



INTERNSHIP REPORT

OMKAR DEVIDAS GAWAS

2022

REPORT OF INTERNSHIP DONE AT HELIXTECH INFOSYSTEMS PVT. LTD

Completed by:

OMKAR DEVIDAS GAWAS

2022

For the partial fulfilment of

MCA Degree for Semester: VI

The Discipline of Computer Science and Technology,

Goa Business School,

Goa University

At

HelixTech Infosystems Pvt. Ltd

Villa HT, Plot No. 45, H No. 854/1A,

Journalist Colony, Alto-Porvorim,

Goa – 403521, India.

UNDER THE GUIDANCE OF

Mr. Manthan Sutar

(Team lead – Flutter, HelixTech)

Mr. Niranjan Naik

(Project Manager, HelixTech)

INTERNSHIP CERTIFICATE



Date: 02nd June 2023

To Whomsoever It May Concern

Dear Sir/Ma'am,

It is our pleasure to write about Mr. Omkar Gawas, who has worked with Helix Techno Info Systems Pvt. Ltd. (hereinafter referred to as "HELIX") in the capacity of Software Developer Intern – Flutter from 02/01/2023 – till date.

During the aforementioned tenure of his work here, Mr. Omkar remained involved in his work with determination and sincerity. We found him active and competent in executing all assigned tasks.

Sincerely,

A handwritten signature in black ink, appearing to read "Rodrigues", written in a cursive style.

Ms. Valzera Rodrigues
Sr.HR/Admin Executive

Helix Techno Info Systems Pvt. Ltd
CIN: U72300GA2014PTC007419

+91-832-2414401/02/03
contact@helixtech.co
www.helixtech.co
New York | Goa | London

Corp. Office:
Villa HT, Plot No.45, H No. 854/1A,
Journalist Colony, Alto-Porvorim,
Goa- 403521, India

Regd. Address:
Housing Board Colony, B Block,
Grnd Flr, Flat No.7, Pundalik Nagar,
Alto-Porvorim, Goa- 403521, India

GOA UNIVERSITY



GOA BUSINESS SCHOOL

Certificate of Evaluation

This is to certify that **Mr. Omkar Devidas Gawas** has successfully completed his internship at **HelixTech Infosystems Pvt. Ltd**, in partial fulfilment of the award of the degree in Master of Computer Application.

Examiner 1

Examiner 2

Place: Goa University

Date: 14/06/2023

Dean, Goa Business School

ACKNOWLEDGEMENT

A company internship is a fantastic chance for learning and personal growth, especially since I was guided through my internship by so many lovely people. Without thanking everyone who helped make the internship possible, it wouldn't be complete.

I thank **Mrs. Jyoti Pawar** (Dean, Goa Business School, Goa University), **Mr. Ramdas Karmali** (Prof. and TPO, MCA, Goa Business School, Goa University), **Mr. Ramrao Wagh** (Program Director, MCA, Goa Business School, Goa University), **Mr. Hanumant Redkar** (Assistant Prof, MCA, Goa Business School, Goa University) and all the faculty of MCA, Goa University for their constant encouragement and support during the project work.

I would like to thank **Mr. Kunal Kerkar** (CEO, HelixTech) for giving me the opportunity to intern at HelixTech.

I would like to thank **Mr. Manthan Sutar** (Team Lead -Flutter, HelixTech), who was reachable whenever I needed guidance. His mentorship & guidance helped me to learn new concepts, tools & technologies in a friendly environment.

My sincerest gratitude to **Mr. Niranjana Naik** (Project Manager - Technical, HelixTech) for being my mentor and giving me the necessary guidance and support.

A Special thanks to HR **Miss. Valzera Rodrigues** (HR, HelixTech) for giving me the opportunity to work with such an incredible and hardworking team at Open Destinations Infotech Pvt Ltd.

Finally, I would like to express my gratitude to the HelixTech family who were always ready to help me and guide me in all aspects of life.

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INTRODUCTION

This report provides a concise overview of my on-site internship at HelixTech in Goa.

Since my start on January 13, 2022, I have gained valuable experience and accomplished various tasks during my tenure. It includes essential information about the organization, the projects, and mini projects I worked on, and the additional tasks and specialized training I completed throughout the internship.

The subsequent chapters will delve into the company, its work, and its culture, followed by a detailed discussion of the projects I contributed to. This will include a brief project description, and the tasks I successfully completed within those modules.

The report will highlight both my learning experience and my contributions to the organization, emphasizing the knowledge I acquired through the completion of assigned tasks.

It will also touch upon the tools and technologies utilized during my internship, along with a timeline of my activities.

Finally, I will conclude by sharing my overall experience and how it has fostered my personal and professional growth.

COMPANY PROFILE

In 2013, as the Indian start-up scene gained traction and the demand for smartphones skyrocketed, two fresh IT graduates capitalized on this trend by venturing into mobile app development. Over the past five years, they have successfully consulted on over 500 apps for more than 100 clients spanning six continents. Their objective remains clear: impress clients with seamless, strategic, and reliable high-quality software solutions.

Presently, Helix Tech has evolved into an acclaimed mobile-first technology partner for organizations of all sizes. They offer comprehensive end-to-end software solutions and have garnered recognition, including being named the company of the year by CIO Review and being listed among the top 30 companies to watch out for by Silicon Review.

Moreover, Helix Tech actively engages in a non-profit initiative called HT for Students, demonstrating their commitment to education. They serve as a practice school station for BITS and conduct app development training for students every summer at their headquarters in Goa.

Mobile Design

Helix Tech excels at transforming concepts into visually refined and seamlessly functional mobile applications. They possess extensive knowledge in design and technology, enabling them to effectively align with your strategic objectives. Their team of skilled designers has honed their craft in captivating crafting products with outstanding interactions and a flawless user experience.

App Development

They bring the best mobile experiences by hiring the best talent that they can find. This way, when they put them together in a team, it results in an atmosphere where with different perspectives and challenges, everyone learns swiftly to deploy customized solutions for every project. Each project ensures personal development as well as the capability of the team.

