Spring Data JPA

# 1. Dependencies (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>spring-data-jpa-demo</artifactId>  
 <version>1.0.0</version>  
 <parent>  
 <groupId>org.springframework.boot</groupId>  
 <artifactId>spring-boot-starter-parent</artifactId>  
 <version>3.3.0</version>  
 </parent>  
 <dependencies>  
 <dependency>  
 <groupId>org.springframework.boot</groupId>  
 <artifactId>spring-boot-starter-data-jpa</artifactId>  
 </dependency>  
 <dependency>  
 <groupId>com.h2database</groupId>  
 <artifactId>h2</artifactId>  
 <scope>runtime</scope>  
 </dependency>  
 </dependencies>  
</project>

# 2. Entity Class - Student.java

package com.example.springdatajpademo.entity;  
  
import jakarta.persistence.Entity;  
import jakarta.persistence.GeneratedValue;  
import jakarta.persistence.GenerationType;  
import jakarta.persistence.Id;  
  
@Entity  
public class Student {  
 @Id  
 @GeneratedValue(strategy = GenerationType.IDENTITY)  
 private Long id;  
 private String name;  
 private String email;  
  
 public Long getId() { return id; }  
 public void setId(Long id) { this.id = id; }  
  
 public String getName() { return name; }  
 public void setName(String name) { this.name = name; }  
  
 public String getEmail() { return email; }  
 public void setEmail(String email) { this.email = email; }  
}

# 3. Repository Interface - StudentRepository.java

package com.example.springdatajpademo.repository;  
  
import com.example.springdatajpademo.entity.Student;  
import org.springframework.data.jpa.repository.JpaRepository;  
  
public interface StudentRepository extends JpaRepository<Student, Long> {  
}

# 4. Main Application - SpringDataJpaDemoApplication.java

package com.example.springdatajpademo;  
  
import com.example.springdatajpademo.entity.Student;  
import com.example.springdatajpademo.repository.StudentRepository;  
import org.springframework.boot.CommandLineRunner;  
import org.springframework.boot.SpringApplication;  
import org.springframework.boot.autoconfigure.SpringBootApplication;  
import org.springframework.context.annotation.Bean;  
  
@SpringBootApplication  
public class SpringDataJpaDemoApplication {  
  
 public static void main(String[] args) {  
 SpringApplication.run(SpringDataJpaDemoApplication.class, args);  
 }  
  
 @Bean  
 public CommandLineRunner demo(StudentRepository repo) {  
 return args -> {  
 Student student = new Student();  
 student.setName("raja moushmi");  
 student.setEmail("rajamoushmi.com");  
 repo.save(student);  
  
 System.out.println("All Students:");  
 repo.findAll().forEach(s ->  
 System.out.println(s.getId() + ": " + s.getName() + " - " + s.getEmail()));  
 };  
 }  
}

# 5. Configuration - application.properties

spring.datasource.url=jdbc:h2:mem:testdb  
spring.datasource.driverClassName=org.h2.Driver  
spring.datasource.username=root  
spring.datasource.password=2005  
spring.jpa.database-platform=org.hibernate.dialect.H2Dialect  
spring.h2.console.enabled=true  
spring.jpa.show-sql=true