

# Smartphone based Digital Attendance System

CSE - 618

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# Content

- Problem Statement
- What do we offer
- What we have already implemented
- What we have partially implemented
- What we are planning to implement
- Our stack
- Language we have used
- DFD-0

# Content

- ER diagram
- Class diagram
- Activity diagram
- System Architecture
- Some snaps
- Some snaps - Flutter
- Questions

# Problem Statement

While taking attendance in traditional process, we may encounter some problems. Some notable of them are :

- Time consuming
- Non-eco friendly
- Tempering with attendance.
- Touch, means contamination

Overall costly process

# What do we offer

- Taking attendance in an efficient way
- Reduce extra processing
- Making data digital
- Going paperless
- Reduce time
- Reduce cost
- No touch, means less contamination
- No tampering

# What we have already implemented

- Authentication (JWT based)
  - Login
  - Sign-up
  - Logout
- Basic operations to a classroom
  - Create
  - Join
  - Add
  - Edit / Update
  - Pending status
  - Role based on classroom
  - Edit people



# What we have already implemented (Cont.)

- Basic operations to a session
  - Create
  - Attend
  - Auto evaluation (based on Code, Location, Time)
  - Edit (Teacher only privilege)
- Profile
  - View
  - Edit
- Classroom
  - View all
  - Search

# What we have partially implemented

- Adding profile picture to server
- Sending minimize alert to server
- Showing overview of classroom

# What we are planning to implement

- Push notifications
- Video call/Ring (Only Teacher to Student)
- Read all applications installed on phone(Location emulation detection)
- Generate print-ready document
- Batch import attendance



# Our stack

- Frontend
  - Android
  - Flutter (For cross support - wip)
- Backend
  - Spring Boot
- Database
  - H2
  - Firebase

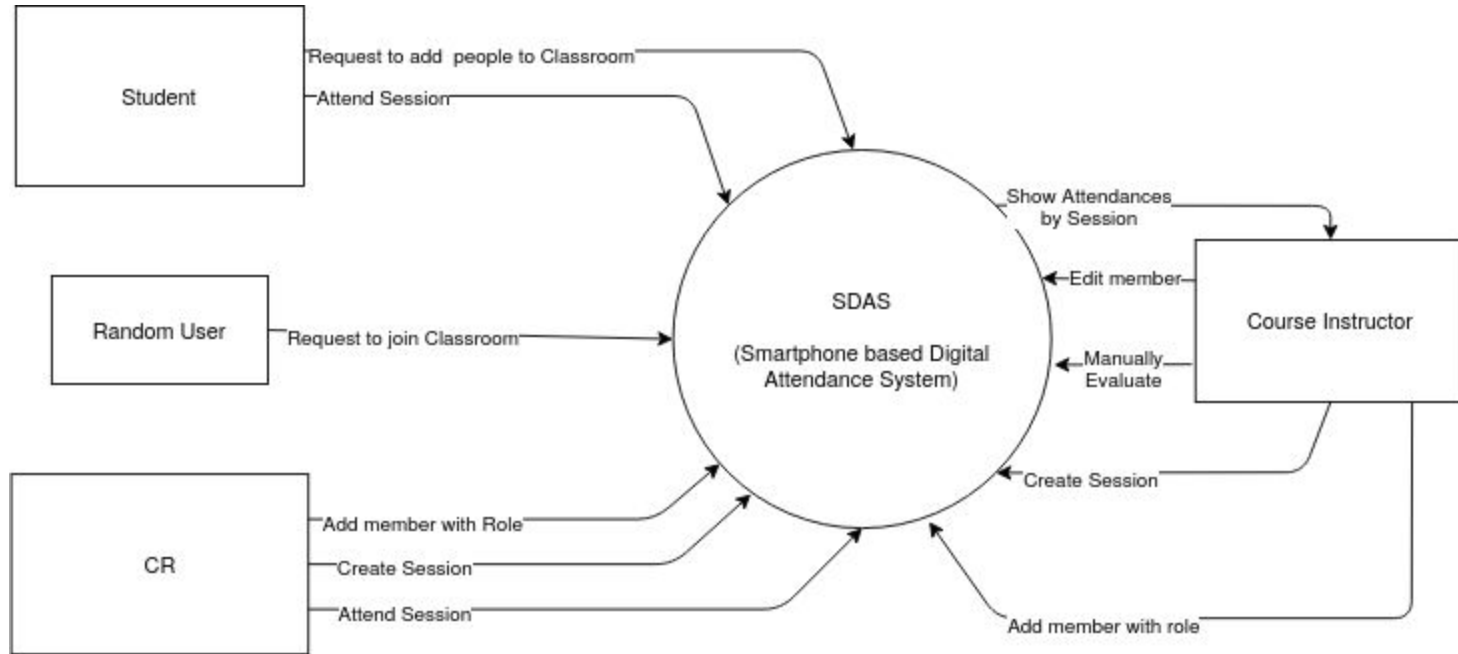
# Our stack (Cont.)

- Some tools we have used too
  - Postman
  - Pencil
- Cloud server
  - Heroku

# Language we have used

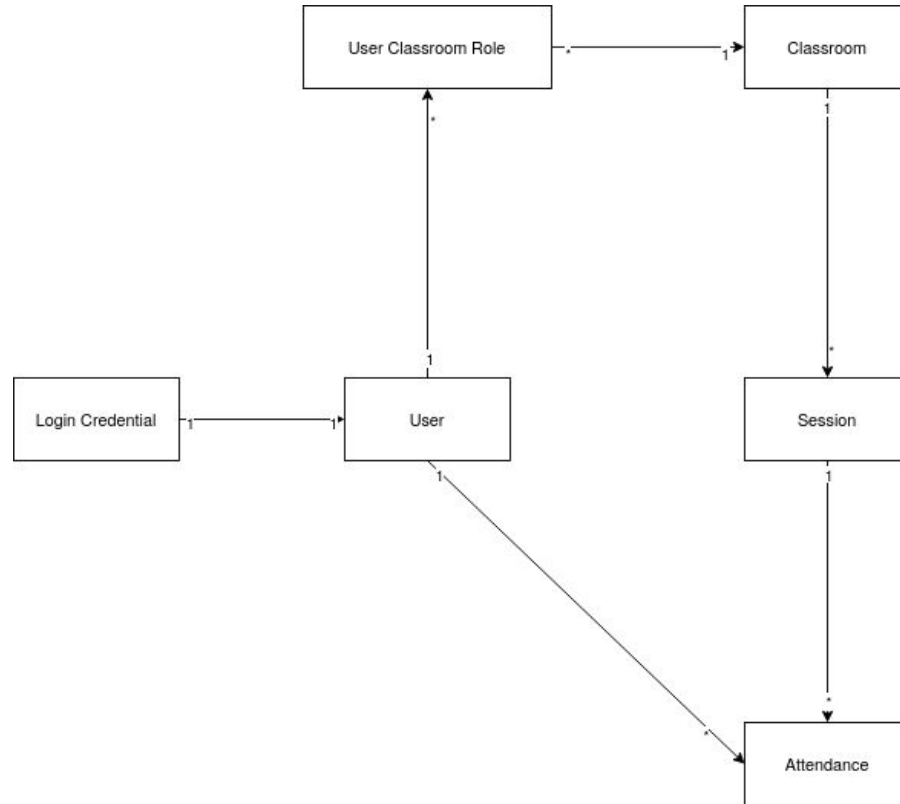
- Android is mostly in Kotlin
- Some portion of Android implementation contains Java
- Backend is completely in Java
- In Flutter app we are working on Dart