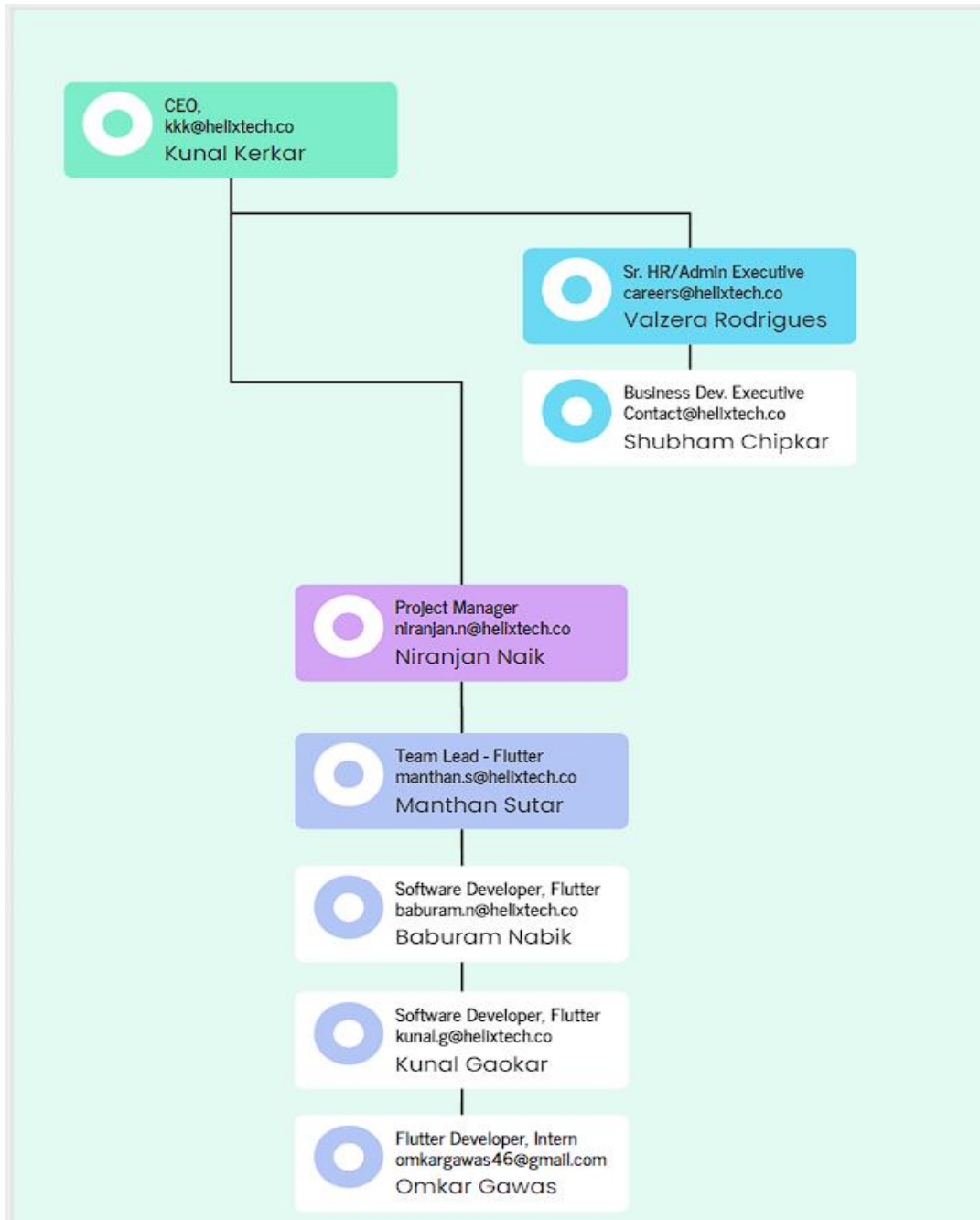
Mobile Marketing

Irrespective of the platform your users utilize, Helix Tech diligently crafts their apps to provide an exceptional user experience. This achievement is a direct outcome of their relentless dedication to product strategy, design, and the functionality of your mobile application. The apps they develop are meticulously engineered to deliver tangible business results while boasting stunning aesthetics.

App Support

Helix Tech recognizes the significance of seamless and reliable app performance for businesses. Therefore, they offer comprehensive support through their team of highly qualified and trained professionals. After the app is launched, continuous monitoring and updating are crucial. To cater to this need, they provide a selection of four support plans. Through these plans, they diligently analyse and resolve any issues, ensuring a flawless experience for users.

ORGANISATION



DESIGNATION AND ROLES AS AN INTERN IN COMPANY

Designation: Software/Flutter Developer Intern

Roles as an Intern:

- It includes learning app development and getting practical experience in it. a chance to work on creating an app from scratch, starting with the fundamentals, and moving up to more complex ideas.
- working alongside experienced developers within the organisation as well as the Team.
- actively participating in the app's development under the leadership of the more experienced team members. Coding, bug-fixing, testing, and adding new features are some examples of the duties that may be involved.
- actively looking for issues and solutions to make sure the app runs without any problems. Improve your ability to tackle real-world development issues by improving your problem-solving skills.
- learning new programming languages or frameworks, keeping up with current technological developments, and researching the best techniques for developing apps.

Test – ROUTINE APP (ANDROID APP)

Problem Statement

Create a mobile app that enables users to save and manage their daily routines. Users can add routines with exact time, include photos and descriptions, mark routines as checked when completed, delete individual routines, and reset all routines. The app should have a view button to display images and a camera button to capture photos and add descriptions to routines for saving.

