

## Back-End development: Spring Boot – Build a Rest CRUD API with Hibernate – Real-Time Project

The following files are required:

1. **Application** - provided by Spring boot

2. **Entity** - *POJO*

3. **DAO**

- *Interface dao (defines all functions with their data type)*

```
public interface EmployeeDAO {  
    List<Employee> findAll();  
    Object findById(int theId);  
    void saveOrUpdate(Employee theEmployee);  
    void deleteById(int theId);  
}
```

- *IMPL defines how/what these functions returns values when called*

```
@Repository  
public class EmployeeIMPL implements EmployeeDAO {  
    private final EntityManager entityManager;  
  
    //Set up constructor injection  
    @Autowired  
    public EmployeeIMPL(EntityManager entityManager) {  
        this.entityManager = entityManager;  
    }  
}
```

4. **Service**

- *Interface service (defines all functions with their data type)*

```
public interface EmployeeService {  
    List<Employee> findAll();  
    Object findById(int employeeId);  
    void saveOrUpdate(Employee theEmployee);  
    void deleteById(int employeeId);  
}
```

- *IMPL just leaves the default unimplemented functions from the interface.*

```
@Service  
public class EmployeeServiceIMPL implements EmployeeService {  
    private final EmployeeDAO employeeDAO;  
  
    @Autowired  
    public EmployeeServiceIMPL(EmployeeDAO employeeDAO) {  
        this.employeeDAO = employeeDAO;  
    }  
}
```

5. **Controller** - *communicates with web using RESTful API*

```
@CrossOrigin(origins = { "http://localhost:3000" })  
@RestController  
public class EmployeeController {  
    private final EmployeeService employeeService;  
  
    @Autowired  
    public EmployeeController(@Qualifier("employeeServiceIMPL") EmployeeService employeeService) {  
        this.employeeService = employeeService;  
    }  
}
```