

Food Delivery app of local pastry (Endpoint naming might change)

1. User Registration and Activation

- Endpoint: /register
 - Users register by providing necessary details (username, email, password).
 - An activation code is sent to the user's email.
- Email Service: Sends activation emails with a unique code and an activation link.
- Endpoint: /activate-account
 - Users activate their accounts by visiting this endpoint with the activation code.
 - The code is validated, and upon success, the user's account status is updated to "active".

2. Authentication and Authorization

- Endpoints: /login, /logout
 - Uses Spring Security for handling authentication.
 - Only activated users can log in.
- Role Management: Roles like USER, ADMIN are defined to manage permissions.

3. Product Management

- Endpoint: /products/upload
 - Admins can upload new pastry products.
 - Details include name, description, price, and an image of the product.
- Image Storage:
- Database:
 - Product details are stored in a database table (e.g., products).

4. Browsing and Searching Products

- Endpoint: /products
 - Users can view all available products.
- Endpoint: /products/search
 - Users can search for products by keywords.
- Service Layer:
 - Handles the search logic and querying the database.

5. Ordering and Payment

- Endpoint: /order
 - Users can place orders for products, which means filling out order form.
 - Order details include user info, product info, payment details.
 - User will fill out payment form.
 - Order status will be updated
 - Keeps track of order status.

6. Review System

- Endpoint: /reviews
 - Users can leave reviews for products they have purchased.
 - Reviews comments, and are associated with the user and product.
- Review Moderation:
 - Optionally, reviews can be moderated by admins before being published.

7. Technical Components

- Spring Boot: Main framework for building the backend application.
- Thymeleaf: Template engine for rendering frontend views.
- Spring Data JPA: For interacting with the database.
- Spring Security: For managing authentication and authorization.
- Mail Dev: For sending activation and notification emails.
- Rest Controllers: For handling API requests and responses.
- Services: Business logic and service layer.
- Repositories: Data access layer.

Example Flow

1. User Registration
 - User registers via /register endpoint.
 - Application sends an email with an activation code.
 - User activates their account via /activate endpoint.
2. Uploading Products

- Admin accesses /products/upload.
 - Provides product details and image.
 - Application saves details in the database and stores the image.
3. Browsing and Searching Products
 - User accesses /products to view all products.
 - User can also search products using various criteria.
 - Application retrieves and returns matching products from the database.
 4. Placing an Order
 - User selects a product and places an order via /order.
 - User fills out payment form
 - Order status is updated and stored in the database.
 5. Leaving a Review
 - After purchase, user leaves a review via /reviews.
 - Application stores the review and optionally, admin can moderate it.