# **Project Proposal: BarberEase – Barber Shop Management System**

### **Project Description**

**BarberEase** is a full-stack web application designed to streamline the operations of a barber shop. It addresses the inefficiencies of manual appointment scheduling and feedback collection by offering a centralized digital solution. The system allows clients to discover barbers, book appointments, and leave reviews, while barbers can manage their schedules and services more effectively.

**Core Features:**

* Clients can:  
  + View barber profiles, services, and availability
  + Book appointments with available barbers
  + Submit reviews and ratings after appointments
* Barbers can:  
  + View and manage their schedules
  + Update services offered, availability, and pricing
* A user can be able to sign up, log in, and manage their profile as either a client or a barber.
* A client can be able to view barber profiles, including services offered, prices, availability, and ratings.
* A client can be able to book appointments with a selected barber based on available time slots.
* A client can be able to receive appointment reminders to avoid missed bookings.
* A client can be able to leave reviews and star ratings for barbers after completed appointments.
* A barber can be able to update their profile with offered services, pricing, and a short bio.
* A barber can be able to set and manage their weekly availability for receiving appointments.
* A barber can be able to view, accept, or decline upcoming appointments on their dashboard.
* A user can be able to securely authenticate and remain logged in using JWT tokens.
* A user can be able to interact with validated forms (e.g., booking or review submissions) with clear feedback
* System features:  
  + User authentication for both clients and barbers
  + Appointment reminders
  + Profile pages for clients and barbers
  + Form validation for better UX (using Formik)

This system improves appointment reliability, enhances customer experience, and empowers barbers with data for continuous service improvement.

### **Languages & Technologies to Be Used**

| **Layer** | **Technology/Language Used** |
| --- | --- |
| **Frontend** | React.js, Tailwind CSS, HTML, JavaScript |
| **Backend** | Flask (Python), Flask-RESTful |
| **Database** | PostgreSQL (Relational) |
| **Authentication** | JSON Web Tokens (JWT) |
| **Form Handling** | Formik, Yup |
| **Version Control** | Git & GitHub |
| **Diagram Tool** | dbdiagram.io / draw.io |

### **Database Tables (PostgreSQL)**

| **Table Name** | **Description** |
| --- | --- |
| Users | Stores user information (clients & barbers) |
| Appointments | Stores appointment bookings and time details |
| Services | Lists services offered by barbers |
| Reviews | Stores client ratings and feedback for barbers |
| Availability | Tracks barber available times |

ERD

https://dbdiagram.io/d/685103d93cc77757c8261dd4

### **Relationships Between Tables**

* A **User** can be either a **Client** or **Barber**
* A **Client** can book many **Appointments**
* A **Barber** can have many **Appointments**
* A **Barber** offers many **Services**
* A **Client** can submit multiple **Reviews**
* Each **Review** is associated with one **Appointment**
* Each **Appointment** has one **Client** and one **Barber**

### **Summary of Relationships**

| **Relationship** | **Type** |
| --- | --- |
| User ↔ Appointments | One-to-Many (as client or barber) |
| Barber ↔ Services | One-to-Many |
| Appointment ↔ Review | One-to-One |
| User ↔ Reviews | One-to-Many (as reviewer) |