# **System Design Document**

for

## **MindEase**

Online Counselling Platform for Kids, Teens & Adults

## Prepared by

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Course: WS & SOA (IT644)

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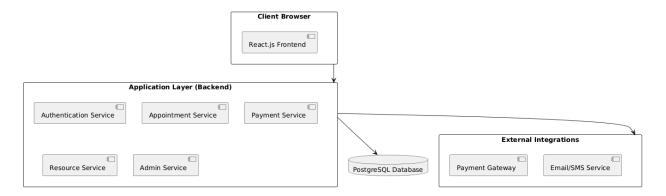
## **Table of Contents**

1. Architecture Diagram	′
2. Database Schema (ER Diagram)	1
3. Class / Component Diagrams	3
4. REST API Contracts	4
5. Wireframes / UI Mockups (Final Draft)	. 11

## 1. Architecture Diagram

#### A 3-tier architecture:

- Presentation Layer (Frontend) → React.js + TailwindCSS
- Application Layer (Backend API) → Django REST Framework (or Node.js Express if chosen)
- Data Layer (Database) → PostgreSQL
- External Integrations: Payment Gateway (Razorpay/Stripe), Email/SMS (SendGrid/Twilio)



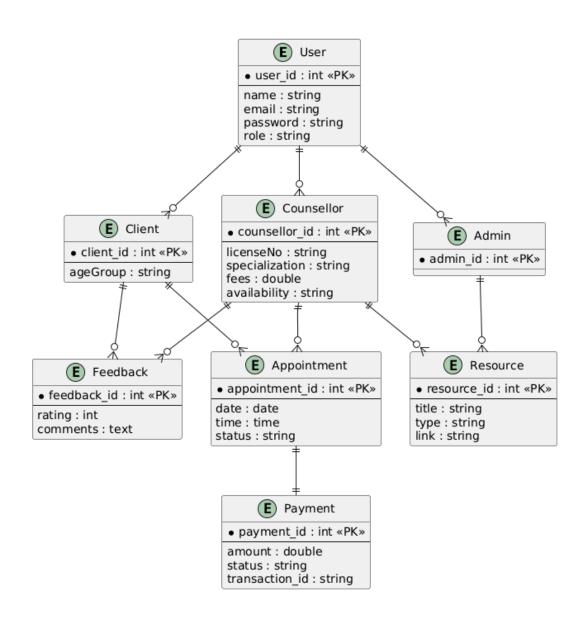
## 2. Database Schema (ER Diagram)

#### Key Entities:

- **User** (abstract) → Client, Counsellor, Admin
- Appointment (date, time, status, client id, counsellor id)
- Payment (id, appointment\_id, amount, status, transaction\_id)
- **Resource** (id, title, type, uploaded\_by, approved\_by)
- Feedback (id, client\_id, counsellor\_id, rating, comments)

#### Relationships:

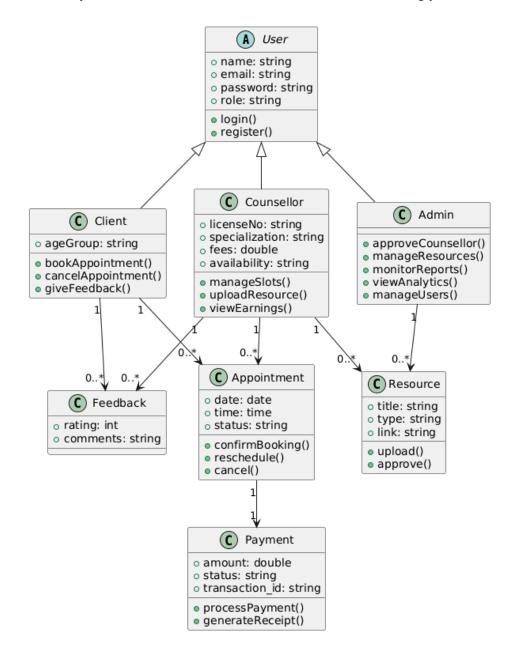
- One Client → Many Appointments
- One Counsellor → Many Appointments
- One Appointment → One Payment
- One Counsellor → Many Resources
- One Admin → Approves Many Counsellors/Resources



