**U18CO009**

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**Lab Assignment 9**

**Android Application**

Question: Extend your lab assignment 8 by inserting a new table which stores

messages related to the persons available in your contact list. This is to save

any important information mentioned during the recent or an earlier phone call.

Your new table should be named as “Message” with message\_id as the primary

key and contact\_no (or any id which you are using as your primary key for the

contact table) as your foreign key here. You will also store date and time stamp

to identify the recent message stored for a particular person. A list of operations

which are required to provide to the user are as follows.

(a) Display all messages related to a person.

(b) Display recent message of a person.

(c) Add a new message.

(d) Delete an existing message.

(e) Update an existing message.

MainActivity.java

package com.exmple.savecontactsandmessages;  
  
import androidx.annotation.NonNull;  
import androidx.appcompat.app.ActionBarDrawerToggle;  
import androidx.appcompat.app.AppCompatActivity;  
import androidx.core.view.GravityCompat;  
import androidx.drawerlayout.widget.DrawerLayout;  
  
import android.os.Bundle;  
import android.view.MenuItem;  
  
import com.exmple.savecontactsandmessages.fragments.AddMessageFragment;  
import com.exmple.savecontactsandmessages.fragments.ContactEntryFragment;  
import com.exmple.savecontactsandmessages.fragments.DeleteFragment;  
import com.exmple.savecontactsandmessages.fragments.SerachFragment;  
import com.exmple.savecontactsandmessages.fragments.UpdateFragment;  
import com.exmple.savecontactsandmessages.fragments.UpdateMessageFragment;  
import com.exmple.savecontactsandmessages.fragments.ViewContactFragment;  
import com.exmple.savecontactsandmessages.R;  
import com.exmple.savecontactsandmessages.fragments.showMessagesFragment;  
import com.google.android.material.navigation.NavigationView;  
  
import java.util.Objects;  
  
public class MainActivity extends AppCompatActivity implements NavigationView.OnNavigationItemSelectedListener {  
  
 private DrawerLayout drawer;  
 private ActionBarDrawerToggle toggle;  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
  
 drawer = findViewById(R.id.*draw\_layout*);  
 NavigationView navigationView = findViewById(R.id.*nav\_view*);  
 navigationView.setNavigationItemSelectedListener(this);  
  
 toggle = new ActionBarDrawerToggle(this,drawer,  
 R.string.*navigation\_drawer\_open*,R.string.*navigation\_drawer\_close*);  
 drawer.addDrawerListener(toggle);  
 toggle.syncState();  
  
 Objects.*requireNonNull*(getSupportActionBar()).setDisplayHomeAsUpEnabled(true);  
  
 if(savedInstanceState == null) {  
 getSupportFragmentManager().beginTransaction().replace(R.id.*fragment\_container*,new ContactEntryFragment()).commit();  
 navigationView.setCheckedItem(R.id.*contactEntry*);  
 }  
  
 }  
  
 @Override  
 public boolean onOptionsItemSelected(@NonNull MenuItem item) {  
  
 if(toggle.onOptionsItemSelected(item)) {  
 return true;  
 }  
  
 return super.onOptionsItemSelected(item);  
 }  
  
 @Override  
 public void onBackPressed() {  
 if(drawer.isDrawerOpen(GravityCompat.*START*)){  
 drawer.closeDrawer(GravityCompat.*START*);  
 return;  
 }  
 super.onBackPressed();  
 }  
  
 @Override  
 public boolean onNavigationItemSelected(@NonNull MenuItem item) {  
 switch (item.getItemId()) {  
 case R.id.*contactEntry*:  
 getSupportFragmentManager().beginTransaction().replace(R.id.*fragment\_container*,new ContactEntryFragment()).commit();  
 break;  
  
 case R.id.*viewEntries*:  
 getSupportFragmentManager().beginTransaction().replace(R.id.*fragment\_container*,new ViewContactFragment()).commit();  
 break;  
  
 case R.id.*search*:  
 getSupportFragmentManager().beginTransaction().replace(R.id.*fragment\_container*,new SerachFragment()).commit();  
 break;  
  
 case R.id.*updateEntry*:  
 getSupportFragmentManager().beginTransaction().replace(R.id.*fragment\_container*,new UpdateFragment()).commit();  
 break;  
  
 case R.id.*deleteEntry*:  
 getSupportFragmentManager().beginTransaction().replace(R.id.*fragment\_container*,new DeleteFragment()).commit();  
 break;  
  
 case R.id.*addMessageMenu*:  
 getSupportFragmentManager().beginTransaction().replace(R.id.*fragment\_container*,new AddMessageFragment()).commit();  
 break;  
  
 case R.id.*updateMessageMenu*:  
 getSupportFragmentManager().beginTransaction().replace(R.id.*fragment\_container*,new UpdateMessageFragment()).commit();  
 break;  
  
 case R.id.*viewAllMessages*:  
 getSupportFragmentManager().beginTransaction().replace(R.id.*fragment\_container*,new showMessagesFragment()).commit();  
 break;  
 }  
  
 drawer.closeDrawer(GravityCompat.*START*);  
 return true;  
 }  
  
}

**DatabaseHandler.java**

package com.exmple.savecontacts;  
  
import android.content.ContentValues;  
import android.content.Context;  
import android.database.Cursor;  
import android.database.sqlite.SQLiteDatabase;  
import android.database.sqlite.SQLiteOpenHelper;  
  
import androidx.annotation.Nullable;  
  
  
public class DatabaseHandler extends SQLiteOpenHelper {  
  
 public static final String *DATABASE\_NAME* = "ContactDatabase.db";  
 public static final String *CONTACT\_TABLE\_NAME* = "contact";  
 public static final String *CONTACT\_COLUMN\_ID* = "id";  
 public static final String *CONTACT\_COLUMN\_NAME* = "name";  
 public static final String *CONTACT\_COLUMN\_PHONE* = "phone";  
 public static final String *CONTACT\_COLUMN\_EMAIL* = "email";  
 public static final String *CONTACT\_COLUMN\_ADDRESS* = "address";  
  
 public DatabaseHandler(@Nullable Context context) {  
 super(context,*DATABASE\_NAME*,null,1);  
 }  
  
