Business Requirements Document (BRD)

Title : TailorNest - A Tailor Management Platform

1. Project Overview

Small tailoring businesses face challenges managing customer orders, measurements, and deadlines. Currently, they handle these processes manually, which can lead to miscommunication, errors, and delayed deliveries. This project aims to build an online platform that enables customers to place orders digitally, manage their measurements, track order progress, and communicate with tailors. For tailors, the system will streamline workflows, provide order management tools, and support business analysis through reports.

2. Objectives

- **Optimize Order Management**: Digitally manage orders and measurements, reducing manual errors and improving workflow efficiency for tailors.
- **Expand Customer Reach**: Allow customers to find tailors nearby through location-based search, helping tailors reach a wider audience.
- **Enhance Communication with Customers**: Enable real-time chat and automated notifications, allowing tailors to keep customers informed and respond to inquiries.
- **Track Business Performance**: Provide monthly revenue and sales reports, helping tailors make data-driven business decisions and identify growth opportunities.
- **Streamline Ordering**: Enable customers to place orders online and submit measurements, making the tailoring service more accessible and convenient.

3. Scope

This project will include:

- **Customer-facing features:** shop search, order placement, measurement management, notifications, chat with tailors, order tracking, reviews and ratings**.**
- **Tailor-facing features:** order management, customer notifications, revenue tracking, shop status (open/closed), and chat functionality**.**
- **Common features:** tailor shop map discovery using Open Maps, notifications for both parties, and optional delivery or pickup services**.**

4. Key Features and Requirements

4.1. Search and Discovery

- **Search Nearby Shops:** Customers can search for tailoring shops based on their location. Results will display:
  - Shop name and location.
  - Tailor rating based on customer reviews.
  - Tailor status (open or closed).

- **Open Maps Integration:** Integration with Open Maps to show the physical location of shops.

4.2. Order Management

- **Order Placement:** Customers can place different types of orders (bulk, men's tailoring, etc.).
- **Custom Measurements:** Customers can digitally store and update their measurements.
- **Order Tracking:** Customers can track the progress of their orders through various stages (e.g., received, in progress, completed).

4.3. Tailor Status (Open/Closed)

- Tailors can update their business status (open/closed), which will be visible to customers before placing an order.

4.4. Notifications

- **Tailor Notifications:** Tailors receive notifications when new orders are placed.
- **Customer Notifications:** Customers are notified when:
  - Tailor updates the order status.
  - The order is completed and ready for pickup or delivery.

4.5. Chat Functionality

- **Customer-Tailor Chat:** A real-time chat system allowing customers and tailors to discuss order details, clarifications, and updates.

4.6. Tailor Revenue Report

- Tailors can view monthly revenue reports, including:
  - Total orders completed.
  - Revenue generated.
  - Performance analysis of different types of orders.

4.7. Customer Reviews and Ratings

- **Rating System:** After completing an order, customers can review and rate the tailor. Ratings will be displayed to future customers during shop searches.

4.8. Pickup/Delivery Option

- Customers can choose to either pick up their order from the shop or opt for home delivery (if the tailor provides this service).

4.9. Types of Orders

- Customers can specify the type of order, such as:
  - Bulk orders (for events).
  - Men's tailoring (shirts, suits).

- Women’s tailoring, etc.

5. Functional Requirements

5.1. Frontend (React & TypeScript)

- **Search Page:** Location-based shop search with filters (status, rating).
- **Shop Page:** Detailed tailor profile with reviews, status, and order placement functionality.
- **Order Management:** Customer dashboard for tracking order progress and managing measurements.
- **Chat Interface:** Real-time chat system between customers and tailors.
- **Notifications:** Frontend support for push notifications.

5.2. Backend (Node.js & MongoDB)

- **User Management:** Authentication and authorization for both customers and tailors.
- **Order Processing:** Manage the entire order lifecycle from placement to completion.
- **Notification System:** Push notification service for both customers and tailors.
- **Chat System:** Real-time chat implementation using WebSocket or similar technology.
- **Analytics Module:** Generate monthly reports and analytics for tailors.

6. Non-Functional Requirements

- **Performance:** The system must be able to handle peak loads, especially during festivals and wedding seasons when tailoring orders are higher.
- **Security:** Secure storage of customer measurements and order details, including encryption where needed.
- **Scalability:** The system should scale easily as more tailors and customers join the platform.
- **Usability:** The user interface must be intuitive for customers and tailors with varying levels of technical expertise.