# DFD-0

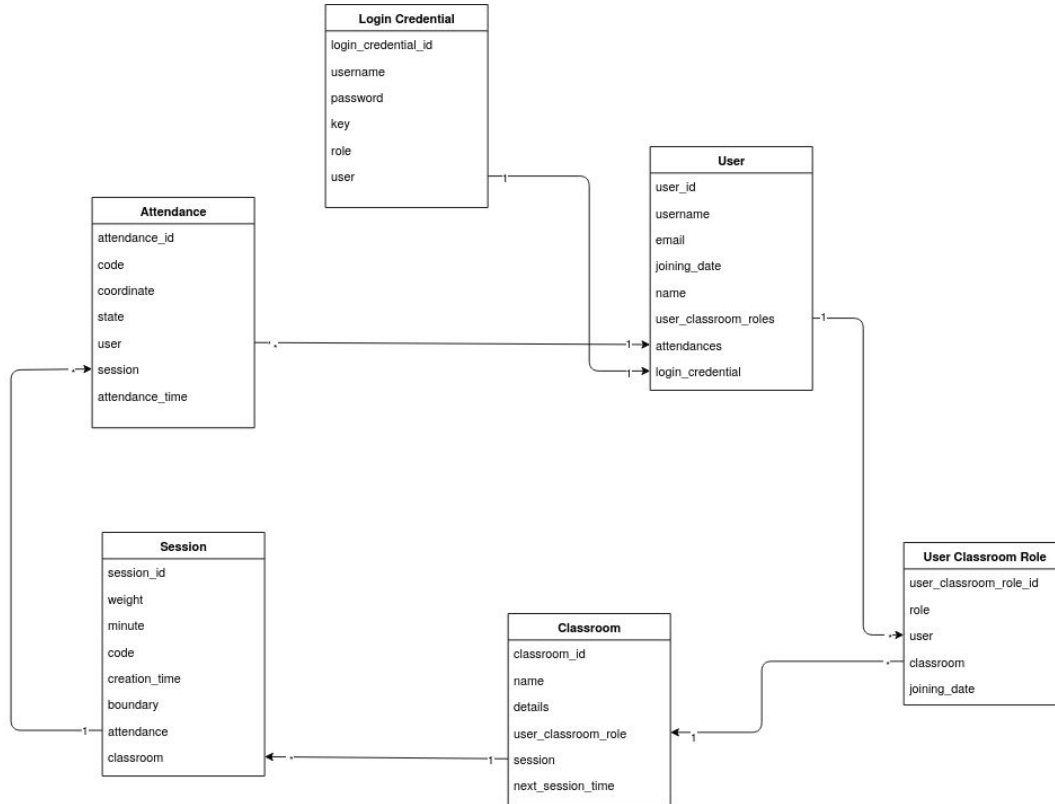


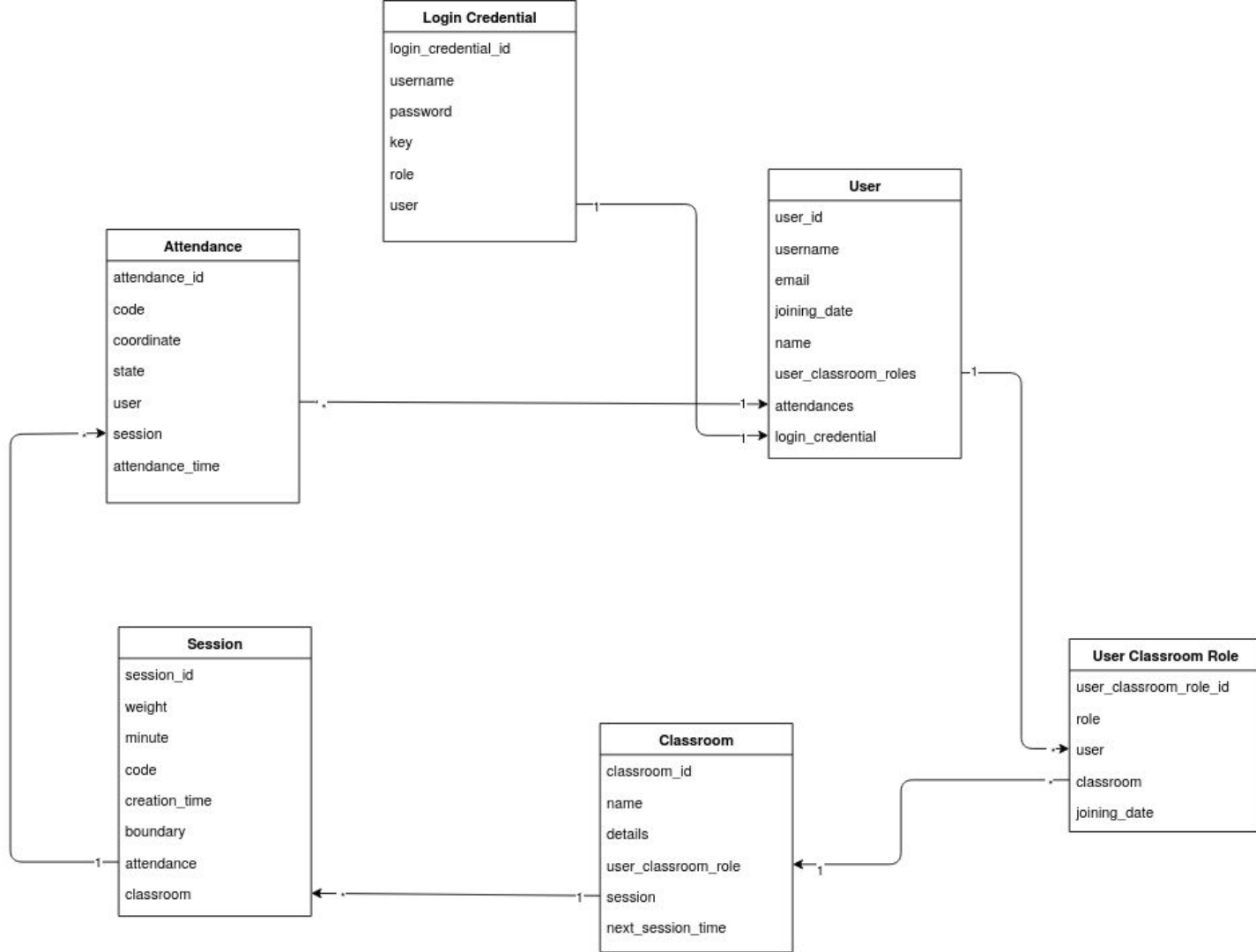


# ER diagram

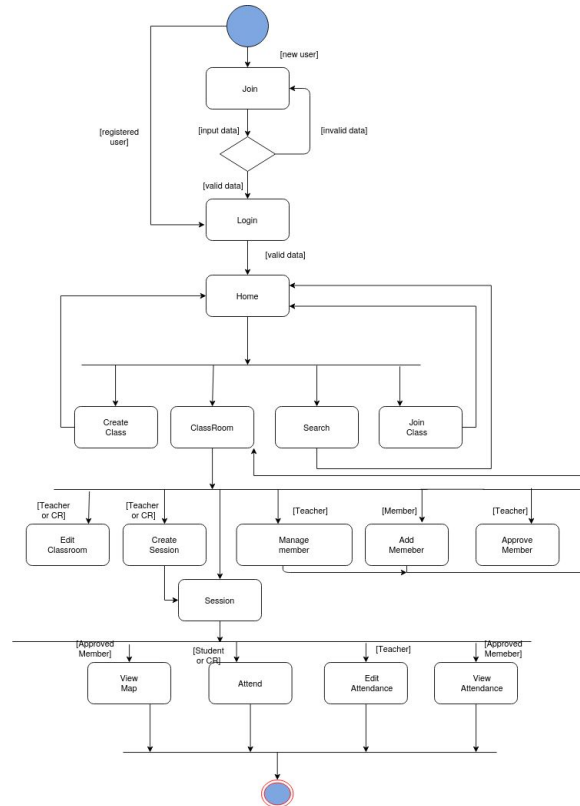


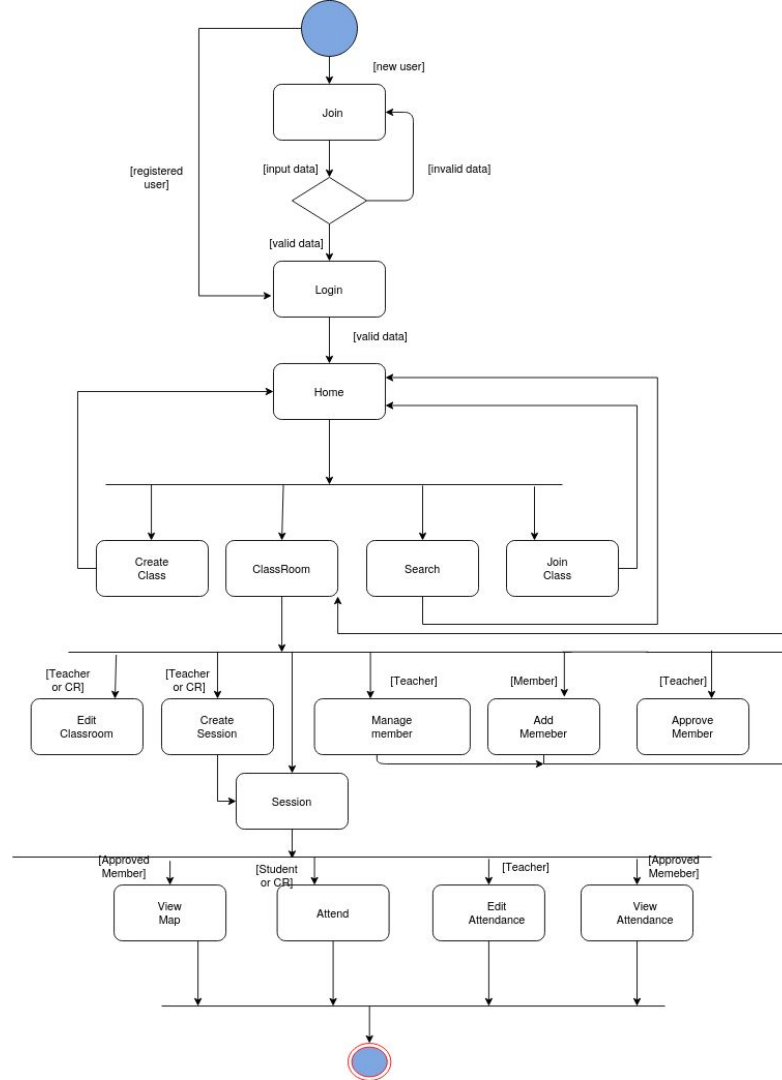
# Class diagram



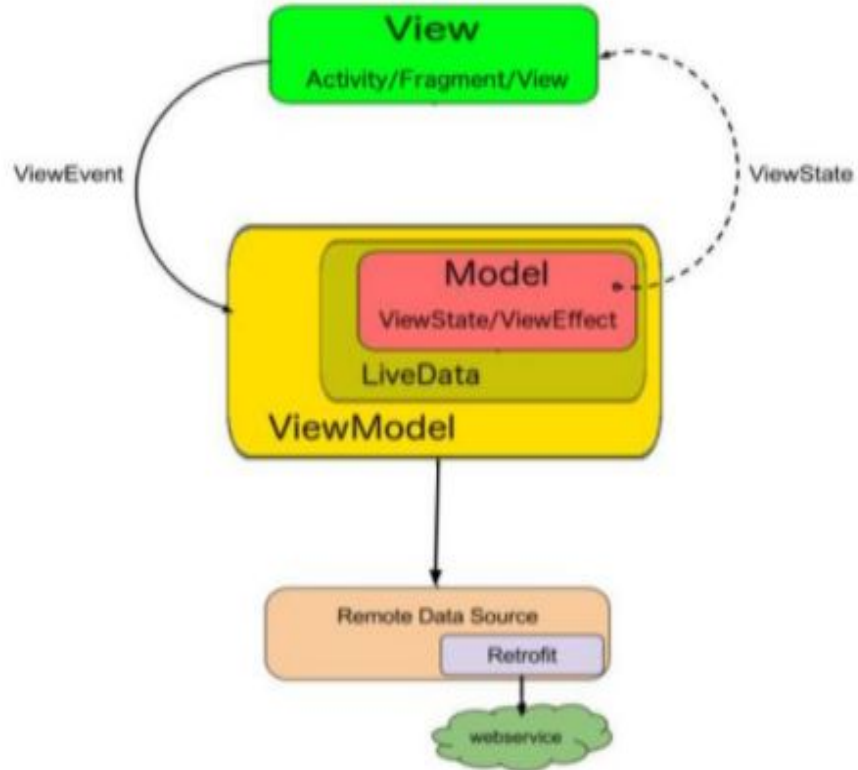


# Activity Diagram

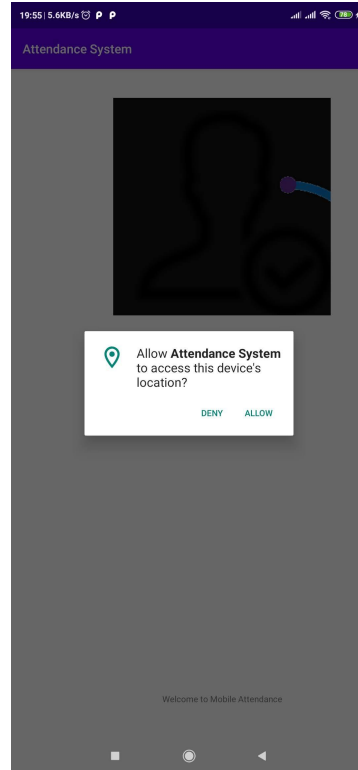




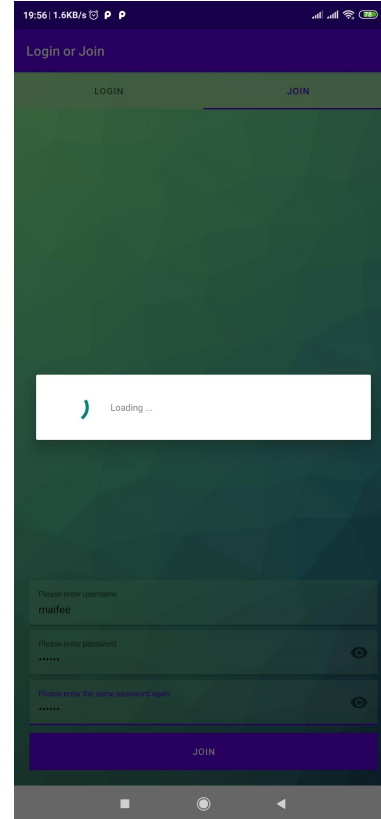
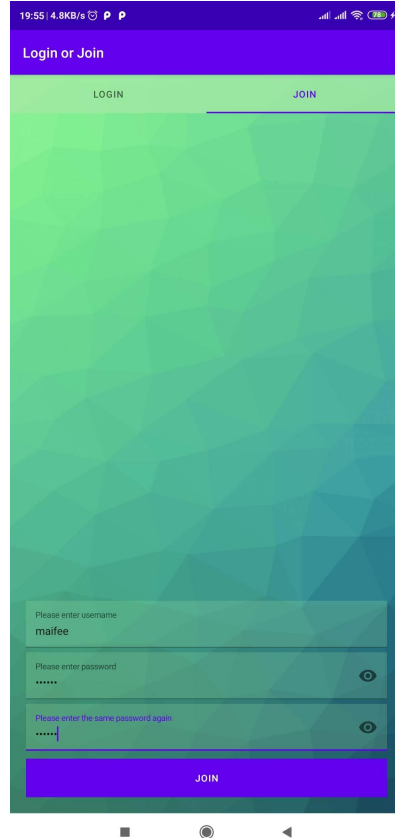
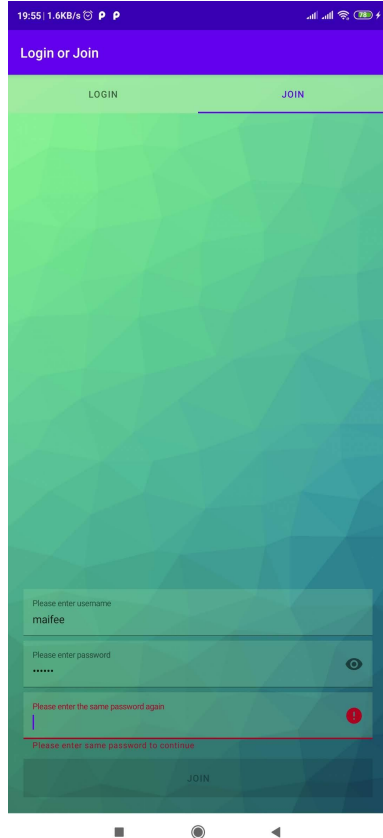
# System Architecture



# Some snaps



# Some snaps (Cont.)





# Some snaps (Cont.)



# Some snaps (Cont.)



You are not in any Classroom  
Please create or enroll



You are not in any Classroom  
Please create or enroll



