**Hands on 3**

**Create payroll tables and bean mapping**

**Demonstrate implementation of O/R Mapping**

**Department.java**

package com.example.countryapp.model;

import jakarta.persistence.\*;

import java.util.List;

@Entity

@Table(name = "department")

public class Department {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

@Column(name = "dp\_id")

private int id;

@Column(name = "dp\_name")

private String name;

@OneToMany(mappedBy = "department", cascade = CascadeType.ALL)

private List<Employee> employees;

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 List<Employee> getEmployees() {

return employees;

}

public void setEmployees(List<Employee> employees) {

this.employees = employees;

}

}

**Employee.java**

package com.example.countryapp.model;

import jakarta.persistence.\*;

import java.util.Date;

@Entity

@Table(name = "employee")

public class Employee {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

@Column(name = "em\_id")

private int id;

@Column(name = "em\_name")

private String name;

@Column(name = "em\_salary")

private double salary;

@Column(name = "em\_permanent")

private boolean permanent;

@Column(name = "em\_date\_of\_birth")

private Date dateOfBirth;

@ManyToOne

@JoinColumn(name = "em\_dp\_id")

private Department department;

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 double getSalary() {

return salary;

}

public void setSalary(double salary) {

this.salary = salary;

}

public boolean isPermanent() {

return permanent;

}

public void setPermanent(boolean permanent) {

this.permanent = permanent;

}

public Date getDateOfBirth() {

return dateOfBirth;

}

public void setDateOfBirth(Date dateOfBirth) {

this.dateOfBirth = dateOfBirth;

}

public Department getDepartment() {

return department;

}

public void setDepartment(Department department) {

this.department = department;

}

}

**Skill.java**

package com.example.countryapp.model;

import jakarta.persistence.\*;

@Entity

@Table(name = "skill")

public class Skill {

@Id

@GeneratedValue(strategy = GenerationType.IDENTITY)

@Column(name = "sk\_id")

private int id;

@Column(name = "sk\_name")

private String name;

}

**DepartmentRepository.java**

package com.example.countryapp.repository;

import com.example.countryapp.model.Department;

import org.springframework.data.jpa.repository.JpaRepository;

public interface DepartmentRepository extends JpaRepository<Department, Integer> {

}

**EmployeeRepository.java**

package com.example.countryapp.repository;

import com.example.countryapp.model.Employee;

import org.springframework.data.jpa.repository.JpaRepository;

public interface EmployeeRepository extends JpaRepository<Employee, Integer> {

}

**SkillRepository.java**

package com.example.countryapp.repository;

import com.example.countryapp.model.Skill;

import org.springframework.data.jpa.repository.JpaRepository;

public interface SkillRepository extends JpaRepository<Skill, Integer> {

}

**Application.java**

package com.example.countryapp;

import com.example.countryapp.model.Employee;

import com.example.countryapp.repository.EmployeeRepository;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.boot.CommandLineRunner;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import java.util.List;

@SpringBootApplication

public class CountryAppApplication implements CommandLineRunner {

@Autowired

private EmployeeRepository employeeRepository;

public static void main(String[] args) {

SpringApplication.run(CountryAppApplication.class, args);

}

@Override

public void run(String... args) {

System.out.println("Start");

List<Employee> list = employeeRepository.findAll();

for (Employee emp : list) {

System.out.println("ID: " + emp.getId());

System.out.println("Name: " + emp.getName());

System.out.println("Salary: " + emp.getSalary());

System.out.println("Permanent: " + emp.isPermanent());

System.out.println("Date of Birth: " + emp.getDateOfBirth());

System.out.println("-----");

}

System.out.println("End");

}

}

**application.properties**

spring.datasource.url=jdbc:mysql://localhost:3306/countryapp

spring.datasource.username=root

spring.datasource.password=Sajitha\_$2004

spring.datasource.driver-class-name=com.mysql.cj.jdbc.Driver

spring.jpa.hibernate.ddl-auto=none

spring.jpa.properties.hibernate.dialect=org.hibernate.dialect.MySQLDialect

logging.level.org.hibernate.SQL=debug