7. User Stories

Customer User Stories :

1. **Account and Personalization**:
   - As a customer, I want to create an account so that I can save my personal information and measurements for future orders.
   - As a customer, I want to update my stored measurements so that I can ensure they are accurate for future orders.
   - As a customer, I want to browse various tailoring services and fabric options so that I can choose the best options for my order.
2. **Order Placement and Management**:
   - As a customer, I want to submit custom measurements through an easy-to-use interface so that my order fits my specifications.
   - As a customer, I want to receive an order confirmation after placing an order so that I have a record of my request.

3. **Order Tracking and Status Updates**:
    - As a customer, I want to track the status of my order in real time so that I can stay informed about its progress.
    - As a customer, I want to receive notifications when my order is completed so that I know it's ready for pickup or delivery.
4. **Communication**:
    - As a customer, I want to be able to chat with the tailor to confirm details and resolve any questions about my order.
5. **Fulfillment Options**:
    - As a customer, I want to choose between pickup and delivery for my order so that I can select the most convenient option.
6. **Reviews and Ratings**:
    - As a customer, I want to leave a review and rating after my order is completed so that other customers can benefit from my experience.
7. **Notification and Alerts**:
    - As a customer, I want to receive notifications for key order milestones so that I am kept up-to-date without needing to check manually.

Tailor User Stories :

1. **Order Management**:
    - As a tailor, I want to manage all incoming orders in one view so that I can handle my workflow efficiently.
    - As a tailor, I want to update the status of each order as it progresses so that customers receive accurate updates.
2. **Communication**:
    - As a tailor, I want to reply to customer messages so that I can provide clarity and ensure accurate order fulfillment.
3. **Fulfillment Options**:
    - As a tailor, I want to offer both delivery and pickup options to customers so that I can provide flexibility in fulfillment.
4. **Business Analytics and Reporting**:
    - As a tailor, I want to view detailed monthly sales and revenue reports so that I can track my business performance.
    - As a tailor, I want to analyze customer trends and order types so that I can make data-driven decisions to improve my offerings.
5. **Reviews and Ratings**:
    - As a tailor, I want to display my ratings and reviews so that new customers can see my service quality.
6. **Notification and Alerts**:
    - As a tailor, I want to receive immediate alerts for new orders so that I can start processing them promptly.

8. Stakeholders

- **Customers:** Individuals looking to place tailoring orders online.
- **Tailors:** Small tailoring businesses that need help managing orders and records.

- **Business Owners:** Interested in increasing visibility and order management efficiency.

9. API Documentation

9.1. Authentication

a. **POST /api/auth/register**
   - Registers a new user (customer or tailor) with account details.
b. **POST /api/auth/login**
   - Logs in a user and returns an authentication token.
c. **GET /api/auth/logout**
   - Logs out the user and clears the active session.
d. **GET /api/auth/user**
   - Retrieves details of the currently logged-in user.

9.2. Shop Discovery

a. **GET /api/shops/search?location=:location**
   - Searches for tailoring shops based on location and filters (like rating and status).
b. **GET /api/shops/:id**
   - Retrieves detailed information about a specific tailoring shop.

9.3. Order Management

a. **POST /api/orders**
   - Places a new order with details like order type, measurements, and tailor.
b. **GET /api/orders/:id**
   - Retrieves details and status of a specific order.
c. **PUT /api/orders/:id/status**
   - Updates the status of an existing order (e.g., "In Progress", "Completed").
d. **GET /api/orders/customer/:customerId**
   - Lists all orders placed by a specific customer.
e. **GET /api/orders/tailor/:tailorId**
   - Lists all orders assigned to a specific tailor.

9.4. Chat & Communication

a. **POST /api/chat/:orderId**
   - Initiates a chat session between customer and tailor for a specific order.
b. **GET /api/chat/:orderId/messages**
   - Retrieves the chat messages for a specific order between customer and tailor.

9.5. Notifications

a. **GET /api/notifications/user/:userId**
   - Fetches all notifications for a specific user, including new orders and status updates.
b. **POST /api/notifications/mark-as-read/:notificationId**
   - Marks a specific notification as read for the user.

9.6. Reports

a. **GET /api/reports/tailor/:tailorId?month=:month**
   - Generates a monthly revenue report for a specific tailor.

9.7 Admin

a. **GET /api/admin/tailors**
   - Fetches all the tailors information.

