Invoice Scanner App

Students

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Initial Situation: In this day and age, invoices are received in a wide variety of formats. Some as physical paper documents and others digitally. This makes it challenging to keep track of all invoices, their status and other relevant information. To combat this issue a solution should be created that allows scanning of physical invoices or uploading digital ones for processing. Important information should be extracted and returned in a structured format providing a tabular overview.
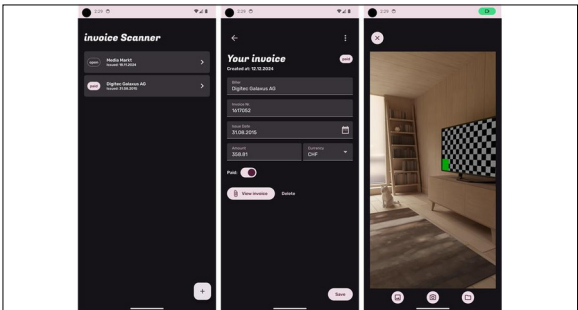
Approach / Technology: A mobile app for Android was developed for the frontend. The app is based on Kotlin utilizing Jetpack Compose and Hilt. As a REST-API for the frontend to interact with, a Python-based backend has been created using the FastAPI framework. The backend has been containerized and runs on a virtual server behind a Traefik reverse proxy. Various AWS services have been integrated for storage, including S3 and DynamoDB, as well as computation with Lambda and data extraction using Textract, a machine learning service that goes beyond ordinary OCR. The Firebase Cloud Messaging service was used for push notifications.

Result: The produced Invoice Scanner app solves the described problem. Invoices can be scanned for automatic data extraction or manually created. The app provides an organized overview of all invoices and options to edit, mark as paid and view the associated original invoice file. Acting as a centralized place for invoices the app can be used for management and archiving purposes.
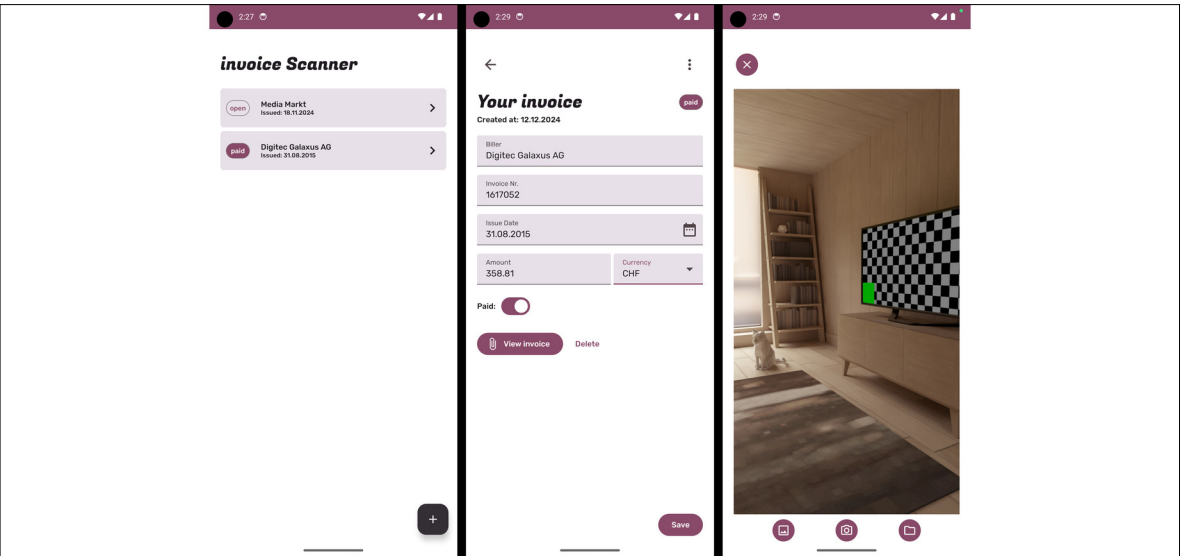
App on tablet
Own presentment

App in dark mode
Own presentment

App in light mode
Own presentment

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Subject Area
Software, Application Design, Networks, Security & Cloud Infrastructure