## Classrooms :

**Name :** Mobile application development  
**Details :** CSE-618  
**Next session :** 13 Nov 2020 07:57:23 GMT

**Name :** Compiler  
**Details :** CSE-711  
**Next session :** 13 Nov 2020 07:58:18 GMT

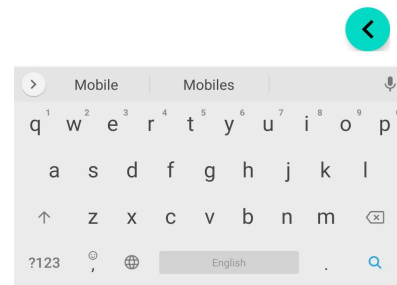
Classroom creation successful  
Now ask people to join or add



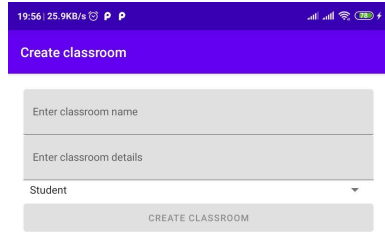
## Classrooms :

## Search result :

**Name :** Mobile application development  
**Details :** CSE-618  
**Next session :** 13 Nov 2020 07:57:23 GMT



# Some snaps (Cont.)



19:56 | 25.9KB/s

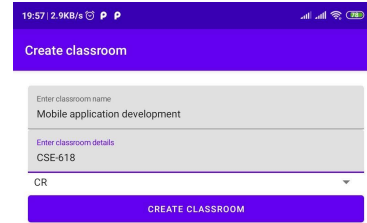
Create classroom

Enter classroom name

Enter classroom details

Student

CREATE CLASSROOM



19:57 | 2.9KB/s

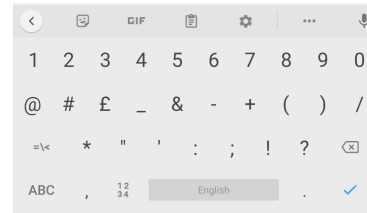