## 3. Class / Component Diagrams

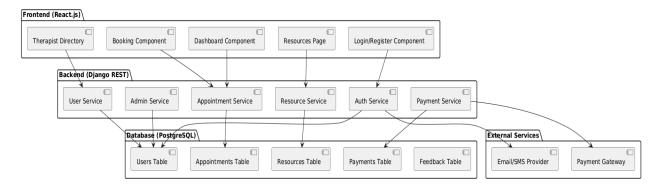
#### Class Diagram:

- Abstract **User** with attributes (name, email, password, role).
- Subclasses: Client (ageGroup), Counsellor (license, specialization, fees, availability), Admin.
- Appointment, Payment, Resource, Feedback classes linked accordingly.



#### Component Diagram:

- Frontend Component: Authentication, Booking, Payments, Dashboard, Resources.
- **Backend Component**: Auth Service, Appointment Service, Payment Service, Resource Service, Admin Service.
- External: Payment Gateway, Email/SMS provider.



## 4. REST API Contracts (Swagger/OpenAPI style)

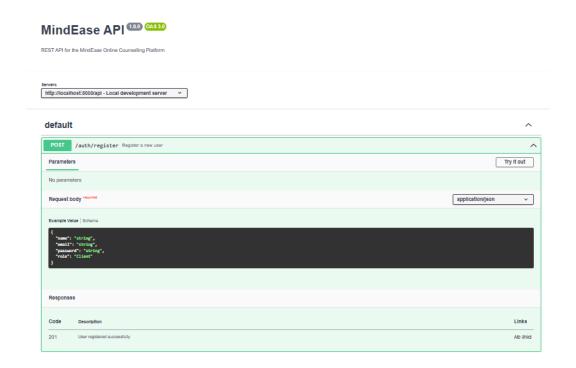
#### **REST API Contracts**

#### Overview

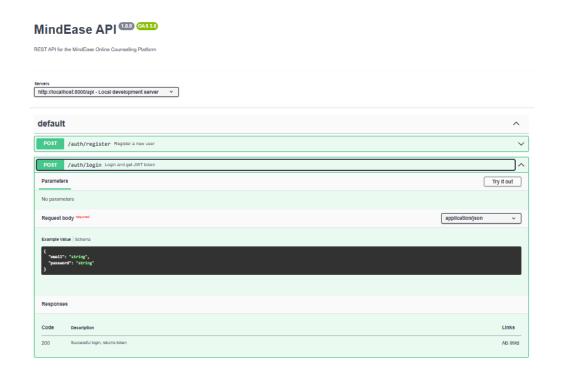
The REST API follows **OpenAPI 3.0 specification** and defines endpoints for Authentication, Counsellor Management, Appointments, Payments, Resources, Feedback, and Admin functionalities.

