Authify - Email Authentication System

1. Project Overview

Authify is a complete email authentication system built using Spring Boot (Backend) and React (Frontend). It provides secure user registration, login, email verification, OTP-based authentication, and password reset functionality. The system also sends professional branded HTML emails for user onboarding and verification.

2. Features Implemented

✔ User Registration & Login using Email & Password
✔ Welcome Email sent on successful signup
✔ Email Verification using OTP
✔ JWT-based Authentication with HttpOnly cookies
✔ Password Reset with OTP verification
✔ Professional HTML Email Templates
✔ Fully responsive React UI integrated with Spring Boot

3. User Authentication Flow

The diagram below shows the complete authentication journey from registration to password reset:

Flowchart: Sign Up → Email Verification → Login → Forgot Password → Reset Password

4. Email Notification System

Email Type	Trigger	Purpose
Welcome Email	After successful signup	Greets the user and confirms account creation
Email Verification OTP	Click on Verify Email	Sends OTP for account verification
Reset Password OTP	Click on Forgot Password	Sends OTP to reset password

5. Step-by-Step User Journey

1. User opens the app: http://localhost:5173
2. User registers via Sign Up → Welcome Email is sent
3. User logs in with email & password
4. User verifies email by entering OTP → Account marked Verified
5. If password forgotten → Click Forgot Password → OTP sent to email
6. Enter OTP → Set new password → Login successful

6. API Endpoints Summary

Endpoint	Method	Purpose
/register	POST	Registers a new user

/login	POST	Authenticates user & generates JWT
/send-otp	POST	Sends email verification OTP
/verify-otp	POST	Verifies user's email using OTP
/reset-otp	POST	Sends OTP for resetting password
/reset-password	POST	Updates the user's password
/logout	POST	Logs out the user and clears JWT cookie

7. Final Architecture

• **Frontend** → React + Bootstrap (UI) • **Backend** → Spring Boot (REST APIs) • **Database** → PostgreSQL • **Authentication** → JWT + HttpOnly Cookies • **Email Service** → Brevo SMTP with HTML templates

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