SERVICES AND MANAGEMENT ENGINEERING
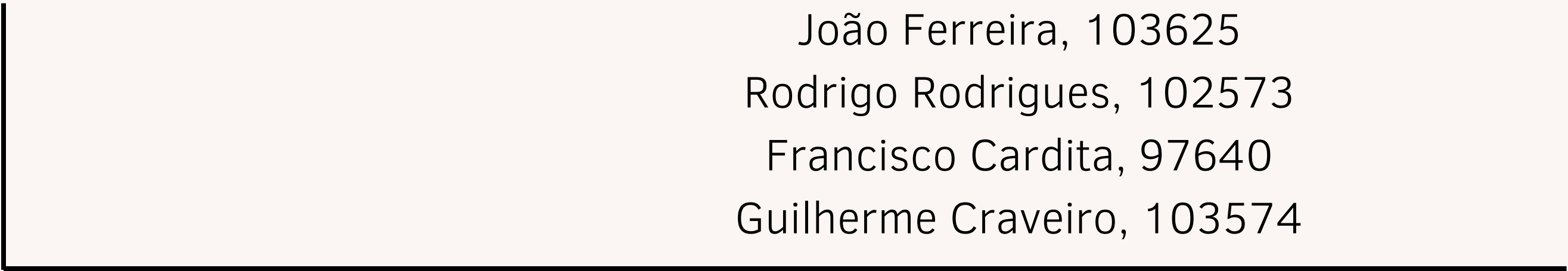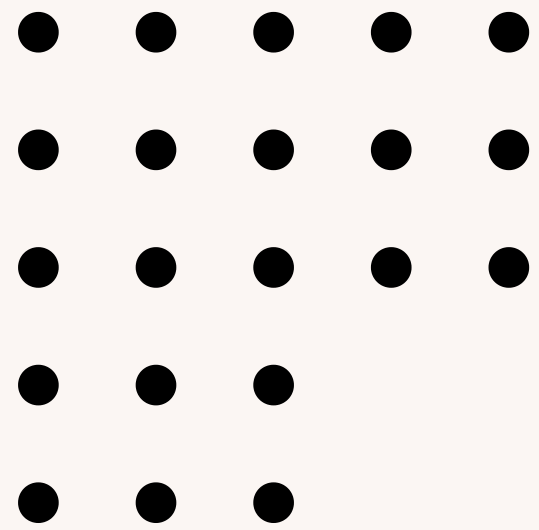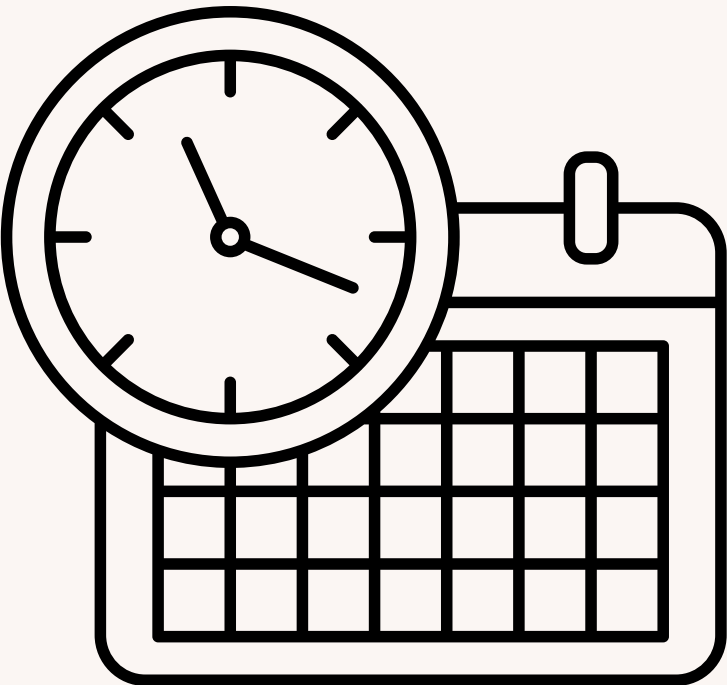
CellWatch