 @Override  
 public void onCreate(SQLiteDatabase sqLiteDatabase) {  
 sqLiteDatabase.execSQL("Create table contact ( id INTEGER PRIMARY KEY AUTOINCREMENT, name text not null, phone text not null ,email text not null ,address text not null);");  
 }  
  
 @Override  
 public void onUpgrade(SQLiteDatabase sqLiteDatabase, int i, int i1) {  
 sqLiteDatabase.execSQL("DROP TABLE IF EXISTS " + *CONTACT\_TABLE\_NAME*);  
 onCreate(sqLiteDatabase);  
 }  
  
 public boolean insertData (String name, String phone, String email, String address) {  
 boolean isSuccess = false;  
 SQLiteDatabase db = this.getWritableDatabase();  
 ContentValues content = new ContentValues();  
 content.put(*CONTACT\_COLUMN\_NAME*, name);  
 content.put(*CONTACT\_COLUMN\_PHONE*,phone);  
 content.put(*CONTACT\_COLUMN\_EMAIL*, email);  
 content.put(*CONTACT\_COLUMN\_ADDRESS*,address);  
 isSuccess = db.insert(*CONTACT\_TABLE\_NAME*,null,content) > 0;  
 db.close();  
 return isSuccess;  
 }  
  
 public Cursor getData() {  
 SQLiteDatabase sqLiteDatabase = this.getReadableDatabase();  
 return sqLiteDatabase.rawQuery("select \* from contact",null);  
 }  
  
 public Cursor getDataById(String s) {  
 SQLiteDatabase sqLiteDatabase = this.getReadableDatabase();  
 String str = "select \* from contact where id = " + s;  
 return sqLiteDatabase.rawQuery(str ,null);  
 }  
  
 public void updateData(int id, String name, String phone, String email, String address) {  
 SQLiteDatabase db = this.getWritableDatabase();  
 db.execSQL("update contact set name = '" + name + "', phone = '" + phone + "', email = '" + email + "', address = '" + address + "' where id = " + id);  
 }  
  
 public void deleteData(String s) {  
 SQLiteDatabase db = this.getWritableDatabase();  
 db.execSQL("delete from contact where id = " + s);  
 }  
}

ContactInformation.java

package com.exmple.savecontacts;  
  
public class ContactInformation {  
  
 private int id;  
 private String name;  
 private String phone;  
 private String email;  
 private String address;  
  
 public ContactInformation() {  
 }  
  
 public ContactInformation(int id, String name, String phone, String email, String address) {  
 this.id = id;  
 this.name = name;  
 this.phone = phone;  
 this.email = email;  
 this.address = address;  
 }  
  
 public int getId() {  
 return id;  
 }  
  
 public void setId(int id) {  
 this.id = id;  
 }  
  
 public String getName() {  
 return name;  
 }  
  
 public void setName(String name) {  
 this.name = name;  
 }  
  
 public String getPhone() {  
 return phone;  
 }  
  
 public void setPhone(String phone) {  
 this.phone = phone;  
 }  
  
 public String getEmail() {  
 return email;  
 }  
  
 public void setEmail(String email) {  
 this.email = email;  
 }  
  
 public String getAddress() {  
 return address;  
 }  
  
 public void setAddress(String address) {  
 this.address = address;  
 }  
}

ContactEntryFragment.java

package com.exmple.savecontacts.fragments;  
  
import android.os.Bundle;  
  
import androidx.annotation.NonNull;  
import androidx.annotation.Nullable;  
import androidx.fragment.app.Fragment;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
import com.exmple.savecontacts.DatabaseHandler;  
import com.exmple.savecontacts.MainActivity;  
import com.exmple.savecontacts.R;  
  
public class ContactEntryFragment extends Fragment {  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 return inflater.inflate(R.layout.*fragment\_contact\_entry*, container, false);  
 }  
  
 private EditText nameEt, phoneEt, emailEt, addressEt;  
 private Button submitBtn;  
  
 @Override  
 public void onViewCreated(@NonNull View view, @Nullable Bundle savedInstanceState) {  
 super.onViewCreated(view, savedInstanceState);  
  
 nameEt = view.findViewById(R.id.*nameEt*);  
 phoneEt = view.findViewById(R.id.*phoneEt*);  
 emailEt = view.findViewById(R.id.*emailEt*);  
 addressEt = view.findViewById(R.id.*addressEt*);  
  
 submitBtn = view.findViewById(R.id.*submitBtn*);  
  
  
 submitBtn.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String phone = phoneEt.getText().toString().trim();  
 String name = nameEt.getText().toString().trim();  
 String email = emailEt.getText().toString().trim();  
 String address = addressEt.getText().toString().trim();  
  
  
 if(phone.isEmpty() || name.isEmpty() || email.isEmpty() || address.isEmpty()) {  
 Toast.*makeText*(view.getContext(), "All Fields are requierd", Toast.*LENGTH\_LONG*).show();  
 } else {  
  
 try {  
  
 DatabaseHandler db = new DatabaseHandler(view.getContext());  
 boolean flag = db.insertData(name, phone, email, address);  
  
 if (flag) {  
 Toast.*makeText*(view.getContext(), "Successful", Toast.*LENGTH\_SHORT*).show();  
 } else {  
 Toast.*makeText*(view.getContext(), "Something Went Wrong!", Toast.*LENGTH\_SHORT*).show();  
 }  
  
 nameEt.setText("");  
 phoneEt.setText("");  
 emailEt.setText("");  
 addressEt.setText("");  
 } catch (Exception e) {  
  
 }  
  
 }  
  
 }  
 });  
  
