FamPay Application

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Prior experience

> 💡 Open to learning anything 🙂

Languages

JavaScript, Java, Kotlin, Python, HTML, CSS

Frameworks

Android, RxJava, Coroutines, Flow, MVVM, MVI, Jetpack Components, React.js, Node.js, Firebase, FastAPI, IoT

About FamPay

FamPay aims to inculcate financial awareness in the teens by providing them with prepaid cards that are safe and secure. With FamPay parents can safely give money to their kids and also track their spendings.

Who am I

I am Amit Krishna A, a junior year student pursuing B.Tech in Computer Science at Vellore Institute of Technology (VIT), Vellore, India which is also recognized as one of the Institute of Eminence (IoE) by the Govt of India.

I am a passionate software developer who started making apps in High School to create interfaces for my electronic and IoT science projects. I have been in love with problem solving and technology since my childhood and always had a knack for the curiosity of how a particular tech stack or
an application works.

I currently the App Projects Head at Association of Computer Machinery (ACM) chapter at my college, VIT, Vellore who oversees the app projects and manages a team of 5. I have built and published apps backed by solid architectures and UI principles for hackathons of ACM-VIT. I also set up CI/CD to streamline development and testing.

I have also interned at a service company EasyMazdoor where I designed and developed the authentication for their app. At the moment I am learning full-stack development and DevOps.

Why Me

I started using FamPay recently and I fell in love with it right from the start. The idea of seamless Aadhar verification and payments afterward is really enthralling. I would love to explore and work on the tech side of the app.

I believe working at and interacting with mentors at FamPay will help me take my Android Development skills to the next level. It will help me better understand the industrial standards and best practices involved in writing better code.

My skills and experience match the requirement for this role. I have 3 years of experience in Android. I can develop an app with a solid architecture in both Java and Kotlin. I respect clean coding and UI design principles and follow them in every app I build. I design my apps with the user in mind. I do whatever it takes to get the work done when I am faced with blockers. I have experience making backends using FastAPI that makes it easy for me to understand and contribute to the backend code if necessary as it is in Python too.

Hence, I am applying with full enthusiasm for the same.

Related Projects

Project	Description
Quizzie Android Companion	An app for teachers to easily create quizzes. It can scan questions along with the options from an MCQ book using the Text Recognition Module from Firebase ML. Uses **MVI** architecture.
C2C Android 2021	Code2Create is ACM's flagship Hackathon. I worked on making this app. Uses **MVVM** architecture
Covid Tracker For India	An innovative app that helps you analyze the Covid situation in the country with statistical figures, graphs, and the latest information from the news. Has a map overlay with the stats of each state overlayed on the map. Uses **MVVM** architecture
TimelineView	A custom view that will help you create event timelines in apps just like the Google Calendar DayView. Published to **MavenCentral**
BoxieField	A custom view that allows you to create a set of boxed EditTexts that are managed for cursor movement, enabling, tint, text addition, and deletion, and text change notification. Published to **MavenCentral**
Apptitude2021 Backend	Backend for Apptitude2021 Hackathon of ACM-VIT. Built using FastAPI and deployed on Heroku at https://apptitude2021.herokuapp.com/docs

Assignment Submission

Problem Statement

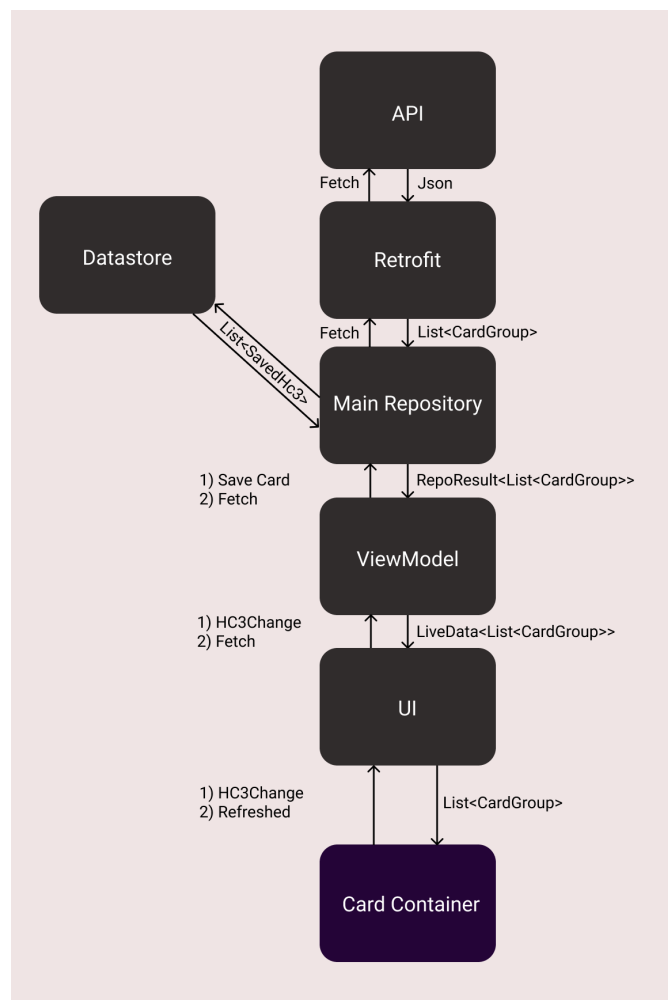Develop a standalone container, that displays a list of `Contextual Cards`

- A `Contextual Card` is used to refer to a view that is rendered using JSON from an API

- These views are dynamic and their properties like images, color, texts, buttons (CTAs) etc. can be changed from the backend at any time.

- This container should work completely independently of everything else, such that, we can add this to the container to any fragment/activity and it should work. (Plug-and-Play component)

- Your app should render contextual cards in a list based on the API response

Solution

I have always wanted to explore server-driven UI and I did just that. I really loved working on it. I am looking forward to working on similar projects at FamPay

https://github.com/akri16/ContextualCards

It uses **Model View ViewModel (MVVM)** architecture.

Future Work

This can be also be built using **Jetpack Compose (JC),** the new declarative UI framework. This might make the code a bit more scalable and adaptable.

During the development of this project, I faced difficulties in building the nested lists as I had to create the Viewgroups as well as the Views and associate them dynamically at runtime. With Compose, you can just declare the views without the need to handle how they are rendered internally.

However, I have used the normal imperative UI here due to time constraints. I am interested to modify this project to use JC in the future.

My Familiarity with GitHub Features

Git/GitHub is one of the primary things I use in my development. It helps me:

- Keep track of the changes that I have made through commits

- Collaborate with others using branches, and Pull Requests

- Use CI/CD with GitHub Actions to streamline development, testing, and deployment

> https://github.com/ACM-VIT/c2c-android-2021

This is an Event App that I made along with a few other app developers

- We utilized **Branches** and **Pull Requests** to independently work on our part of the code before we merged it into the *main* branch

GitHub Actions and Workflows

https://github.com/ACM-VIT/c2c-android-2021/tree/master/.github

- Used **GitHub Actions** to build the app on *Pull Requests*

- Created **GitHub Workflows** to deploy the app to *Firebase App Distribution*

- Added more checks to the workflow to distribute apps only after a certain amount of time has elapsed after the last execution

- I would love to work more on this and wrap this into a **GitHub Action**

Open Source Contribution

I have contributed to open source repositories before and know how the **Issue → Assign → Pull Request → Changes → Resolution → Merge** cycle works. You can see my work at:

- https://github.com/fossasia/badge-magic-android/pull/746

- https://github.com/fossasia/badge-magic-android/pull/740

*****************Thank You For Your Time!***************