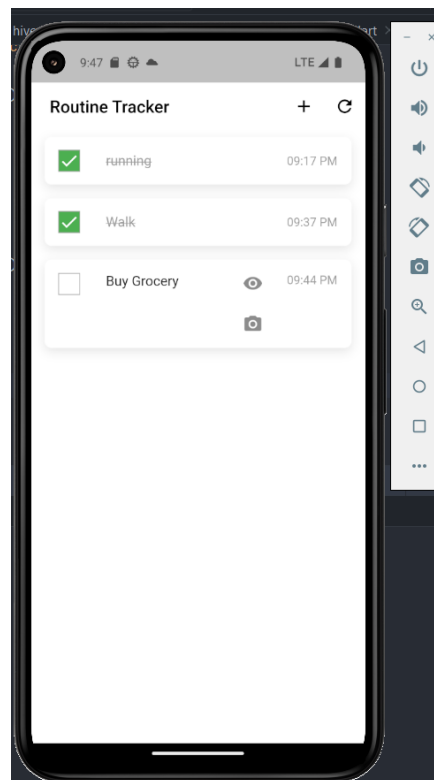
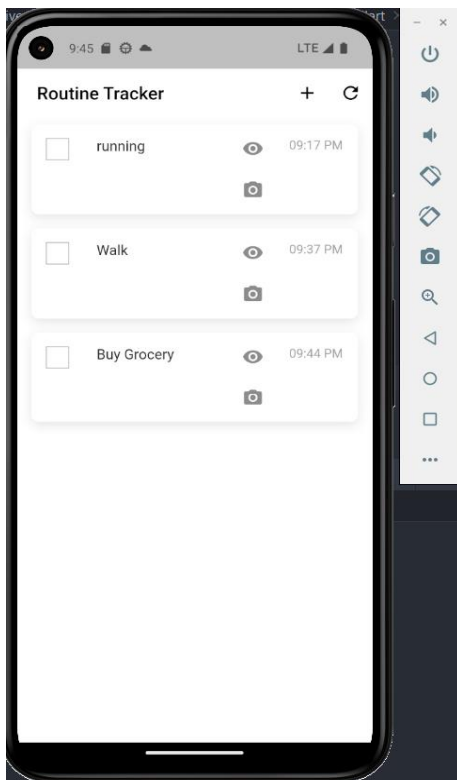
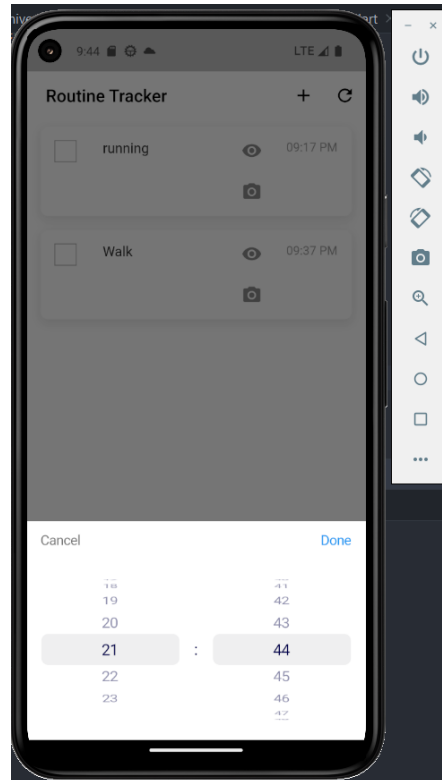
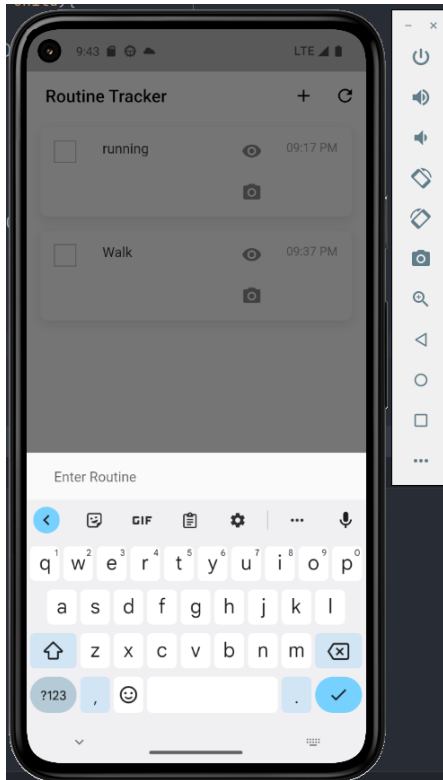
Given task: -

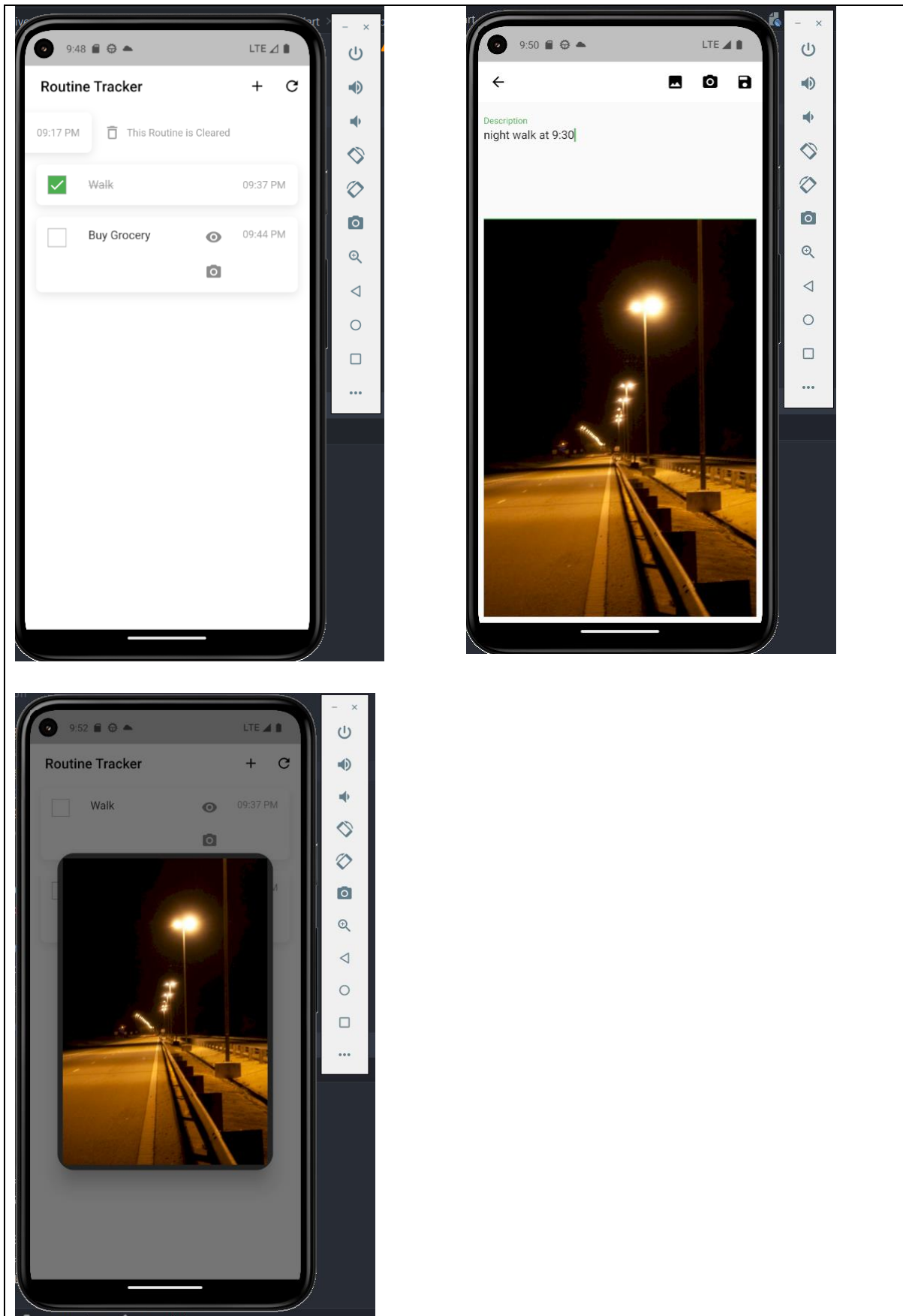
- File upload in Hive using the camera and image picker.
The image file should be saved in hive local database.
- Save Routine with Exact time.
When user enter routine, I should be saved with exact time.
- Save Image & description.
When user click on save button the photo and description should be saved with description
- Delete single routine & Reset Functionality
when user swipe the routine, it should delete that selected routine.
- On click of “View” button, a dialog box Should appear, displaying the saved image associated with the specific routine.
- On click of camera button, the app should navigate to another page where they can upload or capture an image, add a description, and save it.

