CANKAYA UNIVERSITY

Software Design Document

Daily: an AI powered journaling application with Image generation

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1. Introduction

1.1 Purpose

The purpose of this Software Design Document (SDD) is to detail the architecture and system design of the Daily platform. Daily is a journaling platform that provides a fun and new way of journaling and writing diaries by introducing artificial intelligence, data analysis and anonymous journal sharing features. By this journal sharing feature we aim to foster a sense of community. This document provides a comprehensive architectural blueprint of the system to effectively guide development, maintenance, testing, and evaluation of the platform.

1.1 Glossary

2. System Overview

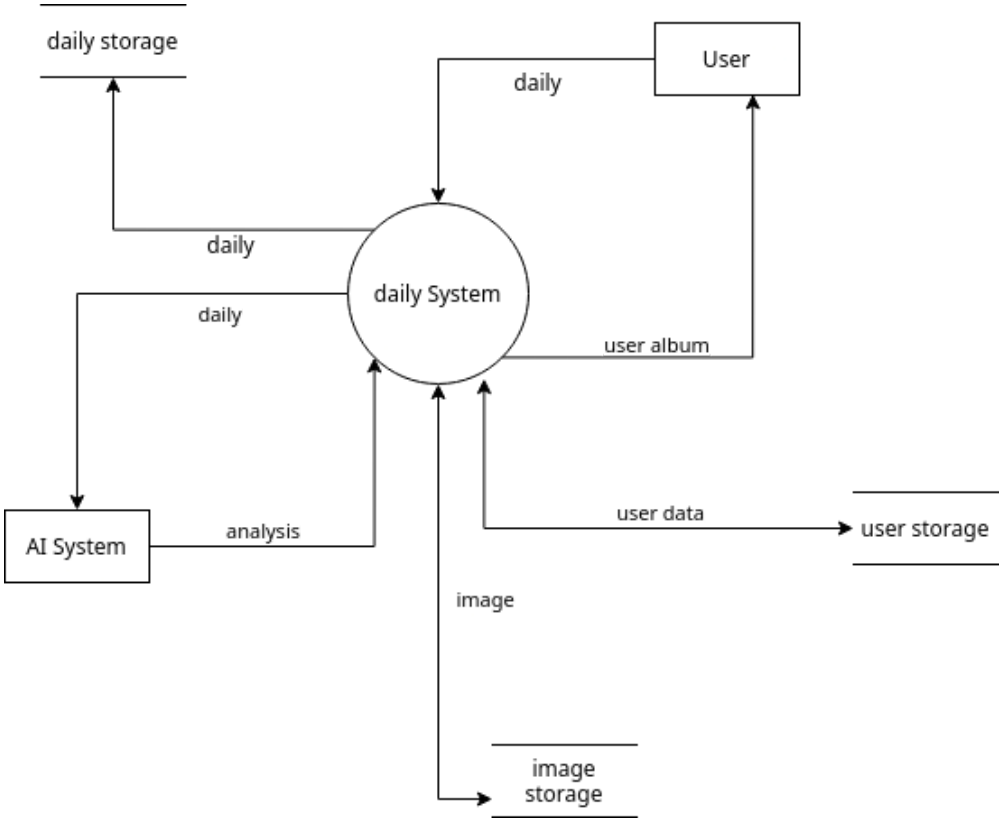
daily platform is a revolutionary online system tailored to enhance the journaling and diary-writing experience. It leverages the power of artificial intelligence and data analysis to introduce a new way of personal expression and community building. Sharing personal stories, daily offers an innovative anonymous journal sharing feature, facilitating a deeper sense of connection among its users.

A “daily” - the name of every diary entry in our application - is the backbone of our application. These dailies cannot be edited after once the clock hits 12 PM. The platform's features are designed with users' needs at the center of the design. These features include personalized daily albums, a dynamic daily sharing system, statistical emotional analysis, personal growth tracking features, among others.

