

# 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-Scoped 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

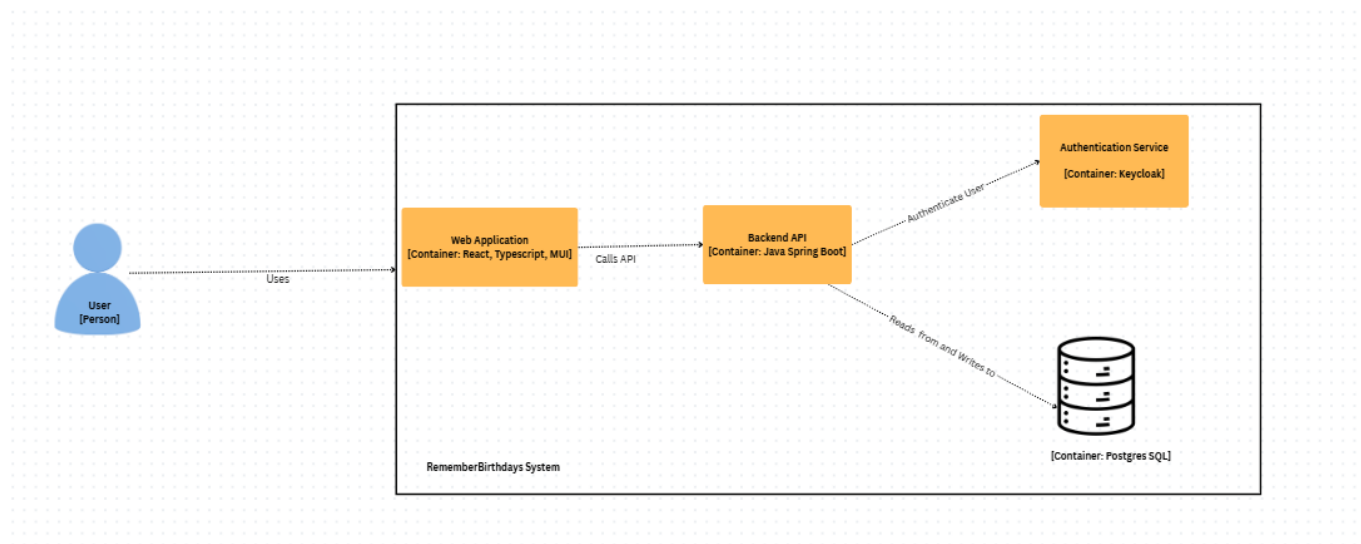
- **Containerized & Cloud-Ready Deployment**

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>