Tools and Technology used: -

- Flutter
- Dart
- Gradle
- Android studio
- Hive (local Database)

Screenshots: -





Project – CIPLA ANDROID APP (ANDROID TABLET)

Problem Statement

Front End: Allow Cipla clients (Medical representatives) to submit leave requests, expense reports, schedules for daily planners, and other tasks using a single app that works both online and offline.

Back End: Store local data for offline use so that the application can be used while offline and without constant internet access.

Overview

Cipla App is an Android application that the clients (Medical Representative staff) must download on an Android tablet and use it as a tool to manage all their filing tasks easier and save time.

It is an ongoing project that is still in the development stage.

Tools and Technologies used:

- Flutter
- Dart
- Gradle
- Android Studio
- Gitlab
- Hive (Local Database)
- Android Architecture components

My Contributions:

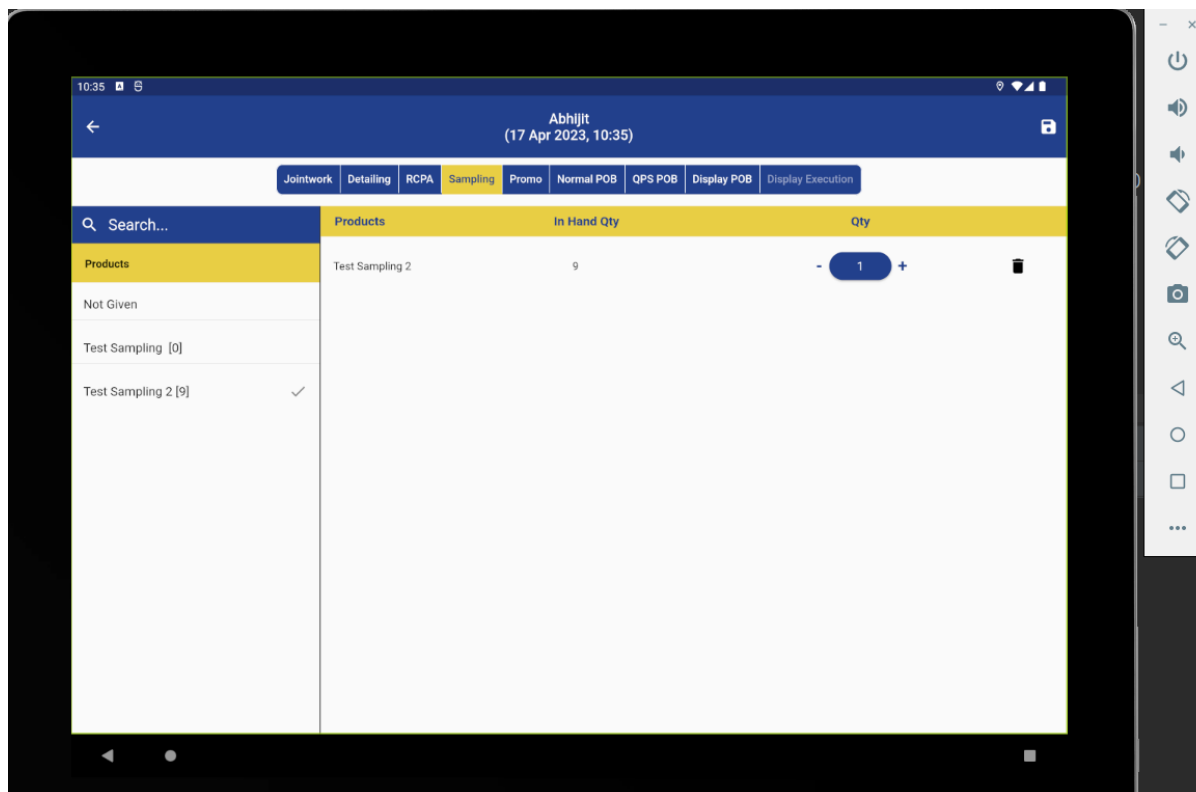
At the beginning of my internship, I was assigned to work on the front-end development of the Cipla App, where I was told to:

