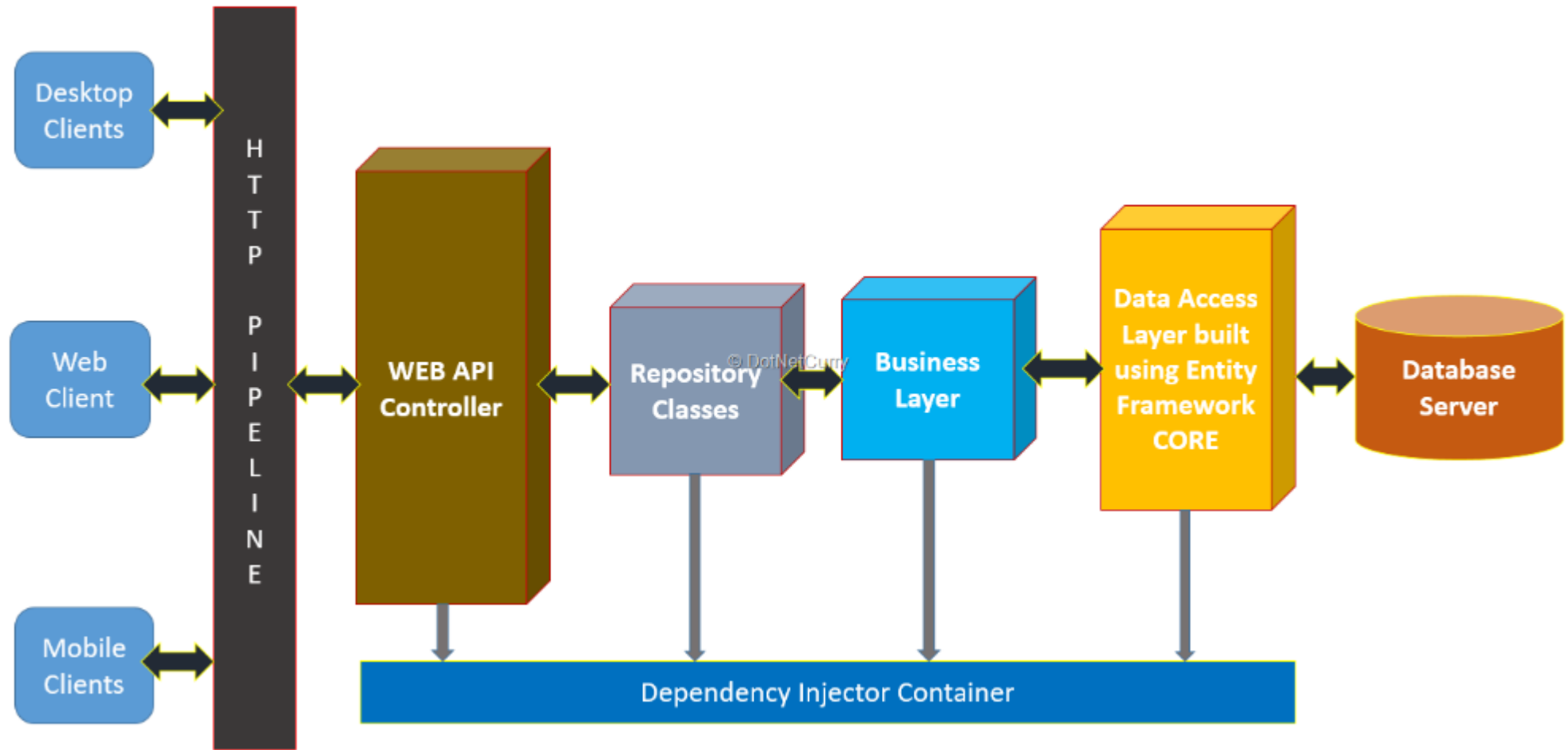# Entity Core Framework

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Introduction

- Entity Core Framework is:
  - Cross-platform: Windows, Linux, macOS
  - An Object Relational Mapper (ORM)
  - A wrapper that associates C# classes, that satisfy certain conventions, with relational database tables and their relationships.
  - A mechanism for:
    - building database instances from C# classes (Code First)
    - building C# models from existing databases (Data First)
    - auto generating SQL queries

https://www.dotnetcurry.com/entityframework/1348/ef-core-web-api-crud-operations

Applications

- Entity Core Framework can be added to:
  - a data agnostic application, e.g. a console application
  - An application that is scaffolded for data management, e.g., MVC web applications
- EF is most frequently used for Asp.Net Mvc and Asp.Net Core Mvc applications.

Enabling Entity Framework

- Create a C# Web Application and add EF scaffolding manually
  - That was how Mvc-Skeleton with CRUD using EF was built.
- Create a C# Asp.Net Core Mvc Application with individual user accounts for Authentication.
  - That adds most of the EF scaffolding you need automatically.
- That assumes that you have installed Visual Studio 2017 with the needed packages.
  - Some of the tutorials cited on the lecture page lead you through the process of installing anything that is missing.

Code First

- Define model classes in Models folder

- Follow naming conventions to define keys

- In nuget pkgmgr console:
  - Add-Migration [context]
  - Update-Database

Builds/updates database