## CHAPTER 1

# INTRODUCTION

#### 1.1 Introduction

The final year students of Bsc.CSIT, Tribhuvan University are required to complete an internship as a partial fulfillment for a Bachelor degree as a course requirement.

An internship can be referred to as an opportunity that employers offer to students interested in gaining work experience in a particular industry. In other words, an internship is a period of work experience offered to the students and graduates by an employer to give exposure to the working environment which relates to their field of study. The modern concept of internship is to offer a formal program to provide practical experiences for beginners in a certain occupation or profession. Internship can be understood as a wonderful and effective way to connect students' academic experiences with the professional work arena. It allows the young students to gain exposure to the workplace, which provides them an opportunity for skill development, and gives them a competitive edge in the job search.

An internship provides practical skills, workplace experience and opportunity to gain greater knowledge. An internship can be either paid or voluntary. Internship is an experience that enhances a student's academic, career and personal development. Students can even get job opportunities if they perform well during their internship period. Internship helps to build confidence and communication skills. During the internship period, interns get the opportunity to meet with experts of their field, which helps to open the door of next step of their career.

This project "Grow Teamly" was done at Ambition Guru Inc. during the internship period. This application is built using Dart programming Language using Flutter framework which is very much in demand these days because of the features this frame work provides. One of the main feature is development of both android and ios application using the same code. Through this mobile application users can manage their teams using just an app. The application is API based so changes made in main server brings changes to all the apps and websites. The Team Managers can handle their team from anywhere using this application even though if they haven't carried their laptops. This is n group project as this application is based on handling employees of big organizations so it requires lots of time for all internee to be involved in this project.

This application consists of many major components; there is a login and log out system which is connected to the server. The user interface is very smooth and has bottom

navigation feature which helps to get to different pages easily. It keeps the record of all the changes happening on the server and display in the application. The main feature of this application is displaying all the changes happening in the server. This application uses flutter framework for user all of its works. Different packages can be installed for the new features to be added from its packages website which helps to install different packages in our project.

### 1.2 Problem Statement

Grow Teamly is a team management application developed for android and ios users. This application deals with the handling of teams in a large organization. The complexity of this starts here. This project is a very big project so it cannot be completed by a single person in a required time. This requires a bigger team for handling such projects which easily makes it complex project to be done. Everyone involved in the project is needed to cooperate with each other.

The goal of this project is to create a very smooth application for handling groups or teams of an organization. The application is based on API so the speed of server plays important part in the speed of the application. The Organization servers are handled by them so the main work of this application is to utilize that servers speed and make it smooth user friendly so that the teams can be handled even by using mobile application.

## 1.3 Objectives

#### 1.3.1. Internship Objectives

The internship experience is expected to enable the students to assist in the resolution of complex problems associated with team managing applications. The broad objectives of internship are as follows:

- To test the interest in a particular field before permanent commitments are made.
- To develop skills in the application of theory to practical work situations.
- To know the value of time management and interpersonal skills.
- To develop skills and techniques directly applicable to their careers.

#### 1.3.2. Project Objectives

The objectives of this projects are as follows:

- To develop a mobile application for handling teams of companies and organization
- To provide better user interface for smooth running of application, and that can be easily installed in all android as well as ios smart phone

# 1.4 Scope and Limitations

### 1.4.1. Scope

This report includes information about the tasks I completed during my internship at Ambition Guru. The main project I worked on during my internship was "Grow Teamly", and this report details all of the work I did during my internship on this project. This report also covers the information I learned while serving as a company intern.

#### 1.4.2. Limitations

There are some limitations of this internship report. They are listed as follows:

- Due to limits imposed by the organization's privacy regulations, not every aspect of the organization's operation has been revealed.
- The "Grow Teamly" project was handled by a project group and is very large in scope. As a result, not all of the project's features have been discussed.
- Economic details of the project have not been mentioned due to confidentiality issues

1.5 Report Organization

On completion of our Internship work, we have documented the milestones and the final

document report has been organized under the following chapters:

Chapter 1: Introduction

Chapter 2: Organization Details and Literature Review

Chapter 3: Internship Activities

Chapter 4: Conclusion and Learning Outcomes

First chapter consists of a brief introduction about internship and work done on project

during that internship period giving a broad idea about the internship activities and a

problem definition. It also consists of the objectives, scope, limitations of the internship

work.