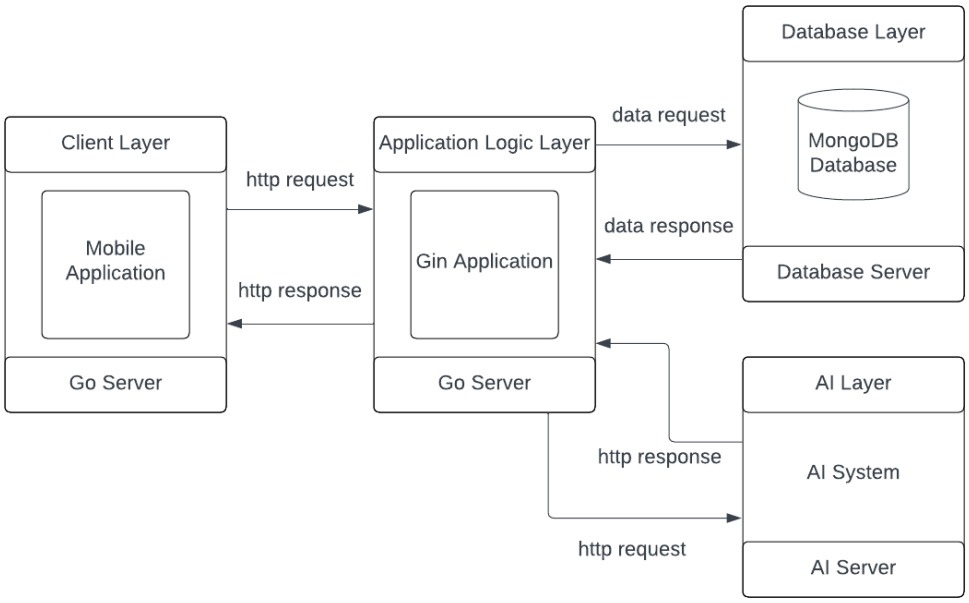
Designed for both iOS and Android platforms using React Native and Expo, it offers a user-friendly interface that encourages users to connect with their inner child and writer. What sets it apart is its AI functionality, built using Python, which emotionally analyzes these entries to gain insights into the user's mood and thoughts. The AI then generates a unique image that encapsulates the essence of the daily, adding a visual dimension to the journaling experience. On the backend, the application is powered by the Gin framework, ensuring a robust, scalable, and efficient performance. "d**ai**ly" is more than just a diary app; it's a platform for self-expression, emotional exploration, and communal support, driven by AI.

