

RememberBirthdays

Overview

A full stack Spring Boot application to help users remember and manage birthdays, featuring secure authentication, email reminders, and a modern frontend.

Problem

“Most people rely on social media to track friends’ birthdays. RememberBirthdays stores birthdays securely and sends automatic email reminders.”

Tech Stack

Backend: Java (Spring Boot), PostgreSQL, Keycloak

Frontend: React, TypeScript, MUI

Deployment: Docker, Railway (Backend), Netlify (Frontend)

Features

- **Secure Authentication & Authorization**

OAuth2-based authentication with Keycloak, JWT-based access control, and role separation (Admin/User)

- **User-Scope Data Management**

Full CRUD operations for birthdays with strict per-user data isolation; admin visibility across users

- **Automated Background Jobs**

Scheduled daily jobs that trigger birthday reminder emails via SendGrid API

- **RESTful API Design**

Clean, versioned REST endpoints with clear separation of controller, service, and persistence layers

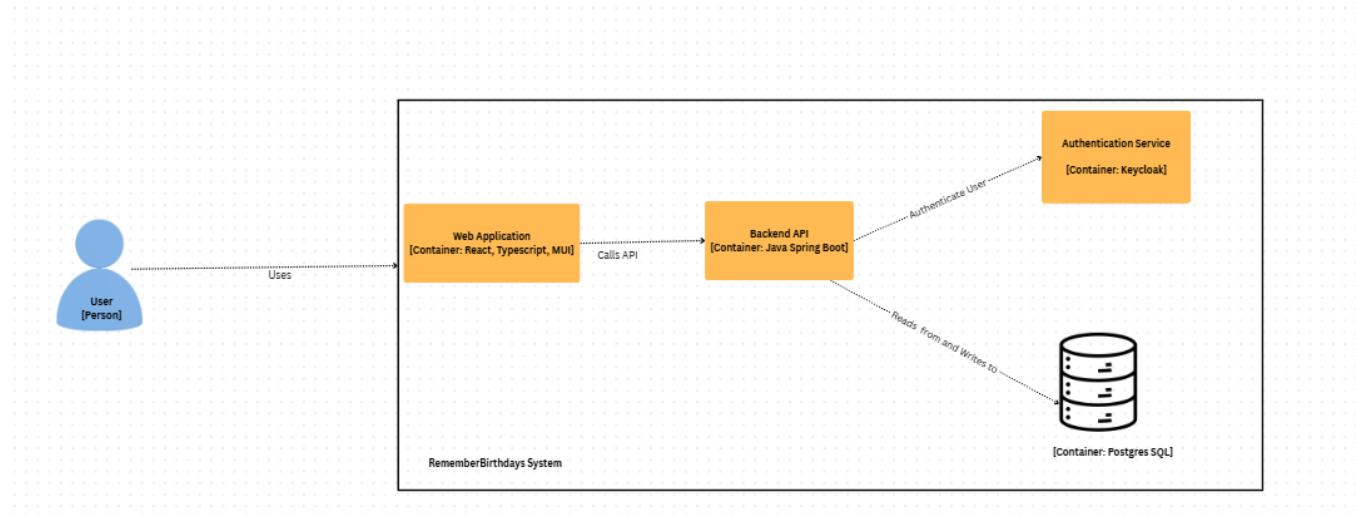
- **Containerized & Cloud-Ready Deployment**

Dockerized backend with docker-compose for local development and seamless cloud deployment

- **Production-Grade Data Persistence**

PostgreSQL relational database with normalized schema and transactional consistency

Architecture Diagram



Future Improvements

- Implement unit and integration tests for backend services
- Add **CI/CD pipeline** for automated testing and deployment
- Implement **rate limiting** for security

Links

- **Backend (Spring Boot API):** [Github - RememberBirthdays API](#)
- **Frontend (React + TypeScript):** [GitHub – RememberBirthdays UI](#)
- **Live Demo:** <https://rememberbirthdaysfrontend.netlify.app/>
- **Video Demo:** <https://youtu.be/NufGv6MUI7s>