Second chapter consists of an Organization details and its hierarchy and how this

organization works and literature review giving a short description about the papers and

articles that we have gone through.

Third chapter consists of the detailed information about the internship activities

performed in the organization. It consist of log tables, roles and responsibility and

description of project involved during internship.

**Fourth chapter** consists of the summary of the entire project and report and the things that

we learnt after the completion of our internship.

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## **CHAPTER 2**

## ORGANIZATION DETAILS AND LITERATURE REVIEW

## 2.1 Introduction to Organization

Ambition Guru is the leading software development company house in the Kathmandu, Nepal. We adopt new and latest technology so we are able to develop state of the art products that are robust and powerful for solving existing problems in a specific niche. At Revolution, we are always eager to identify a problem and then find an effective way to solve that problem.

Ambition Guru have been doing great things and building useful products from the first day of the company. They have been using the latest technology available which are in reach. They have been developing products using the different programming language of which some of the main programming languages are Dart for Flutter framework, Laravel, .Net, Java, IOS, Android, and others. The main products of the Revolution technology is *Nagarik App*; Nagarik App is developed using Dart with Flutter Framework. Others are CPN UML, and also some senior developers were part of Esewa development team.

# 2.2 Working Domains of the Organization

Ambition Guru works on multiple working domains in development technology. From web development to database management all are provided. The working domains of the organization are as follows;

- 1. Web development
  - a. core development with php laravel
- 2. Software development
  - a. Java, PHP
- 3. Database Management
  - a. mysql,

b.mongoDB

- 4. Mobile Application Development
  - a. Dart with Flutter
  - b. Java

## 5. Web Hosting

- a. domain name for website
- b. Provide storage for web hosting

# 6.Training

- a. Training on different Technology stacks
- b. Training on web designing and development

# 2.3 Organization Hierarchy

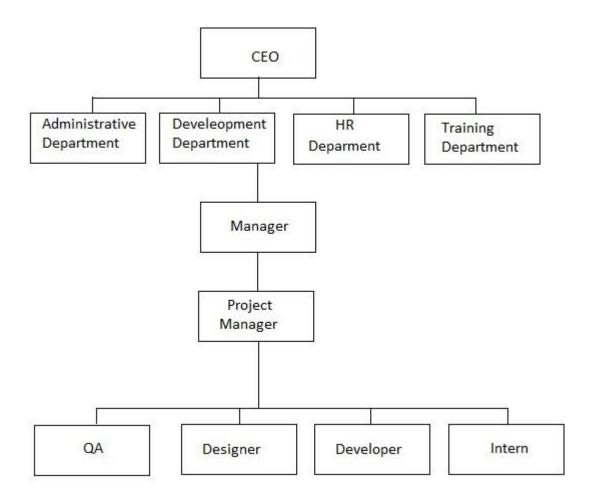


Fig.1.1. Organizational Hierarchy at Ambition Guru

# 2.4 Description of Intern Department

Flutter department was the department that we involve during the internship period. Ambition Guru was the company containing the many more department for different level project. We used to work under the flutter department for the project "Grow Teamly".

The management work of our flutter department was done by the manager Er.Srijana Jha. Her work involves the activities of scheduling the task and managing the internship period for individual. The Manager is also responsible to coordinate classes during training period and regulate the training session.

In the flutter department there were all together 10 senior developer who had involvement in this project. Among these developer our Mentor was Er.Ankit Karki. Mentor used to describe the web based project "Grow Teamly" that we need to convert in the android and ios form. I came to known that Flutter department had produced different well known project.