Create classroom

Enter classroom name  
Mobile application development

Enter classroom details  
CSE-618

CR

CREATE CLASSROOM



< GIF 📄 ⚙️ ... 🎤

1 2 3 4 5 6 7 8 9 0

@ # £ \_ & - + ( ) /

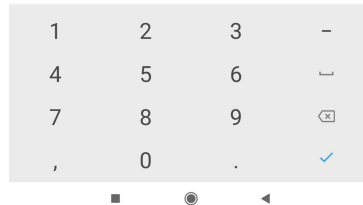
=\< \* " ' : ; ! ? <X>

ABC , 12 3 4 English . ✓

# Some snaps (Cont.)



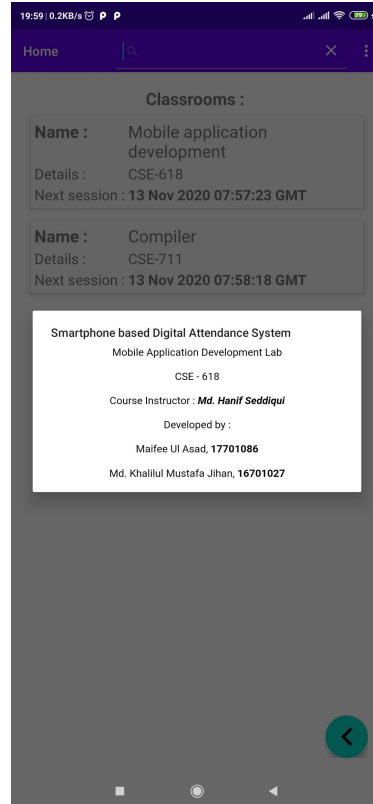
A screenshot of a mobile application interface. At the top, a status bar shows the time 19:56, data speed 22.8KB/s, and various icons. Below this is a blue header bar with the text "Join classroom". Underneath the header is a text input field labeled "Classroom ID :" containing the text "10". Below the input field is a blue button with the text "JOIN".



