Mapping In .NET Entity Framework Core (EF Core),

* mapping refers to how the database tables and their relationships are represented in the application code through entities.

Mapping Strategy

1. Table Per Hierarchy(TPH)

**TPH** is the default strategy in EF Core for mapping inheritance hierarchies. With TPH, a single database table is used to store data for all the classes in the hierarchy. The table has a discriminator column that indicates which derived class the data belongs to.

* **Advantages**:
  + Simplifies schema design with a single table.
  + Performs well because no joins are required to fetch data.

**2. Table Per Concrete Type (TPC)**

**TPC** is a strategy where each concrete class in the hierarchy has its own database table. The table for each derived type contains columns for all properties of that type, including inherited properties.

(Each concrete class has its own table, which includes all inherited and unique properties.)

* **Advantages**:
  + No discriminator column is required.
  + No null values for non-applicable properties

**3. Table Per Type (TPT)**

**TPT** creates separate tables for the base class and each derived class. The table for the base class contains the common properties, while each derived class has a table for properties unique to that class. Relationships between these tables are established via foreign keys.

(Each type, including the base and derived classes, has its own table. The base table contains common properties, while derived tables contain unique properties and a foreign key reference to the base table.)

* **Advantages**:
  + Avoids null columns in tables for properties not relevant to certain derived types.

**Choosing the Right Strategy**

* **TPH** is ideal when you want simplicity and better performance with less schema management overhead.
* **TPC** is suitable when each derived type represents a distinct table without worrying about NULLs or discriminator values.
* **TPT** is a good choice when accurately modeling an inheritance hierarchy in the database is critical