Splash class

**package** com.example.note\_taking\_application;  
  
**import** androidx.annotation.NonNull;  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.content.Intent;  
**import** android.os.Bundle;  
**import** android.os.Handler;  
**import** android.widget.Toast;  
  
**import** com.example.note\_taking\_application.auth.Login;  
**import** com.google.android.gms.tasks.OnFailureListener;  
**import** com.google.android.gms.tasks.OnSuccessListener;  
**import** com.google.firebase.auth.AuthResult;  
**import** com.google.firebase.auth.FirebaseAuth;  
  
**public class** Splash **extends** AppCompatActivity {  
  
 FirebaseAuth **fauth**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_splash***);  
 **fauth**=FirebaseAuth.*getInstance*();  
 Handler handler = **new** Handler();  
 handler.postDelayed(**new** Runnable() {  
 @Override  
 **public void** run() {  
  
 **if**(**fauth**.getCurrentUser()!=**null**){  
 startActivity(**new** Intent(getApplicationContext(),MainActivity.**class**));  
 finish();  
 }  
  
  
  
 **else**{  
 startActivity(**new** Intent(getApplicationContext(), Login.**class**));  
 finish();  
  
 }  
  
  
 }  
 },2000);  
 }  
}

Login Activity

**package** com.example.note\_taking\_application.auth;  
  
**import** androidx.annotation.NonNull;  
**import** androidx.annotation.RequiresApi;  
**import** androidx.appcompat.app.AlertDialog;  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.content.DialogInterface;  
**import** android.content.Intent;  
**import** android.content.SharedPreferences;  
**import** android.os.Build;  
**import** android.os.Bundle;  
**import** android.text.TextUtils;  
**import** android.util.Log;  
**import** android.view.MenuItem;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
**import** android.widget.ProgressBar;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
  
**import** com.example.note\_taking\_application.MainActivity;  
**import** com.example.note\_taking\_application.R;  
**import** com.google.android.gms.tasks.OnCompleteListener;  
**import** com.google.android.gms.tasks.OnFailureListener;  
**import** com.google.android.gms.tasks.OnSuccessListener;  
**import** com.google.android.gms.tasks.Task;  
**import** com.google.firebase.auth.AuthResult;  
**import** com.google.firebase.auth.FirebaseAuth;  
  
**import** java.util.Objects;  
  
**public class** Login **extends** AppCompatActivity {  
  
 EditText **mEmail**,**mPassword**;  
 Button **mLoginBtn**;  
 TextView **mCreateBtn**,**forgotTextLink**;  
 ProgressBar **progressBar**;  
 FirebaseAuth **fAuth**;  
  
 **private** SharedPreferences **mPreferences**;  
 **private** String **sharedPrefFile** =  
 **"com.example.note\_taking\_application"**;  
 @RequiresApi(api = Build.VERSION\_CODES.***KITKAT***)  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_login***);  
  
  
 **mPreferences** = getSharedPreferences(**sharedPrefFile**, ***MODE\_PRIVATE***);  
  
  
 getSupportActionBar().setTitle(**"Log In To Account"**);  
  
  
 **mEmail** = findViewById(R.id.***email***);  
 **mPassword** = findViewById(R.id.***lPassword***);  
 **progressBar** = findViewById(R.id.***progressBar3***);  
 **fAuth** = FirebaseAuth.*getInstance*();  
 **mLoginBtn** = findViewById(R.id.***loginBtn***);  
 **mCreateBtn** = findViewById(R.id.***createAccount***);  
 **mLoginBtn**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
  
  
 String email = **mEmail**.getText().toString();  
 **final** String password = **mPassword**.getText().toString();  
  
 **if**(TextUtils.*isEmpty*(email)){  
 **mEmail**.setError(**"Email is Required."**);  
 **return**;  
 }  
  
 **if**(TextUtils.*isEmpty*(password)){  
 **mPassword**.setError(**"Password is Required."**);  
 **return**;  
 }  
  
 **if**(password.length() < 6){  
 **mPassword**.setError(**"Password Must be >= 6 Characters"**);  
 **return**;  
 }  
  
 **progressBar**.setVisibility(View.***VISIBLE***);  
  
 **fAuth**.signInWithEmailAndPassword(email,password).addOnCompleteListener(**new** OnCompleteListener<AuthResult>() {  
 @Override  
 **public void** onComplete(@NonNull Task<AuthResult> task) {  
  
 **if**(task.isSuccessful()){  
  
 SharedPreferences.Editor preferencesEditor = **mPreferences**.edit();  
 preferencesEditor.putString(**"password"**,password);  
 preferencesEditor.apply();  
 Toast.*makeText*(Login.**this**, **"Logged in Successfully"**, Toast.***LENGTH\_SHORT***).show();  
  
  
 startActivity(**new** Intent(getApplicationContext(), MainActivity.**class**));  
 finish();  
 }**else** {  
 Toast.*makeText*(Login.**this**, **"Error ! "** + task.getException().getMessage(), Toast.***LENGTH\_SHORT***).show();  
 **progressBar**.setVisibility(View.***GONE***);  
 }  
  
  
 }  
 });  
  
 }  
 });  
  
  
 **mCreateBtn**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 startActivity(**new** Intent(getApplicationContext(),Register.**class**));  
 finish();  
 }  
 });

*Register Activity*

**package** com.example.note\_taking\_application.auth;  
  
**import** androidx.annotation.NonNull;  
**import** androidx.appcompat.app.AppCompatActivity;  
  
**import** android.content.Intent;  
**import** android.content.SharedPreferences;  
**import** android.os.Bundle;  
**import** android.text.TextUtils;  
**import** android.util.Log;  
**import** android.view.MenuItem;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
**import** android.widget.ProgressBar;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
  
**import** com.example.note\_taking\_application.MainActivity;  
**import** com.example.note\_taking\_application.R;  
**import** com.google.android.gms.tasks.OnCompleteListener;  
**import** com.google.android.gms.tasks.OnFailureListener;  
**import** com.google.android.gms.tasks.OnSuccessListener;  
**import** com.google.android.gms.tasks.Task;  
**import** com.google.firebase.auth.AuthCredential;  
**import** com.google.firebase.auth.AuthResult;  
**import** com.google.firebase.auth.EmailAuthProvider;  
**import** com.google.firebase.auth.FirebaseAuth;  
**import** com.google.firebase.firestore.CollectionReference;  
**import** com.google.firebase.firestore.DocumentReference;  
**import** com.google.firebase.firestore.FirebaseFirestore;  
**import** com.google.firebase.firestore.Query;  
  
**public class** Register **extends** AppCompatActivity {  
  
  
 EditText **mFullName**,**mEmail**,**mPassword**,**mconfirmPassword**;  
 Button **mRegisterBtn**;  
 TextView **mLoginBtn**;  
 FirebaseAuth **fAuth**;  
 ProgressBar **progressBar**;  
 FirebaseFirestore **fStore**;  
 String **userID**;  
 String **password**;  
 **private** SharedPreferences **mPreferences**;  
 **private** String **sharedPrefFile** =  
 **"com.example.note\_taking\_application"**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_register***);  
 **mPreferences** = getSharedPreferences(**sharedPrefFile**, ***MODE\_PRIVATE***);  
  
 **mFullName** = findViewById(R.id.***userName***);  
 **mEmail** = findViewById(R.id.***userEmail***);  
 **mPassword** = findViewById(R.id.***password***);  
 **mconfirmPassword** = findViewById(R.id.***passwordConfirm***);  
 **mRegisterBtn**= findViewById(R.id.***createAccount***);  
 **mLoginBtn** = findViewById(R.id.***login***);  
  
 **fAuth** = FirebaseAuth.*getInstance*();  
 **fStore** = FirebaseFirestore.*getInstance*();  
 **progressBar** = findViewById(R.id.***progressBar***);  
  
 getSupportActionBar().setTitle(**"Create Account"**);  
  
  
 **mLoginBtn**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 startActivity(**new** Intent(Register.**this**,Login.**class**));  
 finish();  
 }  
 });  
 **mRegisterBtn**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 **final** String email = **mEmail**.getText().toString().trim();  
 **password** = **mPassword**.getText().toString().trim();  
 **final** String fullName = **mFullName**.getText().toString();  
 **final** String confirmPassword = **mconfirmPassword**.getText().toString();  
  
 **if**(TextUtils.*isEmpty*(email)){  
 **mEmail**.setError(**"Email is Required."**);  
 **return**;  
 }  
  
 **if**(TextUtils.*isEmpty*(**password**)){  
 **mPassword**.setError(**"Password is Required."**);  
 **return**;  
 }  
  
 **if**(**password**.length() < 6){  
 **mPassword**.setError(**"Password Must be >= 6 Characters"**);  
 **return**;  
 }  
**fAuth**.createUserWithEmailAndPassword(email,**password**).addOnCompleteListener(**new** OnCompleteListener<AuthResult>() {  
 @Override  
 **public void** onComplete(Task<AuthResult> task) {  
  
 **if**(task.isSuccessful()) {  
  
 SharedPreferences.Editor preferencesEditor = **mPreferences**.edit();  
 preferencesEditor.putString(**"password"**, **password**);  
 preferencesEditor.apply();  
 Toast.*makeText*(Register.**this**, **"Notes are Synced"**, Toast.***LENGTH\_SHORT***).show();  
 Intent intent = **new** Intent(getApplicationContext(), Login.**class**);  
  
 startActivity(intent);  
 finish();  
 }  
 Toast.*makeText*(Register.**this**, **"Please try**

