**Hands on 3**

**Hibernate Annotation Config implementation walk through**

* **object to relational database mapping done in persistence class file Employee:**

Place special tags (annotations) directly in your Java class to define the mapping.

Ex: (Employee.java)

import jakarta.persistence.\*;

@Entity

@Table(name = "employee")

public class Employee {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

@Column(name = "id")

private int id;

@Column(name = "first\_name")

private String firstName;

@Column(name = "last\_name")

private String lastName;

// Getters, Setters, toString...

}

* **@Entity:**

Marks this class as a Hibernate entity. Hibernate knows to persist it to the DB.

* **@Table:**

Maps the class to the table named employee in your database.

* **@Id:**

Marks this field (id) as the primary key**.**

* **@GeneratedValue:**

Tells Hibernate that the database should auto-generate the ID value (e.g., auto-increment).

IDENTITY = Database will handle auto-increment (common with MySQL).

* **@Column:**

Maps the Java field to a specific column in the database.

* **Hibernate Configuration(hibernate.cfg.xml):**

This file tells Hibernate how to connect to the database and what classes to map.

<hibernate-configuration>

<session-factory>

<!-- DB connection properties -->

<property name="hibernate.connection.driver\_class">com.mysql.cj.jdbc.Driver</property>

<property name="hibernate.connection.url">jdbc:mysql://localhost:3306/testdb</property>

<property name="hibernate.connection.username">root</property>

<property name="hibernate.connection.password">root</property>

<!-- Hibernate settings -->

<property name="hibernate.dialect">org.hibernate.dialect.MySQLDialect</property>

<property name="hibernate.hbm2ddl.auto">update</property>

<property name="hibernate.show\_sql">true</property>

<!-- Tell Hibernate which class to map -->

<mapping class="com.example.Employee"/>

</session-factory>

</hibernate-configuration>

* **Dialect:**

Tells Hibernate which SQL version to use. (MySQLDialect, OracleDialect, etc.)

* **Driver:**

The JDBC driver used to connect to your DB.

* **Connection URL:**

The JDBC URL to your database.

* **Username/Password:**

Used to authenticate to the DB.