**Chat app**

1. **Part Signup:**

Started Sunday 9:30am

**1. Create New empty project and name it**

Add new Activity as 'SignUpActivity' and select as launcher Activity(can be changed from Manifest.xml)

Set Layout to Linear

Orientation:verticle

Gravity:center

add another Linear Layout-Horizontal

2. goto themes.xml:

Set colors for Actionbar & Statusbar

3. come back to 'SignupActivity':

create the layout

set bg grey

set gravity-center horizontal

download logo-flat icon

create the signup layout

set id for all 7 items

**4. create 'signing Activity'**

copy the Signin xml and make some edit and add id for all.

**5. viewbinding setup: come back to Signup activity Coding:** Enable viewbinding

buildFeatures{ // past it to gradle.build Module-below buildtypes

viewBinding true

}

**Connect Firebase Authentication:**

after connecting you will find inside gradle

'com.google.gms:google-services:4.3.10' & 'com.google.firebase:firebase-auth:21.0.3'

search-signup email and password android firebase and follow

**add firebase realtime datbase** dependency to project and remove the version no.

'com.google.firebase:firebase-bom:29.3.0' & 'com.google.firebase:firebase-firestore'

'com.google.firebase:firebase-database:20.0.4'

implementation 'com.google.android.gms:play-services-auth:20.1.0' //for login with google

**view binding:**

ActivitySignupBinding binding; //import class by alt+enter

private FirebaseAuth auth; //auth-to signup using email password

FirebaseDatabase database; //to add databse in firebase

binding = ActivitySignupBinding.inflate(getLayoutInflater()); //initialise

setContentView(binding.getRoot()); //initialize //Remove R.layout.activity\_signup

auth = FirebaseAuth.getInstance();

database = FirebaseDatabase.getInstance();

“**setonclicklistner” on signupbutton using firebase**

binding.btnSignUp.setOnClickListener(new View.OnClickListener() { //using binding:

@Override

public void onClick(View view) { //implementing auth

auth.createUserWithEmailAndPassword(binding.etEmail.getText().toString(), binding.etPassword.getText().toString()); } }); //("addOnCompleteListener" will be added after creating Users Model class)

6. **Create new package for 'model class** as 'Users' to set oncomplete.

declare all the required fields.

String ProfilePic, userName, mail, password, userId, lastMessage;

Generate **Constructor** and **getter and setter** for all by rightclicking on emty space.

and create another Constructor for Firebase also

public Users(String mail, String password, String userId) { // Constructor for Firebase also

this.mail = mail;

this.password = password;

this.userId = userId;

}

**7. addOnCompleteListener: go to Signup Activity:**

remove the ; and add

addOnCompleteListener(new OnCompleteListener<AuthResult>() {

@Override

public void onComplete(@NonNull Task<AuthResult> task) {

}

}); // Task means data is authenticated to Firebase

**Toast** if Task is successful

if (task.isSuccessful()){

Toast.makeText(SignupActivity.this, "User created succesfully", Toast.LENGTH\_SHORT).show(

}

else {

Toast.makeText(SignupActivity.this, task.getException().getMessage(), Toast.LENGTH\_SHORT).show();

}

9. **RTDB** authen for an user entry

Enable Signin method in firebase

Select Security rules 'Start in test mode' not in locked mode.

10. in Signup Activity: implementing databse// implement the Users class

Now inside if(){} create a user object for empty User constructor

Users user = new Users(binding.etUsername.getText().toString(), binding.etEmail.getText().toString(),

binding.etPassword.getText().toString());

now set getUID() to uniquely identyfy each user

String id = task.getResult().getUser().getUid();

create child id-database.getReference().child("Users").child(id).setValue(user);//to save user id to farebase

database.getReference().child("Users").child(id).setValue(user);

**run app enter signupdata and check in fairebase realtime database.**

now you can find the id inside **Node**

create Loading/progress dialog :

**Create progress dialog:**

ProgressDialog progressDialog; //Declare

progressDialog = new ProgressDialog(SignupActivity.this); // initialise

progressDialog.setTitle("Creating account"); //implemention for tiltle

progressDialog.setMessage("We are creating your account"); //implemention for message

progressDialog.show(); //under onclick

progressDialog.dismiss(); //under oncomplete

**Hide the Actionbar/toolbar**

getSupportActionBar().hide();

completed at 1:10minutes

**B. Part Signin Activity:**

Started on Wednesday @ 1:18pm

1. **viewbinding:** Goto Signin Activity and complete the binding work.

ActivitySigninBinding binding;

binding = ActivitySigninBinding.inflate(getLayoutInflater());

setContentView(binding.getRoot());

2. Set and change progress bar

3. set **oncliclicklistner** in **Signinbutton**:

binding.btnSignIn.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

}

});

auth.signInWithEmailAndPassword(binding.etEmail.getText().toString(),

binding.etPassword.getText().toString()).

addOnCompleteListener(new OnCompleteListener<AuthResult>() {

@Override

public void **onComplete**(@NonNull Task<AuthResult> task) {

progressDialog.dismiss();

}

});

**4. intent:** if task is successful set intent to MainActivity

Intent intent = new Intent(SignInActivity.this, MainActivity.class);

startActivity(intent);

5. **Toast: set Toast for any Exception**

***Toast***.makeText(***SignInActivity***.this, task.getException().**getMessage**(), ***Toast***.LENGTH\_SHORT).**show**()**;**

Change intent filter in Manifest to Signin Activity.

6. for any existing user:

if(auth.getCurrentUser()!= null){

Intent intent = new Intent(SignInActivity.this, MainActivity.class);

startActivity(intent);

}

**Run the App**

7. set “**onclicklistner**” on "create account" text:

binding.tvClickSignup.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Intent intent = new Intent(SignInActivity.this, SignupActivity.class);

startActivity(intent);

}

});

8. Goto Signup Activity:

set **onclicklistner** on "already have account" text:

binding.tvClickSignup.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View view) {

Intent intent = new Intent(SignupActivity.this, SignInActivity.class);

startActivity(intent);

}

});

9. Goto MainActivity add **Menubutton** for Signing out.

create menu and add Setting and Logout

complete the binding

@Override

public boolean **onCreateOptionsMenu**(Menu menu) {

MenuInflater inflater = getMenuInflater();

inflater.inflate(R.menu.menu,menu);

return super.onCreateOptionsMenu(menu);

}

10. add **onOptionsItemSelected** and **switch case**

@Override  
public boolean onOptionsItemSelected(@NonNull *MenuItem* item) {  
 switch (item.getItemId()){  
  
 case ***R***.***id***.settings:  
 ***Toast***.makeText(this, "settings clicked", ***Toast***.LENGTH\_SHORT).**show**()**;** break**; //** Create toast for settingcase ***R***.***id***.logout:  
 auth.**signOut**()**;  
 *Intent*** intent = new **Intent**(***MainActivity***.this, ***SignInActivity***.class)**;** startActivity(intent)**;** break**;** }

return true**;**}

C. Part 3: Signup using existing Google ID:

Search Google sign in firebase

Add this implementation 'com.google.firebase:firebase-auth' //for signup with google

**Configure google sign in:**

*GoogleSignInOptions* gso = new *GoogleSignInOptions*.Builder(*GoogleSignInOptions*.DEFAULT\_SIGN\_IN)  
 .requestIdToken(getString(*R*.*string*.default\_web\_client\_id)).requestEmail()  
 .build();

mGoogleSignInClient = *GoogleSignIn*.getClient(this, gso);