João Ferreira, 103625

Rodrigo Rodrigues, 102573

Francisco Cardita, 97640

Guilherme Craveiro, 103574

ABOUT

Problem

- Prison guards have to check their schedules on a sheet pinned in a dashboard

- Need for an accessible and reliable way to register events (shift changes and meetings)
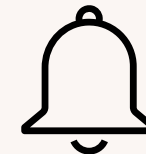
PROVIDED SERVICES

Calendar

Users can check their work schedule and respective shifts.

Authentication

Users have a pre-defined account, and using their credentials, they can access it.

Notification

Setting notification preference (advance notice time and choosing between email or text message). Associating notifications when adding events to the calendar (meetings, shift changes).

TEAM STRUCTURE

Calendar Service Developer

Responsible for developing the calender functionality

Authentication Developer

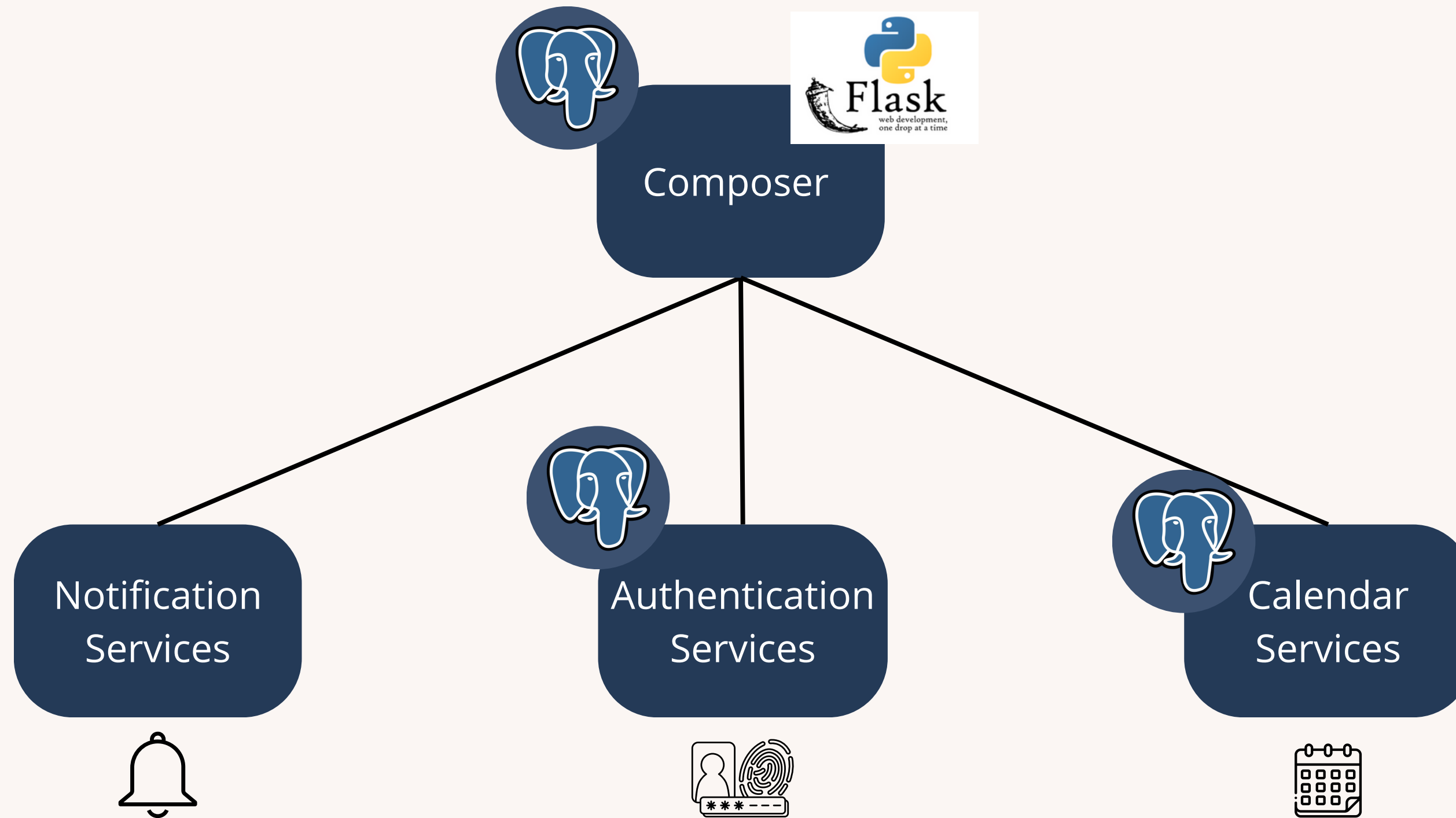Focuses on implementing secure login/logout processes and user authentication