**Again..."**, Toast.***LENGTH\_SHORT***).show();  
 }  
 }  
 });  
 }  
 });  
 }  
  
  
  
 **public** String getPassword(){  
 **return password**;  
 }  
}

}  
  
 @Override  
 **public boolean** onOptionsItemSelected(@NonNull MenuItem item) {  
  
 **if**(item.getItemId()==android.R.id.***home***){  
  
 startActivity(**new** Intent(Login.**this**,MainActivity.**class**));  
 }  
 **return true**;  
 }  
}

FireStore Adapter Class

**package** com.example.note\_taking\_application.model;  
  
  
**import** android.content.Intent;  
**import** android.content.SharedPreferences;  
**import** android.os.Build;  
**import** android.util.Log;  
**import** android.view.Gravity;  
**import** android.view.LayoutInflater;  
**import** android.view.MenuItem;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
**import** android.widget.ImageView;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
  
**import** androidx.annotation.NonNull;  
**import** androidx.annotation.RequiresApi;  
**import** androidx.appcompat.widget.PopupMenu;  
**import** androidx.cardview.widget.CardView;  
**import** androidx.recyclerview.widget.RecyclerView;  
  
**import** com.example.note\_taking\_application.EditNote;  
**import** com.example.note\_taking\_application.MainActivity;  
**import** com.example.note\_taking\_application.NoteDetails;  
**import** com.example.note\_taking\_application.R;  
**import** com.example.note\_taking\_application.security.Decryption;  
**import** com.firebase.ui.firestore.FirestoreRecyclerAdapter;  
**import** com.firebase.ui.firestore.FirestoreRecyclerOptions;  
**import** com.google.android.gms.tasks.OnFailureListener;  
**import** com.google.android.gms.tasks.OnSuccessListener;  
**import** com.google.firebase.firestore.DocumentReference;  
**import** com.google.firebase.firestore.DocumentSnapshot;  
  
**import** java.util.ArrayList;  
**import** java.util.List;  
**import** java.util.Random;  
  
**import static** androidx.core.content.ContextCompat.*startActivity*;  
  
**public class** FirestoreAdapter **extends** FirestoreRecyclerAdapter<Note, FirestoreAdapter.NoteViewHolder> {  
  
  
 **private** SharedPreferences **mPreferences**;  
 **private** String **sharedPrefFile** =  
 **"com.example.note\_taking\_application"**;  
 Decryption **decryption**;  
 OnItemClickListner **listner**;  
  
 **public** FirestoreAdapter(@NonNull FirestoreRecyclerOptions<Note> options,SharedPreferences mPreferences) {  
  
 **super**(options);  
 **this**.**mPreferences**=mPreferences;  
 **decryption**=**new** Decryption();  
 }  
  
 @RequiresApi(api = Build.VERSION\_CODES.***M***)  
 @Override  
 **protected void** onBindViewHolder(@NonNull **final** NoteViewHolder noteViewHolder, **int** i, @NonNull **final** Note note) {  
 **final** String docId = getSnapshots().getSnapshot(i).getId();  
 noteViewHolder.**noteTitle**.setText(noteViewHolder.decrypted\_title\_body());  
 noteViewHolder.**noteContent**.setText(noteViewHolder.decrypted\_content\_body());  
 noteViewHolder.**date**.setText(**"Created on "**+note.getDate());  
 **final int** code = getRandomColor();  
 noteViewHolder.**mCardView**.setCardBackgroundColor(noteViewHolder.**view**.getResources().getColor(code, **null**));  
  
  
 noteViewHolder.**view**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View v) {  
 Intent i = **new** Intent(v.getContext(), NoteDetails.**class**);  
 i.putExtra(**"title"**, noteViewHolder.decrypted\_title\_body());  
 i.putExtra(**"content"**,noteViewHolder.decrypted\_content\_body());  
 i.putExtra(**"code"**, code);  
 i.putExtra(**"noteId"**, docId);  
 i.putExtra(**"date"**,note.getDate());  
 v.getContext().startActivity(i);  
 }  
 });  
  
  
 }  
  
 @NonNull  
 @Override  
 **public** NoteViewHolder onCreateViewHolder(@NonNull ViewGroup parent, **int** viewType) {  
 View view = LayoutInflater.*from*(parent.getContext()).inflate(R.layout.***note\_view\_layout***, parent, **false**);  
 **return new** NoteViewHolder(view);  
 }  
  
 **public class** NoteViewHolder **extends** RecyclerView.ViewHolder {  
  
 TextView **noteTitle**, **noteContent**,**date**;  
 View **view**;  
 CardView **mCardView**;  
 ImageView **menuicon**;  
  
 **public** NoteViewHolder(@NonNull View itemView) {  
 **super**(itemView);  
  
 **noteTitle** = itemView.findViewById(R.id.***titles***);  
 **noteContent** = itemView.findViewById(R.id.***content***);  
 **date**=itemView.findViewById(R.id.***date***);  
 **mCardView** = itemView.findViewById(R.id.***noteCard***);  
 **menuicon**=itemView.findViewById(R.id.***menuIcon***);  
 **view** = itemView;  
  
  
  
 **menuicon**.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(**final** View v) {  
 **int** position=getAdapterPosition();  
  
  
 **if**(position!=RecyclerView.***NO\_POSITION***&&**listner**!=**null**){  
  
 **listner**.OnItemClick(getSnapshots().getSnapshot(position),position,decrypted\_title\_body(),decrypted\_content\_body(),v);  
 }  
  
  
  
  
  
  
  
  
  
  
  
  
  
  
 }  
 });  
  
 }  
  
  
  
  
  
 **public** String decrypted\_title\_body(){  
  
  
 **int** position=getAdapterPosition();  
 DocumentSnapshot documentSnapshot=getSnapshots().getSnapshot(position);  
 Note note=documentSnapshot.toObject(Note.**class**);  
 String decrypted\_title=note.getTitle();  
 **try** {  
 **if** (Build.VERSION.***SDK\_INT*** >= Build.VERSION\_CODES.***O***) {  
 decrypted\_title = **decryption**.decrypt(note.getTitleSalt(), note.getTitle(), note.getTitleiv(), **mPreferences**.getString(**"password"**, **"password"**));  
 }  
  
  
 } **catch** (Exception e) {  
 e.printStackTrace();  
 }  
  
  
  
 **return** decrypted\_title;  
 }  
  
  
  
 **public** String decrypted\_content\_body(){  
 **int** position=getAdapterPosition();  
 DocumentSnapshot documentSnapshot=getSnapshots().getSnapshot(position);  
 Note note=documentSnapshot.toObject(Note.**class**);  
  
 String decrypted\_content = note.getContent();  
  
  
 **try** {  
  
 **if** (Build.VERSION.***SDK\_INT*** >= Build.VERSION\_CODES.***O***) {  
 decrypted\_content = **decryption**.decrypt(note.getContentSalt(), note.getContent(), note.getContentiv(), **mPreferences**.getString(**"password"**, **"password"**));  
 }  
  
 } **catch** (Exception e) {  
 e.printStackTrace();  
 }  
  
 **return** decrypted\_content;  
 }  
  
  
  
  
  
  
 }  
  
  
 **private int** getRandomColor() {  
  
 List<Integer> colorCode = **new** ArrayList<>();  
 colorCode.add(R.color.***blue***);  
 colorCode.add(R.color.***yellow***);  
 colorCode.add(R.color.***skyblue***);  
 colorCode.add(R.color.***lightPurple***);  
 colorCode.add(R.color.***lightGreen***);  
 colorCode.add(R.color.***gray***);  
 colorCode.add(R.color.***pink***);  
 colorCode.add(R.color.***red***);  
 colorCode.add(R.color.***greenlight***);  
 colorCode.add(R.color.***notgreen***);  
  
 Random randomColor = **new** Random();  
 **int** number = randomColor.nextInt(colorCode.size());  
 **return** colorCode.get(number);  
  
 }  
  
  
 **public interface** OnItemClickListner{  
 **void** OnItemClick(DocumentSnapshot documentSnapshot,**int** position,String title,String content,View v);  
 }  
  
 **public void** setOnclickListner(OnItemClickListner listner){  
 **this**.**listner**=listner;  
  
 }  
  
  
}

Note Class

**package** com.example.note\_taking\_application.model;  
  
**import** java.util.List;  
  
**public class** Note {  
 **private** String **title**;  
 **private** String **content**;  
 String **titleSalt**;  
 String **titleiv**;  
 String **contentSalt**;  
 String **contentiv**;  
 String **date**;  
 **long timeStamp**;  
 **public** Note(){}  
 **public** Note(String title,String content,String titleSalt,String titleiv,String contentSalt,String contentiv,String date,**long** timeStamp){  
 **this**.**title** = title;  
 **this**.**content** = content;  
 **this**.**titleSalt**=titleSalt;  
 **this**.**titleiv**=titleiv;  
 **this**.**contentSalt**=contentSalt;  
 **this**.**contentiv**=contentiv;  
 **this**.**date**=date;  
 **this**.**timeStamp**=timeStamp;  
 }  
  
