**I) EF Core Database First Approach and Update the database and models in .net core project**

**1) Create EmployeeDB database and Employee table in SQL Server**

CREATE DATABASE EmployeeDB

CREATE TABLE Employee(

EmpId INT PRIMARY KEY IDENTITY(1,1),

EmpName VARCHAR(50),

EmpEmail VARCHAR(50))

INSERT INTO Employee(EmpName,EmpEmail)

VALUES('chaitali','chaitali.narkhede1991@gmail.com')

select \* from Employee

**2) Install below packages in .net core project**

Microsoft.EntityFrameworkCore.SqlServer

Microsoft.EntityFrameworkCore.SqlServer.Design

Microsoft.EntityFrameworkCore.Tools

**3) Execute below query using Package manager console in .net core to generate DBContext class and other entities**

PM> Scaffold-DbContext "Server=DESKTOP-3DF0FM6\SQLEXPRESS;Database=DemoDatabase;Trusted\_Connection=True;" Microsoft.EntityFrameworkCore.SqlServer -OutputDir Models

**Above command will add the below classes in models folder in .net core project**

**i) EmployeeDBContext.cs and comment out the OnConfigure() method**

namespace NetCoreEFDBFirst.Models

{

public partial class EmployeeDBContext : DbContext

{

public EmployeeDBContext()

{

}

public EmployeeDBContext(DbContextOptions<EmployeeDBContext> options)

: base(options)

{

}

public virtual DbSet<Employee> Employees { get; set; }

//protected override void OnConfiguring(DbContextOptionsBuilder optionsBuilder)

//{

//if (!optionsBuilder.IsConfigured)

// {

//optionsBuilder.UseSqlServer("Server=DESKTOP-3DF0FM6\\SQLEXPRESS;Database=EmployeeDB;Trusted\_Connection=True;");

// }

// }

protected override void OnModelCreating(ModelBuilder modelBuilder)

{

modelBuilder.HasAnnotation("Relational:Collation", "SQL\_Latin1\_General\_CP1\_CI\_AS");

modelBuilder.Entity<Employee>(entity =>

{

entity.HasKey(e => e.EmpId)

.HasName("PK\_\_Employee\_\_AF2DBB99D7501E63");

entity.ToTable("Employee");

entity.Property(e => e.EmpEmail)

.HasMaxLength(50)

.IsUnicode(false);

entity.Property(e => e.EmpName)

.HasMaxLength(50)

.IsUnicode(false);

});

OnModelCreatingPartial(modelBuilder);

}

partial void OnModelCreatingPartial(ModelBuilder modelBuilder);

}

}

**ii) Employee.cs**

namespace NetCoreEFDBFirst.Models

{

public partial class Employee

{

public int EmpId { get; set; }

public string EmpName { get; set; }

public string EmpEmail { get; set; }

}

}

**4) Add connection string inside the appsetting.json file as follows.**

{

"Logging": {

"LogLevel": {

"Default": "Information",

"Microsoft": "Warning",

"Microsoft.Hosting.Lifetime": "Information"

}

},

"ConnectionStrings": {

"EmployeeDBConnection": "Server=DESKTOP-3DF0FM6\\SQLEXPRESS;Database=EmployeeDB;Trusted\_Connection=True"

},

"AllowedHosts": "\*"

}

**5) Add the below code in ConfigureServices method in startup.cs file**

services.AddDbContext<EmployeeDbContext>(item => item.UseSqlServer

(Configuration.GetConnectionString("EmployeeDBConnection")));

**6) Update the Employee table and add Department table in Database**

ALTER TABLE Employee ADD EmpAddress VARCHAR(100)

CREATE TABLE Department(

DeptId INT PRIMARY KEY IDENTITY(1,1),

DeptName VARCHAR(50))

INSERT INTO Department(DeptName)

VALUES('IT')

**5) Now, We want to add db updated changes in models => .net core project, then we can use the below command.**

**This command will maintain the data as well, so no code will be lost from table.**

PM> Scaffold-DbContext "Server=DESKTOP-3DF0FM6\SQLEXPRESS;Database=EmployeeDB;Trusted\_Connection=True;" Microsoft.EntityFrameworkCore.SqlServer -OutputDir Models -f -Context EmployeeDBContext

**6) Above command will update the below models in .net core project**

**i) EmployeeDbContext.cs**

namespace NetCoreEFDBFirst.Models

{

public partial class EmployeeDBContext : DbContext

{

public EmployeeDBContext()

{

}

public EmployeeDBContext(DbContextOptions<EmployeeDBContext> options)

: base(options)

{

}

public virtual DbSet<Department> Departments { get; set; }

public virtual DbSet<Employee> Employees { get; set; }

protected override void OnConfiguring(DbContextOptionsBuilder optionsBuilder)

{

if (!optionsBuilder.IsConfigured)

{

optionsBuilder.UseSqlServer("Server=DESKTOP-3DF0FM6\\SQLEXPRESS;Database=EmployeeDB;Trusted\_Connection=True;");

}

}

protected override void OnModelCreating(ModelBuilder modelBuilder)

{

modelBuilder.HasAnnotation("Relational:Collation", "SQL\_Latin1\_General\_CP1\_CI\_AS");

modelBuilder.Entity<Department>(entity =>

{

entity.HasKey(e => e.DeptId)

.HasName("PK\_\_Departme\_\_014881AE1B2F83E7");

entity.ToTable("Department");

entity.Property(e => e.DeptName)

.HasMaxLength(50)

.IsUnicode(false);

});

modelBuilder.Entity<Employee>(entity =>

{

entity.HasKey(e => e.EmpId)

.HasName("PK\_\_Employee\_\_AF2DBB99D7501E63");

entity.ToTable("Employee");

entity.Property(e => e.EmpAddress)

.HasMaxLength(100)

.IsUnicode(false);

entity.Property(e => e.EmpEmail)

.HasMaxLength(50)

.IsUnicode(false);

entity.Property(e => e.EmpName)

.HasMaxLength(50)

.IsUnicode(false);

});

OnModelCreatingPartial(modelBuilder);

}

partial void OnModelCreatingPartial(ModelBuilder modelBuilder);

}

}

**ii) Employee.cs**

namespace NetCoreEFDBFirst.Models

{

public partial class Employee

{

public int EmpId { get; set; }

public string EmpName { get; set; }

public string EmpEmail { get; set; }

public string EmpAddress { get; set; }

}

}

**iii) Department.cs**

namespace NetCoreEFDBFirst.Models

{

public partial class Department

{

public int DeptId { get; set; }

public string DeptName { get; set; }

}

}