#### 2.5 Literature Review

This Literature review is about similar applications and software like our project application that are available in the real world from which we took inspiration from. The applications and software similar to our project are as follows;

#### 1. Microsoft Teams

Microsoft Teams is a proprietary business communication platform developed by Microsoft, as part of the Microsoft 365 family of products. Teams primarily competes with the similar service Slack, offering workspace chat and videoconferencing, file storage, and application integration[1]. Teams is replacing other Microsoft-operated business messaging and collaboration platforms, including Skype for Business and Microsoft Classroom[1].

#### 2. Smartsheet

Smartsheet includes features that enables leaders to share the vision to their team members as well as help them perform and execute the vision. It has multiple work views including a Gantt chart and calendar for shared project plan and schedule, a card view for task management and tracking, dashboards and dynamic reports. The software also includes file attachment, content collaboration, conversations, document generation, and mobile app to help teams connect and communicate<sub>[2]</sub>.

#### 3. Jira

Jira Work Management is a friendly and intuitive team management app for all business teams, not only for technical teams. It enables teams in marketing, HR, and finance to connect with their IT and software development teams and work together within a digital platform. Jira implements the Networked Help Desk API for sharing customer support tickets with other issue tracking systems [3]

#### 4. Asana

Asana founded in 2008 [4] includes tools to collaborate, communicate, and rebalance team workload as needed. Multiple work views include timeline, board, and and also a workload view that provides a real-time overview of how busy team members are across projects. Other features include task comments, task update followers, visual status indicators, private messaging, project conversations, and team announcements.

#### 5. Workflow

Cloud-based worklow and job management software delivered as Software-as-a-Service<sub>[5]</sub>. It is an end-to-end PM solution that has tools for leads, quotes, timesheets, job management, and invoicing

## 6. Monday.com

monday.com includes team management app features for organizing tasks, tracking project progress, and simplifying collaboration. A timeline feature allows the project manager to plan which team member will be responsible for particular tasks. Task tracking and automated reminders ensure on-time completion. The software also has time tracking, dashboards, reports, templates, and mobile apps<sub>[6]</sub>.

### CHAPTER 3

# **INTERNSHIP ACTIVITIES**

## 3.1 Roles and Responsibities

Roles and responsibilities are the most important factor when we work in the company. There are certain roles in the organization that everyone should performs. Responsibilities also guides the person with in the company boundaries. As I work under the flutter department I was assigned with the certain task by my Mentor. Responsibilities is what I am done in time with the task assign to me. As my internship was part of flutter department, I learn to build the android version of the web based project that was already done in the organization. During my internship period I was assign with following roles and responsibilities.

My Roles and Responsibilities are:

- Working with JSON. Design of dailyUpdate\_model.dart file for dailyUpadate page.
- Working with these file involves use of http.Response, getRequest and Apiendpoint.baseUrl. Also the use of Await and Async.
- Worked is involved with counter provider() function. I learned and worked with coding function responsemodel(),httpresponse(),NotifyerListener().
- Worked with POSTMAN. Generating the status code. Api testing, http request testing and verifying the response.
- Worked with Authentication services and counter Provider. services.dart and provider.dart files are involved. I worked with changeNotifyer() and increase/decrese () function.

### 3.2 Weekly Log

Week	Activity
Week 1(8th May – 13th May)	Flutter department was the part of the organization
	where my internship begin First week I learned

