**WG Blendz Website Development Technical Document**

\*Note: Website is currently under development

**Table of Contents**

1. Introduction
2. Project Overview
3. Technology Stack
4. System Architecture
5. Frontend Development
6. Backend Development
7. Database Schema
8. Integration with Stripe API
9. Security Measures
10. Deployment
11. Conclusion

**1. Introduction**

This technical document outlines the development process of the WG Blendz website, which is an appointment booking platform for a barber business. The document provides an in-depth look at the project's technology stack, system architecture, and various development aspects.

**2. Project Overview**

The WG Blendz website is being developed to enable clients to book appointments conveniently with the barber business. The project aims to streamline the booking process, store client details securely, and integrate payment options for a seamless experience.

**3. Technology Stack**

The website is being developed using the MERN (MongoDB, Express.js, React.js, Node.js) stack. Here is an overview of the technologies used:

* Frontend:
  + React.js: For building the user interface.
  + HTML/CSS: For structuring and styling web pages.
* Backend:
  + Node.js: For server-side logic.
  + Express.js: As a web application framework.
* Database:
  + MongoDB: As the NoSQL database for storing client information.
* Authentication:
  + JWT (JSON Web Tokens): For secure user authentication.
* Payment Integration:
  + Stripe API: For processing payments.

**4. System Architecture**

The system will follows a client-server architecture. The frontend, built with React.js, communicates with the backend, which is powered by Node.js and Express.js. The MongoDB database stores client and appointment data securely.

**5. Frontend Development**

The frontend of the WG Blendz website is going to be developed using React.js. It provides an intuitive user interface for clients to browse services, choose appointment slots, make payments, and interact with additional features:

* User Account Creation: Clients have the option to create user accounts. This feature enhances the user experience by allowing users to save their preferences, view their appointment history, and streamline the booking process for future visits.
* Reviews Section: The website includes a dedicated section for client reviews. Users can submit reviews, rate their experiences, and provide valuable feedback. This interactive feature fosters community engagement and helps potential clients make informed decisions.

HTML and CSS are being used for structuring and styling web pages to ensure an appealing and user-friendly experience.

**6. Backend Development**

Node.js and Express.js are being employed for the backend development. The backend not only handles user authentication, appointment scheduling, and payment processing but also manages user accounts and reviews:

* User Account Management: User accounts are securely stored in the database. Registered users can log in, access their profiles, update personal information, and view their appointment history.
* Reviews Management: The backend facilitates the submission, retrieval, and display of client reviews. Reviews are associated with specific services and appointments, allowing for a detailed and context-rich feedback system.

**7. Database Schema**

The MongoDB database will store data in JSON-like documents. In addition to collections for clients, appointments, and user accounts, the schema includes collections for reviews:

* Reviews Collection: This collection stores client reviews, including text, ratings, timestamps, and associations with specific services or appointments. This data is structured efficiently to facilitate quick retrieval and maintain data integrity.

The integration of user accounts and reviews will further enrich the website's functionality, enhancing the overall user experience and providing valuable insights for the barber business.

**8. Integration with Stripe API**

To enable online payments, the website will integrate with the Stripe API. This integration allows clients to securely pay for their appointments using various payment methods, enhancing the overall user experience.

**9. Security Measures**

* JWT tokens are used for user authentication, ensuring secure access to the website.
* Sensitive data is encrypted and stored securely in the database.
* Regular security audits and updates are performed to safeguard against potential vulnerabilities.

**10. Deployment**

The WG Blendz website is planned to deploy on a cloud hosting platform to ensure high availability and scalability. Continuous integration and deployment (CI/CD) pipelines are implemented to automate testing and deployment processes.

11. Conclusion

The development of the WG Blendz website is progressing with a strong focus on technology, security, and user experience. The MERN stack, MongoDB, and Stripe API integration contribute to a robust and feature-rich platform that simplifies the appointment booking process for clients and enhances the operational efficiency of the barber business.

This technical document provides an overview of the development process and key technologies used in this project. Further updates and enhancements are planned to continually improve the website's functionality and user experience.