3. System Design

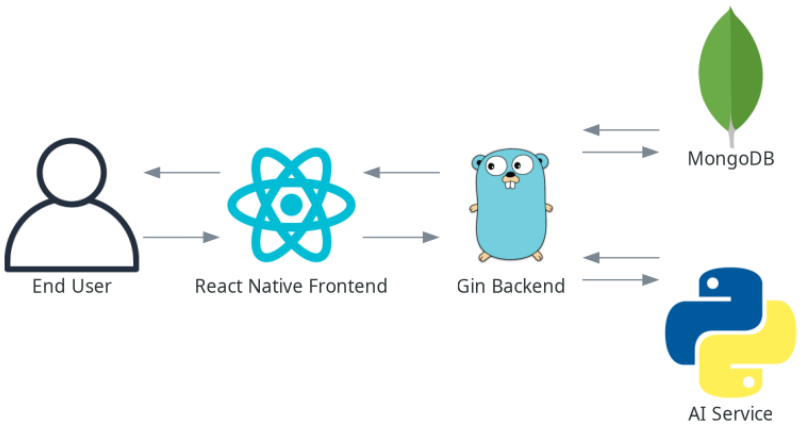
3.1 Context Diagram



3.2 High Level System Architecture Diagram

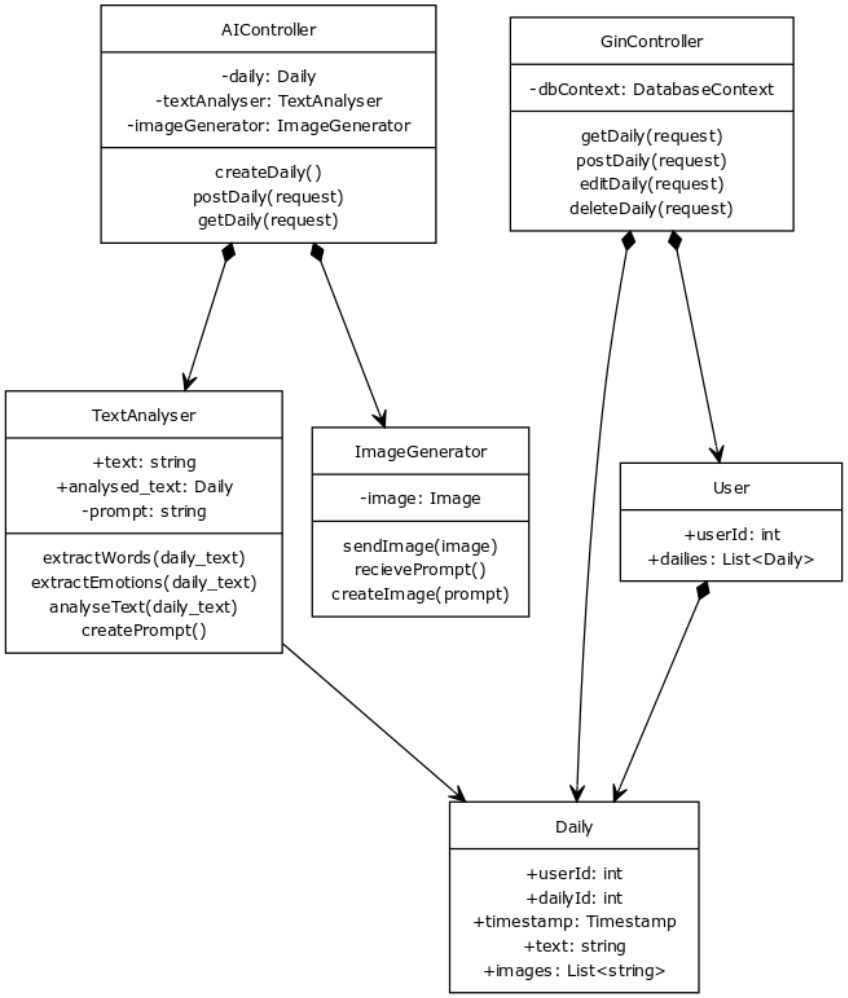


3.3 Service Flow



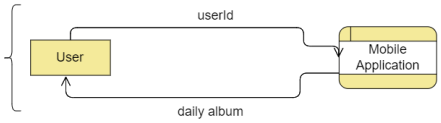
Service Flow