	department environment, Use of flutter
	framework, Basics of dart programming and
	installation process and github profile.
Week 2(15 <sup>th</sup> May – 20 <sup>st</sup> May)	We entered to the project details. Concept and
	application of transferring web based "Grow
	Teamly" project to android form. Understanding
	the packages and beginning with the project. Also
	understanding about API.
Week 3(22 <sup>nd</sup> May - 27 <sup>th</sup>	Details of packages to import. Building the run
May)	method to enter in the project. Design the scaffold,
	container and app bar. Also Floating action button,
	Text decoration, Coloration, Icons, Row item
	management and column item management were
	done.
Week 4(29 <sup>th</sup> May – 3 <sup>rd</sup> June)	Details of the Widget used in the project.
	SingleChildScrollView, ListView,
	ListViewBuilder, ListTIle, SizedBox, Safearea,
	Tabbar, BottomNavigationBar, StreamBuilder
	and FutureBuilder were learned and use of this
	widget is done in project.
Week 5(5 <sup>th</sup> June – 10 <sup>th</sup> June)	Working with http request and response model.
	Maintaining the services provider and counter
	providerand also used NotifyerListener().
	Understanding and working with JSON. Design of
	services.dart file for services provider and
	authentication provider.
Week 6(12 <sup>nd</sup> June – 17 <sup>th</sup>	Learned and worked with three files http.dart,
June)	apiendpoint.dart and Auth.dart. Working with
	these file involves use of http.Response,
	ResponseModel and Apiendpoint.baseUrl. Also
	the use of Await and Async.
Week 7(19 <sup>th</sup> June – 24 <sup>th</sup>	In this week I worked with services provider.dart
June)	file. Work is involved with NotifierListener()

	function. I learned and worked with coding
	function responseModel(), and providerservices
	().
Week 8(26 <sup>th</sup> June – 1 <sup>st</sup> July)	Working with Authentication and servicesProvider.
	services.dart and provider.dart files are involved. I
	worked with responseModel( ) and serviceprovider(
	) function.
Week 9(3 <sup>rd</sup> July – 8 <sup>th</sup> July)	Understanding and working with POSTMAN.
	Generating the status code. Api testing, http
	request testing and verifying the response.
Week 10(10 <sup>th</sup> July - 15 <sup>th</sup>	Concept of Google Firebase, version control, git
July)	and play store application.

Table 1:weekly Log

# 3.2 Description of Project

This project "Grow Teamly" was done at Ambition Guru Inc. during the internship period. This application is built using Dart programming Language using Flutter framework which is very much in demand these days because of the features this frame work provides. One of the main feature is development of both android and ios application using the same code. Through this mobile application users can manage their teams using just an app.

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features to be added from its packages website which helps to install different packages in our project.

## 3.4 Activities Performed During Internship

#### 3.4.1 Installation Process

The first activity performed in the internship was the installing the flutter framework . The installation steps for flutter framework are :

**At first**, download the important softwares and files required for application development using flutter. The important softwares are :

#### **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. It is available for download on Windows, mac OS and Linux based operating systems. It is a replacement for the Eclipse Android Development Tools (E-ADT) as the primary IDE for native Android application development.

#### **Visual Studio Code**

Visual Studio Code, also commonly referred to as VS Code, is a source-code editor made by Microsoft for Windows, Linux and macOS. Features include support for debugging, syntax highlighting, intelligent code completion, snippets, code refactoring, and embedded Git. Users can change the theme, keyboard shortcuts, preferences, and install extensions that add additional functionality.

#### **Download Flutter SDK**

It is a flutter SDK (Software Development Kit) which is required for flutter application development process.

**Second step** of the process was installation of all downloaded files .The SDK file was extracted and placed in the Drive C. and the Dart and Flutter extensions where installed in both VS code and Android Studio

**Third Step**, the environment variables were created for flutter and thus flutter was ready run. To verify successful installation command prompt is used and checked by flutter doctor command line. Now flutter was ready to run in either in Android Studio or VS Code.

### 3.4.2 Starting project with Flutter Basics

The second activity performed in the internship was learning and using basic flutter widgets in coding. These are basic building blocks of the flutter. These widgets helped in creating the basic structure of the application from give ui design. The basic flutter widgets used often are

Scaffold and AppBar, Floating Action Button, Text, Icons, Container, Rows and Columns, SingleChildScrollView, ListView and ListViewBuilder, Images and Assets,Expanded, ListTiles, SizedBox, Wrap, SafeArea, TabBar, BottomNavigationBar, StreamBuilder and FutureBuilder, Navigation and Routes and others

These widgets were more often used and are very easy to learn. With the knowledge of these widgets a static app was easy to develop.

Observed about flutter framework and its vastness from the different documentations to various tutorials on the youtube and udemy.

