ESE Lab – Reusable Spring Boot CRUD API Guide

Part 1: Steps to Convert Student CRUD App to Any New CRUD API

1. Rename package from studentcrud to desired module (e.g., employeemanagement).
2. Rename Entity class (Student → Employee) and update fields only.
3. Change table name and attributes in @Entity class.
4. Rename Repository interface accordingly.
5. Rename Controller class and update @RequestMapping path.
6. Change Service class logic only for entity name (methods remain same).
7. Update application name and description in application.properties and pom.xml.
8. No change required in main application class logic.

Part 2: Topic-wise Minimal Changes for 20 CRUD APIs

1. Student Management CRUD App

Entity Rename: Student → Student
Fields Change: name, course
Controller Mapping: @RequestMapping("/students")

2. Employee Management CRUD App

Entity Rename: Student → Employee
Fields Change: name, department
Controller Mapping: @RequestMapping("/employees")

3. Book Management CRUD App

Entity Rename: Student → Book
Fields Change: title, author
Controller Mapping: @RequestMapping("/books")

4. Product Management CRUD App

Entity Rename: Student → Product
Fields Change: name, price
Controller Mapping: @RequestMapping("/products")

5. Course Management CRUD App

Entity Rename: Student → Course
Fields Change: code, name
Controller Mapping: @RequestMapping("/courses")

6. Department Management CRUD App

Entity Rename: Student → Department
Fields Change: name
Controller Mapping: @RequestMapping("/departments")

7. Teacher Management CRUD App

Entity Rename: Student → Teacher
Fields Change: name, subject
Controller Mapping: @RequestMapping("/teachers")

8. Subject Management CRUD App

Entity Rename: Student → Subject
Fields Change: code, name
Controller Mapping: @RequestMapping("/subjects")

9. Contact Management CRUD App

Entity Rename: Student → Contact
Fields Change: name, phone

Controller Mapping: @RequestMapping("/contacts")

10. Customer Management CRUD App

Entity Rename: Student → Customer
Fields Change: name, address
Controller Mapping: @RequestMapping("/customers")

11. Vehicle Management CRUD App

Entity Rename: Student → Vehicle
Fields Change: number, ownerName
Controller Mapping: @RequestMapping("/vehicles")

12. Patient Management CRUD App

Entity Rename: Student → Patient
Fields Change: name, disease
Controller Mapping: @RequestMapping("/patients")

13. Event Management CRUD App

Entity Rename: Student → Event
Fields Change: name, date
Controller Mapping: @RequestMapping("/events")

14. Expense Management CRUD App

Entity Rename: Student → Expense
Fields Change: amount, description
Controller Mapping: @RequestMapping("/expenses")

15. InventoryItem Management CRUD App

Entity Rename: Student → InventoryItem
Fields Change: name, quantity
Controller Mapping: @RequestMapping("/items")

16. Notice Management CRUD App

Entity Rename: Student → Notice
Fields Change: title, description
Controller Mapping: @RequestMapping("/notices")

17. Feedback Management CRUD App

Entity Rename: Student → Feedback
Fields Change: userName, feedback
Controller Mapping: @RequestMapping("/feedbacks")

18. Supplier Management CRUD App

Entity Rename: Student → Supplier
Fields Change: name, contact

Controller Mapping: @RequestMapping("/suppliers")

19. LibraryMember Management CRUD App

Entity Rename: Student → LibraryMember
Fields Change: name, memberId
Controller Mapping: @RequestMapping("/members")

20. User Management CRUD App

Entity Rename: Student → User
Fields Change: username, email
Controller Mapping: @RequestMapping("/users")