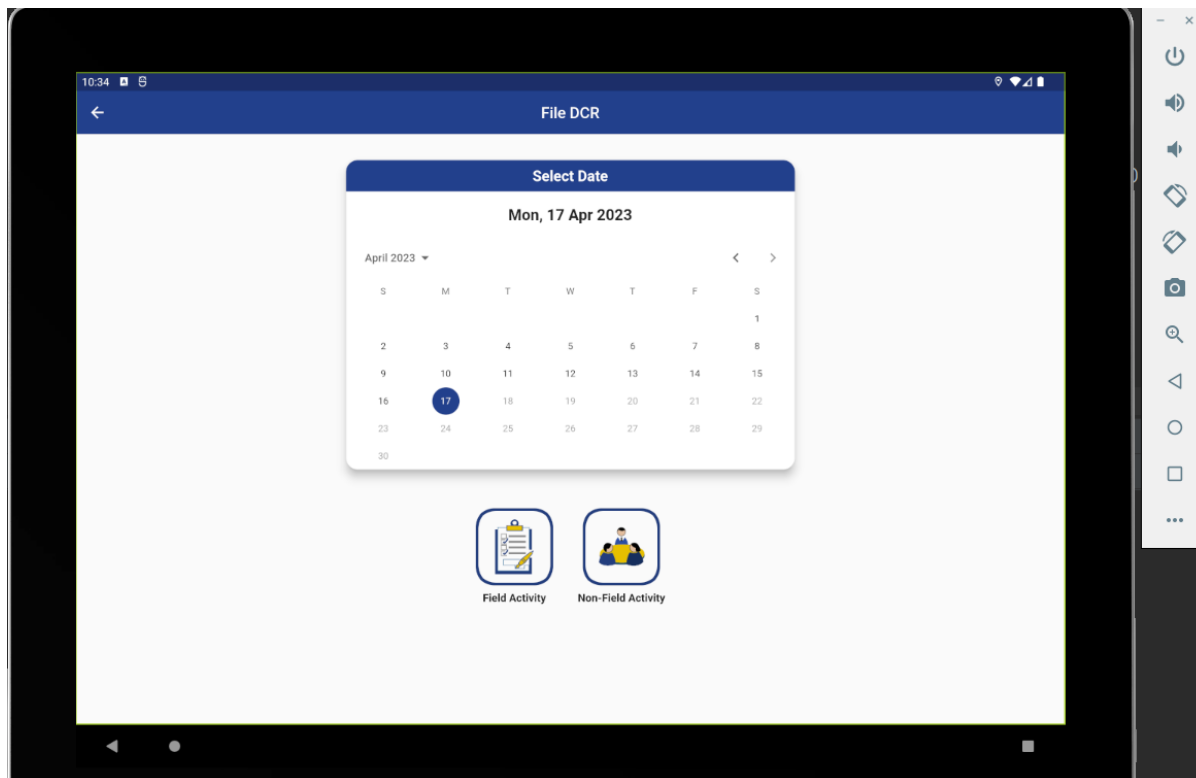
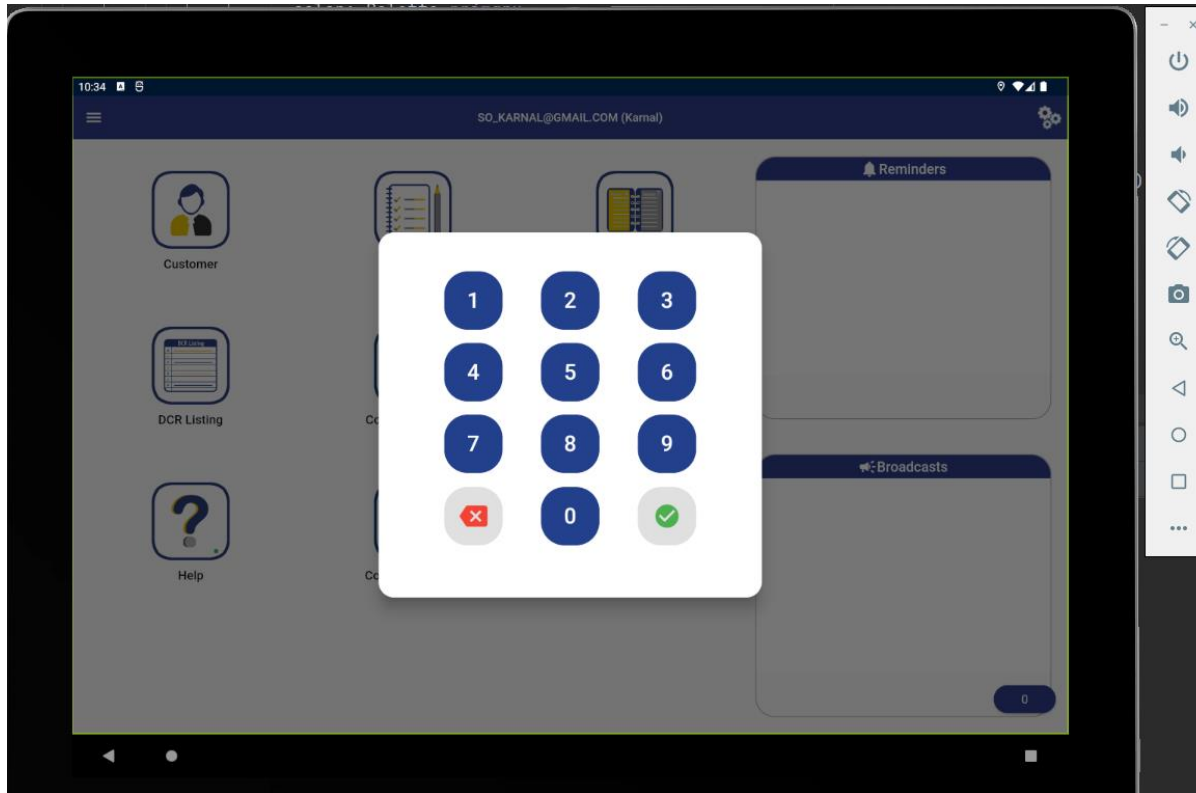
- To Design sampling table
- Add quantity counter in table & Delete samples.
- Design keypad which accepts no. of quantity
- Improve design of File DCR calendar
- Test feature for bugs

My Specific contribution:

- Designed User Friendly sampling table in File DCR report where user can add report about product samples given to the customer.
- Adding counter in quantity column where user can add or remove quantity by clicking on +, - button. User can also add number of quantities by clicking on it, the keypad will appear, and user can add the number of quantities manually.
- Improved the overall design of calendar with proper spacing and borders and date highlighting make it more appealing and user friendly.
- Mapping the UI changes and functionality to other modules of project where keypad and calendar are used.

Screenshots:





PROJECT – ALKEM ANDROID APP (ANDROID TABLET)

Problem Statement

Front End: Allow Alkem clients (Medical representatives) to submit leave requests, expense reports, schedules for daily planners, and other tasks using a single app that works both online and offline.

Back End: Store local data for offline use so that the application can be used while offline and without constant internet access.

Overview

Cipla App is an Android application that the clients (Medical Representative staff) must download on an Android tablet and use it as a tool to manage all their filing tasks easier and save time.

It is an ongoing project that is still in the development stage.