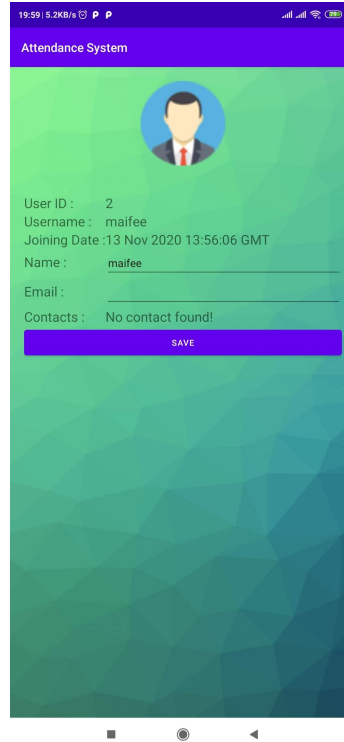
A screenshot of a numeric keypad interface. The keypad is a 4x4 grid of buttons. The first three rows contain digits 1-9. The fourth row contains a comma, 0, a period, and a blue checkmark icon. The keypad is displayed over a light gray background.

1	2	3	-
4	5	6	_
7	8	9	<X>
,	0	.	✓

# Some snaps (Cont.)



# Some snaps (Cont.)



# Some snaps (Cont.)



Acting as :  
Classroom ID : 4  
Classroom Name : Mobile application development  
Classroom Details :CSE-618  
Next session time 13 Nov 2020 07:57:23 GMT

## User and Roles

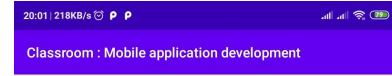
User ID : 2  
Username : maiffee  
User Role : CR



Acting as :  
Classroom ID : 4  
Classroom Name : Mobile application development  
Classroom Details :CSE-618  
Next session time 13 Nov 2020 07:57:23 GMT

## User and Roles

User ID : 2  
Username : maiffee  
User Role : CR



Acting as : CR  
Classroom ID : 4  
Classroom Name : Mobile application development  
Classroom Details :CSE-618  
Next session time 13 Nov 2020 07:57:23 GMT

## Sessions

### User and Roles

User ID : 2  
Username : maiffee  
User Role : CR

User ID : 10  
Username : test  
User Role : Pending



# Some snaps (Cont.)



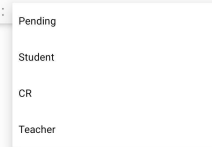
User ID : 2  
Username : maifee  
User Role : CR

User ID : 10  
Username : test  
User Role : Pending



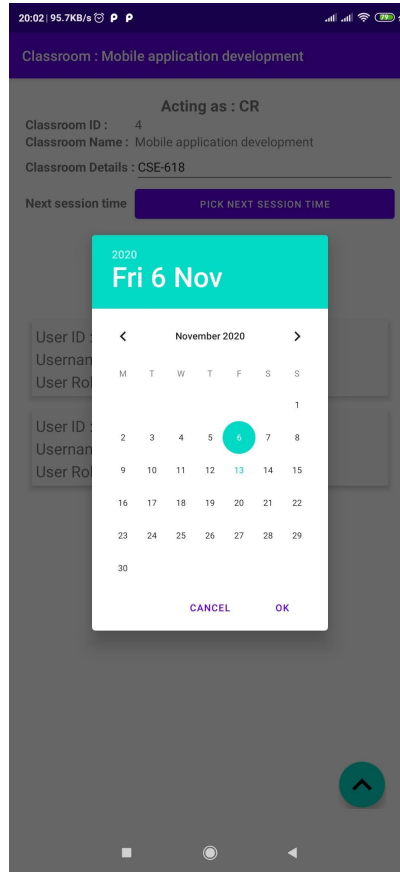
User ID : 2  
Username : maifee  
User Role : CR

User ID : 10  
Username : test  
User Role : Pending

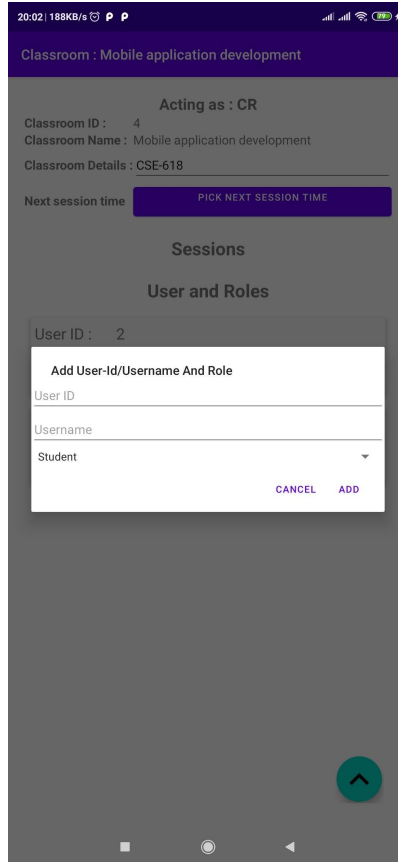




# Some snaps (Cont.)



# Some snaps (Cont.)



# Some snaps (Cont.)

20:02 | 176KB/s | P P

Create session

Creation Time :

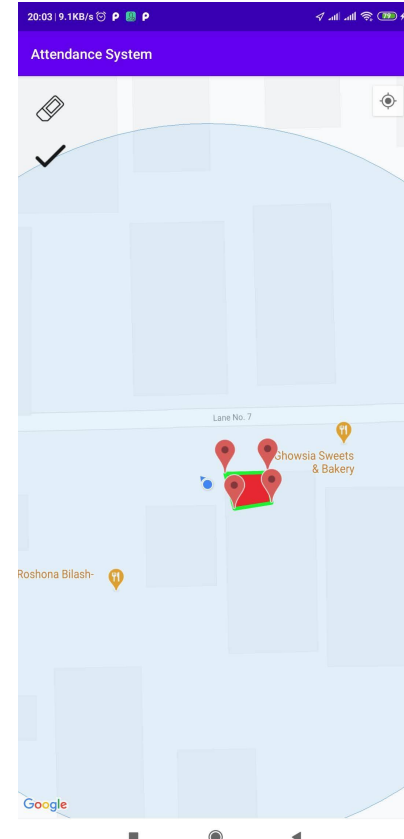
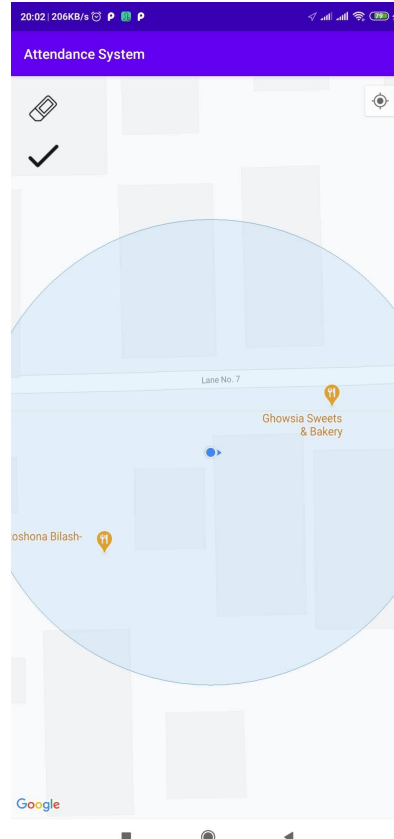
Please enter weight

