

vaccination center

Writeup :

- ❖ Database Setup: Create a MySQL database to store citizen and vaccination center information. Design and create tables for Citizen and Vaccine Center entities, considering appropriate relationship mappings.
- ❖ Entity Layer: Implement the Vaccine Center and User (Citizen) classes/entities in the code, corresponding to the database tables. Define relationships between Vaccine Center and User entities.
- ❖ Repository Layer: Create a repository layer to handle all database operations.
- ❖ Implement functions to perform CRUD operations on the Citizen and Vaccine Center entities, interacting with the MySQL database.
- ❖ Service Layer: Design and implement the service layer to handle business logic and dependency injection. Demonstrate the interface segregation principle by creating separate interfaces for Citizen and Vaccine Center services.
- ❖ Controller Layer: Develop a controller layer to expose APIs for the application's functionalities. Implement endpoints for the following operations: Add citizens to the database. Retrieve all citizens. Retrieve a specific citizen by ID. Retrieve all vaccination centers. Retrieve a specific vaccination center by ID. Retrieve a specific vaccination center and all its citizens in that city.
- ❖ API Design: Define appropriate request and response formats for each API endpoint. Ensure proper validation and error handling for user inputs.
- ❖ Integration: Integrate the database, entity, repository, service, and controller layers to work together cohesively.
- ❖ Testing: Thoroughly test the application's functionality, covering various scenarios and edge cases.
- ❖ Deployment: Deploy the application on a suitable platform, considering scalability and security.
- ❖ Documentation: Create detailed documentation for the application, including API documentation and setup instructions.
- ❖ Throughout the development process, ensure adherence to coding standards, security best practices, and optimal performance. Collaborate

with relevant stakeholders to gather feedback and make necessary improvements.