**What is Data Seeding?**

**Data Seeding** means adding default or initial data to your database automatically when you run your project or apply migrations. It's a common practice to pre-fill your tables with necessary data without inserting them manually.

**✅ Why Do We Use Data Seeding?**

* To have ready data when the project starts
* For testing purposes
* To ensure essential values like categories, product types, or user roles exist
* To provide a consistent environment for all developers working on the project

**✅ Real Example with EF Core:**

Suppose you have a ProductBrand entity, and you want to seed some data:

protected override void OnModelCreating(ModelBuilder modelBuilder)

{

modelBuilder.Entity<ProductBrand>().HasData(

new ProductBrand { Id = 1, Name = "Brand A" },

new ProductBrand { Id = 2, Name = "Brand B" }

);

base.OnModelCreating(modelBuilder);

}

After this, you run:

dotnet ef migrations add SeedProductBrands

dotnet ef database update

The table ProductBrands will be automatically filled with these records.

**✅ Key Notes:**

* Seeding happens during database update
* You must provide the Id for seeded records (especially if using EF Core with HasData)
* Seeded data is great for testing, demo environments, and default system setup