Please enter minute

Please enter code

Bounds : SELECT BOUNDARY

CREATE SESSION



# Some snaps (Cont.)

20:06 | 1.9KB/s | P P | 20%

**Attend**

Creation Time : 13 Nov 2020 14:03:17 GMT  
Weight : 1  
Minute : 1

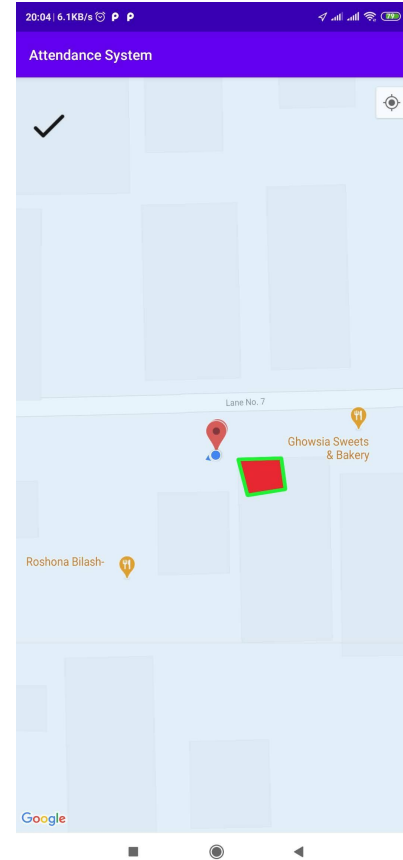
Please enter code  
1

Bounds : [VIEW BOUNDARY](#)

[ATTEND SESSION](#)

[EDIT ATTENDANCES](#)

User ID : 10  
Username : test  
Coordinate : {lat : 22.33815162lon : 91.78358919,}  
State : AutoRejected  
Time : 13 Nov 2020 14:04:15 GMT



# Some snaps (Cont.)



User ID : 10  
Username : test  
Coordinate : {lat : 22.33815162lon : 91.78358919,}  
State :  
Time :

Pending

Accepted

Rejected



Creation Time : 13 Nov 2020 14:03:17 GMT  
Weight : 1  
Minute : 1

Please enter code  
1

Bounds : [VIEW BOUNDARY](#)

[ATTEND SESSION](#)

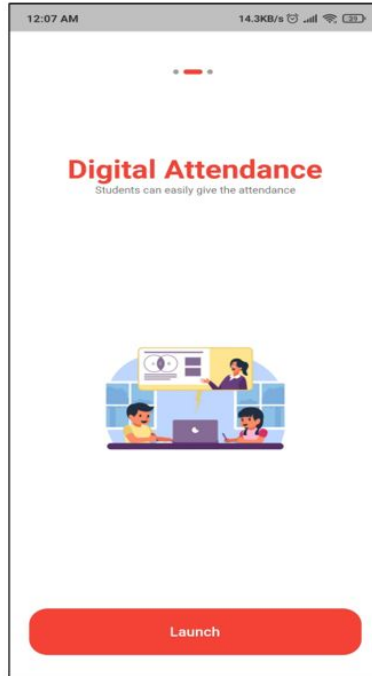
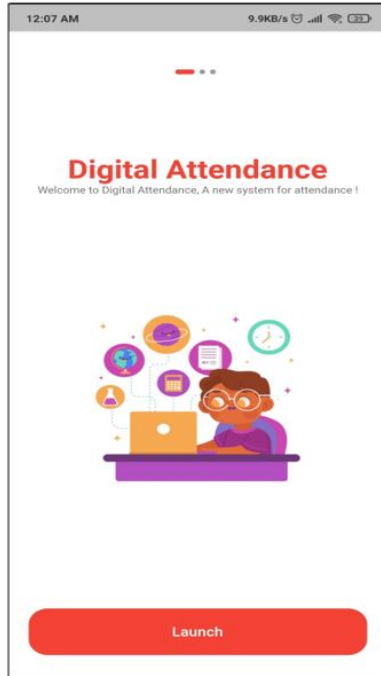
[EDIT ATTENDANCES](#)

User ID : 10  
Username : test  
Coordinate : {lat : 22.33815162lon : 91.78358919,}  
State : Accepted  
Time : 13 Nov 2020 14:04:15 GMT

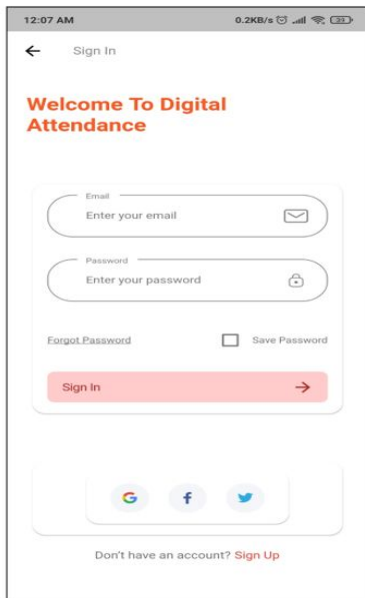
Role has been changed



# Some snaps - Flutter



# Some snaps - Flutter (Cont.)



12:07 AM 0.2KB/s

← Sign In




**Welcome To Digital Attendance**

Email  
Enter your email

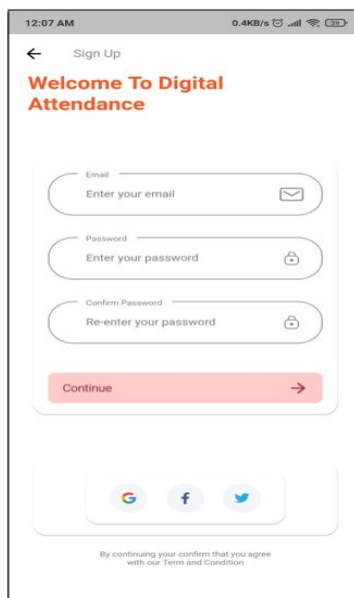
Password  
Enter your password

[Forgot Password](#) ☐ Save Password

Sign In →

Don't have an account? [Sign Up](#)