### 3.4.3 Building Authentication services

In this activities I worked with the login Response model. I was assign the task to maintain the page of the login service where the user can log in to the page where when the user id and password gets verified. In this file I used the http.Responce function which is used to carry the data that is used for the validation process. In this authentication I did the activities with LoginResponseModel.fromjson which keep the data in the json format that gets stored in the variables declared in the pages. This data can be used with in the pages when required.

#### 3.4.4 Building counter provider file

In this file I worked with provider.dart file where the counter is created. When the user updated the counter its gets notified to the supervisor. After the notification the counter is accepted. The same concept is used with the decrease counter. In this file notifyListner() function is used which is used to store the value in the json format.

#### 3.4.5 Detailed Learning on flutter webservices

In this activity, we learned about flutter web services in a detailed way. We had already used API service during logging system.

In this step we learned in detailed way about API to fetch data from the servers.Learned about the JSON which showed the data coming from the server in json format. For this we used a very famous API service software Postman.

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.

The services like Http Request, Get Post request all were discussed and used in this activity. Other web services discussed in this activity were Null Safety, Parsing JSONs Mapping.

#### 3.4.6 Version Control

In this activity, we learned about git. Github is a platform to store our code in the git library. The ways to upload our code our github profile. We learned about how to maintain git hub profile which would be added as our work inour profile which can be used for applying in jobs. Maintained github profile lands many opportunities for the developer. Other git features git bash, git lab etc

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#### 3.4.7 Database work with Firebase

In this activity, we learned about Firebase. **Firebase** is a platform developed by Google for creating mobile and web applications. It was originally an independent company founded in 2011. In 2014, Google acquired the platform and it is now their flagship offering for app development.

#### 3.4.8 Uploading app to play store

In this activity, we learned about the steps to upload an developed app to the play store. Play store is open platform for uploading applications games with only \$20 charge once.

## **CHAPTER 4**

## CONCLUSION AND LEARNING OUTCOMES

#### 4.1 Conclusion

Working as an intern at Ambition Guru was a great learning experience for me. This was my first internship and learnt a lot from this internship. I got the chance of being involved as an intern in the organization and that was a great opportunity for me. I learnt how work is being done professionally under an organization. After completion of my internship, I got an inside view of professional surroundings and gained experience by being involved in the day-to-day activities directly. Since the IT industry is a revolutionary and leading industry, getting chance of working as an intern in the IT industry helped me learn a lot about the IT industry and the potential growth of IT industry.

Apart from that, working at Ambition Guru, helped me broaden my technical skills in the programming field. I got chance to sharpen my technical skill on the mobile application development. Before the internship on Ambition Guru, I just had some basic understanding and knowledge of the programming language. During my internship period, I learnt a lot about programming and application development.

During my internship period, I got chance of working on a API-based Team management system by implementing the programming knowledge I learnt during my internship period. Moreover I learnt about Postman and Firebase too.

Overall, this internship program helped me develop technical skills as well as problem solving skills, communication skills and time management skills working under a deadline. All the skills learnt during my internship period will be very helpful for me on my professional career.

# **4.2 Learning Outcome**

Through the internship from revolution solutions, the lessons learnt were:

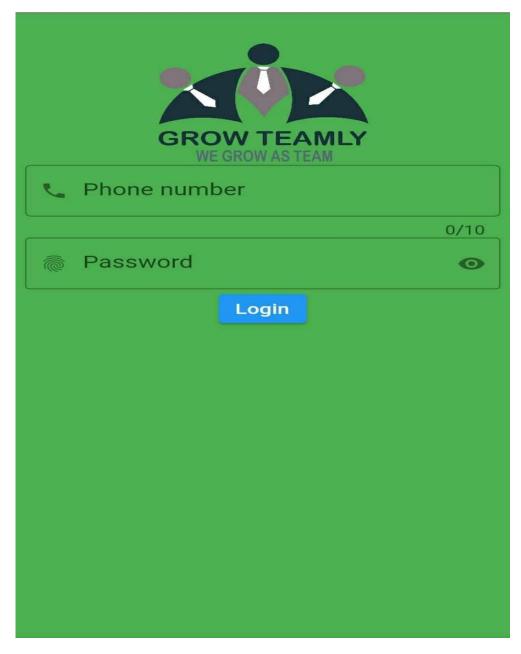
- Learnt about time management and working with multiple people and on multiple
  - features.
- Learnt about handling urgent changes and bug fixes.
- Maintaining discipline while working under guidance.
- Learnt the differences between practical and theoretical knowledge.
- Working in a team with coordination and cooperation to make quality decisions.
- Working as a flutter developer can be considered as a potential career.