 **public** String getTitle() {  
 **return title**;  
 }  
  
 **public void** setTitle(String title) {  
 **this**.**title** = title;  
 }  
  
 **public** String getContent() {  
 **return content**;  
 }  
  
 **public void** setContent(String content) {  
 **this**.**content** = content;  
 }  
  
 **public** String getTitleSalt() {  
 **return titleSalt**;  
 }  
  
 **public void** setTitleSalt(String titleSalt) {  
 **this**.**titleSalt** = titleSalt;  
 }  
  
 **public** String getTitleiv() {  
 **return titleiv**;  
 }  
  
 **public void** setTitleiv(String titleiv) {  
 **this**.**titleiv** = titleiv;  
 }  
  
 **public** String getContentSalt() {  
 **return contentSalt**;  
 }  
  
 **public void** setContentSalt(String contentSalt) {  
 **this**.**contentSalt** = contentSalt;  
 }  
  
 **public** String getContentiv() {  
 **return contentiv**;  
 }  
  
 **public void** setContentiv(String contentiv) {  
 **this**.**contentiv** = contentiv;  
 }  
  
 **public** String getDate() {  
 **return date**;  
 }  
  
 **public void** setDate(String date) {  
 **this**.**date** = date;  
 }  
  
 **public long** getTimeStamp() {  
 **return timeStamp**;  
 }  
  
 **public void** setTimeStamp(**long** timeStamp) {  
 **this**.**timeStamp** = timeStamp;  
 }  
}

Encryption Class

**package** com.example.note\_taking\_application.security;  
  
**import** java.security.NoSuchAlgorithmException;  
**import** java.security.SecureRandom;  
**import** java.util.HashMap;  
  
**import** javax.crypto.Cipher;  
**import** javax.crypto.SecretKey;  
**import** javax.crypto.SecretKeyFactory;  
**import** javax.crypto.spec.IvParameterSpec;  
**import** javax.crypto.spec.PBEKeySpec;  
**import** javax.crypto.spec.PBEParameterSpec;  
**import** javax.crypto.spec.SecretKeySpec;  
  
**public class** Encryption {  
  
  
 **public** HashMap<String,Object> encrypt(String password,String data) **throws** Exception {  
  
 HashMap<String,Object> info=**new** HashMap<>();  
  
 PBEKeySpec pbeKeySpec;  
 PBEParameterSpec pbeParamSpec;  
 SecretKeyFactory keyFac;  
  
  
 **byte**[] salt = **new byte**[8];  
 SecureRandom random = **new** SecureRandom();  
 random.nextBytes(salt);  
 **int** count = 1000;  
  
  
  
 pbeKeySpec = **new** PBEKeySpec(password.toCharArray(),salt,count,256);  
  
 keyFac=SecretKeyFactory.*getInstance*(**"PBKDF2WithHmacSHA1"**);  
 **byte**[] key=keyFac.generateSecret(pbeKeySpec).getEncoded();  
 SecretKeySpec keySpec=**new** SecretKeySpec(key,**"AES"**);  
  
 Cipher cipher = Cipher.*getInstance*(**"AES/CBC/PKCS5Padding"**);  
  
 SecureRandom ivrandom=**new** SecureRandom();  
 **byte**[] iv=**new byte**[16];  
 ivrandom.nextBytes(iv);  
  
 IvParameterSpec ivParameterSpec=**new** IvParameterSpec(iv);  
  
  
  
  
  
 cipher.init(Cipher.***ENCRYPT\_MODE***, keySpec, ivParameterSpec);  
  
 **byte**[] text = data.getBytes();  
 **byte**[] ciphertext = cipher.doFinal(text);  
 info.put(**"salt"**,salt);  
 info.put(**"iv"**,iv);  
 info.put(**"ciphertext"**,ciphertext);  
 **return** info;  
 }  
  
  
  
}

Decryption Class

**package** com.example.note\_taking\_application.security;  
  
**import** android.os.Build;  
  
**import** androidx.annotation.RequiresApi;  
  
**import** java.security.NoSuchAlgorithmException;  
**import** java.util.Base64;  
**import** java.util.List;  
  
**import** javax.crypto.Cipher;  
**import** javax.crypto.SecretKey;  
**import** javax.crypto.SecretKeyFactory;  
**import** javax.crypto.spec.IvParameterSpec;  
**import** javax.crypto.spec.PBEKeySpec;  
**import** javax.crypto.spec.PBEParameterSpec;  
**import** javax.crypto.spec.SecretKeySpec;  
  
**public class** Decryption {  
  
  
 @RequiresApi(api = Build.VERSION\_CODES.***O***)  
 **public** String decrypt(String salt, String data, String iv, String password) **throws** Exception {  
  
 PBEKeySpec pbeKeySpec;  
 PBEParameterSpec pbeParamSpec;  
 SecretKeyFactory keyFac;  
  
 **int** count = 1000;  
  
  
  
  
 Base64.Decoder decoder=Base64.*getDecoder*();  
  
 **byte**[] salt1=decoder.decode(salt);  
 **byte**[] text=decoder.decode(data);  
 **byte**[] iv1=decoder.decode(iv);  
  
  
 pbeKeySpec = **new** PBEKeySpec(password.toCharArray(),salt1,count,256);  
 keyFac=SecretKeyFactory.*getInstance*(**"PBKDF2WithHmacSHA1"**);  
 **byte**[] key=keyFac.generateSecret(pbeKeySpec).getEncoded();  
 SecretKeySpec keySpec=**new** SecretKeySpec(key,**"AES"**);  
  
  
  
  
 IvParameterSpec ivParameterSpec=**new** IvParameterSpec(iv1);  
  
  
 Cipher cipher = Cipher.*getInstance*(**"AES/CBC/PKCS5Padding"**);  
  
  
 cipher.init(Cipher.***DECRYPT\_MODE***, keySpec, ivParameterSpec);  
  
 **byte**[] decryptes=cipher.doFinal(text);  
 **return new** String(decryptes);  
 }  
  
  
  
}

ADD Note Activity

**package** com.example.note\_taking\_application;  
  
**import** android.app.DatePickerDialog;  
**import** android.content.Intent;  
**import** android.content.SharedPreferences;  
**import** android.os.Build;  
**import** android.os.Bundle;  
  
**import** com.example.note\_taking\_application.auth.Register;  
**import** com.example.note\_taking\_application.security.Encryption;  
**import** com.google.android.gms.tasks.OnFailureListener;  
**import** com.google.android.gms.tasks.OnSuccessListener;  
**import** com.google.android.material.floatingactionbutton.FloatingActionButton;  
**import** com.google.firebase.auth.FirebaseAuth;  
**import** com.google.firebase.auth.FirebaseUser;  
**import** com.google.firebase.firestore.DocumentReference;  
**import** com.google.firebase.firestore.FirebaseFirestore;  
  
**import** androidx.annotation.NonNull;  
**import** androidx.annotation.RequiresApi;  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** androidx.appcompat.widget.Toolbar;  
  
**import** android.util.Log;  
**import** android.view.Menu;  
**import** android.view.MenuInflater;  
**import** android.view.MenuItem;  
**import** android.view.View;  
**import** android.widget.DatePicker;  
**import** android.widget.EditText;  
**import** android.widget.ImageView;  
**import** android.widget.ProgressBar;  
**import** android.widget.SearchView;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
  
**import** java.sql.Timestamp;  
**import** java.util.Arrays;  
**import** java.util.Base64;  
**import** java.util.Calendar;  
**import** java.util.Date;  
**import** java.util.HashMap;  
**import** java.util.Map;  
**import** java.util.Objects;  
  
**public class** Add\_Note **extends** AppCompatActivity {  
  
 FirebaseFirestore **fStore**;  
 EditText **noteTitle**,**noteContent**;  
 ProgressBar **progressBarSave**;  
 FirebaseUser **user**;  
 Intent **data**;  
 **private** SharedPreferences **mPreferences**;  
 **private** String **sharedPrefFile** =  
 **"com.example.note\_taking\_application"**;  
  
 EditText **date**;  
  
 **private** Calendar **c**;  
 **private** Date **date1**;  
 Timestamp **ts**;  
 String **selected\_date**;  
 Map<String,Object> **note**;  
  
 **private int year**, **month**, **day**;  
 @RequiresApi(api = Build.VERSION\_CODES.***O***)  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_add\_\_note***);  
 **note** = **new** HashMap<>();  
 **mPreferences** = getSharedPreferences(**sharedPrefFile**, ***MODE\_PRIVATE***);  
 **data**=getIntent();  
 Toolbar toolbar = findViewById(R.id.***toolbar***);  
 setSupportActionBar(toolbar);  
 **date**=findViewById(R.id.***date***);  
  
  
  
**c**=Calendar.*getInstance*();  
 **ts**=**new** Timestamp(**new** Date().getTime());  
 **int** month=**c**.get(Calendar.***MONTH***)+1;  
  
 **selected\_date**= **c**.get(Calendar.***DAY\_OF\_MONTH***) +**"/"**+ month+**"/"**+ **c**.get(Calendar.***YEAR***);  
 **note**.put(**"timeStamp"**,**ts**.getTime());  
  
 **note**.put(**"date"**,**selected\_date**);  
  
  
  
  
  
  
  
  
  