Notifications Developer

Manages the development of notification services for event reminders, app alerts, etc.

Integration Developer

Ensures seamless integration of all services

ARCHITECTURE

AUTHENTICATION

Technologies

OAuth2.0 as a framework for authentication

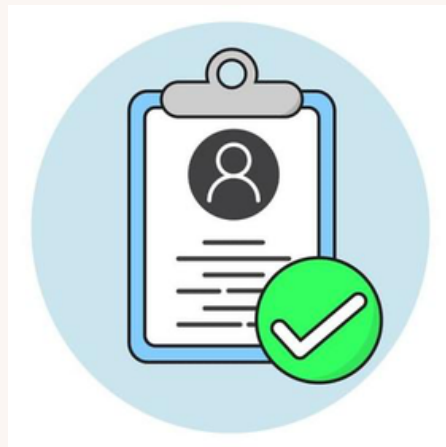**Flask API** for authentication and micro service

PostgresSQL to manage the database

AUTHENTICATION

Login Methods

Self Authentication

Google Authentication

AUTHENTICATION 🪪
Endpoints

GET	**/login/google** Iniciar o fluxo de login com Google OAuth
GET	**/google/callback** Callback para Google OAuth
GET	**/login** Página de login
POST	**/login** Login do user
GET	**/signup** Página de registo
POST	**/signup** Registo de um novo user
GET	**/logout** Logout do user
GET	**/userinfo** Obter informações do user autenticado
POST	**/refresh** Atualizar token de acesso