#### Selected Endpoints

- Authentication
  - POST /auth/register → Register a new user

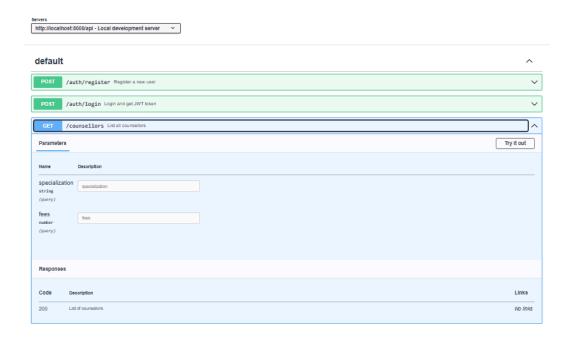


• POST /auth/login → Login and receive JWT

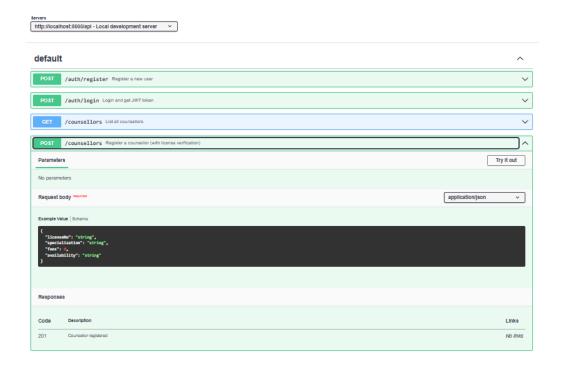


#### Counsellors

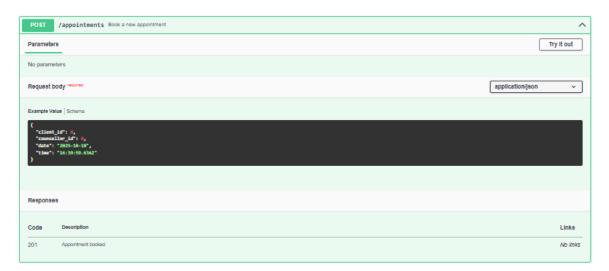
• GET /counsellors → List counsellors



• POST /counsellors → Register counsellor



- Appointments
  - POST /appointments → Book appointment



• GET /appointments/{id} → Get appointment details



• PUT /appointments/{id} → Reschedule appointment



• DELETE /appointments/{id} → Cancel appointment

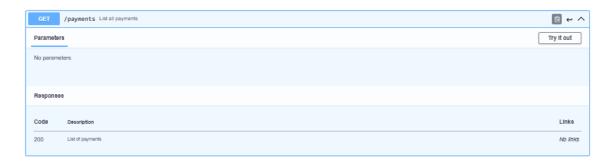


## Payments

• POST /payments → Create payment for appointment



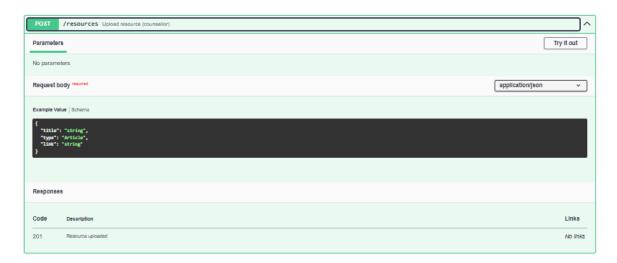
• GET /payments/{id} → Verify payment status



- Resources
  - GET /resources → List resources



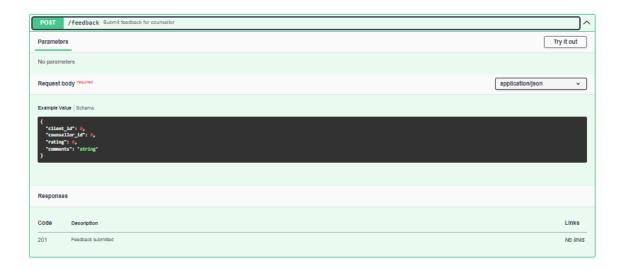
POST /resources → Upload resource (counsellor)



PUT /resources/{id}/approve → Approve resource (admin)



- Feedback
  - POST /feedback → Submit feedback



• GET /feedback → Get feedback list



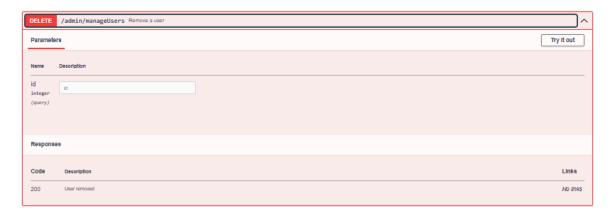
- Admin
  - PUT /admin/approveCounsellor/{id} → Approve counsellor



