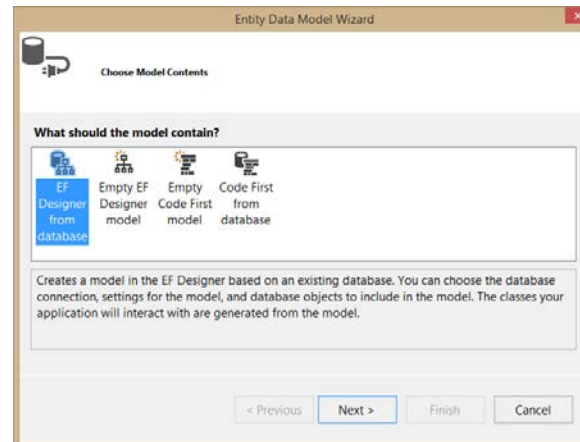
# Summary

```
public class NinjaContext:DbContext
{
    public DbSet<Ninja> Ninjas { get; set; }
    public DbSet<Clan> Clans { get; set; }
    public DbSet<NinjaEquipment> Equipment { get; set; }
}
```



```
public partial class AddBirthdayToNinja : DbMigration
{
    public override void Up()
    {
        AddColumn("dbo.Ninjas", "DateOfBirth", c => c.DateTime(nullable: false));
    }

    public override void Down()
    {
        DropColumn("dbo.Ninjas", "DateOfBirth");
    }
}
```



```
└─ NinjaDomain.DataModel.NinjaContext
  └─ Tables
    ├── System Tables
    ├── dbo._MigrationHistory
    ├── dbo.Clans
    ├── dbo.NinjaEquipments
    └── dbo.Ninjas
```

# Resources

- EF6 Development Site: [entityframework.codeplex.com](https://entityframework.codeplex.com)
- EF6 Ninja Edition: What's New in EF6 (Pluralsight): [bit.ly/PS-EF6](https://bit.ly/PS-EF6)
- Looking Ahead to EF7 (Pluralsight): [bit.ly/PS-EF7Alpha](https://bit.ly/PS-EF7Alpha)
- EF7 Development Site: [github.com/aspnet/entityframework](https://github.com/aspnet/entityframework)
- My Blog: [thedatafarm.com/blog](https://thedatafarm.com/blog)
- EF Team Blog: [blogs.msdn.com/adonet](https://blogs.msdn.com/adonet)



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