Tools and Technologies used:

Flutter

Dart

Gradle

Gitlab

Hive (Local Database)

Android Architecture components

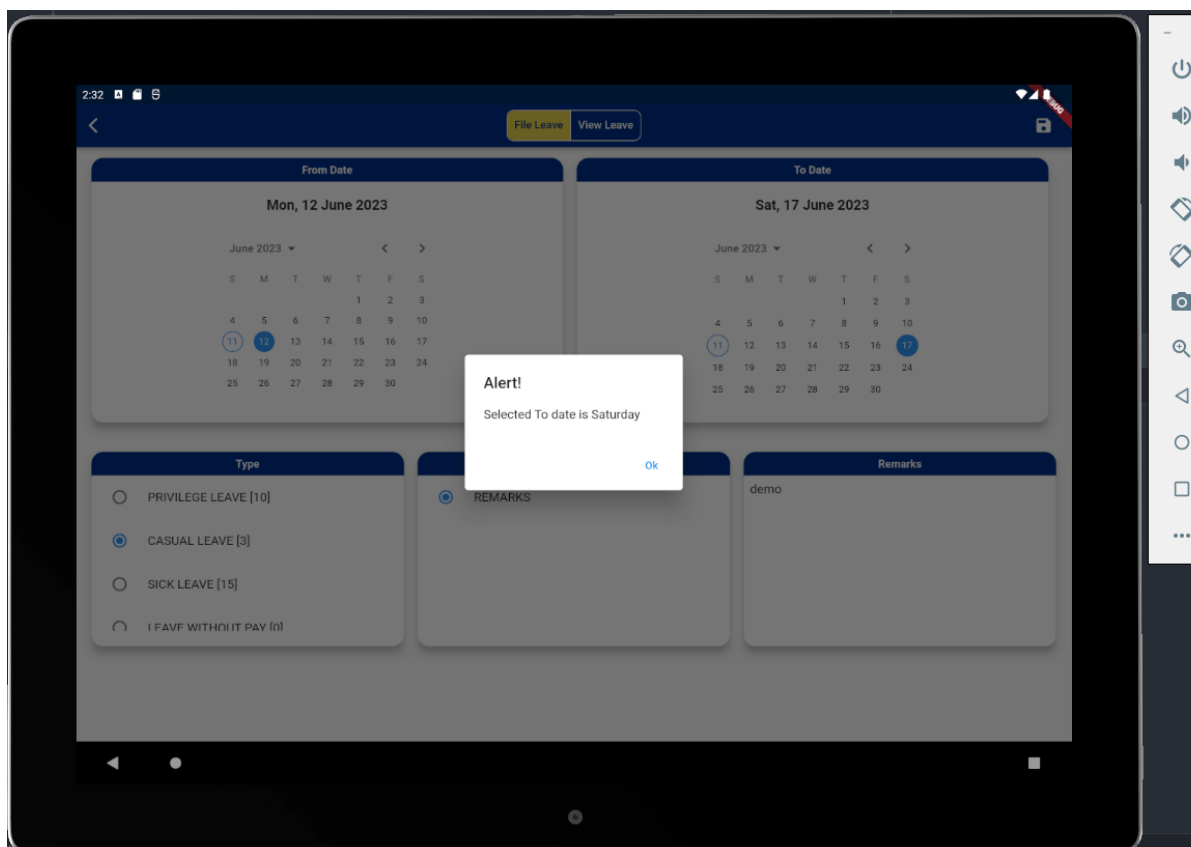
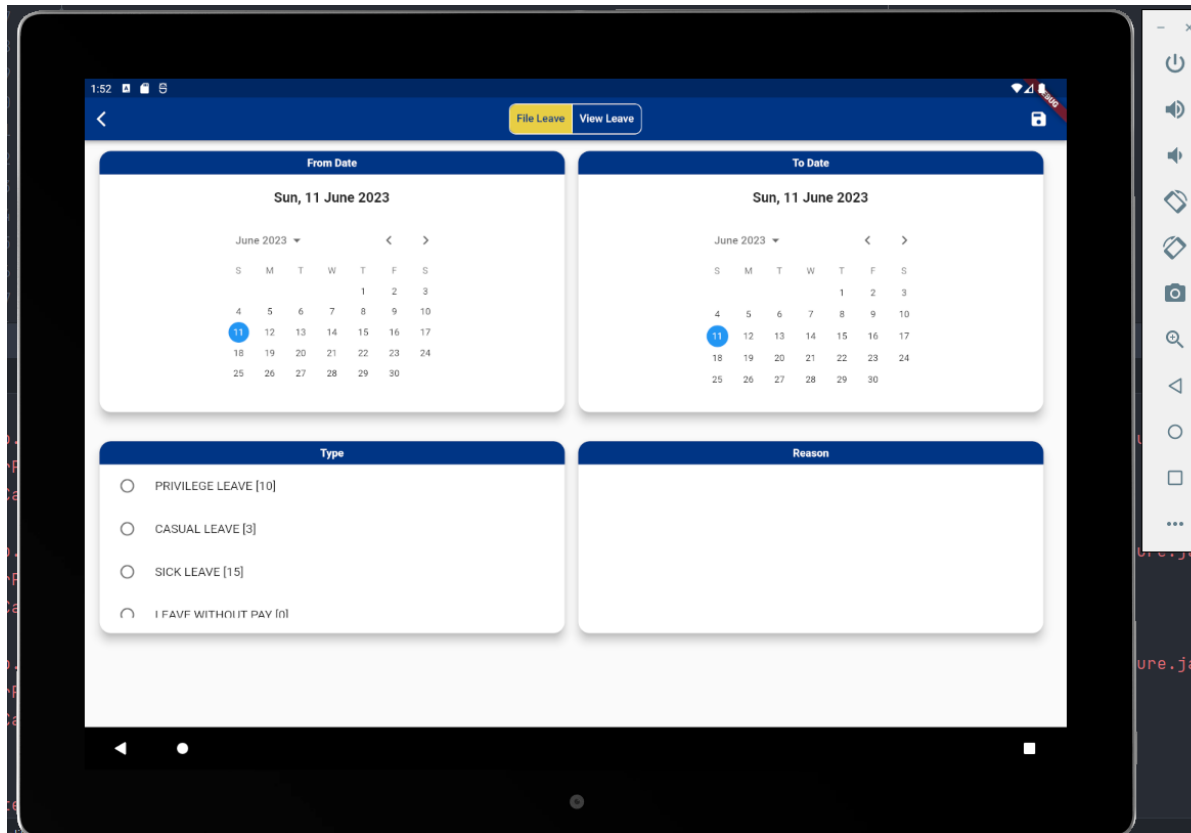
My Contributions:

