1.pom.xml

<project xmlns="<http://maven.apache.org/POM/4.0.0>" xmlns:xsi="<http://www.w3.org/2001/XMLSchema-instance>" xsi:schemaLocation="<http://maven.apache.org/POM/4.0.0> <http://maven.apache.org/xsd/maven-4.0.0.xsd>">

<modelVersion>4.0.0</modelVersion>

<groupId>com.example</groupId>

<artifactId>CitizenPassportHibernate</artifactId>

<version>1.0</version>

<dependencies>

<!-- Hibernate Core -->

<dependency>

<groupId>org.hibernate.orm</groupId>

<artifactId>hibernate-core</artifactId>

<version>6.3.1.Final</version>

</dependency>

<!-- JPA API -->

<dependency>

<groupId>jakarta.persistence</groupId>

<artifactId>jakarta.persistence-api</artifactId>

<version>3.1.0</version>

</dependency>

<!-- MySQL JDBC Driver -->

<dependency>

<groupId>com.mysql</groupId>

<artifactId>mysql-connector-j</artifactId>

<version>8.3.0</version>

</dependency>

<!-- Logging -->

<dependency>

<groupId>org.jboss.logging</groupId>

<artifactId>jboss-logging</artifactId>

<version>3.5.0.Final</version>

</dependency>

</dependencies>

</project>

Hibernate.cfg.xml

<?xml version="1.0" encoding="utf-8"?>

<!DOCTYPE hibernate-configuration PUBLIC

"-//Hibernate/Hibernate Configuration DTD 3.0//EN" "<http://hibernate.sourceforge.net/hibernate-configuration-3.0.dtd>">

<hibernate-configuration>

<session-factory>

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

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

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

<property name="hibernate.connection.password">pass@word</property>

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

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

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

<mapping class="com.example.entity.Citizen"/>

<mapping class="com.example.entity.Passport"/>

</session-factory>

</hibernate-configuration>

1. HibernateUtil.java package com.example.util;

import org.hibernate.SessionFactory; import org.hibernate.cfg.Configuration;

public class HibernateUtil {

private static final SessionFactory sessionFactory;

static {

try {

sessionFactory = new Configuration().configure().buildSessionFactory();

} catch (Throwable ex) {

throw new ExceptionInInitializerError("Initial SessionFactory creation failed: " + ex);

}

}

public static SessionFactory getSessionFactory() { return sessionFactory;

}

}

1. Citizen.java

package com.example.entity; import jakarta.persistence.\*;

@Entity

public class Citizen { @Id

@GeneratedValue(strategy = GenerationType.IDENTITY) private int id;

private String name;

@OneToOne(cascade = CascadeType.ALL)

@JoinColumn(name = "passport\_id", referencedColumnName = "id") private Passport passport;

public Citizen() {}

public Citizen(String name, Passport passport) { this.name = name;

this.passport = passport;

}

// Getters and setters

public int getId() { return id; }

public void setId(int id) { this.id = id; }

public String getName() { return name; }

public void setName(String name) { this.name = name; }

public Passport getPassport() { return passport; }

public void setPassport(Passport passport) { this.passport = passport; }

}

1. Passport.java

package com.example.entity; import jakarta.persistence.\*; @Entity

public class Passport { @Id

@GeneratedValue(strategy = GenerationType.IDENTITY) private int id;

private String passportNumber; public Passport() {}

public Passport(String passportNumber) { this.passportNumber = passportNumber;

}

// Getters and setters

public int getId() { return id; }

public void setId(int id) { this.id = id; }

public String getPassportNumber() { return passportNumber; }

public void setPassportNumber(String passportNumber) { this.passportNumber = passportNumber; }

}

1. App.java

package com.example.app;

import com.example.entity.Citizen; import com.example.entity.Passport; import com.example.util.HibernateUtil; import org.hibernate.Session;

import org.hibernate.Transaction;

public class App {

public static void main(String[] args) {

// Create a Citizen and Passport Citizen citizen = new Citizen(); citizen.setName("Chandu");

Passport passport = new Passport("ABC123456"); citizen.setPassport(passport);

// Save to DB

Session session = HibernateUtil.getSessionFactory().openSession(); Transaction tx = session.beginTransaction();

session.persist(citizen);

tx.commit(); session.close();

System.out.println("Citizen and Passport saved successfully!");

// Retrieve data

Session readSession = HibernateUtil.getSessionFactory().openSession(); Citizen c = readSession.get(Citizen.class, citizen.getId());

System.out.println("Retrieved Citizen: " + c.getName()); System.out.println("With Passport No: " +

c.getPassport().getPassportNumber());

readSession.close();

}

}