

VDESK-CHATBOT

Maccha Prakash Reddy, Student
 Valvala Sai Sreekanth, Student
 M Krishna Prasanna, Assistant professor
 Department of Information Technology
 B.V. Raju Institute of Technology
 Affiliated to JNTUH
 Vishmupur, Narsapur, Medak,
 Telangana State, India

Abstract

The motive of VDESK-CHATBOT is to develop a chatbot application for our previously developed VDESK app-The BVRIT PRODUCT.The first ever dynamic application of BVRIT developed using flutter and firebase as backend.The key features of the vdesk application include Timetable,Contacts.

It also has the features of class teacher desk,principal desk and hod desk.It also has the feature of contacting directly from app.With the new feature we are planning to add the common questionnaire to our freshers or the new users.The new users donot need any login credentials and can use this chatbot to get their doubts resolved.This chatbot reduces the time to visit the college website everytime.We hope that this will be the onestop solution for all the questionnaire of freshers.

Keywords: Flutter,Firestore,DialogFlow

I.INTRODUCTION

The project is motivated by the idea of “encouraging faculty and students to use the MADE IN BVRIT PRODUCT.we enhanced our previous application by adding chatbot feature.

The existing system of our college contains only the static applications and contains very little amount of data. And this application will be the first ever feature of CHATBOT.

Our proposed system is the single point of contact for freshers and regular students to get all the information about the college.The enhanced version of our application I.e chatbot using machine learning algorithms and DIALOGFLOW.It uses the NATURAL LANGUAGE PROCESSING To train the data.Our CHATBOT has been trained with few very frequent

ly asked questions and it also has the ability to learn from the data provided on its own.

The software requirements of our application include Android studio ,flutter,firebase,DialogFlow,Windows 10 Google cloud console. And hardware requirements include 8GB RAM,15 processor and DDR4 HardDisk.

Our proposed application also contains login based authentication for the regular students and faculty.Faculty can also take the attendance from the app itself and can send instant notifications to the student.The attendance feature is not implementd on our own but it is using the third party application to track and monitor the attendance.Timetables are updated as for the latest information from the firebase.

II.IMPLEMENTATION

In this Implementation we used flutter which is based on DART programming language which is also a Object oriented programming language.We also used to firebase as backend for our previous application which is a Collections based database.For our enhance application we implemented it using Google Dialogflow which is used to give the set of instructions to the chatbot I.e it is used to train the data.

The codebase is divided into various modules. Each and every module has its own specification for Implementation. All the codebase for faculty is placed in one place and students code is placed in one place. So that it becomes easier for us to make any changes in the future as it is easily readable and can be easily understandable. We can say that we followed proper hierarchy to implement our work effectively.

The implementation phases includes

- Requirements gathering
- Analysis
- Data Collection
- Modelling/Design
- Code Implementation

The UML DIAGRAMS are as follows



FIG-1: USECASE DIAGRAM

The above usecase diagram represents the enhanced application flow. Usecases diagram are one of the five diagrams in UML Diagrams. It shows a set of Usecases, Actors and their Relationship. It also contains notes and constraints.

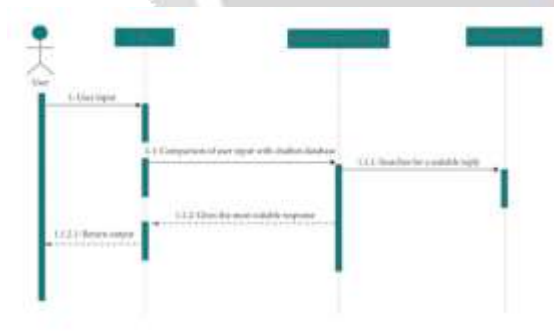


FIG-2: SEQUENCE DIAGRAM

III. RELATED WORK

The Work flow first began with the design and the architecture of the work. The architecture of our work flow is as follows. The architecture is common for our previous application and our enhanced application. The chatbot lies in the MainPage itself as the fresher donot have any login credentials and the mainpage is linked with the Google dialogflow to get the instructions or to train the instructions

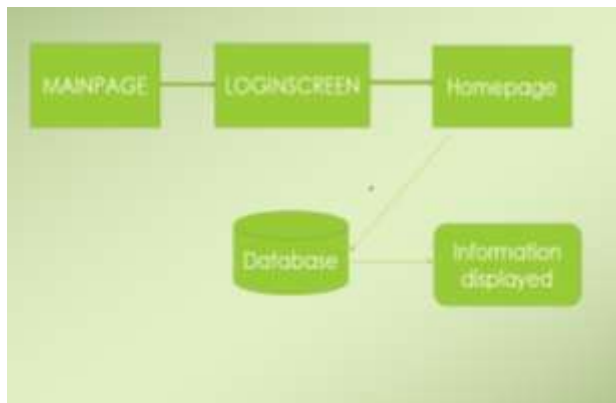


FIG-3:ARCHITECTURE

Lets also have the look at the code specifications for the homescreen and how it flows from one screen to other screen and how data is flowing after logging into the application.

*First,the codeflow starts from the main method,In the main method we specified all our key features like chatbot and the types of user.

*Based on the input provided by the user the respective screen is based.The opening flow is with the help of NAVIGATION FLOW feature of flutter.

*Based on the action performed by the user respective database is invoked by the Database.

```
import 'package:cloud_firestore/cloud_firestore.dart';
import 'package:firebase_auth/firebase_auth.dart';
import 'package:vdesk/page/home_page.dart';
import 'package:vdesk/page/user.dart';
import 'package:vdesk/provider/email_sign_in.dart';
import 'package:vdesk/provider/google_sign_in.dart';
import 'package:firebase_core/firebase_core.dart';
import 'package:flutter/material.dart';
import 'package:provider/provider.dart';
```

```
Future main() async {
  WidgetsFlutterBinding.ensureInitialized();
  await Firebase.initializeApp();

  runApp(MyApp());
}
```

```
class MyApp extends StatelessWidget {
  static final String title = 'Google SignIn';

  @override
  Widget build(BuildContext context) => MultiProvider(
    providers: [
      ChangeNotifierProvider(create: (context) => GoogleSignInProvider()),
      ChangeNotifierProvider(create: (context) => EmailSignInProvider()),
    ],
    child: MaterialApp(
      debugShowCheckedModeBanner: false,
      title: title,
      theme: ThemeData(primarySwatch: Colors.deepOrange),
      home: user(),
    ),
  ),
}
```

```
);  
}
```

The above is the sample code of main method and other methods are being invoked. It also imports the necessary libraries.

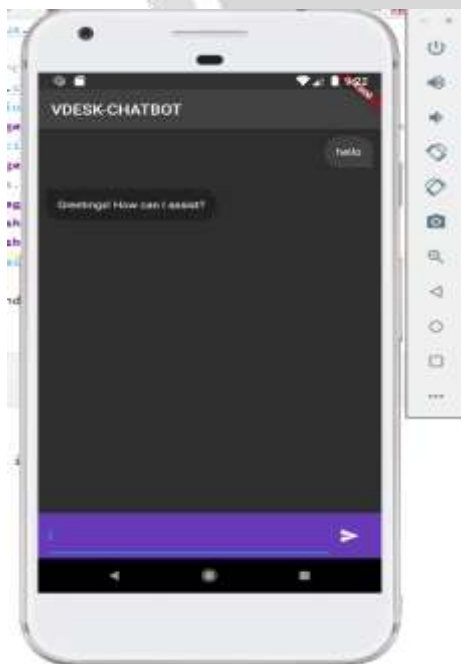
IV. RESULTS

The code specifications followed generated the proper and the desired output and the results of it are as follows:



FIG-4:MAINSCREEN/RESULT

The chatbot feature will be on the main screen and its output



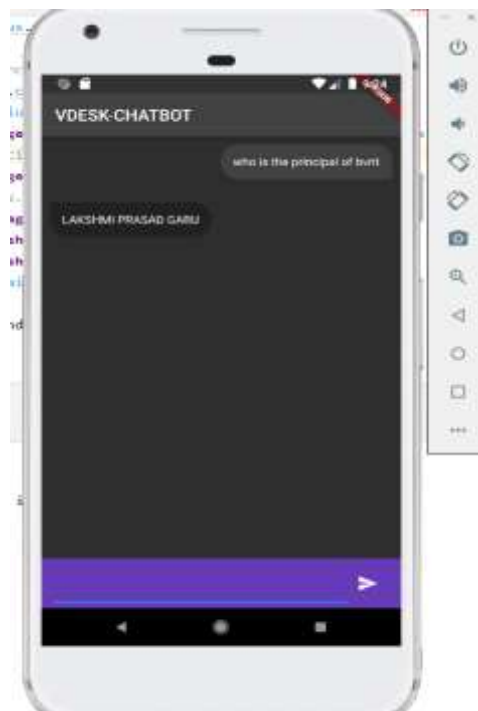


FIG-5:CHATBOT(RESET)



FIG-7:HOMEPAGE(RESET)

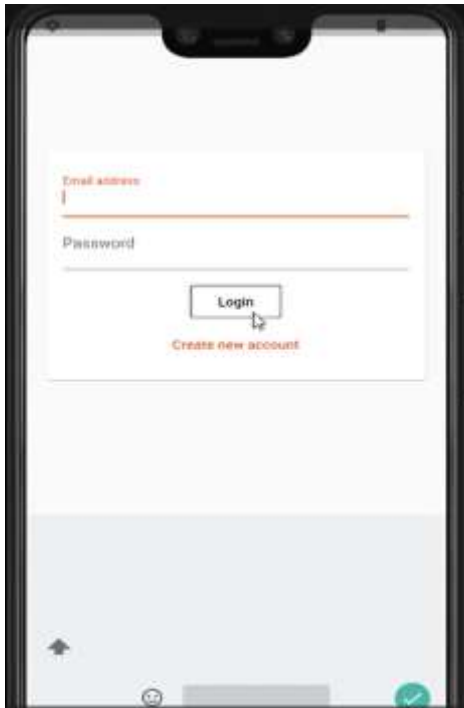


FIG-7:LOGINPAGE(RERESULT)

V.CONCLUSION

The application is the first ever dynamic application of BVRIT.It has many useful features for the students and faculty as well.VDESK-is the one stop solution for all.

In future we are planning to include to audio based chatbot and also make it more user friendly for parents too.In our further updates we will be having both message based and audiobased chatbot.We feel that this application has many usecases and can be given frequent updates making it more user friendly and user oriented application.

VI.REFERENCES

- [1] <https://docs.flutter.dev/>
- [2] <https://docs.flutter.dev/cookbook>
- [3] <https://www.youtube.com/@flutterdev>
- [4] <https://firebase.flutter.dev/docs/overview/>
- [5] <https://docs.flutter.dev/development/data-and-backend/firebase>
- [6] <https://firebase.google.com/codelabs/firebase-get-to-know-flutter#0>
- [7] https://www.youtube.com/watch?v=OlcYP6UXlm8&ab_channel=TensorProgramming
- [8] <https://cloud.google.com/dialogflow/docs>
- [9] <https://cloud.google.com/dialogflow>
- [10] <https://developers.google.com/learn/pathways/chatbots-dialogflow>