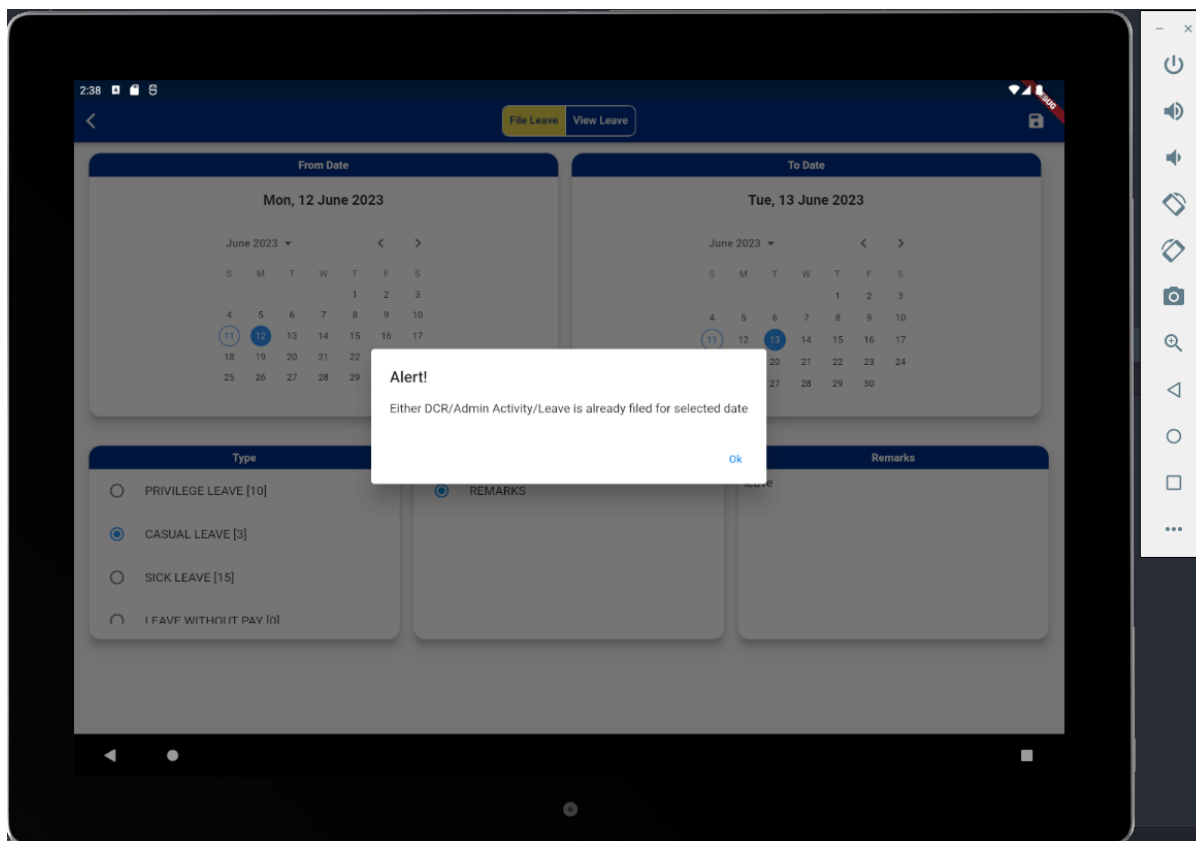
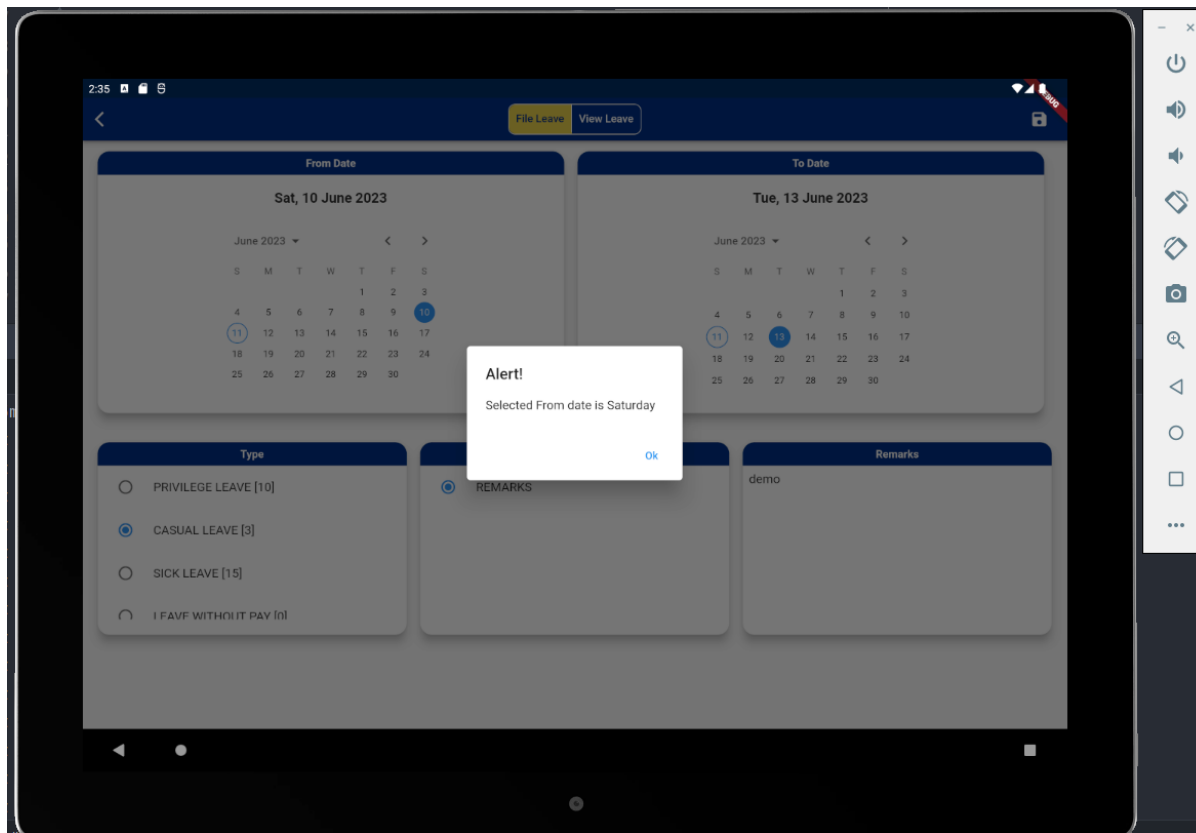
I was assigned to the Alkem app development during my internship, and I was asked to fetch weekoff data in leave module and make dynamic validation for file leave, which was hardcoded.

My responsibilities include:

- saving the data from master, create hive box, save list of strings in box.
- fetching weekoff data in leave module
- dynamic validation changes at save level.