 }  
}

DeleteFragment.java

package com.exmple.savecontacts.fragments;  
  
import android.database.Cursor;  
import android.os.Bundle;  
  
import androidx.annotation.NonNull;  
import androidx.annotation.Nullable;  
import androidx.fragment.app.Fragment;  
import androidx.recyclerview.widget.LinearLayoutManager;  
import androidx.recyclerview.widget.RecyclerView;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
import com.exmple.savecontacts.ContactInformation;  
import com.exmple.savecontacts.DatabaseHandler;  
import com.exmple.savecontacts.R;  
import com.exmple.savecontacts.RecyclerViewAdapter;  
  
import java.util.ArrayList;  
  
public class DeleteFragment extends Fragment {  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* return inflater.inflate(R.layout.*fragment\_delete*, container, false);  
 }  
  
 private EditText etDeleteId;  
 private RecyclerView recyclerViewDelete;  
 private Button btnDeleteFind,btnDeleteDelete;  
 private String id;  
  
 @Override  
 public void onViewCreated(@NonNull View view, @Nullable Bundle savedInstanceState) {  
 super.onViewCreated(view, savedInstanceState);  
  
 etDeleteId = view.findViewById(R.id.*etDeleteId*);  
 recyclerViewDelete = view.findViewById(R.id.*deleteRecyclerList*);  
 btnDeleteDelete = view.findViewById(R.id.*deleteButton*);  
 btnDeleteFind = view.findViewById(R.id.*deleteSearchButton*);  
  
 btnDeleteFind.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 id = etDeleteId.getText().toString().trim();  
  
 recyclerViewDelete.setVisibility(View.*INVISIBLE*);  
 btnDeleteDelete.setVisibility(View.*INVISIBLE*);  
  
 if(id.isEmpty()) {  
 Toast.*makeText*(getActivity(),"Enter valid input ",Toast.*LENGTH\_SHORT*).show();  
 recyclerViewDelete.setAdapter(null);  
 return;  
 }  
  
 DatabaseHandler db = new DatabaseHandler(getActivity());  
 Cursor cursor = db.getDataById(id);  
 if(cursor.getCount() == 0) {  
 Toast.*makeText*(getActivity(),"No record Found",Toast.*LENGTH\_SHORT*).show();  
 recyclerViewDelete.setAdapter(null);  
 } else {  
  
 ArrayList<ContactInformation> arrayList = new ArrayList<>();  
 while (cursor.moveToNext()) {  
 arrayList.add(new ContactInformation(Integer.*parseInt*(cursor.getString(0)), cursor.getString(1), cursor.getString(2), cursor.getString(3),  
 cursor.getString(4)));  
 }  
 recyclerViewDelete.setAdapter(new RecyclerViewAdapter(arrayList,getActivity()));  
 recyclerViewDelete.setLayoutManager(new LinearLayoutManager(getActivity()));  
  
 recyclerViewDelete.setVisibility(View.*VISIBLE*);  
 btnDeleteDelete.setVisibility(View.*VISIBLE*);  
 }  
 etDeleteId.setText("");  
 }  
 });  
  
 btnDeleteDelete.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 DatabaseHandler db = new DatabaseHandler(getActivity());  
  
 try {  
 db.deleteData(id);  
 Toast.*makeText*(getActivity(),"Deleted Successful ",Toast.*LENGTH\_SHORT*).show();  
 } catch (Exception e) {  
 Toast.*makeText*(getActivity(),e.getMessage(),Toast.*LENGTH\_SHORT*).show();  
 }  
  
  
 recyclerViewDelete.setVisibility(View.*INVISIBLE*);  
 btnDeleteDelete.setVisibility(View.*INVISIBLE*);  
 }  
 });  
  
 }  
}

SerachFragment.java

package com.exmple.savecontacts.fragments;  
  
import android.database.Cursor;  
import android.os.Bundle;  
  
import androidx.annotation.NonNull;  
import androidx.annotation.Nullable;  
import androidx.fragment.app.Fragment;  
import androidx.recyclerview.widget.LinearLayoutManager;  
import androidx.recyclerview.widget.RecyclerView;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.ListView;  
import android.widget.Toast;  
  
import com.exmple.savecontacts.ContactInformation;  
import com.exmple.savecontacts.DatabaseHandler;  
import com.exmple.savecontacts.R;  
import com.exmple.savecontacts.RecyclerViewAdapter;  
  
import java.util.ArrayList;  
  
public class SerachFragment extends Fragment {  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* return inflater.inflate(R.layout.*fragment\_serach*, container, false);  
 }  
  
 private EditText etQuery;  
 private Button submitSearch;  
 private RecyclerView listViewId;  
  
 @Override  
 public void onViewCreated(@NonNull View view, @Nullable Bundle savedInstanceState) {  
 super.onViewCreated(view, savedInstanceState);  
  
 etQuery = view.findViewById(R.id.*etQuery*);  
 submitSearch = view.findViewById(R.id.*searchButton*);  
 listViewId = view.findViewById(R.id.*listViewId*);  
  
 submitSearch.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String id = etQuery.getText().toString().trim();  
  
 if (id.isEmpty()) {  
 Toast.*makeText*(getActivity(), "Enter valid input ", Toast.*LENGTH\_SHORT*).show();  
 listViewId.setAdapter(null);  
 return;  
 }  
  
 DatabaseHandler db = new DatabaseHandler(getActivity());  
 Cursor cursor = db.getDataById(id);  
 if (cursor.getCount() == 0) {  
 Toast.*makeText*(getActivity(), "No record Found", Toast.*LENGTH\_SHORT*).show();  
 listViewId.setAdapter(null);  
 } else {  
  
 ArrayList<ContactInformation> arrayList = new ArrayList<>();  
 while (cursor.moveToNext()) {  
 arrayList.add(new ContactInformation(Integer.*parseInt*(cursor.getString(0)), cursor.getString(1), cursor.getString(2), cursor.getString(3),  
 cursor.getString(4)));  
 }  
 listViewId.setAdapter(new RecyclerViewAdapter(arrayList, getActivity()));  
 listViewId.setLayoutManager(new LinearLayoutManager(getActivity()));  
 }  
 etQuery.setText("");  
 }  
 });  
 }  
}