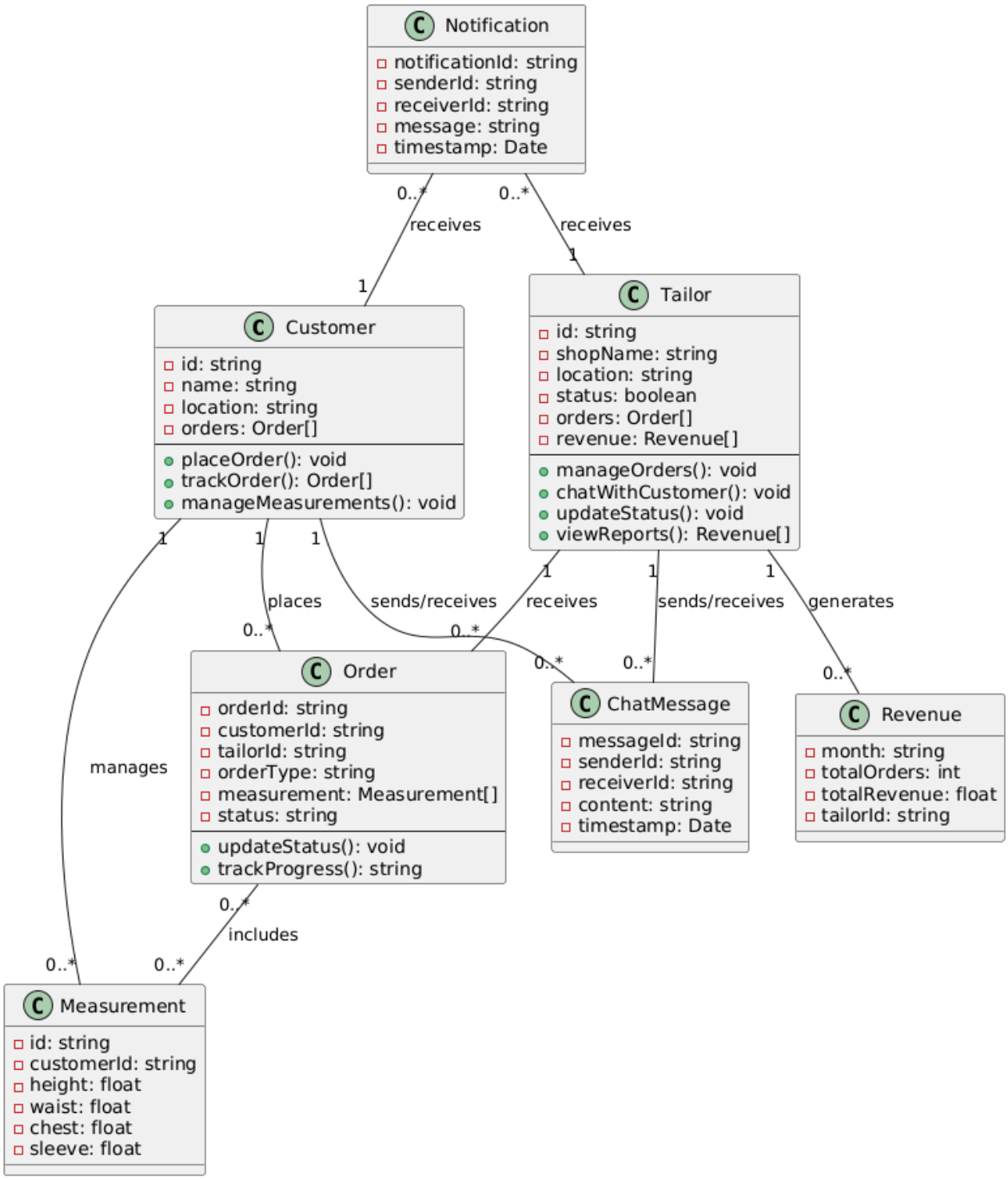
b. **DELETE /api/admin/tailors/:id**
   - Delete a particular tailor.

c. **GET /api/admin/users**
   - Fetches all the user information.

9. Timeline

- **API Documentation (1 day):** API documentation, preparing t
- **Frontend Implementation (4 days):** Develop customer-facing features (shop search, order placement, notifications).
- **Backend Implementation (4 days):** Develop tailor-facing features (order management, notifications, chat).
- **Frontend and Backend Implementation (2 days):** Revenue reports and reviews/ratings implementation.
- **Testing and Deployment (2 days):** Testing, deployment, and final polish (UI/UX improvements, bug fixes).

10. UML Diagram



11. Success Metrics

- Increase in customer satisfaction (measured via reviews and ratings).
- Reduction in order errors and miscommunication.
- Increase in tailoring business efficiency (measured monthly revenue reports).