Screenshots





CERTIFICATIONS AND TRAININGS COMPLETED UNDER INTERNSHIP AND SELF STUDY

Udemy Certification

- Flutter & Dart – The Complete Guide by Maximilian Schwarzmuller

1. Flutter & dart basics I & II
2. Running and Debugging flutter apps on different devices
3. Adding Interactivity, more widgets & theming
4. Building Responsive & Adaptive user interface
5. Flutter & dart internals
6. Building multiscreen apps & navigating between screens
7. Managing app-wide state & Adding animations
8. Handling User inputs & working with forms
9. Connecting a Backend and HTTP Requests
10. Using native device features
11. Push notifications & more using flutter and firebase

TOOLS AND TECHNOLOGIES USED



Android

Android is a mobile operating system based on a modified version of the Linux kernel and other open-source software, designed primarily for touchscreen mobile devices such as smartphones and tablets.



Flutter

Flutter is an open-source UI software development kit created by Google. It is used to develop cross platform applications for Android, iOS, Linux, Mac, Windows, Google Fuchsia, and the web from a single codebase.



Dart

Dart is a programming language designed for client development, such as for the web and mobile apps. It is developed by Google and can also be used to build server and desktop applications.



Android Studio

Android Studio is the official integrated development environment (IDE) for Google's Android operating system, built on JetBrains' IntelliJ IDEA software and designed specifically for Android development.



Git

Git is a distributed version-control system for tracking changes in source code during software development. It is designed for coordinating work among programmers, but it can be used to track changes in any set of files.



Postman

Postman is an API Platform for developers to design, build, test and iterate their APIs. Postman is an API platform for building and using APIs. Postman simplifies each step of the API lifecycle and streamlines collaboration so you can create better APIs—faster.



Firebase

Firebase is a set of backend cloud computing services and application development platforms provided by Google. It hosts databases, services, authentication, and integration for a variety of applications. The Firebase platform has 18 products split into three groups: Build, Release & Monitor, Engage.



Hive (Local Database)

Hive is a lightweight, no-SQL database for flutter and dart applications. Hive is a great choice if you are looking for a straightforward key-value database with few relations. It is also extremely easy to use. It stores data locally on a mobile device. Hive database is inspired by Bitcask.

INTERNSHIP TIMELINE

January 2023

- **Week 1:**

Introduction & Setup

- **Week 2:**

Flutter Basics, Architecture, Dart Programming basics

- **Week 3:**

1. Advance flutter & Dart Basics (Quiz App)

2. Running Apps on different devices & debugging Apps, planning Apps, Combining widgets, alignments, string interpolation, text input widgets.

- **Week 4:**

1. Fetching user input, connecting widgets, working with list view, input/output styling, making list scrollable, adding user transactions (expense app).

February 2023

- **Week 1:**

Learned about shared preferences by creating login app that stored login credentials locally.

- **Week 2:**

1. I/O styling, adding appbar buttons, floating buttons, modal bottom sheet, improving overall UI, config & using themes, custom font (expense app).

2. planning chart widget, looping through lists, deriving recent transactions bars for charts, complete chart bars, list tile widget, widget configuration.

- **Week 3**

1. layout Builder widgets, controlling device orientation, rendering alternative landscape, finishing landscape mode, soft key insets, managing media query, checking device platform, creating custom adaptive widgets.

2. Widget tree & element tree, how to Flutter rebuilds & repaints, how Flutter executes build(), using const widgets & constructors.

- **Week 4**

1. Using builder method, understanding widget lifecycle, understanding app lifecycle, understanding context, problem with lists & stateful widgets, understanding problem root, using keys.

March 2023

- **Week 1**

Medical Leave

- **Week 2**

State Management, alternative provider syntax, local state vs app wide State, adding shopping card data, more state Management & providers, working with multiple providers, connecting cart provider, working on shopping cart. (shopping app) (Given Learning Task)

- **Week 3**

Learning about hive database by implementing it in CRUD app
Saving images in storage using image picker, learned about image compression for further project. (Learning)

- **Week 4**

Routine App (Test)

1. Planning app, Started with Building UI.
2. added view button to display image for each routine, and added camera button that navigates to adding images and description
3. hive implementation on image upload, display and save exact time while adding Routine

April 2023

- **Week 1**

1. Routine app test remaining tasks, delete routine and reset functionality
2. Understanding of Project codebase R&D of Cipla App

- **Week 2**

Cipla App

- 1.Design Sampling table, create model to store sample and quantity.
- 2.Adding add quantity counter and delete samples functionality.
- 3.Design keypad which accept no. of quantity.

- **Week 3**

Cipla App

- 1.Improve design of File DCR calendar
2. Mapping UI/Functionality changes in live project codebase.
- 3.Testing and issue fix.

- Week 4

1. Create model to store product details and their remark. (Alkem App)
2. Implement for (doctors, Chemist, Stockist). (Alkem App)
3. Learning about API integration in flutter, fetching API's, parsing JSON.

May 2023**- Week 1**

Alkem App

1. saving the data from master, create hive box, save list of strings in box.
2. fetching weekoff data in leave module.

- Week 2

1. Alkem App - dynamic validation changes at save level.
2. Learning about code reusability, file structure, firebase notifications.

- Week 3

1. Learning about FCM tokens, push notifications, sending notifications using postman.
2. worked on chat app using firebase authentication for google sign in. firestore database for storing user data and messages. used push notifications to send notifications (Learning Task)

- Week 4

1. Completed chat app
2. Leave

MY REFLECTIONS/OVERALL EXPERIENCE OF INTERNSHIP

My internship at HelixTech has been an enriching and transformative experience. Every day, I encountered new challenges, as it is the norm at HelixTech.

The company fosters a continuous hunger for knowledge among its employees. Being part of the industry and working on live projects is not merely a learning process but a firsthand experience.

What sets HelixTech apart is that I was never limited to just my project team. I had the freedom to interact, seek guidance, and consult with any colleague, which greatly contributed to my growth.

With proper guidance and mentorship, I tackled difficult tasks and effectively managed multiple projects simultaneously. This experience has shaped me into a more capable and resilient individual, ready to confront any future challenges.

Overall, I am incredibly grateful to be a part of HelixTech, and I extend my best wishes to everyone in the organization.

REFERENCES

- <https://docs.flutter.dev/>
- <https://developer.android.com/>
- <https://dart.dev/>
- <https://docs.hivedb.dev/#/>
- <https://learning.postman.com/docs/introduction/overview/>
- <https://firebase.google.com/docs/build>
- <https://firebase.flutter.dev/docs/overview>
- <https://www.helixtech.co/>