# REFRENCES/CITATION

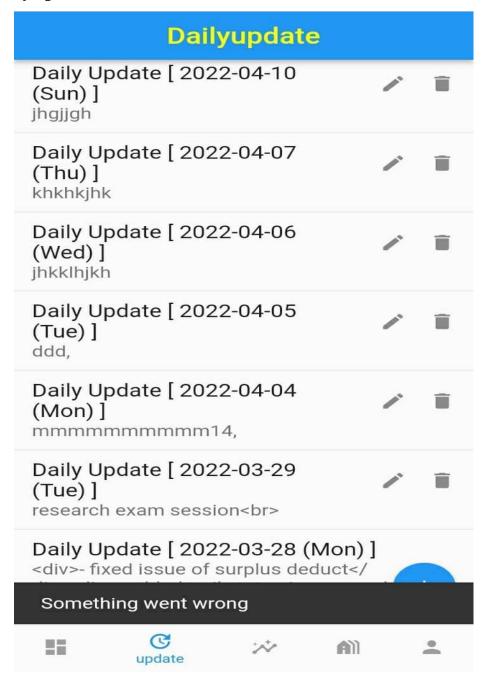
- [1]. Warren, T. (2016, November 2) Microsoft Team launches to take on slack in the workplace. https://www.theverge.com/2016/11/2/13497992/microsoft-teams-slack-competitor-features
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# **APPENDIX**

