

## Hands-on Exercise: Many-to-One Bidirectional Relationship in Hibernate

### Question:

Create a Hibernate application that models a **bidirectional many-to-one** relationship between Order and Customer entities:

#### 1. Database Tables:

- **Customer Table:**
  - **Fields:** **id (Primary Key), name**
- **Order Table:**
  - **Fields:** **id (Primary Key), order\_date, amount, customer\_id (Foreign Key referencing Customer)**

#### 2. Tasks:

- Define two entities: **Customer** and **Order** with a **bidirectional many-to-one relationship**.
- Use **@ManyToOne** in the Order class and **@OneToMany(mappedBy = "customer")** in the Customer class.
- **Implement CRUD operations to:**
  - Create a new customer and add multiple orders for that customer.
  - Retrieve all orders placed by a specific customer.
  - Fetch the customer details from an order instance.
- Write a main application class to demonstrate the following:
  - Create 2 customers and 3 orders (at least 2 orders for one customer).
  - Display all orders for each customer.
  - Display the customer details when querying an order.

Add cascade operations (**CascadeType.ALL**) for automatic updates and use **orphanRemoval** to manage the lifecycle of orders when a customer is deleted.