 **user**= FirebaseAuth.*getInstance*().getCurrentUser();  
 **progressBarSave** = findViewById(R.id.***progressBar***);  
  
 FloatingActionButton fab = findViewById(R.id.***fab***);  
 fab.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 Base64.Encoder encoder = Base64.*getEncoder*();  
 **fStore** = FirebaseFirestore.*getInstance*();  
 **noteContent** = findViewById(R.id.***edit\_note\_detail***);  
 **noteTitle** = findViewById(R.id.***add\_note\_title***);  
 String ntitle=**noteTitle**.getText().toString();  
 String ncontent=**noteContent**.getText().toString();  
 String encrypted\_title=**" "**;  
 String encrypted\_content=**" "**;  
 Encryption encryption=**new** Encryption();  
  
  
 **try** {  
 HashMap<String, Object> first=encryption.encrypt(**mPreferences**.getString(**"password"**,**"password"**),ntitle);  
 encrypted\_title= encoder.encodeToString(( **byte**[])first.get(**"ciphertext"**));  
 **note**.put(**"titleSalt"**,encoder.encodeToString(( **byte**[])first.get(**"salt"**)));  
 **note**.put(**"titleiv"**,encoder.encodeToString(( **byte**[])first.get(**"iv"**)));  
  
  
  
  
  
 HashMap<String, Object> second=encryption.encrypt(**mPreferences**.getString(**"password"**,**"password"**),ncontent);  
 encrypted\_content=encoder.encodeToString(( **byte**[])second.get(**"ciphertext"**));  
 **note**.put(**"contentSalt"**,encoder.encodeToString(( **byte**[])second.get(**"salt"**)));  
 **note**.put(**"contentiv"**,encoder.encodeToString(( **byte**[])second.get(**"iv"**)));  
  
 } **catch** (Exception e) {  
  
 e.printStackTrace();  
 }  
  
  
 **if**(ntitle.isEmpty() || ncontent.isEmpty()){  
 Toast.*makeText*(Add\_Note.**this**, **"Can not Save note with Empty Field."**, Toast.***LENGTH\_SHORT***).show();  
 **return**;  
 }  
  
 **progressBarSave**.setVisibility(View.***VISIBLE***);  
 DocumentReference docref = **fStore**.collection(**"notes"**).document(**user**.getUid()).collection(**"MyNotes"**).document();  
  
  
  
 **note**.put(**"title"**,encrypted\_title);  
 **note**.put(**"content"**,encrypted\_content);  
 docref.set(**note**).addOnSuccessListener(**new** OnSuccessListener<Void>() {  
 @Override  
 **public void** onSuccess(Void aVoid) {  
 Toast.*makeText*(Add\_Note.**this**, **"Note Added."**, Toast.***LENGTH\_SHORT***).show();  
 onBackPressed();  
  
 }  
 }).addOnFailureListener(**new** OnFailureListener() {  
 @Override  
 **public void** onFailure(@NonNull Exception e) {  
 Toast.*makeText*(Add\_Note.**this**, **"Error, Try again."**, Toast.***LENGTH\_SHORT***).show();  
 **progressBarSave**.setVisibility(View.***VISIBLE***);  
 }  
 });  
  
  
  
  
 }  
 });  
  
  
  
  
  
 }  
  
  
 @Override  
 **public boolean** onCreateOptionsMenu(Menu menu) {  
 MenuInflater menuInflater=getMenuInflater();  
 menuInflater.inflate(R.menu.***close***,menu);  
 **return true**;  
 }  
  
 **public boolean** onOptionsItemSelected(@NonNull MenuItem item) {  
 **if**(item.getItemId() == android.R.id.***home***){  
 onBackPressed();  
 }  
 **else if**(item.getItemId()==R.id.***close***){  
 finish();  
 }  
**return true**;  
 }  
  
  
  
 **public void** set\_date(View view) {  
 *// final Calendar c = Calendar.getInstance();* **int** mYear = **c**.get(Calendar.***YEAR***);  
 **int** mMonth = **c**.get(Calendar.***MONTH***);  
 **int** mDay = **c**.get(Calendar.***DAY\_OF\_MONTH***);  
 *// c.* **final** DatePickerDialog datePickerDialog = **new** DatePickerDialog(**this**,  
 **new** DatePickerDialog.OnDateSetListener() {  
  
 @Override  
 **public void** onDateSet(DatePicker view, **int** year,  
 **int** monthOfYear, **int** dayOfMonth) {  
  
 **selected\_date**=dayOfMonth + **"/"** + (monthOfYear + 1) + **"/"** + year;  
 **note**.put(**"date"**,**selected\_date**);  
 **c**.set(year,monthOfYear + 1,dayOfMonth);  
 Date date1=**c**.getTime();  
 **ts**=**new** Timestamp(date1.getTime());  
 **note**.put(**"timeStamp"**,**ts**.getTime());  
  
 **date**.setText(**selected\_date**);  
  
 }  
 }, mYear, mMonth, mDay);  
 datePickerDialog.show();  
  
  
 }  
}

Edit Note Activity

**package** com.example.note\_taking\_application;  
  
**import** androidx.annotation.NonNull;  
**import** androidx.annotation.RequiresApi;  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** androidx.appcompat.widget.Toolbar;  
  
**import** android.app.DatePickerDialog;  
**import** android.content.Intent;  
**import** android.content.SharedPreferences;  
**import** android.os.Build;  
**import** android.os.Bundle;  
**import** android.util.Log;  
**import** android.view.View;  
**import** android.widget.DatePicker;  
**import** android.widget.EditText;  
**import** android.widget.ProgressBar;  
**import** android.widget.Toast;  
  
**import** com.example.note\_taking\_application.security.Encryption;  
**import** com.google.android.gms.tasks.OnCompleteListener;  
**import** com.google.android.gms.tasks.OnFailureListener;  
**import** com.google.android.gms.tasks.OnSuccessListener;  
**import** com.google.android.gms.tasks.Task;  
**import** com.google.android.material.floatingactionbutton.FloatingActionButton;  
**import** com.google.firebase.auth.FirebaseAuth;  
**import** com.google.firebase.auth.FirebaseUser;  
**import** com.google.firebase.firestore.DocumentReference;  
**import** com.google.firebase.firestore.DocumentSnapshot;  
**import** com.google.firebase.firestore.FirebaseFirestore;  
  
**import** java.sql.Timestamp;  
**import** java.util.Base64;  
**import** java.util.Calendar;  
**import** java.util.Date;  
**import** java.util.HashMap;  
**import** java.util.Map;  
  
**public class** EditNote **extends** AppCompatActivity {  
  
  
 Intent **data**;  
 EditText **editNoteTitle**,**editNoteContent**;  
 FirebaseFirestore **fStore**;  
 ProgressBar **spinner**;  
 FirebaseUser **user**;  
 **private** SharedPreferences **mPreferences**;  
 **private** String **sharedPrefFile** =  
 **"com.example.note\_taking\_application"**;  
  
 EditText **date**;  
  
 **private** Calendar **c**;  
 **private** Date **date1**;  
 Timestamp **ts**;  
 String **selected\_date**;  
 Map<String,Object> **note**;  
  
  
 @RequiresApi(api = Build.VERSION\_CODES.***M***)  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_edit\_note***);  
  
 Toolbar toolbar = findViewById(R.id.***toolbar***);  
 setSupportActionBar(toolbar);  
 **mPreferences** = getSharedPreferences(**sharedPrefFile**, ***MODE\_PRIVATE***);  
 **fStore** = **fStore**.*getInstance*();  
 **user**= FirebaseAuth.*getInstance*().getCurrentUser();  
 **spinner** = findViewById(R.id.***progressBar2***);  
 **data** = getIntent();  
 **c**=Calendar.*getInstance*();  
 **note** = **new** HashMap<>();  
 **final** DocumentReference docref = **fStore**.collection(**"notes"**).document(**user**.getUid()).collection(**"MyNotes"**).document(**data**.getStringExtra(**"noteId"**));  
 **editNoteContent** = findViewById(R.id.***editNoteContent***);  
 **editNoteTitle** = findViewById(R.id.***editNoteTitle***);  
 **date**=findViewById(R.id.***date***);  
  
 **selected\_date**=**data**.getStringExtra(**"date"**);  
  
  
  
 String noteTitle = **data**.getStringExtra(**"title"**);  
 String noteContent = **data**.getStringExtra(**"content"**);  
  
 **editNoteTitle**.setText(noteTitle);  
 **editNoteContent**.setText(noteContent);  
 **date**.setText(**selected\_date**);  
 **note**.put(**"date"**,**selected\_date**);  
  
  
  
 **c**=Calendar.*getInstance*();  
 **ts**=**new** Timestamp(**new** Date().getTime());  
docref.get().addOnCompleteListener(**new** OnCompleteListener<DocumentSnapshot>() {  
 @Override  
 **public void** onComplete(@NonNull Task<DocumentSnapshot> task) {  
 **if**(task.isSuccessful()){  
 DocumentSnapshot document=task.getResult();  
 **note**.put(**"timeStamp"**,document.get(**"timeStamp"**));  
 }  
 **else**{  
 **note**.put(**"timeStamp"**,**ts**.getTime());  
 }  
  
 }  
 });  
  
  
  
  
  
  
 FloatingActionButton fab = findViewById(R.id.***saveEditedNote***);  
  
  
 fab.setOnClickListener(**new** View.OnClickListener() {  
 @RequiresApi(api = Build.VERSION\_CODES.***O***)  
 @Override  
 **public void** onClick(View view) {  
  