CALENDAR

Technologies

evoCalendar: JavaScript plugin used to build the calendar interface

FastAPI: framework to build the API with Python

PostgreSQL: manage the database system

CALENDAR
Endpoints

GET	`/v1/schedules` List all schedules

POST	`/v1/schedules` Create a new schedule

GET	`/v1/schedule/{id}` Get a schedule by ID

PUT	`/v1/schedule/{id}` Update a schedule by ID

DELETE	`/v1/schedule/{id}` Delete a schedule by ID

GET	`/v1/schedules/{person_name}` List all schedules for a person

CALENDAR

Schemas

Schedule

id	time	locationId	person_name
UUID	datetime	string	string

ScheduleUpdate

time	locationId	person_name
datetime	string	string

NOTIFICATIONS 🔔

Technologies

FastAPI framework to build API

SMTP to send email notifications

Twilio cloud communications platform to send SMS notifications

NOTIFICATIONS 🔔

Endpoints

| POST | /api/v1/notifications | Send Notification | ⌃ |

Parameters

Try it out

No parameters

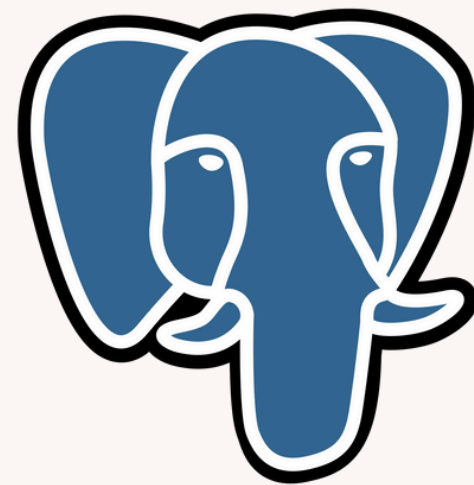**Request body** *required*

application/json ⌄

Example Value | Schema

```json
{
  "username": "string",
  "email": "user@example.com",
  "phoneNumber": "string",
  "systemName": "string",
  "notificationContent": {
    "subject": "string",
    "body": "string"
  },
  "preferences": {
    "smsEnabled": true,
    "emailEnabled": true,
    "pushEnabled": true
  }
}
```