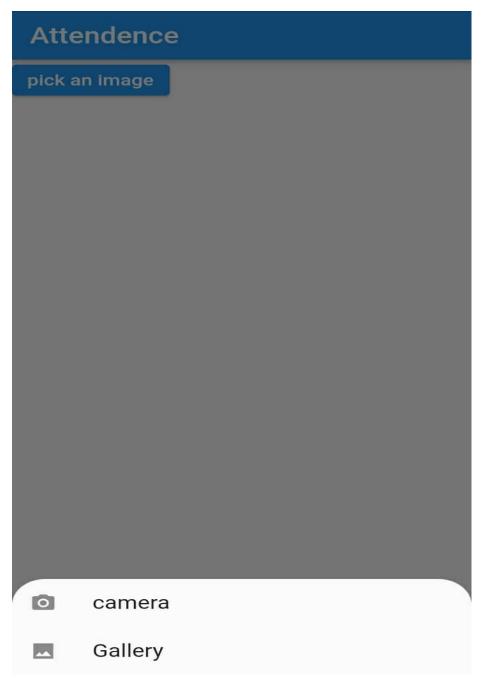
# Some snapshots of project



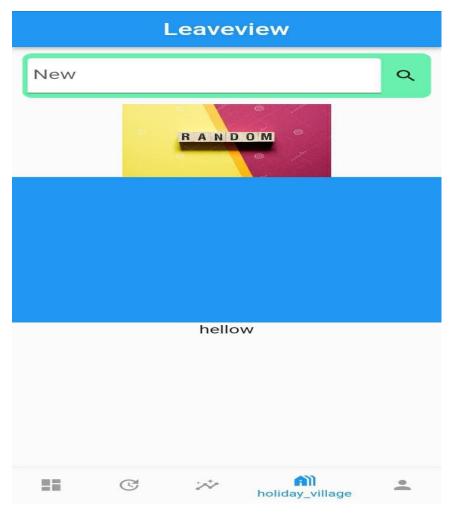
# **Snapshot DailyUpdate**



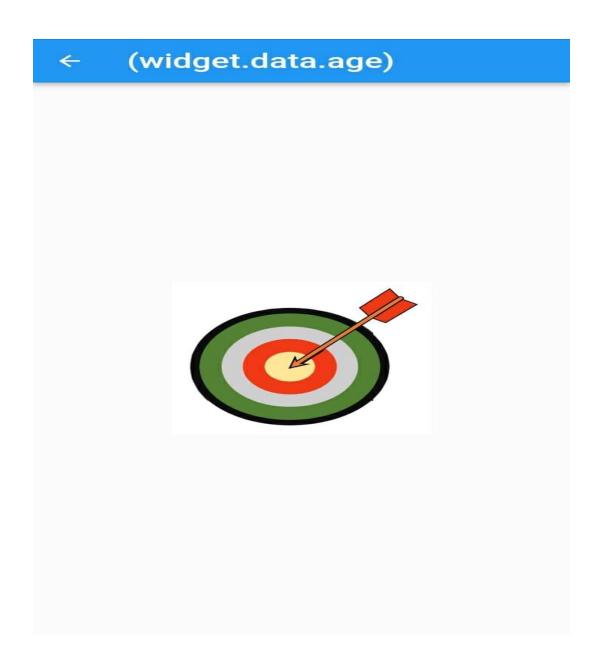
# **Snapshot of Attendence**



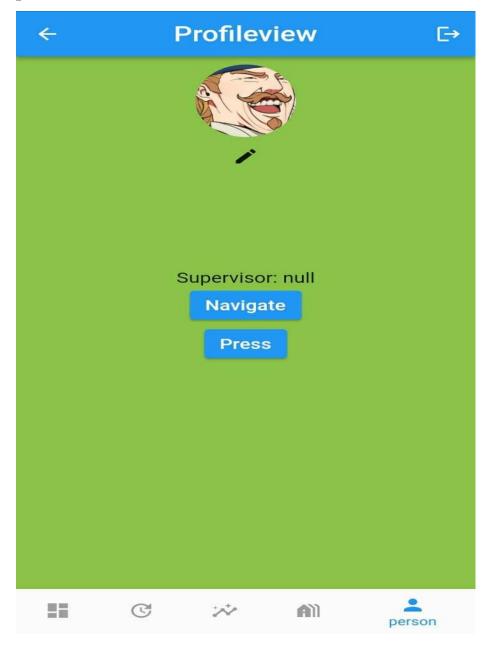
# **Snapshot of leaveview**



# **Snapshot of widget Data**



# Snapshot of profileView



# Some code of project

```
lib > services > ♠ auth_services.dart > ♣ AuthServices > ♠ login
       import 'dart:convert';
       import 'package:http/http.dart' as http;
       import 'package:profileapp/constants/api_endpoint.dart';
       import 'package:profileapp/core/header.dart';
       import 'package:profileapp/core/network_client.dart';
       import 'package:profileapp/models/login response model.dart';
      class AuthServices {
         Future<LoginResponseModel?> login(String username, String password) async {
           final http.Response? response = await NetworkClient().postRequest(
               path: ApiEndpoints.login,
               body: {"username": username, "password": password});
               LoginResponseModel?model;
           if (response != null) {
             Map<String, dynamic> json = jsonDecode(response.body);
             model = LoginResponseModel.fromJson(json);
 16
           return model;
```

```
body: pages[_currentindex],
bottomNavigationBar: BottomNavigationBar(
  selectedItemColor: Colors.blue,
  unselectedItemColor: Colors.grey,
  currentIndex: _currentindex,
  items: const [
    BottomNavigationBarItem(
      icon: Icon(
        Icons.dashboard,
      label: "Dashboard"
    BottomNavigationBarItem(
      icon: Icon(
        Icons.update,
      label: "update"
    BottomNavigationBarItem(
        Icons.insights,
      label: "Attendence"
    BottomNavigationBarItem(
      icon: Icon(
        Icons.holiday_village,
      ),
label: "holiday_village"
```