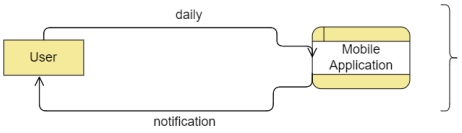
3.4 UML Class Diagram



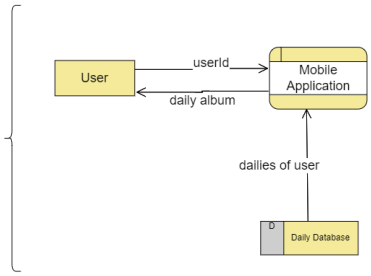
3.5 Data Flow Diagram

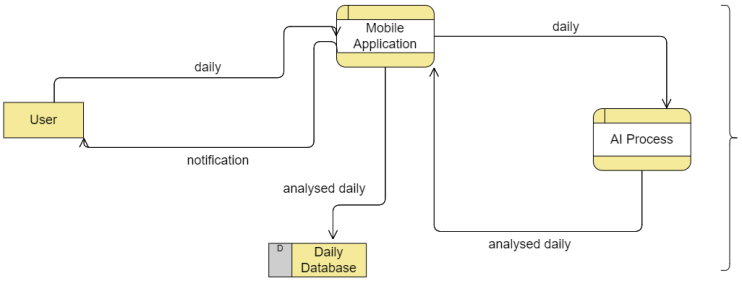
Level 0 Data Flows



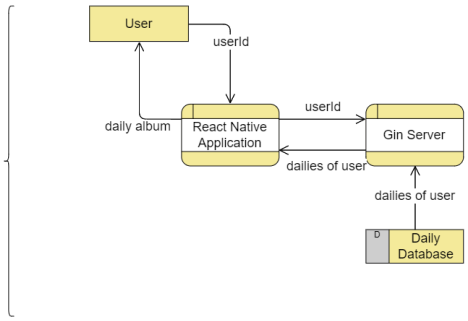