UpdateFragment.java

package com.exmple.savecontacts.fragments;  
  
import android.database.Cursor;  
import android.os.Bundle;  
  
import androidx.annotation.NonNull;  
import androidx.annotation.Nullable;  
import androidx.fragment.app.Fragment;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextView;  
import android.widget.Toast;  
  
import com.exmple.savecontacts.DatabaseHandler;  
import com.exmple.savecontacts.R;  
  
public class UpdateFragment extends Fragment {  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* return inflater.inflate(R.layout.*fragment\_update*, container, false);  
 }  
  
 private EditText etUpdateId, etUpdateName,etUpdatePhone,etUpdateEmail, etUpdateAddress;  
 private Button btnFind,btnUpdate;  
 private TextView tvId;  
 private TextView tvUpdateIdShow, tvUpdateName, tvUpdatePhone, tvUpdateEmail, tvUpdateAddress;  
  
 @Override  
 public void onViewCreated(@NonNull View view, @Nullable Bundle savedInstanceState) {  
 super.onViewCreated(view, savedInstanceState);  
  
 etUpdateId = view.findViewById(R.id.*etUpdateId*);  
 etUpdateName = view.findViewById(R.id.*etUpdateName*);  
 etUpdatePhone = view.findViewById(R.id.*etUpdatePhone*);  
 etUpdateEmail = view.findViewById(R.id.*etUpdateEmail*);  
 etUpdateAddress = view.findViewById(R.id.*etUpdateAddress*);  
  
 btnFind = view.findViewById(R.id.*updateSearchButton*);  
 btnUpdate = view.findViewById(R.id.*etUpdateButton*);  
  
 tvUpdateIdShow = view.findViewById(R.id.*tvUpdateIdShow*);  
 tvId = view.findViewById(R.id.*tvUpdateId*);  
  
 tvUpdateName = view.findViewById(R.id.*tvUpdateName*);  
 tvUpdatePhone = view.findViewById(R.id.*tvUpdatePhone*);  
 tvUpdateEmail = view.findViewById(R.id.*tvUpdateEmail*);  
 tvUpdateAddress = view.findViewById(R.id.*tvUpdateAddress*);  
  
  
 btnFind.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 makeInvisible();  
  
 String id = etUpdateId.getText().toString().trim();  
  
 if(id.isEmpty()) {  
 Toast.*makeText*(getActivity(),"Enter valid input ",Toast.*LENGTH\_SHORT*).show();  
 return;  
 }  
  
 DatabaseHandler db = new DatabaseHandler(getActivity());  
 Cursor cursor = db.getDataById(id);  
 if(cursor.getCount() == 0) {  
 Toast.*makeText*(getActivity(),"No record Found",Toast.*LENGTH\_SHORT*).show();  
 } else {  
 makeVisible();  
  
 while (cursor.moveToNext()) {  
  
 tvId.setText(cursor.getString(0));  
 etUpdateName.setText(cursor.getString(1));  
 etUpdatePhone.setText(cursor.getString(2));  
 etUpdateEmail.setText(cursor.getString(3));  
 etUpdateAddress.setText(cursor.getString(4));  
 }  
  
 }  
 etUpdateId.setText("");  
 }  
 });  
  
 btnUpdate.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String id = tvId.getText().toString().trim();  
 String name = etUpdateName.getText().toString().trim();  
 String phone = etUpdatePhone.getText().toString().trim();  
 String email = etUpdateEmail.getText().toString().trim();  
 String address = etUpdateAddress.getText().toString().trim();  
  
 if(name.isEmpty() || phone.isEmpty() || email.isEmpty() || address.isEmpty()) {  
 Toast.*makeText*(getActivity(),"All fields Are requierd ",Toast.*LENGTH\_SHORT*).show();  
 return;  
 }  
  
 DatabaseHandler db = new DatabaseHandler(getActivity());  
 try {  
 db.updateData(Integer.*parseInt*(id), name, phone, email, address);  
 Toast.*makeText*(getActivity(), "Data Updated Successfully ", Toast.*LENGTH\_SHORT*).show();  
 } catch (Exception e) {  
 Toast.*makeText*(getActivity(),e.getMessage(),Toast.*LENGTH\_SHORT*).show();  
 }  
  
 makeInvisible();  
 }  
 });  
  
 }  
  
 private void makeInvisible() {  
 etUpdateName.setVisibility(View.*GONE*);  
 etUpdatePhone.setVisibility(View.*GONE*);  
 etUpdateEmail.setVisibility(View.*GONE*);  
 etUpdateAddress.setVisibility(View.*GONE*);  
  
 btnUpdate.setVisibility(View.*GONE*);  
  
 tvUpdateIdShow.setVisibility(View.*GONE*);  
 tvId.setVisibility(View.*GONE*);  
 tvUpdateName.setVisibility(View.*GONE*);  
 tvUpdatePhone.setVisibility(View.*GONE*);  
 tvUpdateEmail.setVisibility(View.*GONE*);  
 tvUpdateAddress.setVisibility(View.*GONE*);  
 }  
  
 private void makeVisible() {  
 etUpdateName.setVisibility(View.*VISIBLE*);  
 etUpdatePhone.setVisibility(View.*VISIBLE*);  
 etUpdateEmail.setVisibility(View.*VISIBLE*);  
 etUpdateAddress.setVisibility(View.*VISIBLE*);  
  
 btnUpdate.setVisibility(View.*VISIBLE*);  
  
 tvUpdateIdShow.setVisibility(View.*VISIBLE*);  
 tvId.setVisibility(View.*VISIBLE*);  
 tvUpdateName.setVisibility(View.*VISIBLE*);  
 tvUpdatePhone.setVisibility(View.*VISIBLE*);  
 tvUpdateEmail.setVisibility(View.*VISIBLE*);  
 tvUpdateAddress.setVisibility(View.*VISIBLE*);  
 }  
}