 String nTitle = **editNoteTitle**.getText().toString();  
 String nContent = **editNoteContent**.getText().toString();  
 Base64.Encoder encoder = Base64.*getEncoder*();  
  
 **if**(nTitle.isEmpty() || nContent.isEmpty()){  
 Toast.*makeText*(EditNote.**this**, **"Can not Save note with Empty Field."**, Toast.***LENGTH\_SHORT***).show();  
 **return**;  
 }  
 **spinner**.setVisibility(View.***VISIBLE***);  
String encrypted\_title=**" "**;  
 String encrypted\_content=**" "**;  
 Encryption encryption=**new** Encryption();  
  
  
  
  
  
  
 **try** {  
 HashMap<String, Object> first=encryption.encrypt(**mPreferences**.getString(**"password"**,**"password"**),nTitle);  
 encrypted\_title= encoder.encodeToString(( **byte**[])first.get(**"ciphertext"**));  
 **note**.put(**"titleSalt"**,encoder.encodeToString(( **byte**[])first.get(**"salt"**)));  
 **note**.put(**"titleiv"**,encoder.encodeToString(( **byte**[])first.get(**"iv"**)));  
  
  
  
  
  
 HashMap<String, Object> second=encryption.encrypt(**mPreferences**.getString(**"password"**,**"password"**),nContent);  
 encrypted\_content=encoder.encodeToString(( **byte**[])second.get(**"ciphertext"**));  
 **note**.put(**"contentSalt"**,encoder.encodeToString(( **byte**[])second.get(**"salt"**)));  
 **note**.put(**"contentiv"**,encoder.encodeToString(( **byte**[])second.get(**"iv"**)));  
  
 } **catch** (Exception e) {  
  
 e.printStackTrace();  
 }  
  
  
  
  
  
  
  
  
  
 **note**.put(**"title"**,encrypted\_title);  
 **note**.put(**"content"**,encrypted\_content);  
  
 docref.update(**note**).addOnSuccessListener(**new** OnSuccessListener<Void>() {  
 @Override  
 **public void** onSuccess(Void aVoid) {  
 Toast.*makeText*(EditNote.**this**, **"Note Saved."**, Toast.***LENGTH\_SHORT***).show();  
 onBackPressed();  
}  
 }).addOnFailureListener(**new** OnFailureListener() {  
 @Override  
 **public void** onFailure(@NonNull Exception e) {  
 Toast.*makeText*(EditNote.**this**, **"Error, Try again."**, Toast.***LENGTH\_SHORT***).show();  
 **spinner**.setVisibility(View.***VISIBLE***);  
 }  
 });  
  
 }  
 });  
  
  
  
  
  
 }  
  
 **public void** set\_date(View view) {  
  
  
 **int** mYear = **c**.get(Calendar.***YEAR***);  
 **int** mMonth = **c**.get(Calendar.***MONTH***);  
 **int** mDay = **c**.get(Calendar.***DAY\_OF\_MONTH***);  
 *// c.* **final** DatePickerDialog datePickerDialog = **new** DatePickerDialog(**this**,  
 **new** DatePickerDialog.OnDateSetListener() {  
  
 @Override  
 **public void** onDateSet(DatePicker view, **int** year,  
 **int** monthOfYear, **int** dayOfMonth) {  
  
 **selected\_date**=dayOfMonth + **"/"** + (monthOfYear + 1) + **"/"** + year;  
 **note**.put(**"date"**,**selected\_date**);  
 **c**.set(year,monthOfYear + 1,dayOfMonth);  
 Date date1=**c**.getTime();  
 **ts**=**new** Timestamp(date1.getTime());  
 **note**.put(**"timeStamp"**,**ts**.getTime());  
  
 **date**.setText(**selected\_date**);  
  
 }  
 }, mYear, mMonth, mDay);  
 datePickerDialog.show();  
  
  
 }  
}

Main Activity

**package** com.example.note\_taking\_application;  
  
**import** androidx.annotation.NonNull;  
**import** androidx.annotation.RequiresApi;  
**import** androidx.appcompat.app.ActionBarDrawerToggle;  
**import** androidx.appcompat.app.AlertDialog;  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** androidx.appcompat.widget.PopupMenu;  
**import** androidx.appcompat.widget.Toolbar;  
**import** androidx.cardview.widget.CardView;  
**import** androidx.core.view.GravityCompat;  
**import** androidx.drawerlayout.widget.DrawerLayout;  
**import** androidx.recyclerview.widget.RecyclerView;  
**import** androidx.recyclerview.widget.StaggeredGridLayoutManager;  
  
**import** android.content.DialogInterface;  
**import** android.content.Intent;  
**import** android.content.SharedPreferences;  
**import** android.os.Build;  
**import** android.os.Bundle;  
**import** android.util.Log;  
**import** android.view.Gravity;  
**import** android.view.LayoutInflater;  
**import** android.view.Menu;  
**import** android.view.MenuInflater;  
**import** android.view.MenuItem;  
**import** android.view.View;  
**import** android.view.ViewGroup;  
**import** android.widget.ImageView;  
**import** android.widget.SearchView;  
**import** android.widget.TextView;  
**import** android.widget.Toast;  
  
  
**import** com.example.note\_taking\_application.auth.Login;  
**import** com.example.note\_taking\_application.auth.Register;  
**import** com.example.note\_taking\_application.model.FirestoreAdapter;  
**import** com.example.note\_taking\_application.model.Note;  
*//import com.example.note\_taking\_application.Add\_Note;  
//import com.example.note\_taking\_application.EditNote;  
//import com.example.note\_taking\_application.NoteDetails;***import** com.example.note\_taking\_application.security.Decryption;  
**import** com.firebase.ui.firestore.FirestoreRecyclerAdapter;  
**import** com.firebase.ui.firestore.FirestoreRecyclerOptions;  
**import** com.google.android.gms.tasks.OnCompleteListener;  
**import** com.google.android.gms.tasks.OnFailureListener;  
**import** com.google.android.gms.tasks.OnSuccessListener;  
**import** com.google.android.gms.tasks.Task;  
**import** com.google.android.material.floatingactionbutton.FloatingActionButton;  
**import** com.google.android.material.navigation.NavigationView;  
**import** com.google.firebase.auth.FirebaseAuth;  
**import** com.google.firebase.auth.FirebaseUser;  
**import** com.google.firebase.firestore.DocumentReference;  
**import** com.google.firebase.firestore.DocumentSnapshot;  
**import** com.google.firebase.firestore.FirebaseFirestore;  
**import** com.google.firebase.firestore.Query;  
**import** com.google.firebase.firestore.QuerySnapshot;  
  
**import** java.util.ArrayList;  
**import** java.util.Date;  
**import** java.util.List;  
**import** java.util.Random;  
  
**public class** MainActivity **extends** AppCompatActivity **implements** NavigationView.OnNavigationItemSelectedListener {  
 DrawerLayout **drawer**;  
 NavigationView **nav\_view**;  
 RecyclerView **note\_list**;  
 FirebaseFirestore **fStore**;  
 FirebaseAuth **fauth**;  
 FirebaseUser **user**;  
 Intent **data**;  
  
 FirestoreAdapter **noteAdapter1**;  
  
 **private** SharedPreferences **mPreferences**;  
 **private** String **sharedPrefFile** =  
 **"com.example.note\_taking\_application"**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
 **data** = getIntent();  
 **mPreferences** = getSharedPreferences(**sharedPrefFile**, ***MODE\_PRIVATE***);  
 **user** = FirebaseAuth.*getInstance*().getCurrentUser();  
 Toolbar toolbar = findViewById(R.id.***toolbar***);  
 setSupportActionBar(toolbar);  
 **drawer** = findViewById(R.id.***drawer***);  
 ActionBarDrawerToggle actionBarDrawerToggle = **new** ActionBarDrawerToggle(**this**, **drawer**, toolbar, R.string.***navigation\_drawer\_open***, R.string.***navigation\_drawer\_close***);  
 **drawer**.addDrawerListener(actionBarDrawerToggle);  
 actionBarDrawerToggle.syncState();  
 **nav\_view** = findViewById(R.id.***nav\_view***);  
 **nav\_view**.setNavigationItemSelectedListener(**this**);  
 **note\_list** = findViewById(R.id.***note\_list***);  
  
  
 **note\_list**.setLayoutManager(**new** StaggeredGridLayoutManager(2, StaggeredGridLayoutManager.***VERTICAL***));  
  
  
 FloatingActionButton fabmain = findViewById(R.id.***fabmain***);  
  
 fabmain.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 Intent intent = **new** Intent(MainActivity.**this**, Add\_Note.**class**);  
 intent.putExtra(**"password"**, **data**.getStringExtra(**"password"**));  
 startActivity(intent);  
 }  
 });  
  
  
 **fStore** = FirebaseFirestore.*getInstance*();  
  
  
  
  
  
 Query query = **fStore**.collection(**"notes"**).document(**user**.getUid()).collection(**"MyNotes"**).orderBy(**"timeStamp"**, Query.Direction.***ASCENDING***);  
  
  
  
 FirestoreRecyclerOptions<Note> allNotes = **new** FirestoreRecyclerOptions.Builder<Note>()  
 .setQuery(query, Note.**class**)  
 .build();  
**noteAdapter1**=**new** FirestoreAdapter(allNotes,**mPreferences**);  
 **noteAdapter1**.setOnclickListner(**new** FirestoreAdapter.OnItemClickListner() {  
 @Override  
 **public void** OnItemClick(DocumentSnapshot documentSnapshot, **int** position, **final** String decypted\_title, **final** String decrypted\_content,View v) {  
  