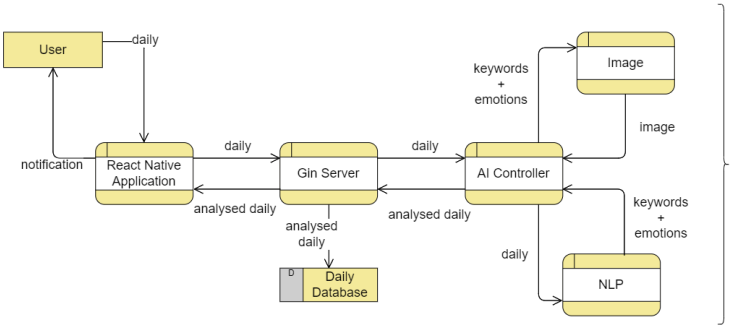
Level 1 Data Flows





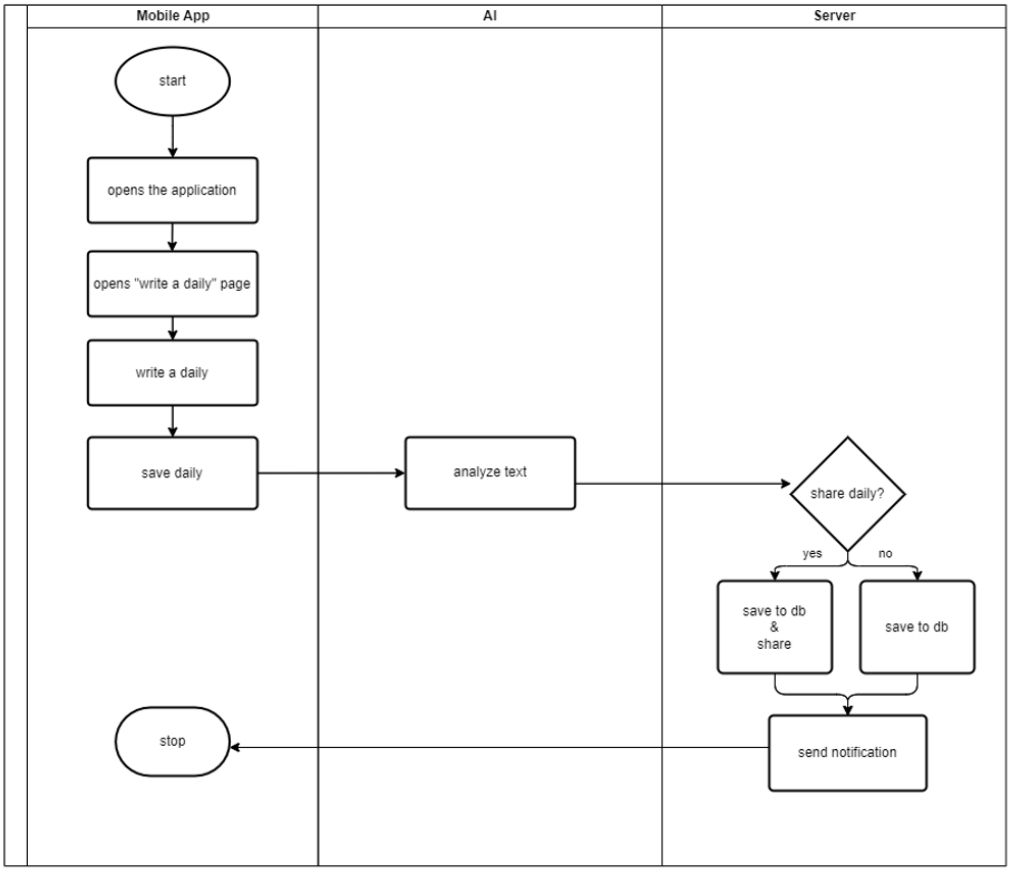
Level 2 Data Flows



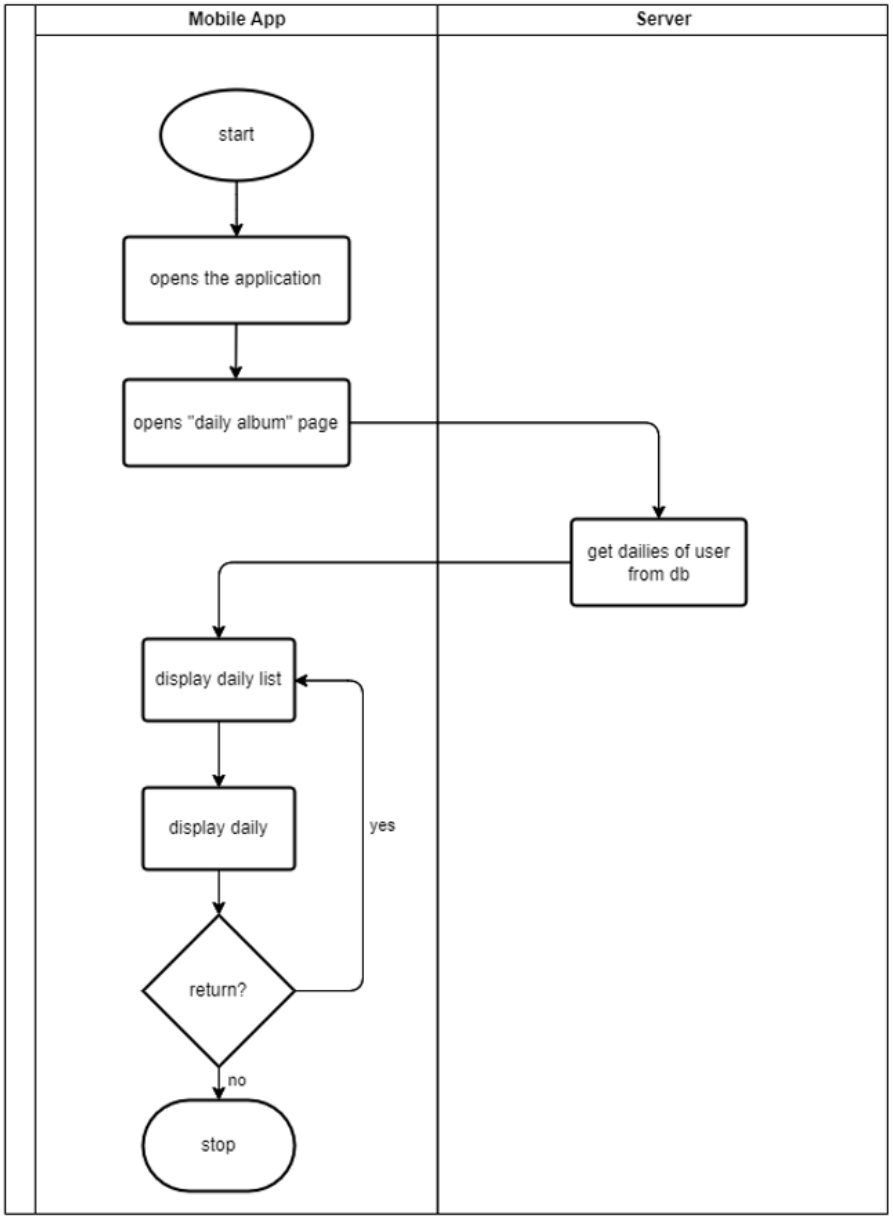


3.6 Activity Diagrams

3.6.1 Writing a daily



3.6.2 Display Album



3.6.3 View Shared Dailies