**Lab Scenario: Building a Contact Management System**

**Objective**: Implement a RESTful service using Spring Boot to manage contacts in a Contact Management System. This system will allow users to add new contacts, retrieve contact details, update contact information, and delete contacts. Each contact should include information such as ID, name, phone number, email(string), and address(string).

**Lab Questions**

1. **Defining the Contact Entity**:
   * **Question**: Define a Contact entity class that represents a contact in the system. Which attributes would you include to adequately represent a contact, and how would you use annotations to map this class to a database table?

**Create three layered packages and classes(Repository, service, Controller)**

1. **Component Scanning and Annotations**:
   * **Question**: Explain how you would organize your Spring Boot application's package structure to optimize component scanning. Which annotations would you use to denote service classes, repository interfaces, and controllers, and why?

1. **Creating a Contact Repository**:
   * **Question**: What basic CRUD operations will this interface provide, and how can you extend its functionality to include custom query methods, such as finding contacts by name?
   * Various ways of getting the data.
   * Implement Get all controller service and Repository.
   * Implement Get by contact ID
2. **Developing the REST Controller**:
   * **Question**: Create a ContactController class annotated with @RestController. Define RESTful endpoints to perform the following actions: add a new contact, retrieve all contacts, get details of a specific contact by ID, update a contact, and delete a contact. What HTTP methods and annotations would you use for each operation?