 $\bullet$  GET /admin/manageUsers  $\rightarrow$  List users



• DELETE /admin/manageUsers?id= → Remove user

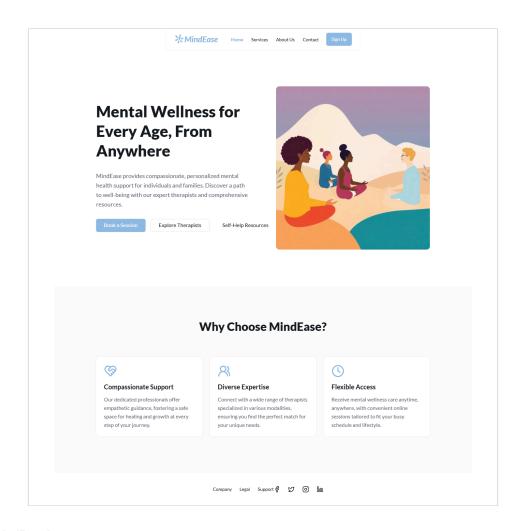


## **Notes**

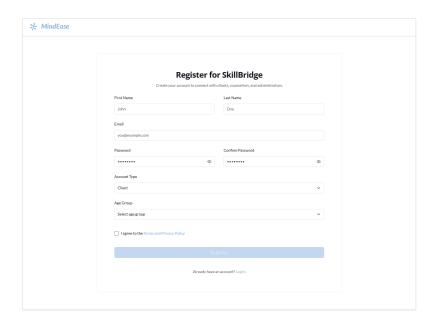
• Screenshots were taken directly from **Swagger Editor** after loading the OpenAPI YAML.

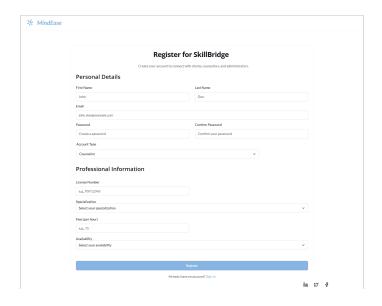
## 5. Wireframes / UI Mockups (Final Draft)

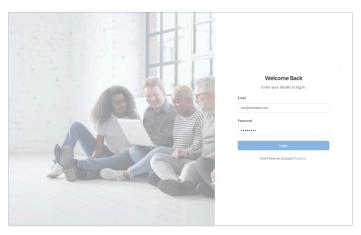
• Homepage:



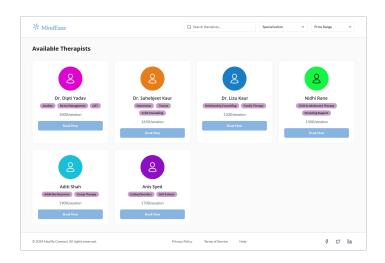
## Login/Register:



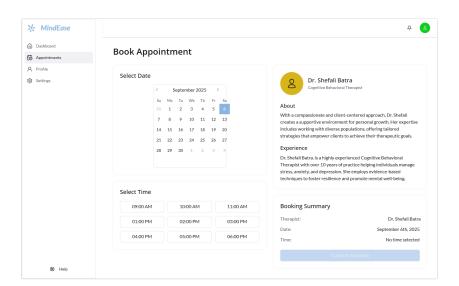




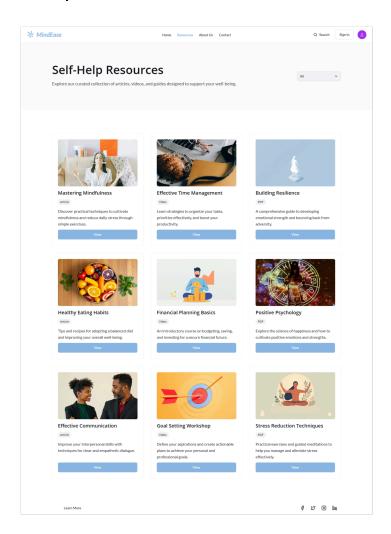
## • Therapist Directory:



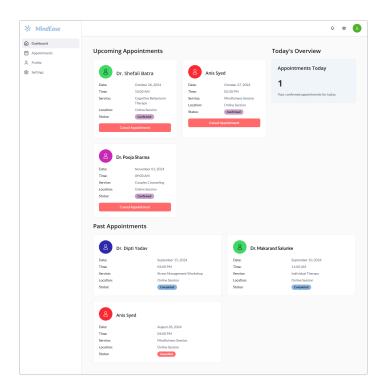
#### • Booking Page:



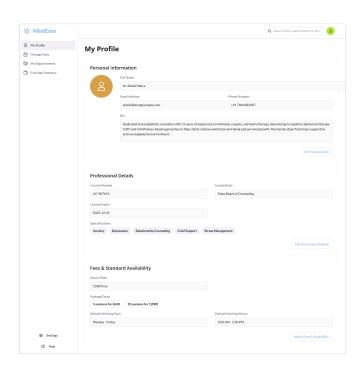
#### • Self help resources:



#### • Client Dashboard:



#### • Counsellor Dashboard:



#### • Admin Dashboard:

