

# **Group-MeetUp**

## **MINI PROJECT – I**

### **SYNOPSIS**



Department of Computer Science & Application

**Institute of Engineering & Technology**

SUBMITTED TO :-

Mr. Mandeep Singh  
(Technical Trainer)

SUBMITTED BY :-

Aadya Agrawal (2115990001)

Nandini Singh (201500431)

Kirti Kushwah (201500345)

Neha Sharma (201500436)

Vidisha Singhal (201500782)

## **Acknowledgement**

It gives us a great sense of pleasure to present the synopsis of the B.Tech mini project undertaken during B.Tech III Year. This project is going to be an acknowledgement to the inspiration, drive and technical assistance. We owe special debt of gratitude to Mr. Mandeep Singh, Technical Trainer, for providing us with an encouraging platform to develop this project, which thus helped us in shaping our abilities towards a constructive goal and for his constant support and guidance to our work.

His sincerity, thoroughness and perseverance has been a constant source of inspiration for us. We believe that he will shower us with all his extensively experienced ideas and insightful comments at different stages of the project & also taught us about the latest industry-oriented technologies. We also do not like miss the opportunity to acknowledge the contribution of all faculty members of the department for their kind guidance and co-operation.

Aadya Agrawal (2115990001)

Nandini Singh (201500431)

Kirti Kushwah (201500345)

Neha Sharma (201500436)

Vidisha Singhal (201500782)

## **ABSTRACT**

For the past decade, video conferencing (VC) has become more popular and more reliable as a tool to bridge the distance gap when travel is not an option, impractical or undesired. Video conferencing uses audio and video telecommunications to bring people at different sites together. Understanding what are required for videoconferencing and its application has become one of the major researched topics by various learning institutions and businessmen. In this paper, an introduction to video conferencing is presented with the emphasis on its application in distance learning. In the toughest times of Covid-19, through online teaching, the teaching process became possible from home. This enabled the students to save their time which they have to give while attending physical classes. Also, the sharing of notes and study material online plays a huge role in time management and resource saving. The technical environment also demands the students to be fast in their approach of the study material.

# **Contents**

Abstract

Declaration

Acknowledgement

1. Introduction

1.1 Objective

1.2 Motivation

1.3 Problem Statement

2. Software Requirement

2.1 Hardware Requirements

2.2 Software Requirements

3. Project Description

4. Working

5. Implementation

6. References

## **INTRODUCTION**

It is only recently that technology has reached a level of stability, usability and affordability which permits its use in real teaching scenarios rather than research projects. The main advantages of online learning are flexibility and accessibility (Wu, Tennyson, & Hsia, 2010). Video conferencing and online classes have recently become increasingly popular and disperse in the wake of faster and cheaper internet connections and better technologies. Face-to-face tutoring is a well-established, and effective, instructional method. However, there is a need for more empirical research to be directed toward investigating users' experiences with online tutoring services, their impact on academic confidence (self-efficacy), and achievement scores.

The purpose of this project is to develop a hybrid mobile application that allows video conferencing and sharing of notes and also provides an

opportunity for online group discussion among students and colleagues using graphical user interface.

### **SOFTWARE AND HARDWARE REQUIREMENTS**

- Flutter version 2.7
- Google Flutter
- VS Code
- 512 MB Ram
- Windows 10

### **PROJECT DESCRIPTION**

**Group MeetUp** is a platform for people with similar interests to share and communicate. It is a virtual group discussion or study app. The platform works by using servers. These are set up with a particular focus or theme as a way for people to meet up online to discuss and exchange images, links and study notes. The application allows both text channels and voice chat via a microphone on the device

you use. Two components are needed to use this platform: A computer, tablet or smartphone with internet connection and an email address to set up an account. It can be a really powerful way for students to discover other people with similar interests and to build a community.

### **Features :**

- Create groups.
- Add, delete members to the group.
- Sharing of text, voice notes, images, GIFs, study notes.
- Use of camera and mic during meetings.
- Initiate audio, video calls and chat during meetings.
- Make study notes and share them with group directly.
- Access whiteboard during video calls.
- Access location of group members and check who is active.
- Block members.

The roles of the modules are as follows:

**Administrator (Group Admin):** The admin can share all the various type of content as other group members. In addition, the admin of the group will have the limited power to remove or add other members to the group. Each group can have one admin. The admin can also make any other group member the admin as he wishes to. The admin can also delete the group as and when wanted.

**Group Members (Students):** The group members can join the group using a unique code which is provided uniquely to every group on the application. The group members can share images, voice notes, typed notes and also initiate group audio and video calls or meetings. The group members can mute notifications of the group if they desire, pin messages and report members.

## **WORKING**

A user has to login using his Google account or by creating an account on the application by using mobile number or email. A student can create group or join any group using the unique code of the group. There is no group limit of members. A single student can join a number of groups. To start meetings, simply click on the audio or video call icon. As soon as the meeting gets started, the app can access the microphone and camera of the members. All the other members will get notified whenever a meeting gets initiated. Meet offers native, full-screen presenting with the use of whiteboard whenever needed. Members are also allowed to chat during the meetings. Another important feature of the application is that the students can note down classroom notes in the app itself, just by clicking the 'notes' icon and these notes can be shared with the group later on.

## **IMPLEMENTATION**

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



written in the Dart language and make use of many of the language's more advanced features.

While writing and debugging an application, Flutter runs in the Dart virtual machine, which features a just-in-time execution engine. This allows for fast compilation times as well as "hot reload", with which modifications to source files can be injected into a running application. Flutter extends this further with support for stateful hot reload, where in most cases changes to source code are reflected immediately in the running app without requiring a restart or any loss of state.

For better performance, release versions of Flutter apps on all platforms use ahead-of-time (AOT) compilation, except for on the Web where code is transpiled to JavaScript. Flutter inherits Dart's Pub package manager and software repository, which allows users to publish and use custom packages as well as Flutter-specific plugins.

Flutter's engine, written primarily in C++, provides low-level rendering support using either Google's Skia graphics library or the custom "Impeller" graphics layer. Additionally, it interfaces with platform-specific SDKs such as those provided by Android and iOS to implement accessibility, file and network I/O, native plugin support, and more.

Visual Studio Code, also commonly referred to as VS Code, is a source-code editor made by Microsoft with the Electron Framework, 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.

#### Reference Websites:

- <https://code.visualstudio.com>
- <https://vscode.dev>
- <https://flutter.dev>
- <https://dart.dev>
- <https://developers.google.com>

**Faculty Guidelines:**

Mr. Mandeep Singh (Technical Trainer in GLA University)

**GitHub Repository link:**

<https://github.com/VidishaSinghal26/Mini-Project>