1.variables

**private static final int *GOOGLE\_SIGN\_IN*** =9001 ;

SignInButton **sign\_in\_button**; *//predefined google button*FirebaseAuth **mauth**;  
FirebaseAuth.AuthStateListener **mAuthListener**;  
  
*//google*GoogleApiClient **mGoogleApiClient**;

2.onCreate()

@Override  
**protected void** onCreate(@Nullable Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 *//facebook initialization*

}  
  
 setContentView(R.layout.***activity\_login***);  
  
 *//firebase* **mauth**=FirebaseAuth.*getInstance*();  
 **mAuthListener** = **new** FirebaseAuth.AuthStateListener() {  
 @Override  
 **public void** onAuthStateChanged(@NonNull FirebaseAuth firebaseAuth) {  
  
 }  
 };

3.

*//google initialization*GoogleSignInOptions gso = **new** GoogleSignInOptions.Builder(GoogleSignInOptions.***DEFAULT\_SIGN\_IN***)  
 .requestIdToken(getString(R.string.***default\_web\_client\_id***))  
 .requestEmail()  
 .build();  
  
  
**mGoogleApiClient** = **new** GoogleApiClient.Builder(**this**)  
 .enableAutoManage(**this** */\* FragmentActivity \*/*, **this** */\* OnConnectionFailedListener \*/*)  
 .addApi(Auth.***GOOGLE\_SIGN\_IN\_API***, gso)  
 .build();

4.

@Override  
**protected void** onStart() {  
 **super**.onStart();  
  
}  
  
@Override  
**protected void** onStop() {  
 **super**.onStop();  
  
}

5.

**case** R.id.***sign\_in\_button***:  
 Toast.*makeText*(**this**, **"google signin"**, Toast.***LENGTH\_SHORT***).show();  
 **progressDialog**.show();  
 signIn();  
 **break**;

6.

@Override  
**protected void** onActivityResult(**int** requestCode, **int** resultCode, Intent data) {  
**super**.onActivityResult(requestCode, resultCode, data);  
  
*//Differentiate fb and google on the basis of requestCode***if**(requestCode ==***GOOGLE\_SIGN\_IN***) {  
 *//for google* GoogleSignInResult result=Auth.***GoogleSignInApi***.getSignInResultFromIntent(data);  
 handleSignInResult(result);  
}  
 **else if**(requestCode==***FB\_SIGN\_IN***){  
 *//for fb***mCallbackManager**.onActivityResult(requestCode, resultCode, data);  
}  
}

7.

*//GOOGLE INTEGRATION* **private void** signIn() {  
 Intent signInIntent = Auth.***GoogleSignInApi***.getSignInIntent(**mGoogleApiClient**);  
 startActivityForResult(signInIntent, ***GOOGLE\_SIGN\_IN***);  
 }  
  
*// @Override  
// public void onActivityResult(int requestCode, int resultCode, Intent data) {  
// super.onActivityResult(requestCode, resultCode, data);  
//  
// // Result returned from launching the Intent from GoogleSignInApi.getSignInIntent(...);  
// if (requestCode == GOOGLE\_SIGN\_IN) {  
// GoogleSignInResult result = Auth.GoogleSignInApi.getSignInResultFromIntent(data);  
// handleSignInResult(result);  
// }  
// }* **private void** handleSignInResult(GoogleSignInResult result) {  
 Log.*d*(**"google handled"**, **"handleSignInResult:"** + result.isSuccess());  
 **if** (result.isSuccess()) {  
 *// Signed in successfully, show authenticated UI.* GoogleSignInAccount acct = result.getSignInAccount();  
 firebaseAuthWithGoogle(acct);  
*// mStatusTextView.setText(getString(R.string.signed\_in\_fmt, acct.getDisplayName()));  
// updateUI(true);* } **else** {  
 *// Signed out, show unauthenticated UI.  
 //updateUI(false);* }  
 }  
  
  
  
 **private void** firebaseAuthWithGoogle(GoogleSignInAccount acct) {  
 Log.*d*(**"Google auth"**, **"firebaseAuthWithGoogle:"** + acct.getId());  
 *// [START\_EXCLUDE silent]  
 //showProgressDialog();  
 // [END\_EXCLUDE]*

AuthCredential credential = GoogleAuthProvider.*getCredential*(acct.getIdToken(), **null**);  
 **mauth**.signInWithCredential(credential)  
 .addOnCompleteListener(**this**, **new** OnCompleteListener<AuthResult>() {  
 @Override  
 **public void** onComplete(@NonNull Task<AuthResult> task) {  
 Log.*d*(**"google auth"**, **"signInWithCredential:onComplete:"** + task.isSuccessful());  
 String uid = FirebaseAuth.*getInstance*().getCurrentUser().getUid();  
 FirebaseDatabase firebaseDatabase = FirebaseDatabase.*getInstance*();  
 **final** DatabaseReference databaseReference = firebaseDatabase.getReference().child(**"users"**).child(uid);  
  
 databaseReference.child(**"name"**).setValue(FirebaseAuth.*getInstance*().getCurrentUser().getDisplayName()).addOnCompleteListener(**new** OnCompleteListener<Void>() {  
 @Override  
 **public void** onComplete(@NonNull Task<Void> task) {  
 **if** (task.isSuccessful()) {  
 *//databaseReference.child("Contact").setValue(contact\_no);  
 //databaseReference.child("photoUrl").setValue(FirebaseAuth.getInstance().getCurrentUser().getPhotoUrl());* databaseReference.child(**"email"**).setValue(FirebaseAuth.*getInstance*().getCurrentUser().getEmail());  
 task.getResult();  
 Toast.*makeText*(LoginActivity.**this**, **"Successfully Registered"**, Toast.***LENGTH\_SHORT***).show();  
*// startActivity(new Intent(LoginActivity.this,HomeActivity.class));* } **else** {  
 Toast.*makeText*(LoginActivity.**this**, **"Registration Failed"**, Toast.***LENGTH\_SHORT***).show();  
 }  
 }  
 });  
 **if** (!task.isSuccessful()) {  
*// Log.v();* Toast.*makeText*(LoginActivity.**this**, **"Authentication Failed"**, Toast.***LENGTH\_SHORT***).show();  
 }  
 **else** {  
 Toast.*makeText*(LoginActivity.**this**, **"Successfully login"**, Toast.***LENGTH\_SHORT***).show();  
 startActivity(**new** Intent(LoginActivity.**this**,HomeActivity.**class**));  
 }  
 }  
 });  
 }  
  
  
  
  
   
  
  
  
  
  
 *//google mGoogleApiClient implements this method* @Override  
 **public void** onConnectionFailed(@NonNull ConnectionResult connectionResult) {  
  
 }

**Google (internet setting)**

1.android google firebase

<https://firebase.google.com/docs/android/setup>

2.go to end of page->authentication->

**Federated identity provider integration->**

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| Google | [iOS](https://firebase.google.com/docs/auth/ios/google-signin) [ANDROID](https://firebase.google.com/docs/auth/android/google-signin) [WEB](https://firebase.google.com/docs/auth/web/google-signin) [C++](https://firebase.google.com/docs/auth/cpp/google-signin) |
|  |  |

Choose android

3.this page ->

<https://firebase.google.com/docs/auth/android/google-signin>

//follow the link……….