Spring Boot MVC JPA H2 Query Methods

Agenda

1 **Spring Boot MVC JPA H2 Query Methods**

Objectives

At the end of this module, you will be able to:

- Understand, What is query methods in spring boot.

Spring Boot MVC JPA H2 Query Methods

Crud Repository Interface

- The CRUD methods from “CrudRepository” interface are.
  - save(Entity entity)
  - count()
  - delete(Entity entity)
  - deleteAll()
  - deleteById(Integer id)
  - findAll()
  - findById(Integer id)

Scenario - 1

Scenario - 1

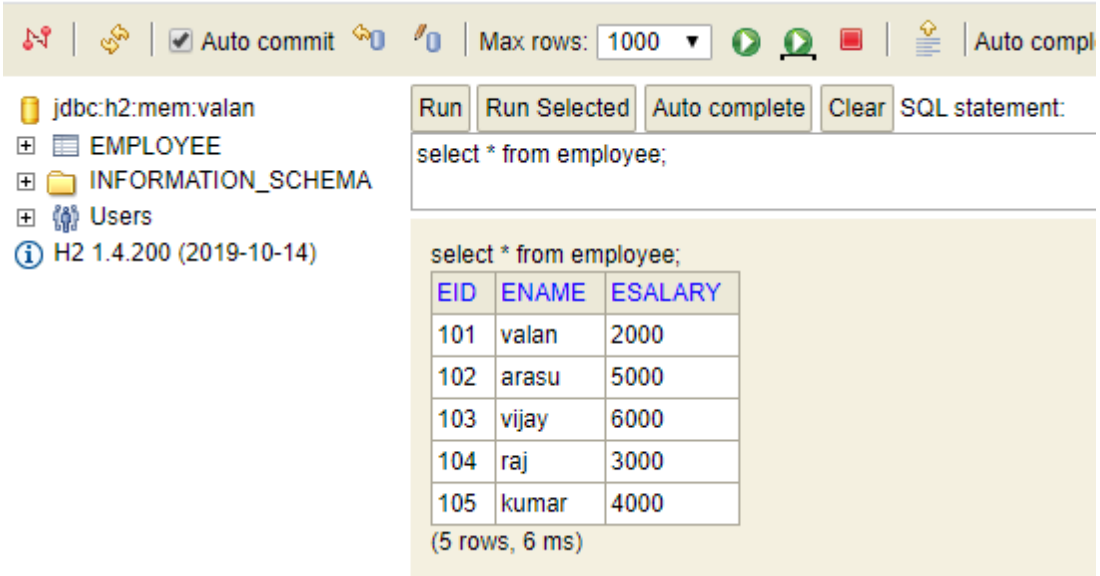
- Let us consider our model class is like below.

```
package com.wipro.pack.model;
import javax.persistence.Entity;
import javax.persistence.Id;
@Entity
public class Employee {
		@Id
		private int eid;
		private String ename;
		private int esalary;
		//Getters & Setters
		@Override
		public String toString() {
			return "Employee [eid=" + eid + ", ename=" + ename + ", esalary=" + esalary + "]";
		}

}
```

Scenario - 1

- Also let us load some records in H2 Employee table by using "data.sql" file. For example like below.



Scenario - 1

- In this case, If we want to find or delete any employee records by using "eid" then I can use "CrudRepository" interface methods findById() and deleteById().

- Suppose, If we want to find or delete any employee records by using “ename” or “esalary” then "CrudRepository" interface methods will not help. Because there is no such a method.

- Now will see the solution for this scenario in the next slide.

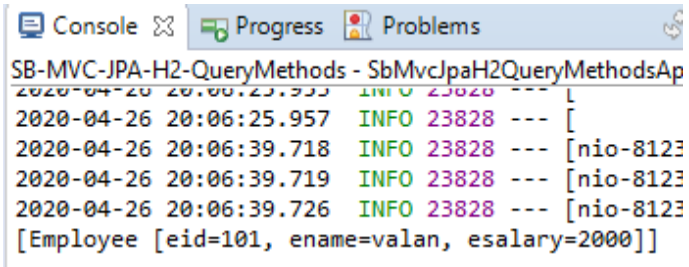
Scenario - 1

- Below is the solution.

```
package com.wipro.pack.dao;
import java.util.List;
import org.springframework.data.repository.CrudRepository;
import com.wipro.pack.model.Employee;
public interface EmployeeDao extends CrudRepository<Employee, Integer>{
            List<Employee> findByEname(String name);
}
```

- Just to check the result, will have a controller like below.

```
@Controller
public class EmployeeController {
            @Autowired
            EmployeeDao dao;
            @RequestMapping("/home")
            public String home() {
            System.out.println(dao.findByEname("valan"));
                        return "";
            }
}
```



Scenario - 1

- Here the rule is that the method must begin with findBy or getBy and then the property name.

```
List<Employee> findByEname(String name);

List<Employee> getByEname(String name);
```

- Same way, you can have your own deleteBy or removeBy method.

```
void deleteByEname(String name);

void deleteByEsalary(int salary);

void removeByEsalary(int salary);
```

Scenario - 2

Scenario - 2

- In this case, If we want to find or delete any employee records by using some conditions.
- Like salary greater than or less than.
- Will see the solution for this scenario in the next slide.

Scenario - 2

- Below is the solution for our “EmployeeDao” interface.

```
List<Employee> findByEsalaryGreaterThan(int salary);

List<Employee> findByEsalaryLessThan(int salary);

List<Employee> deleteByEsalaryGreaterThan(int salary);

List<Employee> deleteByEsalaryLessThan(int salary);
```

Scenario - 3

Scenario - 3

- If we want to write our own query. Then we can use @Query to write JPQL.

```
@Query("from employee where ename=?1 order by esalary")
List<Employee> findByEnameSorted(String name);
```

Summary

In this session, you have learned about:

- What is query methods in spring boot.

Thank you