ViewContactFragmetn.java

package com.exmple.savecontacts.fragments;  
  
import android.database.Cursor;  
import android.os.Bundle;  
  
import androidx.annotation.NonNull;  
import androidx.annotation.Nullable;  
import androidx.fragment.app.Fragment;  
import androidx.recyclerview.widget.LinearLayoutManager;  
import androidx.recyclerview.widget.RecyclerView;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Toast;  
  
import com.exmple.savecontacts.ContactInformation;  
import com.exmple.savecontacts.DatabaseHandler;  
import com.exmple.savecontacts.R;  
import com.exmple.savecontacts.RecyclerViewAdapter;  
  
import java.util.ArrayList;  
  
public class ViewContactFragment extends Fragment {  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* return inflater.inflate(R.layout.fragment\_view\_contact, container, false);  
 }  
  
 @Override  
 public void onViewCreated(@NonNull View view, @Nullable Bundle savedInstanceState) {  
 super.onViewCreated(view, savedInstanceState);  
  
 DatabaseHandler db = new DatabaseHandler(getActivity());  
 Cursor cursor = db.getData();  
  
 ArrayList<ContactInformation> arrayList = new ArrayList<>();  
  
 RecyclerView recyclerView = view.findViewById(R.id.recyclerView);  
  
  
 if(cursor.getCount() == 0) {  
 Toast.makeText(getActivity(),"No Record Found",Toast.LENGTH\_SHORT).show();  
 } else {  
 while (cursor.moveToNext()) {  
 arrayList.add(new ContactInformation(Integer.parseInt(cursor.getString(0)), cursor.getString(1), cursor.getString(2), cursor.getString(3),  
 cursor.getString(4)));  
 }  
 }  
  
 RecyclerViewAdapter recyclerViewAdapter = new RecyclerViewAdapter(arrayList,getActivity());  
 recyclerView.setAdapter(recyclerViewAdapter);  
 recyclerView.setLayoutManager(new LinearLayoutManager(getActivity()));  
 }  
}

RecyclerViewAdapter.java

package com.exmple.savecontacts;  
  
import android.content.Context;  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.LinearLayout;  
import android.widget.TextView;  
  
import androidx.annotation.NonNull;  
import androidx.recyclerview.widget.RecyclerView;  
  
import java.util.ArrayList;  
  
public class RecyclerViewAdapter extends RecyclerView.Adapter<RecyclerViewAdapter.ViewHolder> {  
  
 private ArrayList<ContactInformation> info;  
 private Context mContext;  
  
 public RecyclerViewAdapter(ArrayList<ContactInformation> info, Context mContext) {  
 this.info = info;  
 this.mContext = mContext;  
 }  
  
 @NonNull  
 @Override  
 public ViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {  
 View view = LayoutInflater.*from*(parent.getContext()).inflate(R.layout.*list\_layout*,parent,false);  
 return new ViewHolder(view);  
 }  
  
 @Override  
 public void onBindViewHolder(@NonNull ViewHolder holder, int position) {  
 holder.idTv.setText("Id : " + info.get(position).getId());  
 holder.nameTv.setText("Name: " + info.get(position).getName());  
 holder.phoneTv.setText("Phone: " + info.get(position).getPhone());  
 holder.emailTv.setText("Email: " + info.get(position).getEmail());  
 holder.addressTv.setText("Address: " + info.get(position).getAddress());  
 }  
  
 @Override  
 public int getItemCount() {  
 return info.size();  
 }  
  
 public class ViewHolder extends RecyclerView.ViewHolder {  
  
 TextView idTv, nameTv, phoneTv, emailTv, addressTv;  
 LinearLayout parentLayout;  
  
 public ViewHolder(@NonNull View itemView) {  
 super(itemView);  
 parentLayout = itemView.findViewById(R.id.*parent\_layout*);  
 idTv = itemView.findViewById(R.id.*idDb*);  
 nameTv = itemView.findViewById(R.id.*nameTv*);  
 phoneTv = itemView.findViewById(R.id.*phoneTv*);  
 emailTv = itemView.findViewById(R.id.*emailTv*);  
 addressTv = itemView.findViewById(R.id.*addressTv*);  
  
 }  
 }  
}

AddMessageFragment.java

package com.exmple.savecontactsandmessages.fragments;  
  
import android.content.Intent;  
import android.database.Cursor;  
import android.os.Bundle;  
  
import androidx.annotation.NonNull;  
import androidx.annotation.Nullable;  
import androidx.fragment.app.Fragment;  
import androidx.recyclerview.widget.LinearLayoutManager;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
import com.exmple.savecontactsandmessages.ContactInformation;  
import com.exmple.savecontactsandmessages.DatabaseHandler;  
import com.exmple.savecontactsandmessages.R;  
import com.exmple.savecontactsandmessages.RecyclerViewAdapter;  
  
import java.util.ArrayList;  
  
public class AddMessageFragment extends Fragment {  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* return inflater.inflate(R.layout.*fragment\_add\_message*, container, false);  
 }  
  
 public EditText etUserId, etMessage;  
 public Button addMessage;  
  
 @Override  
 public void onViewCreated(@NonNull View view, @Nullable Bundle savedInstanceState) {  
 super.onViewCreated(view, savedInstanceState);  
  
 etUserId = view.findViewById(R.id.*etUserId*);  
 etMessage = view.findViewById(R.id.*etUserMessage*);  
 addMessage = view.findViewById(R.id.*addMessage*);  
  
  
 addMessage.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String id = etUserId.getText().toString().trim();  
 String message = etMessage.getText().toString().trim();  
  
 if (id.isEmpty() || message.isEmpty()) {  
 Toast.*makeText*(getActivity(), "Enter valid input ", Toast.*LENGTH\_SHORT*).show();  
 return;  
 }  
  
 DatabaseHandler db = new DatabaseHandler(getActivity());  
 Cursor cursor = db.getDataById(id);  
 if (cursor.getCount() == 0) {  
 Toast.*makeText*(getActivity(), "No record Found", Toast.*LENGTH\_SHORT*).show();  
 } else {  
 boolean flag = db.insertMessage(message, Integer.*parseInt*(id));  
  
 if (flag) {  
 Toast.*makeText*(view.getContext(), "Successful", Toast.*LENGTH\_SHORT*).show();  
 } else {  
 Toast.*makeText*(view.getContext(), "Something Went Wrong!", Toast.*LENGTH\_SHORT*).show();  
 }  
 }  
  
 etUserId.setText("");  
 etMessage.setText("");  
 }  
 });  
  