 **final** Note note=documentSnapshot.toObject(Note.**class**);  
 **final** String docId = documentSnapshot.getId();  
  
  
 PopupMenu menu = **new** PopupMenu(v.getContext(), v);  
 menu.setGravity(Gravity.***END***);  
 menu.getMenu().add(**"Edit"**).setOnMenuItemClickListener(**new** MenuItem.OnMenuItemClickListener() {  
 @Override  
 **public boolean** onMenuItemClick(MenuItem item) {  
 Intent i = **new** Intent(getApplicationContext(), EditNote.**class**);  
 i.putExtra(**"title"**,decypted\_title );  
 i.putExtra(**"content"**,decrypted\_content);  
 i.putExtra(**"noteId"**, docId);  
 i.putExtra(**"date"**,note.getDate());  
 startActivity(i);  
 **return true**;  
 }  
 });  
  
  
  
  
  
  
 menu.getMenu().add(**"Delete"**).setOnMenuItemClickListener(**new** MenuItem.OnMenuItemClickListener() {  
 @Override  
 **public boolean** onMenuItemClick(MenuItem item) {  
 DocumentReference docRef = **fStore**.collection(**"notes"**).document(**user**.getUid()).collection(**"MyNotes"**).document(docId);  
 docRef.delete().addOnSuccessListener(**new** OnSuccessListener<Void>() {  
 @Override  
 **public void** onSuccess(Void aVoid) {  
 Toast.*makeText*(MainActivity.**this**, **"Your Note has been deleted Successfully"**, Toast.***LENGTH\_SHORT***).show();  
 }  
 }).addOnFailureListener(**new** OnFailureListener() {  
 @Override  
 **public void** onFailure(@NonNull Exception e) {  
 Toast.*makeText*(MainActivity.**this**, **"Error in Deleting Note."**, Toast.***LENGTH\_SHORT***).show();  
 }  
 });  
  
 **return true**;  
  
  
 }  
 });  
  
  
  
 menu.getMenu().add(**"Share"**).setOnMenuItemClickListener(**new** MenuItem.OnMenuItemClickListener() {  
 @Override  
 **public boolean** onMenuItemClick(MenuItem menuItem) {  
  
 share(decypted\_title,decrypted\_content);  
 **return true**;  
 }  
 });  
  
 menu.show();  
  
  
  
  
  
  
  
  
  
 }  
 });  
  
  
  
  
  
  
  
  
  
  
  
 **note\_list**.setAdapter(**noteAdapter1**);  
  
  
  
  
  
 }  
  
  
  
  
 **private void** share(String title,String content) {  
 Intent intent=**new** Intent(Intent.***ACTION\_SEND***);  
  
 intent.setType(**"text/plain"**);  
 intent.putExtra(Intent.***EXTRA\_SUBJECT***,title);  
 intent.putExtra(Intent.***EXTRA\_TEXT***,content);  
 startActivity(Intent.*createChooser*(intent,**"Choose From The Given Application"**));  
  
 }  
  
  
 @Override  
 **public void** onBackPressed() {  
 **if** (**drawer**.isDrawerOpen(GravityCompat.***START***)) {  
 **drawer**.closeDrawer(GravityCompat.***START***);  
 } **else  
 super**.onBackPressed();  
 }  
  
 @Override  
 **public boolean** onNavigationItemSelected(@NonNull MenuItem item) {  
  
 **switch** (item.getItemId()) {  
  
 **case** R.id.***add\_note***:  
 startActivity(**new** Intent(**this**, Add\_Note.**class**));  
 **break**;  
 **case** R.id.***logout***:  
 checkuser();  
 **break**;  
 **case** R.id.***sync\_note***:  
 **if**(**user**.isAnonymous()) {  
 startActivity(**new** Intent(**this**, Login.**class**));  
 }  
 **else**{  
 Toast.*makeText*(**this**, **"You Already have Account"**, Toast.***LENGTH\_SHORT***).show();  
 }  
 **break**;  
  
 **default**:  
 Toast.*makeText*(**this**, **"coming soon"**, Toast.***LENGTH\_LONG***).show();  
 }  
 **return true**;  
 }  
  
 **public void** checkuser(){  
  
 FirebaseAuth.*getInstance*().signOut();  
 SharedPreferences.Editor preferencesEditor = **mPreferences**.edit();  
 preferencesEditor.clear();  
 preferencesEditor.apply();  
 Toast.*makeText*(**this**, **"Sucessesfuly Signed Out"**, Toast.***LENGTH\_SHORT***).show();  
 finish();  
  
  
 }  
  
  
 @Override  
 **public boolean** onCreateOptionsMenu(Menu menu) {  
 MenuInflater menuInflater = getMenuInflater();  
 menuInflater.inflate(R.menu.***option\_menu***,menu);  
  
 **return true**;  
 }  
  
 @Override  
 **public boolean** onOptionsItemSelected(@NonNull MenuItem item) {  
 **if** (item.getItemId() == R.id.***search***) {  
 searchSetup(item);  
 **return true**;  
 }  
 **return super**.onOptionsItemSelected(item);  
 }  
  
  
  
 **public void** searchSetup(MenuItem item){  
 SearchView search= (SearchView) item.getActionView();  
 search.setSubmitButtonEnabled(**true**);  
 search.setQueryHint(**"Search by dd/mm/yyyy"**);  
 search.setOnQueryTextListener(**new** SearchView.OnQueryTextListener() {  
 @Override  
 **public boolean** onQueryTextSubmit(String s) {  
 **return false**;  
 }  
  
 @Override  
 **public boolean** onQueryTextChange(String s) {  
 Query query;  
 **if**(s.isEmpty()) {  
 query = **fStore**.collection(**"notes"**).document(**user**.getUid()).collection(**"MyNotes"**).orderBy(**"timeStamp"**, Query.Direction.***ASCENDING***);  
  
  
  
 }  
 **else**{  
 query = **fStore**.collection(**"notes"**).document(**user**.getUid()).collection(**"MyNotes"**).whereEqualTo(**"date"**,s).orderBy(**"timeStamp"**, Query.Direction.***ASCENDING***);  
 }  
 FirestoreRecyclerOptions<Note> allNotes = **new** FirestoreRecyclerOptions.Builder<Note>()  
 .setQuery(query, Note.**class**)  
 .build();  
  
 **noteAdapter1**.updateOptions(allNotes);  
 **return true**;  
 }  
 });  
  
  
 }  
  
  
  
  
 @Override  
 **protected void** onStart() {  
 **super**.onStart();  
 **noteAdapter1**.startListening();  
  
 }  
  
 @Override  
 **protected void** onStop() {  
 **super**.onStop();  
 **if** (**noteAdapter1** != **null**) {  
 **noteAdapter1**.stopListening();  
 }  
 }  
  
  
 }

Note Detail Activity

**package** com.example.note\_taking\_application;  
  
**import** android.content.Intent;  
**import** android.os.Build;  
**import** android.os.Bundle;  
  
**import** com.google.android.material.floatingactionbutton.FloatingActionButton;  
  
**import** androidx.annotation.RequiresApi;  
**import** androidx.appcompat.app.AppCompatActivity;  
**import** androidx.appcompat.widget.Toolbar;  
  
**import** android.text.method.ScrollingMovementMethod;  
**import** android.view.View;  
**import** android.widget.TextView;  
  
**public class** NoteDetails **extends** AppCompatActivity {  
 Intent **data**;  
 @RequiresApi(api = Build.VERSION\_CODES.***M***)  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_note\_details***);  
 Toolbar toolbar = findViewById(R.id.***toolbar***);  
 setSupportActionBar(toolbar);  
 **data** = getIntent();  
  
 TextView note\_details=findViewById(R.id.***note\_details***);  
 TextView note\_details\_title=findViewById(R.id.***note\_details\_title***);  
  
 TextView date=findViewById(R.id.***date***);  
 date.setText(**"Created on "**+**data**.getStringExtra(**"date"**));  
 note\_details.setMovementMethod(**new** ScrollingMovementMethod());  
 note\_details.setText(**data**.getStringExtra(**"content"**));  
 note\_details\_title.setText(**data**.getStringExtra(**"title"**));  
 note\_details.setBackgroundColor(getResources().getColor(**data**.getIntExtra(**"code"**,0),**null**));  
 date.setBackgroundColor(getResources().getColor(**data**.getIntExtra(**"code"**,0),**null**));  
  
 FloatingActionButton fab = findViewById(R.id.***fab***);  
 fab.setOnClickListener(**new** View.OnClickListener() {  
 @Override  
 **public void** onClick(View view) {  
 Intent i = **new** Intent(view.getContext(), EditNote.**class**);  
 i.putExtra(**"title"**,**data**.getStringExtra(**"title"**));  
 i.putExtra(**"content"**,**data**.getStringExtra(**"content"**));  
 i.putExtra(**"noteId"**,**data**.getStringExtra(**"noteId"**));  
 i.putExtra(**"code"**,**data**.getIntExtra(**"code"**,0));  
 i.putExtra(**"date"**,**data**.getStringExtra(**"date"**));  
 startActivity(i);  
 finish();  
 }  
 });  
 }  
}