COMPOSER

Technologies
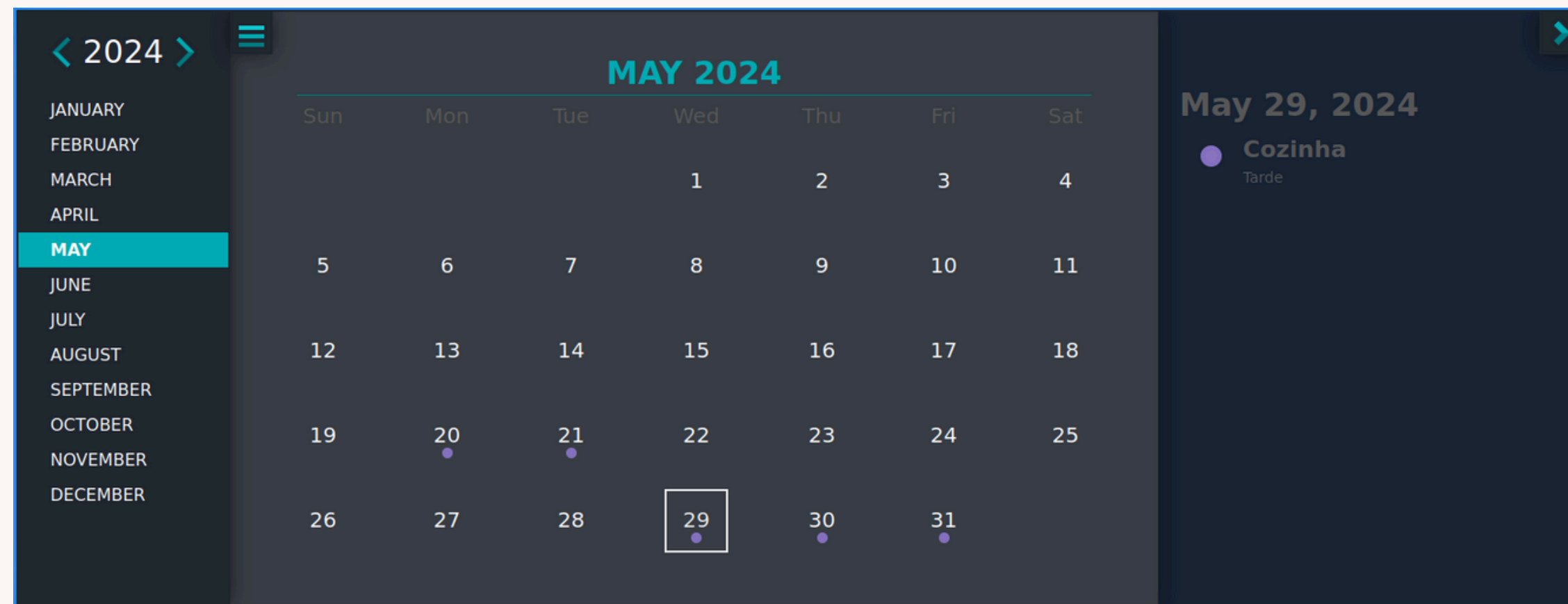
COMPOSER

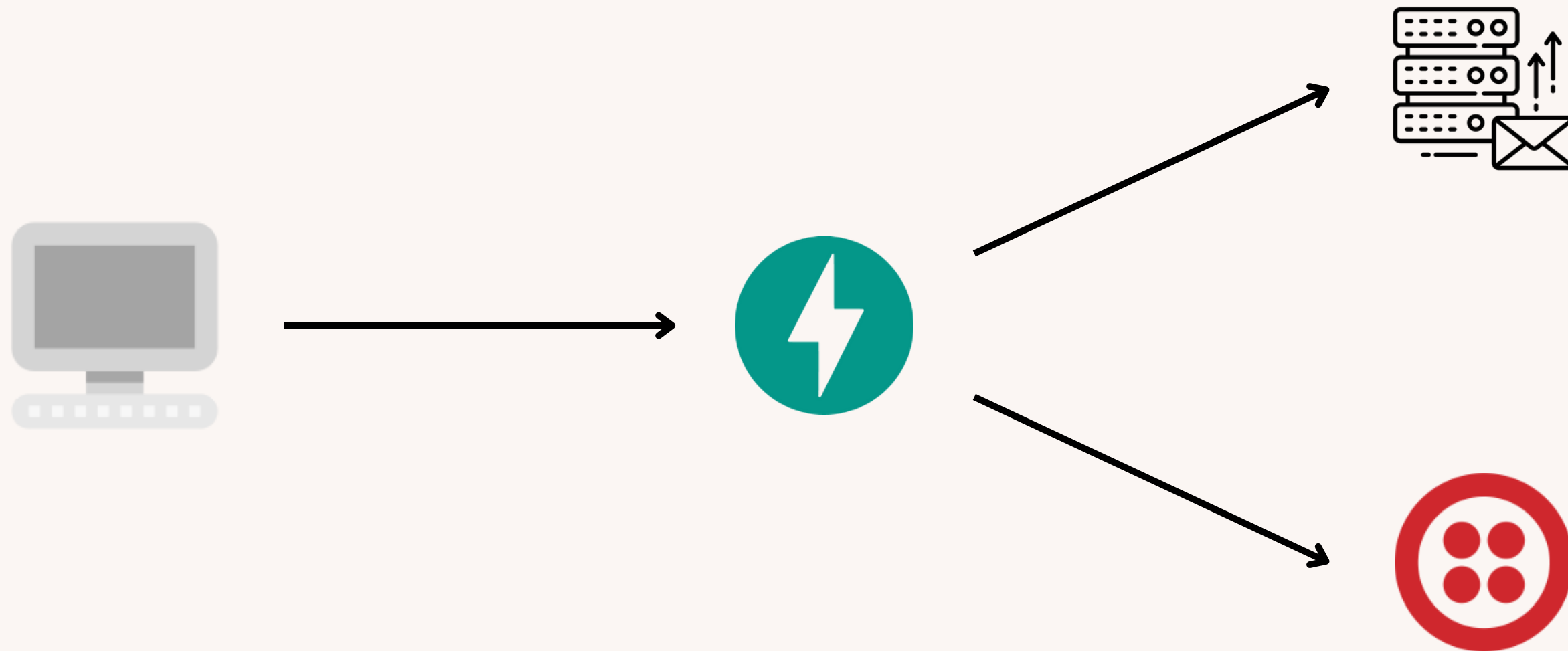**Authentication Service Integration**

Login

Your Email

Your Password

☐ Remember me

login

login with google

COMPOSER

Calendar Service Integration

COMPOSER

Notification Service Integration

DEMO

Login

Your Email

Your Password

☐ Remember me

login

login with google