  
 }  
}

showMessageFragment.java

package com.exmple.savecontactsandmessages.fragments;  
  
import android.database.Cursor;  
import android.os.Bundle;  
  
import androidx.annotation.NonNull;  
import androidx.annotation.Nullable;  
import androidx.fragment.app.Fragment;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.TextClock;  
import android.widget.TextView;  
import android.widget.Toast;  
  
import com.exmple.savecontactsandmessages.DatabaseHandler;  
import com.exmple.savecontactsandmessages.R;  
  
public class showMessagesFragment extends Fragment {  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* return inflater.inflate(R.layout.*fragment\_show\_messages*, container, false);  
 }  
  
 private EditText etShowMessages;  
 private Button find;  
 private TextView messages;  
  
 @Override  
 public void onViewCreated(@NonNull View view, @Nullable Bundle savedInstanceState) {  
 super.onViewCreated(view, savedInstanceState);  
  
 etShowMessages = view.findViewById(R.id.*etShowMessageId*);  
 find = view.findViewById(R.id.*findMessages*);  
 messages = view.findViewById(R.id.*messages*);  
  
 find.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String personId = etShowMessages.getText().toString().trim();  
  
 if (personId.isEmpty()) {  
 Toast.*makeText*(getActivity(), "Enter valid input ", Toast.*LENGTH\_SHORT*).show();  
 return;  
 }  
  
 DatabaseHandler db = new DatabaseHandler(getActivity());  
 Cursor cursor = db.getMessages(personId);  
  
 if(cursor.getCount() == 0) {  
 Toast.*makeText*(getActivity(),"No Record Found",Toast.*LENGTH\_SHORT*).show();  
 } else {  
 String t = "";  
  
 while(cursor.moveToNext()) {  
 t += cursor.getString(1) + "\n";  
 }  
 messages.setVisibility(View.*VISIBLE*);  
 messages.setText(t);  
 }  
  
 etShowMessages.setText("");  
 }  
 });  
  
 }  
}

UpdateMessageFragment.java

package com.exmple.savecontactsandmessages.fragments;  
  
import android.database.Cursor;  
import android.os.Bundle;  
  
import androidx.annotation.NonNull;  
import androidx.annotation.Nullable;  
import androidx.fragment.app.Fragment;  
  
import android.view.LayoutInflater;  
import android.view.View;  
import android.view.ViewGroup;  
import android.widget.Button;  
import android.widget.EditText;  
import android.widget.Toast;  
  
import com.exmple.savecontactsandmessages.DatabaseHandler;  
import com.exmple.savecontactsandmessages.R;  
  
public class UpdateMessageFragment extends Fragment {  
  
 @Override  
 public View onCreateView(LayoutInflater inflater, ViewGroup container,  
 Bundle savedInstanceState) {  
 *// Inflate the layout for this fragment* return inflater.inflate(R.layout.*fragment\_update\_message*, container, false);  
 }  
  
 public EditText etUserId, etMessageId, etMessage;  
 public Button updateMessage;  
  
 @Override  
 public void onViewCreated(@NonNull View view, @Nullable Bundle savedInstanceState) {  
 super.onViewCreated(view, savedInstanceState);  
  
 etUserId = view.findViewById(R.id.*etUserId*);  
 etMessageId = view.findViewById(R.id.*etMessageId*);  
 etMessage = view.findViewById(R.id.*etMessageRead*);  
 updateMessage = view.findViewById(R.id.*updateMessage*);  
  
 updateMessage.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View view) {  
 String id = etUserId.getText().toString().trim();  
 String messageId = etMessageId.getText().toString().trim();  
  
 if (id.isEmpty() || messageId.isEmpty()) {  
 Toast.*makeText*(getActivity(), "Enter valid input ", Toast.*LENGTH\_SHORT*).show();  
 return;  
 }  
  
 DatabaseHandler db = new DatabaseHandler(getActivity());  
 Cursor cursor = db.getDataById(id);  
  
 if(!etMessage.getText().toString().isEmpty()) {  
  
 if (cursor.getCount() == 0) {  
 Toast.*makeText*(getActivity(), "No record Found", Toast.*LENGTH\_SHORT*).show();  
 etMessage.setVisibility(View.*GONE*);  
 } else {  
 String temp = etMessage.getText().toString();  
  
 try {  
 db.updateData(Integer.*parseInt*(messageId),temp, id);  
 Toast.*makeText*(getActivity(), "Data Updated Successfully ", Toast.*LENGTH\_SHORT*).show();  
 } catch (Exception e) {  
 Toast.*makeText*(getActivity(),e.getMessage(),Toast.*LENGTH\_SHORT*).show();  
 }  
 }  
  
 etMessage.setText("");  
 etUserId.setText("");  
 etMessageId.setText("");  
  
 } else {  
 if (cursor.getCount() == 0) {  
 Toast.*makeText*(getActivity(), "No record Found", Toast.*LENGTH\_SHORT*).show();  
 etMessage.setVisibility(View.*GONE*);  
 } else {  
 Cursor cursor1 = db.getMessageById(messageId, id);  
 String message = cursor1.getColumnName(1);  
 etMessage.setVisibility(View.*VISIBLE*);  
 etMessage.setText(message);  
  
 }  
 }  
  
  
 }  
 });  
  
  
 }  
}

activity\_main.xml

*<?*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/draw\_layout"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 tools:openDrawer="start"  
 tools:context=".MainActivity">  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical">  
 <FrameLayout  
 android:id="@+id/fragment\_container"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent" />  
 </LinearLayout>  
  
 <com.google.android.material.navigation.NavigationView  
 android:id="@+id/nav\_view"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="match\_parent"  
 android:layout\_gravity="start"  
 app:headerLayout="@layout/nav\_header"  
 app:menu="@menu/draw\_menu" />  
  
</androidx.drawerlayout.widget.DrawerLayout>

Fragment\_contact\_entry.xml

*<?*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:id="@+id/name"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".fragments.ContactEntryFragment">  
  