NOW CODE FOR UI

ADD NOTE UI CODE

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.coordinatorlayout.widget.CoordinatorLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".Add\_Note"**>  
  
 <**com.google.android.material.appbar.AppBarLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:theme="@style/AppTheme.AppBarOverlay"**>  
  
 <**androidx.appcompat.widget.Toolbar  
 android:id="@+id/toolbar"  
 android:layout\_width="match\_parent"  
 android:layout\_height="?attr/actionBarSize"  
 android:background="?attr/colorPrimary"  
 app:popupTheme="@style/AppTheme.PopupOverlay"**>  
  
 <**EditText  
 android:id="@+id/add\_note\_title"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:ems="10"  
 android:background="@null"  
 android:text="Untitled"  
 android:hint="add title"  
 android:textSize="16sp"  
 android:gravity="start|top"  
 android:inputType="textMultiLine"** />  
  
  
 </**androidx.appcompat.widget.Toolbar**>  
  
  
 </**com.google.android.material.appbar.AppBarLayout**>  
  
 <**include layout="@layout/content\_add\_\_note"** />  
  
 <**com.google.android.material.floatingactionbutton.FloatingActionButton  
 android:id="@+id/fab"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="bottom|end"  
 android:layout\_margin="@dimen/fab\_margin"  
  
 app:backgroundTint="#673AB7"  
 app:maxImageSize="30dp"  
 app:srcCompat="@drawable/ic\_save"** />  
  
</**androidx.coordinatorlayout.widget.CoordinatorLayout**>

EDIT NOTE UI CODE

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".EditNote"**>  
  
  
 <**androidx.appcompat.widget.Toolbar  
 android:id="@+id/toolbar"  
 android:layout\_width="match\_parent"  
 android:layout\_height="?attr/actionBarSize"  
 android:background="?attr/colorPrimary"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:popupTheme="@style/AppTheme.PopupOverlay"**>  
  
  
 <**EditText  
 android:id="@+id/editNoteTitle"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:backgroundTint="@android:color/transparent"  
 android:ems="10"  
 android:inputType="textMultiLine"  
 android:text="@android:string/untitled"  
 android:textColor="#fff"  
 android:textColorHint="#FFFFFF"  
 android:textStyle="bold"** />  
  
 </**androidx.appcompat.widget.Toolbar**>  
  
 <**EditText  
 android:id="@+id/date"  
 android:layout\_width="155dp"  
 android:layout\_height="49dp"  
 android:layout\_marginStart="8dp"  
 android:layout\_marginLeft="10dp"  
 android:layout\_marginTop="44dp"  
 android:drawableLeft="@drawable/ic\_baseline\_date\_range\_24"  
 android:drawablePadding="10dp"  
 android:focusable="false"  
 android:hint="Enter Date"  
 android:onClick="set\_date"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/toolbar"**></**EditText**>  
  
 <**EditText  
 android:id="@+id/editNoteContent"  
 android:layout\_width="0dp"  
 android:layout\_height="0dp"  
 android:layout\_margin="10dp"  
 android:backgroundTint="@android:color/transparent"  
 android:ems="10"  
 android:gravity="start|top"  
 android:inputType="textMultiLine"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/date"** />  
  
  
 <**com.google.android.material.floatingactionbutton.FloatingActionButton  
 android:id="@+id/saveEditedNote"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="bottom|end"  
 android:layout\_margin="@dimen/fab\_margin"  
 app:backgroundTint="@color/colorPrimaryDark"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:maxImageSize="30dp"  
 app:srcCompat="@drawable/ic\_save\_black\_24"** />  
  
 <**ProgressBar  
 android:id="@+id/progressBar2"  
 style="?android:attr/progressBarStyle"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:visibility="invisible"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/toolbar"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

LOGIN UI CODE

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".auth.Login"**>  
  
  
  
 <**EditText  
 android:id="@+id/email"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="24dp"  
 android:layout\_marginEnd="16dp"  
 android:ems="10"  
 android:hint="Email"  
 android:inputType="textPersonName"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
 <**EditText  
 android:id="@+id/lPassword"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="8dp"  
 android:layout\_marginEnd="16dp"  
 android:ems="10"  
 android:hint="Password"  
 android:inputType="textPassword"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/email"** />  
  
 <**Button  
 android:id="@+id/loginBtn"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="32dp"  
 android:layout\_marginTop="32dp"  
 android:layout\_marginEnd="32dp"  
 android:background="#004D40"  
 android:text="Login"  
 android:textColor="#FFFFFF"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/lPassword"** />  
  
  
 <**TextView  
 android:id="@+id/createAccount"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="140dp"  
 android:layout\_marginLeft="140dp"  
 android:layout\_marginTop="49dp"  
 android:text="Create New Account"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/loginBtn"** />  
  
 <**ProgressBar  
 android:id="@+id/progressBar3"  
 style="?android:attr/progressBarStyle"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="16dp"  
 android:visibility="invisible"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/createAccount"** />  
  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

MAIN ACTIVITY UI CODE

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.drawerlayout.widget.DrawerLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:id="@+id/drawer"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".MainActivity"**>  
  
 <**include  
 android:layout\_height="match\_parent"  
 android:layout\_width="match\_parent"  
 layout="@layout/content\_main"**/>  
 <**com.google.android.material.navigation.NavigationView  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 app:menu="@menu/menu\_item"  
 app:headerLayout="@layout/nav\_header"  
 android:id="@+id/nav\_view"  
 android:layout\_gravity="left"  
 android:fitsSystemWindows="true"**/>  
  
  
</**androidx.drawerlayout.widget.DrawerLayout**>

NOTE DETAIL UI CODE

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.coordinatorlayout.widget.CoordinatorLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".NoteDetails"**>  
  
 <**com.google.android.material.appbar.AppBarLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:theme="@style/AppTheme.AppBarOverlay"**>  
  
 <**androidx.appcompat.widget.Toolbar  
 android:id="@+id/toolbar"  
 android:layout\_width="match\_parent"  
 android:layout\_height="?attr/actionBarSize"  
 android:background="?attr/colorPrimary"  
 app:popupTheme="@style/AppTheme.PopupOverlay"**>  
  
 <**TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:gravity="center"  
 android:id="@+id/note\_details\_title"  
 android:text="Text"**/>  
  
 </**androidx.appcompat.widget.Toolbar**>  
  
 </**com.google.android.material.appbar.AppBarLayout**>  
  
 <**include layout="@layout/content\_note\_details"** />  
  
 <**com.google.android.material.floatingactionbutton.FloatingActionButton  
 android:id="@+id/fab"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="bottom|end"  
 android:layout\_margin="@dimen/fab\_margin"  
 app:maxImageSize="30dp"  
 app:srcCompat="@drawable/ic\_edit"** />  
  
  
</**androidx.coordinatorlayout.widget.CoordinatorLayout**>

REGISTER UI CODE

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".auth.Register"**>  
  
 <**EditText  
 android:id="@+id/userName"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="24dp"  
 android:layout\_marginEnd="16dp"  
 android:ems="10"  
 android:hint="Full Name"  
 android:inputType="textPersonName"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
 <**EditText  
 android:id="@+id/userEmail"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="8dp"  
 android:layout\_marginEnd="16dp"  
 android:ems="10"  
 android:hint="Email Address"  
 android:inputType="textEmailAddress"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/userName"** />  
  
 <**EditText  
 android:id="@+id/password"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="8dp"  
 android:layout\_marginEnd="16dp"  
 android:ems="10"  
 android:hint="Password"  
 android:inputType="textPassword"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/userEmail"** />  
  
 <**EditText  
 android:id="@+id/passwordConfirm"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginTop="8dp"  
 android:layout\_marginEnd="16dp"  
 android:ems="10"  
 android:hint="Confirm Password"  
 android:inputType="textPassword"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/password"** />  
  
 <**Button  
 android:id="@+id/createAccount"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="32dp"  
 android:layout\_marginTop="32dp"  
 android:layout\_marginEnd="32dp"  
 android:background="@color/colorPrimaryDark"  
 android:text="Sync Now"  
 android:textColor="#FFFFFF"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/passwordConfirm"** />  
  
 <**TextView  
 android:id="@+id/login"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="16dp"  
 android:text="Login Here"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/createAccount"** />  
  
 <**ProgressBar  
 android:id="@+id/progressBar4"  
 style="?android:attr/progressBarStyle"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="16dp"  
 android:visibility="invisible"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/login"** />  
  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

SPLASH UI CODE

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:background="@drawable/note\_image"  
 tools:context=".Splash"**>  
  
  
 <**TextView  
 android:id="@+id/textView3"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:fontFamily="@font/abril\_fatface"  
 android:text="YourNotes"  
 android:textColor="#004D40"  
 android:textSize="50sp"  
 android:textStyle="bold"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.368"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="0.05"** />  
  
 <**ProgressBar  
 android:id="@+id/progressBar2"  
 style="?android:attr/progressBarStyle"  
 android:layout\_width="66dp"  
 android:layout\_height="58dp"  
 android:foregroundTint="@color/colorPrimary"  
 android:progressTint="@color/colorPrimary"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.468"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/textView3"  
 app:layout\_constraintVertical\_bias="0.469"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