12:07 AM 0.4KB/s

← Sign Up




**Welcome To Digital Attendance**

Email  
Enter your email

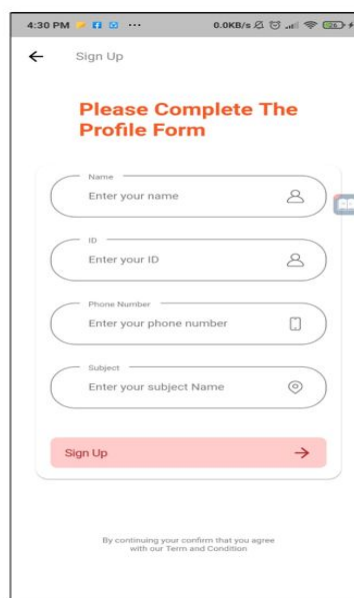
Password  
Enter your password

Confirm Password  
Re-enter your password

Continue →

By continuing you confirm that you agree with our Term and Condition



4:30 PM 0.0KB/s

← Sign Up

**Please Complete The Profile Form**

Name  
Enter your name

ID  
Enter your ID

Phone Number  
Enter your phone number

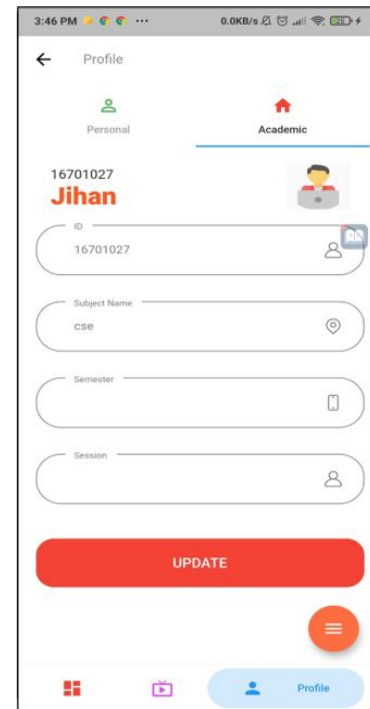
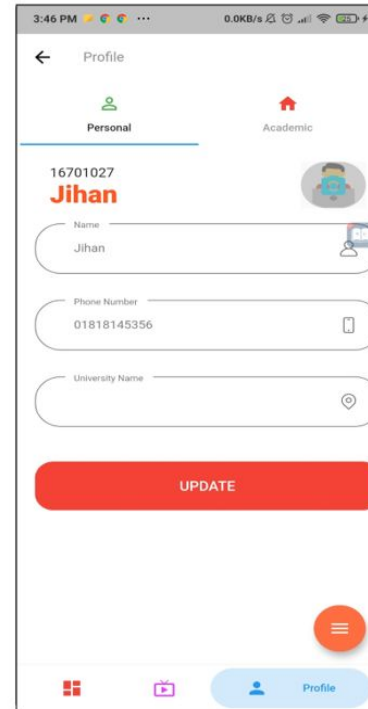
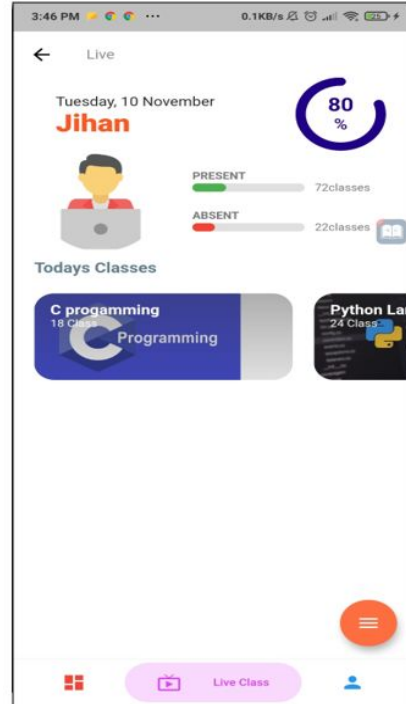
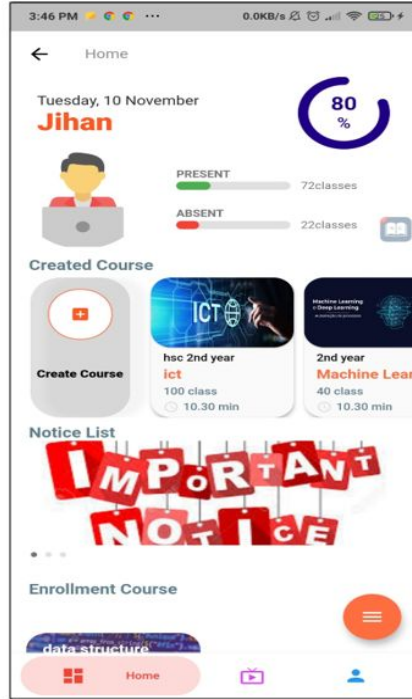
Subject  
Enter your subject Name

Sign Up →

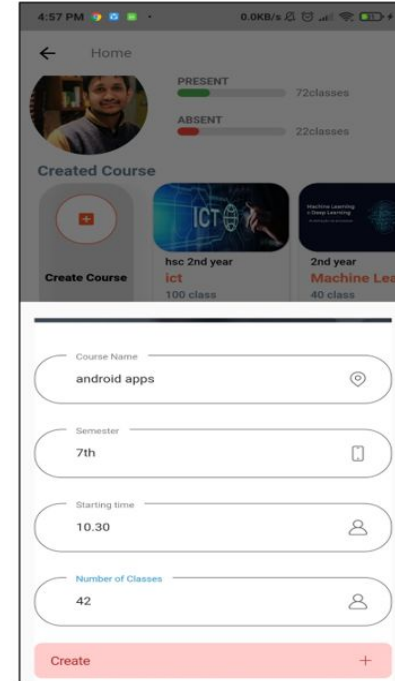
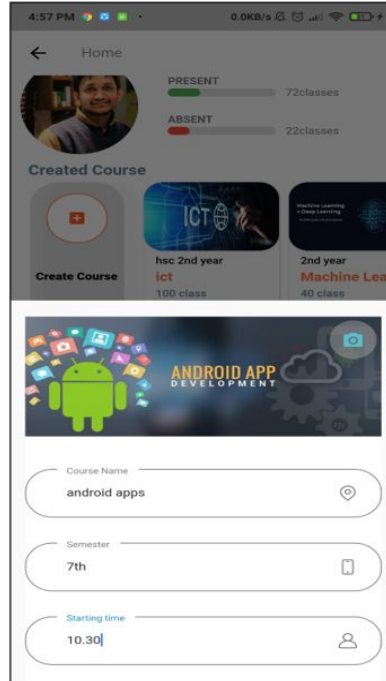
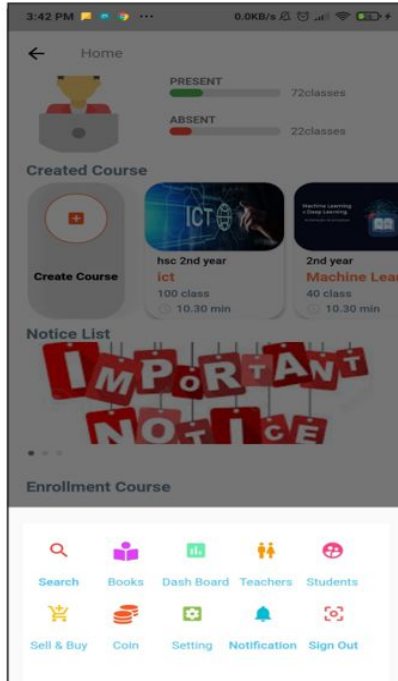
By continuing you confirm that you agree with our Term and Condition