  
 <EditText  
 android:id="@+id/nameEt"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="50dp"  
 android:layout\_marginTop="150dp"  
 android:layout\_marginEnd="50dp"  
 android:ems="10"  
 android:inputType="textPersonName"  
 android:gravity="center"  
 android:hint="Enter name"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toTopOf="parent" />  
  
 <EditText  
 android:id="@+id/phoneEt"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="50dp"  
 android:layout\_marginTop="50dp"  
 android:layout\_marginEnd="50dp"  
 android:ems="10"  
 android:inputType="phone"  
 android:gravity="center"  
 android:hint="Enter phone Number"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/nameEt" />  
  
 <EditText  
 android:id="@+id/emailEt"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="50dp"  
 android:layout\_marginTop="50dp"  
 android:layout\_marginEnd="50dp"  
 android:ems="10"  
 android:inputType="textEmailAddress"  
 android:gravity="center"  
 android:hint="Enter Email"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/phoneEt" />  
  
 <EditText  
 android:id="@+id/addressEt"  
 android:layout\_width="0dp"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginStart="50dp"  
 android:layout\_marginTop="50dp"  
 android:layout\_marginEnd="50dp"  
 android:ems="10"  
 android:inputType="textPostalAddress"  
 android:gravity="center"  
 android:hint="Enter Address"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/emailEt" />  
  
 <Button  
 android:id="@+id/submitBtn"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="70dp"  
 android:text="Submit"  
 app:layout\_constraintEnd\_toEndOf="parent"  
 app:layout\_constraintStart\_toStartOf="parent"  
 app:layout\_constraintTop\_toBottomOf="@+id/addressEt" />  
  
  
</androidx.constraintlayout.widget.ConstraintLayout>

Fragment\_delete.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 tools:context=".fragments.DeleteFragment">  
  
 <EditText  
 android:id="@+id/etDeleteId"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginHorizontal="20dp"  
 android:layout\_marginTop="15dp"  
 android:gravity="center"  
 android:hint="Enter Id"  
 android:inputType="number"  
 android:textSize="20sp" />  
  
 <Button  
 android:id="@+id/deleteSearchButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="Find" />  
  
 <androidx.recyclerview.widget.RecyclerView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/deleteRecyclerList"  
 android:padding="4dp"  
 android:visibility="gone"  
 android:scrollbars="vertical"/>  
  
 <Button  
 android:id="@+id/deleteButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:visibility="gone"  
 android:text="Delete" />  
  
</LinearLayout>

Fragment\_search.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 tools:context=".fragments.SerachFragment">  
  
 <TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="Search By Id"  
 android:textSize="24sp"  
 android:layout\_marginTop="50dp"  
 android:gravity="center"/>  
  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/etQuery"  
 android:hint="Enter Id"  
 android:gravity="center"  
 android:inputType="number"  
 android:layout\_marginTop="15dp"  
 android:layout\_marginHorizontal="20dp"  
 android:visibility="visible"  
 android:textSize="20sp"/>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Find"  
 android:visibility="visible"  
 android:layout\_gravity="center"  
 android:id="@+id/searchButton"/>  
  
 <androidx.recyclerview.widget.RecyclerView  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:id="@+id/listViewId"  
 android:padding="4dp"  
 android:scrollbars="vertical"/>  
  
</LinearLayout>

Fragment\_update.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 tools:context=".fragments.UpdateFragment">  
  
 <EditText  
 android:id="@+id/etUpdateId"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginHorizontal="20dp"  
 android:layout\_marginTop="15dp"  
 android:gravity="center"  
 android:hint="Enter Id"  
 android:inputType="number"  
 android:textSize="20sp" />  
  
 <Button  
 android:id="@+id/updateSearchButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="Find" />  
  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="10dp">  
  
 <TextView  
 android:id="@+id/tvUpdateIdShow"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:layout\_marginHorizontal="40dp"  
 android:text="Id : "  
 android:textSize="20sp"  
 android:visibility="gone" />  
  
 <TextView  
 android:id="@+id/tvUpdateId"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:layout\_marginLeft="30dp"  
 android:text="Id"  
 android:textSize="20sp"  
 android:visibility="gone" />  
 </LinearLayout>  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="10dp">  
  
 <TextView  
 android:id="@+id/tvUpdateName"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:layout\_marginLeft="40dp"  
 android:text="Name : "  
 android:textSize="20sp"  
 android:visibility="gone" />  
  
 <EditText  
 android:id="@+id/etUpdateName"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="20dp"  
 android:gravity="center"  
 android:inputType="textPersonName"  
 android:visibility="gone" />  
 </LinearLayout>  
  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="10dp">  
  
 <TextView  
 android:id="@+id/tvUpdatePhone"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:layout\_marginLeft="40dp"  
 android:text="Phone : "  
 android:textSize="20sp"  
 android:visibility="gone" />  
  
 <EditText  
 android:id="@+id/etUpdatePhone"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="20dp"  
 android:gravity="center"  
 android:inputType="phone"  
 android:visibility="gone" />  
 </LinearLayout>  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="10dp">  
  
 <TextView  
 android:id="@+id/tvUpdateEmail"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:layout\_marginLeft="40dp"  
 android:text="Email : "  
 android:textSize="20sp"  
 android:visibility="gone" />  
  
 <EditText  
 android:id="@+id/etUpdateEmail"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="20dp"  
 android:gravity="center"  
 android:inputType="textEmailAddress"  
 android:visibility="gone" />  
 </LinearLayout>  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginTop="10dp">  
  
 <TextView  
 android:id="@+id/tvUpdateAddress"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:layout\_marginLeft="40dp"  
 android:text="Address : "  
 android:textSize="20sp"  
 android:visibility="gone" />  
  
 <EditText  
 android:id="@+id/etUpdateAddress"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginLeft="20dp"  
 android:gravity="center"  
 android:inputType="textPostalAddress"  
 android:visibility="gone" />  
 </LinearLayout>  
  
 <Button  
 android:id="@+id/etUpdateButton"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:layout\_marginTop="10dp"  
 android:text="Update"  
 android:visibility="gone" />  
  
