SAL INSTITUTE OF TECHNOLOGY AND ENGINEERING RESEARCH

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Student's Weekly Report of Internship

Student Name:	**Anshul Patel**		
Enrollment Number:	**210670107047**		
Week Duration:	**5 Days**		
Name Of Organization:	**OPL Innovate**		
External Guide Name:	**Deepak Vishwakarma**		
External Guide Contact details:	**Email:** Deepak.vishwakarma@oplinnovate.com	**Mob No:**	9827375391
Internal Faculty Guide Name:	**Dr. Krishna Hingrajiya**		

Work done in last Week with description (Attach supporting Documents Like Diagram, Screen Shot of each Work):

1. Project Initialization

2. Dependency Management

3. Database Configuration

Plans for next week:

1. Define entity classes and establish relationships for database consistency.

2. Implement repository layer for optimized data retrieval and transactions.

3. Develop API endpoints to facilitate CRUD operations efficiently.

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Total Working Hrs: _____40_____   **Signature of Student:**

The above entries are correct, and the grading of work done by Trainee is

Excellent	Very Good	Good	Fair	Below Average	Poor

Signature of External Guide with Company Seal: **Signature of Internal Guide:**

Date: **Date:**

Project Setup & Configuration

Work Completed:

Project Initialization:

Created a Spring Boot project using Spring Boot Initializr.

Configured essential dependencies for web development, database interactions, security, and testing.

Ensured compatibility of selected libraries and maintained version consistency.

Dependency Management:

Selected and configured dependencies based on project needs, reducing unnecessary bloat.

Implemented Maven dependency management to avoid conflicts and ensure smooth builds.

Folder Structure Organization:

Established a modular structure with clear separation of concerns.

Created layers for configuration, controllers, services, repositories, and entities.

Introduced DTOs for data transfer and response structuring.

Database Configuration:

Integrated MySQL database with proper configurations for high performance.

Automated schema generation and data migrations.

Set up secure connections and ensured efficient data handling.

Application Runner Setup:

Configured the main application class for seamless startup.

Validated proper initialization of essential services and components.

Version Control Setup:

Initialized Git for source code management and version tracking.

Created a `.gitignore` file to exclude unnecessary files and ensure a clean repository.

Established branch management guidelines for streamlined collaboration.

Future Plans:

Define entity classes and establish relationships for database consistency.

Implement repository layer for optimized data retrieval and transactions.

Develop API endpoints to facilitate CRUD operations efficiently.

Integrate authentication mechanisms to secure the system.

Project Structure:

```
spring-boot-app/
|—— src/
|     ├—— main/
|     |     ├—— java/com/example/app/
|     |     |     ├—— config/        # Configuration classes
|     |     |     ├—— controller/    # API controllers
|     |     |     ├—— dto/           # Data Transfer Objects
|     |     |     ├—— entity/        # JPA entity classes
|     |     |     ├—— repository/    # Data repositories
|     |     |     ├—— service/       # Business logic services
|     |     |     ├—— AppApplication.java  # Main application class
|     |     ├—— resources/
|     |     |     ├—— application.yml   # Configuration file
|     |     |     ├—— schema.sql        # DB Schema (if needed)
|—— pom.xml          # Maven dependencies
|—— .gitignore       # Ignore unnecessary files
  |—— README.md        # Project documentation
```

pom.xml (Dependencies)

```xml
CopyEdit
<dependencies>
    <!-- Spring Boot Starter Web -->
    <dependency>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-web</artifactId>
    </dependency>

    <!-- Spring Boot Starter JPA -->
    <dependency>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-data-jpa</artifactId>
    </dependency>

    <!-- MySQL Connector -->
    <dependency>
        <groupId>mysql</groupId>
        <artifactId>mysql-connector-java</artifactId>
    </dependency>

    <!-- Spring Boot Starter Security -->
    <dependency>
        <groupId>org.springframework.boot</groupId>
        <artifactId>spring-boot-starter-security</artifactId>
    </dependency>

    <!-- Lombok for Cleaner Code -->
    <dependency>
        <groupId>org.projectlombok</groupId>
        <artifactId>lombok</artifactId>
        <scope>provided</scope>
    </dependency></dependencies>
```