CONTENT ADD NOTE UI

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 xmlns:tools="http://schemas.android.com/tools"  
 app:layout\_behavior="@string/appbar\_scrolling\_view\_behavior"  
 tools:context=".Add\_Note"  
 tools:showIn="@layout/activity\_add\_\_note"**>  
  
 <**EditText  
 android:id="@+id/date"  
 android:layout\_width="155dp"  
 android:layout\_height="49dp"  
 android:layout\_marginStart="24dp"  
 android:layout\_marginLeft="24dp"  
 android:layout\_marginTop="16dp"  
 android:hint="Enter Date"  
 android:onClick="set\_date"  
 app:layout\_constraintStart\_toStartOf="parent"  
 android:focusable="false"  
 android:drawableLeft="@drawable/ic\_baseline\_date\_range\_24"  
 android:drawablePadding="10dp"  
 app:layout\_constraintTop\_toTopOf="parent"**>  
  
  
 </**EditText**>  
  
 <**EditText  
 android:id="@+id/edit\_note\_detail"  
 android:layout\_width="0dp"  
 android:layout\_height="0dp"  
 android:layout\_margin="10dp"  
 android:background="@null"  
 android:ems="10"  
  
 android:overScrollMode="always"  
 android:scrollbarStyle="insideInset"  
 android:scrollbars="vertical"  
  
  
  
 android:gravity="start|top"  
 android:hint="Write Your Note Here"  
 android:inputType="textMultiLine"  
 android:textSize="18sp"  
  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.842"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/date"** />  
  
 <**ProgressBar  
 android:id="@+id/progressBar"  
 style="?android:attr/progressBarStyle"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:visibility="invisible"  
 app:layout\_constraintBottom\_toBottomOf="@+id/edit\_note\_detail"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="@+id/edit\_note\_detail"** />  
  
  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

CONTENT MAIN UI

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout  
 xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"**>  
  
 <**androidx.appcompat.widget.Toolbar  
 android:id="@+id/toolbar"  
 android:layout\_width="match\_parent"  
 android:layout\_height="?attr/actionBarSize"  
 android:background="@color/colorPrimaryDark"  
 android:elevation="4dp"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
 <**androidx.recyclerview.widget.RecyclerView  
 android:id="@+id/note\_list"  
 android:layout\_width="0dp"  
 android:layout\_height="0dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/toolbar"** />  
  
 <**com.google.android.material.floatingactionbutton.FloatingActionButton  
 android:id="@+id/fabmain"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="bottom|end"  
 android:layout\_margin="@dimen/fab\_margin"  
 android:layout\_marginBottom="36dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintHorizontal\_bias="0.954"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:maxImageSize="30dp"  
 app:srcCompat="@drawable/ic\_add"** />  
</**androidx.constraintlayout.widget.ConstraintLayout**>

CONTENT NOTE DETAIL UI

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 xmlns:tools="http://schemas.android.com/tools"  
 app:layout\_behavior="@string/appbar\_scrolling\_view\_behavior"  
 tools:context=".NoteDetails"  
 tools:showIn="@layout/activity\_note\_details"**>  
  
 <**TextView  
 android:id="@+id/date"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:text="TextView"  
 android:padding="16dp"  
 android:textSize="18sp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
 <**TextView  
 android:id="@+id/note\_details"  
 android:layout\_width="0dp"  
 android:layout\_height="0dp"  
 android:isScrollContainer="true"  
 android:padding="16dp"  
 android:scrollbars="vertical"  
 android:textColor="#220303"  
 android:textSize="18sp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/date"** />  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

NAV HEADER UI

*<?***xml version="1.0" encoding="utf-8"***?>*<**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:orientation="vertical" android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"**>  
  
 <**androidx.constraintlayout.widget.ConstraintLayout  
 android:layout\_width="match\_parent"  
 android:background="@drawable/cover"  
 android:layout\_height="200dp"**>  
  
 <**TextView  
 android:id="@+id/text"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="24dp"  
 android:layout\_marginLeft="24dp"  
 android:layout\_marginTop="68dp"  
 android:fontFamily="@font/abril\_fatface"  
 android:text="YOUR NOTES"  
 android:textColor="#170303"  
 android:textSize="30dp"  
 android:textStyle="bold"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
 <**TextView  
 android:id="@+id/textView"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="16dp"  
 android:layout\_marginLeft="16dp"  
 android:layout\_marginTop="20dp"  
 android:fontFamily="@font/abril\_fatface"  
 android:text="TAKE YOUR NOTES WITH YOU"  
 android:textColor="#FFFFFF"  
 android:textSize="20dp"  
 android:textStyle="bold"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/text"** />  
 </**androidx.constraintlayout.widget.ConstraintLayout**>  
  
</**LinearLayout**>

NOTE VIEW LAYOUT UI CODE

*<?***xml version="1.0" encoding="utf-8"***?>*<**androidx.constraintlayout.widget.ConstraintLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_margin="10dp"**>  
  
 <**androidx.cardview.widget.CardView  
 android:id="@+id/noteCard"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="8dp"  
 android:layout\_marginTop="2dp"  
  
 android:layout\_marginEnd="8dp"  
 app:cardBackgroundColor="#7B1FA2"  
 app:cardCornerRadius="0dp"  
 app:cardElevation="5dp"  
 app:contentPadding="0dp"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"**>  
  
  
 <**androidx.constraintlayout.widget.ConstraintLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"**>  
  
  
 <**TextView  
 android:id="@+id/date"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="8dp"  
 android:layout\_marginLeft="8dp"  
 android:layout\_marginEnd="8dp"  
 android:layout\_marginRight="8dp"  
 android:gravity="start"  
 android:padding="5dp"  
 android:text="TextView"  
 android:textAlignment="viewStart"  
 android:textColor="#000"  
 android:textSize="15sp"  
 android:textStyle="normal|italic"  
 app:layout\_constraintBottom\_toTopOf="@+id/content"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
 <**TextView  
 android:id="@+id/content"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="8dp"  
 android:layout\_marginTop="8dp"  
 android:layout\_marginEnd="8dp"  
 android:layout\_marginBottom="8dp"  
 android:gravity="start"  
 android:padding="5dp"  
 android:text="TextView"  
 android:textAlignment="viewStart"  
 android:textColor="#000"  
 android:textSize="15sp"  
 android:textStyle="normal|italic"  
 app:layout\_constraintBottom\_toTopOf="@+id/cardView"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
 <**androidx.cardview.widget.CardView  
 android:id="@+id/cardView"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:orientation="horizontal"  
 app:cardCornerRadius="0dp"  
 app:cardElevation="5dp"  
 app:contentPadding="5dp"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:layout\_constraintVertical\_bias="1.0"**>  
  
  
 <**androidx.constraintlayout.widget.ConstraintLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"**>  
  
  
 <**ImageView  
 android:id="@+id/menuIcon"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"  
 app:srcCompat="@drawable/ic\_more\_vert\_black\_24dp"** />  
  
 <**TextView  
 android:id="@+id/titles"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:gravity="start"  
 android:padding="2dp"  
 android:text="TextView"  
 android:textAlignment="viewStart"  
 android:textColor="@color/colorPrimaryDark"  
 android:textSize="14sp"  
 android:textStyle="bold"  
 app:layout\_constraintBottom\_toBottomOf="parent"  
 app:layout\_constraintEnd\_toStartOf="@+id/menuIcon"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent"** />  
  
 </**androidx.constraintlayout.widget.ConstraintLayout**>  
 </**androidx.cardview.widget.CardView**>  
  
  
 </**androidx.constraintlayout.widget.ConstraintLayout**>  
  
  
 </**androidx.cardview.widget.CardView**>  
  
</**androidx.constraintlayout.widget.ConstraintLayout**>

CLOSE MENU UI CODE

*<?***xml version="1.0" encoding="utf-8"***?>*<**menu xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:android="http://schemas.android.com/apk/res/android"**>  
  
  
  
 <**item  
 android:id="@+id/close"  
 android:icon="@drawable/ic\_baseline\_close\_24"  
 android:title="close"  
 app:showAsAction="always"** />  
</**menu**>

NAV MENU UI CODE

*<?***xml version="1.0" encoding="utf-8"***?>*<**menu xmlns:android="http://schemas.android.com/apk/res/android"**>  
<**item android:title="General"**>  
 <**menu** >  
   
 <**item  
 android:id="@+id/add\_note"  
 android:icon="@drawable/ic\_add\_note"  
 android:title="Add Notes"** />  
 <**item  
 android:id="@+id/sync\_note"  
 android:icon="@drawable/ic\_sync"  
 android:title="Log In"** />  
  
  
 </**menu**>  
  
</**item**>  
  
 <**item android:title="LogOut"**>  
  
 <**menu**>  
 <**item  
 android:id="@+id/logout"  
 android:icon="@drawable/ic\_sync"  
 android:title="Logout"** />  
 </**menu**>  
 </**item**>  
  
</**menu**>

SEARCH MENU UI CODE

*<?***xml version="1.0" encoding="utf-8"***?>*<**menu xmlns:app="http://schemas.android.com/apk/res-auto"  
 xmlns:android="http://schemas.android.com/apk/res/android"**>  
  
 <**item  
 android:id="@+id/search"  
  
 android:icon="@android:drawable/ic\_menu\_search"  
  
 android:title="search"  
 app:actionViewClass="android.widget.SearchView"  
 app:showAsAction="always|collapseActionView"** />  
</**menu**>