</LinearLayout>

Fragment\_view\_contact.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".fragments.ViewContactFragment">  
  
 <androidx.recyclerview.widget.RecyclerView  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:id="@+id/recyclerView"  
 android:padding="4dp"  
 android:scrollbars="vertical"/>  
  
</FrameLayout>

List\_layout.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:orientation="vertical" android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:padding="15dp"  
 android:id="@+id/parent\_layout">  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/idDb"  
 android:text="id"  
 android:paddingHorizontal="10dp"  
 android:paddingVertical="2dp"/>  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/nameTv"  
 android:text="Name"  
 android:paddingHorizontal="10dp"  
 android:paddingVertical="2dp"/>  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/phoneTv"  
 android:text="Phone"  
 android:paddingHorizontal="10dp"  
 android:paddingVertical="2dp"/>  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/emailTv"  
 android:text="Email"  
 android:paddingHorizontal="10dp"  
 android:paddingVertical="2dp"/>  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/addressTv"  
 android:text="Address"  
 android:paddingHorizontal="10dp"  
 android:paddingVertical="2dp"/>  
  
</LinearLayout>

Nav\_header.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="170dp"  
 android:background="@mipmap/ic\_launcher\_round"  
 android:orientation="vertical">  
  
</LinearLayout>

Draw\_menu.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<menu xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 tools:showIn="navigation\_view">  
 <group android:checkableBehavior="single">  
 <item  
 android:id="@+id/contactEntry"  
 android:icon="@drawable/add"  
 android:title="Contact Entry" />  
  
 <item  
 android:id="@+id/viewEntries"  
 android:icon="@drawable/view"  
 android:title="View Contact" />  
  
 <item  
 android:id="@+id/search"  
 android:icon="@drawable/search"  
 android:title="Search User" />  
  
 <item  
 android:id="@+id/updateEntry"  
 android:icon="@drawable/update"  
 android:title="Update User" />  
  
 <item  
 android:id="@+id/deleteEntry"  
 android:icon="@drawable/delete"  
 android:title="Delete User" />  
  
 <item  
 android:id="@+id/viewAllMessages"  
 android:icon="@drawable/view"  
 android:title="View Messages" />  
  
 <item  
 android:id="@+id/viewRecentMessages"  
 android:icon="@drawable/view"  
 android:title="View Recent Messages" />  
  
 <item  
 android:id="@+id/addMessageMenu"  
 android:icon="@drawable/search"  
 android:title="Add Message" />  
  
 <item  
 android:id="@+id/updateMessageMenu"  
 android:icon="@drawable/update"  
 android:title="Update Message" />  
  
 <item  
 android:id="@+id/deleteMessageMenu"  
 android:icon="@drawable/delete"  
 android:title="Delete Message" />  
 </group>  
</menu>

Fragment\_add\_message.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".fragments.AddMessageFragment">  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:orientation="vertical"  
 android:layout\_marginTop="50dp"  
 android:layout\_height="wrap\_content">  
  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/etUserId"  
 android:hint="Enter User Id"  
 android:gravity="center"  
 android:inputType="number"  
 android:layout\_marginTop="15dp"  
 android:layout\_marginHorizontal="20dp"  
 android:visibility="visible"  
 android:textSize="20sp"/>  
  
  
 <EditText  
 android:id="@+id/etUserMessage"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginHorizontal="20dp"  
 android:layout\_marginTop="15dp"  
 android:gravity="center"  
 android:hint="Enter message"  
 android:inputType="text"  
 android:textSize="20sp"  
 android:visibility="visible" />  
  
 </LinearLayout>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Find"  
 android:visibility="visible"  
 android:layout\_gravity="center"  
 android:id="@+id/addMessage"/>  
  
</FrameLayout>

Fragment\_show\_messages.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"  
 tools:context=".fragments.showMessagesFragment">  
  
 <EditText  
 android:id="@+id/etShowMessageId"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginHorizontal="20dp"  
 android:layout\_marginTop="15dp"  
 android:gravity="center"  
 android:hint="Enter Id"  
 android:inputType="number"  
 android:textSize="20sp" />  
  
 <Button  
 android:id="@+id/findMessages"  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:layout\_gravity="center"  
 android:text="Find" />  
  
 <TextView  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/messages"  
 android:layout\_gravity="center"  
 android:visibility="gone"  
 />  
  
</LinearLayout>

Fragment\_update\_message.xml

*<?*xml version="1.0" encoding="utf-8"*?>*<FrameLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 xmlns:tools="http://schemas.android.com/tools"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 tools:context=".fragments.UpdateMessageFragment">  
  
 <LinearLayout  
 android:layout\_width="match\_parent"  
 android:orientation="vertical"  
 android:layout\_marginTop="50dp"  
 android:layout\_height="wrap\_content">  
  
 <EditText  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:id="@+id/etUserId"  
 android:hint="Enter User Id"  
 android:gravity="center"  
 android:inputType="number"  
 android:layout\_marginTop="15dp"  
 android:layout\_marginHorizontal="20dp"  
 android:visibility="visible"  
 android:textSize="20sp"/>  
  
  
 <EditText  
 android:id="@+id/etMessageId"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginHorizontal="20dp"  
 android:layout\_marginTop="15dp"  
 android:gravity="center"  
 android:hint="Enter message id"  
 android:inputType="number"  
 android:textSize="20sp"  
 android:visibility="visible" />  
  
 <EditText  
 android:id="@+id/etMessageRead"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_marginHorizontal="20dp"  
 android:layout\_marginTop="15dp"  
 android:gravity="center"  
 android:hint="Enter message"  
 android:inputType="number"  
 android:textSize="20sp"  
 android:visibility="gone" />  
  
 </LinearLayout>  
  
 <Button  
 android:layout\_width="wrap\_content"  
 android:layout\_height="wrap\_content"  
 android:text="Update"  
 android:visibility="visible"  
 android:layout\_gravity="center"  
 android:id="@+id/updateMessage"/>  
  
</FrameLayout>

