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Internship: Xynerotech Backend Internship – Week 1 Task

Project Overview

This is a Spring Boot REST API designed to manage doctors in a healthcare system. It supports complete CRUD operations along with validation and error handling, forming the backend of the **Apkadr.in** appointment platform.

- Add, view, update, and delete doctors
- Field-level validation
- Consistent and structured API responses

Key Features

- Full CRUD functionality for Doctor entity
- Input validation using annotations
- Custom exception handling with meaningful messages
- Modular structure using DTO, service, controller, and entity layers
- Clean RESTful design with proper status codes

Technologies Used

Technology	Purpose
Java 17	Main development language
Spring Boot	Framework for REST API
Spring Web	Creating HTTP endpoints
Spring Data JPA	ORM and DB operations
Spring Validation	Field-level input checks
Lombok	Reducing boilerplate
Postman	API testing

Project Structure

```
src/
└── main/
    └── java/
        └── com.xynerotech.task.doctor_appointment_booking_platform
            ├── controller
            ├── dto
            ├── entity
            ├── repository
            ├── service
            ├── exception
            └── response
```

API Endpoints

Method	Endpoint	Description
POST	/api/doctor	Add a new doctor

GET	/api/doctors	Get all doctors
GET	/api/doctor/{id}	Get doctor by ID
PUT	/api/doctor/{id}	Update doctor partially
DELETE	/api/doctor/{id}	Delete doctor

Sample Request/Response

Add Doctor

```
{
  "name": "Dr. Ahmad Raza",
  "specialization": "Dermatologist",
  "contact": "9876543210"
}
```

```
{
  "message": "Doctor added successfully.",
  "data": {
    "id": 1,
    "name": "Dr. Ahmad Raza",
    "specialization": "Dermatologist",
    "contact": "9876543210"
  },
  "timeStamp": "2025-07-20T18:00:00",
  "statusCode": 201
}
```

Validation Rules

Field	Rule
name	Must not be blank
specialization	Must not be blank

contact	Must be a 10-digit number

⚠ Error Handling

Handled using `@ControllerAdvice` to generate consistent error responses.

```
{
  "message": "Contact must be a valid 10-digit number.",
  "data": null,
  "timeStamp": "2025-07-20T18:30:00",
  "statusCode": 400
}
```

▶ Run Locally

```
git clone https://github.com/Ahmad-Raza810/doctor-api.git
cd doctor-api
mvn spring-boot:run
```

Test with Postman or Swagger UI.

Final Deliverables

- Doctor CRUD APIs implemented
- DTO and validation layer added
- Central exception handler
- Modular structure
- Documented via README

Submitted By

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