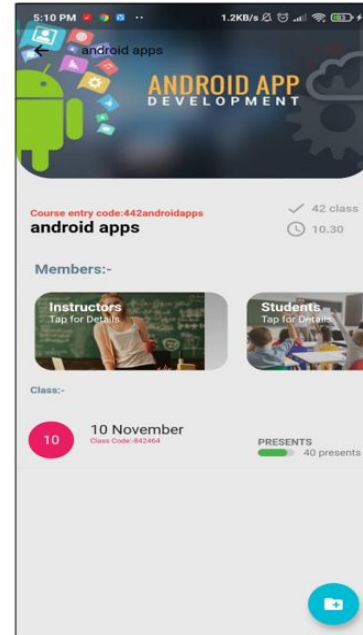
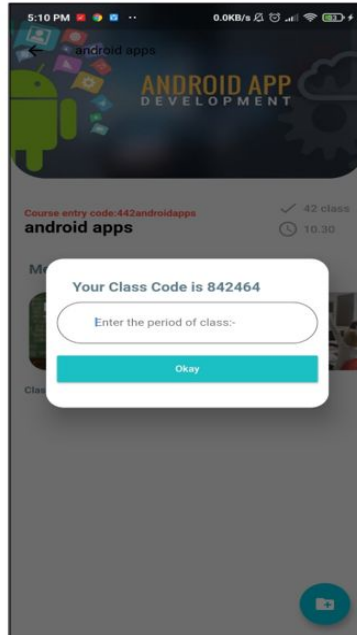
# Some snaps - Flutter (Cont.)



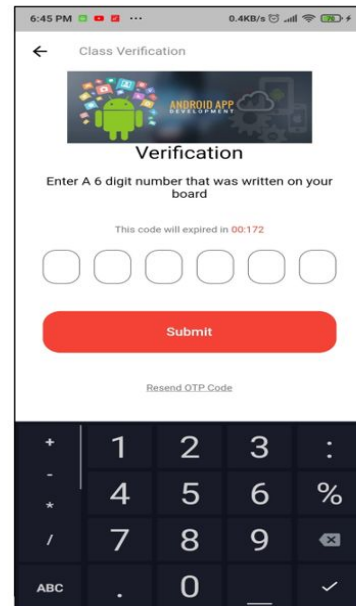
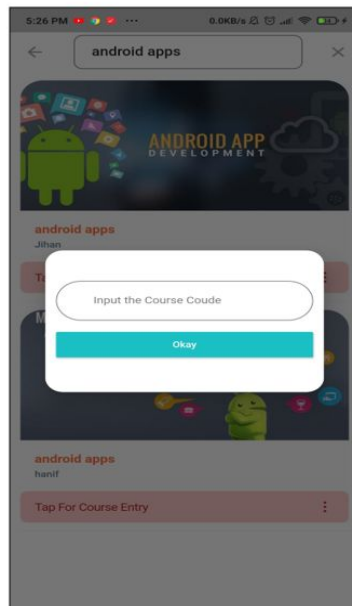
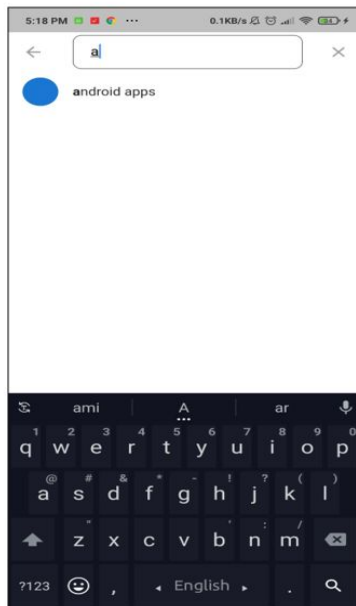
# Some snaps - Flutter (Cont.)



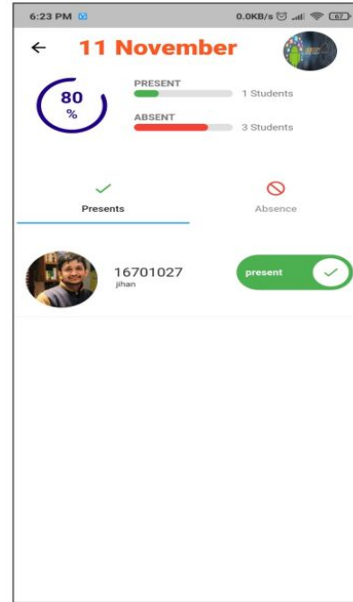
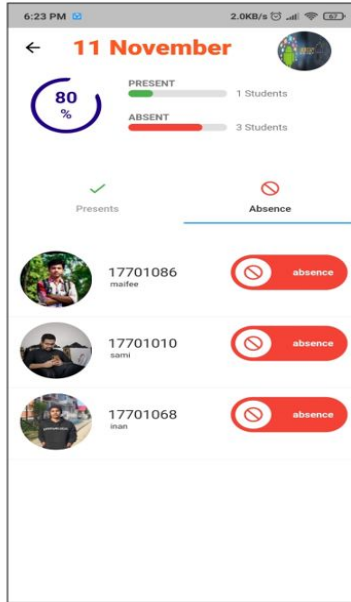
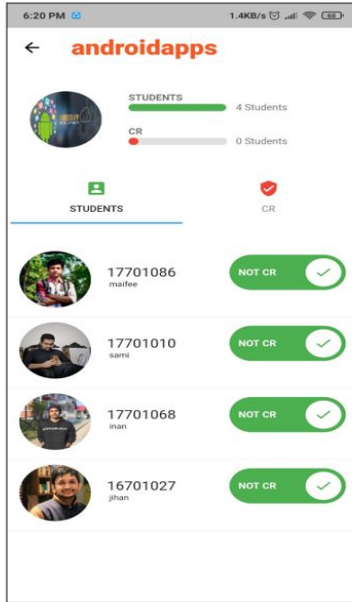
# Some snaps - Flutter (Cont.)



# Some snaps - Flutter (Cont.)



# Some snaps - Flutter (Cont.)



Questions ?

Thanks





# Some links

- Android source code : <https://github.com/maifeeulasad/SDAS/>
- Android Build : <https://github.com/maifeeulasad/SDAS/releases/tag/1.2>
- Flutter source code : <https://github.com/ADUR-JIHAN/Digital-Attendance>
- Flutter Build : <https://github.com/ADUR-JIHAN/Digital-Attendance/tree/master/apk>
- Report : <https://drive.google.com/file/d/13kmafUZkJ694Tuqxy-HaDvCWHzwJSJOV/view>