**A**

**LAB REPORT**

**ON**

**Mobile Programming**

**By**

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# Develop an android application to develop hello World application

## Source Code

**activity\_main.java:**

<?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"

tools:context=".MainActivity">

<TextView

android:layout\_gravity="center"

android:textAlignment="center"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:text="Hello World"

android:textSize="24dp"

/>

</LinearLayout>

**MainActivity.java**

package com.example.helloworld;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

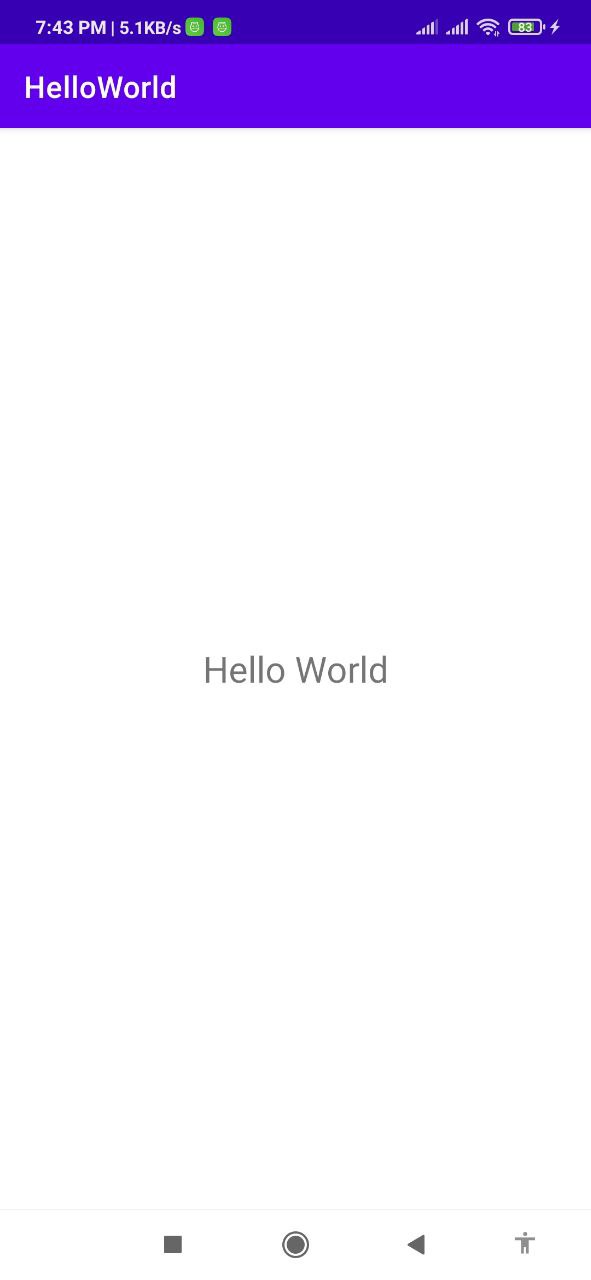
super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

}

}

## Output Window



# Develop android application to develop Login Form. Pass and display username on another activity

## Source Code

**activity\_login.java**

<?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=".LoginActivity">

<EditText

android:id="@+id/username"

android:layout\_width="346dp"

android:layout\_height="60dp"

android:layout\_marginBottom="44dp"

android:background="@drawable/edittext\_bg\_color"

android:ems="10"

android:hint=" enter Username"

android:inputType="textPersonName"

android:textSize="30sp"

app:layout\_constraintBottom\_toTopOf="@+id/password"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.497"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent"

app:layout\_constraintVertical\_bias="1.0" />

<EditText

android:id="@+id/password"

android:layout\_width="347dp"

android:layout\_height="64dp"

android:layout\_marginBottom="60dp"

android:hint=" enter password"

android:inputType="textPassword"

android:background="@drawable/edittext\_bg\_color"

android:textSize="30sp"

app:layout\_constraintBottom\_toTopOf="@+id/button"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.468"

app:layout\_constraintStart\_toStartOf="parent" />

<Button

android:id="@+id/button"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_marginBottom="252dp"

android:background="@drawable/button\_bg\_color"

android:text="Login"

android:textSize="30dp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.498"

app:layout\_constraintStart\_toStartOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

**activity\_display.java**

<?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=".DisplayActivity">

<TextView

android:id="@+id/textView"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textSize="44dp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintHorizontal\_bias="0.562"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

**LoginActivity.java**

package com.example.loginform;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.view.View;

import android.widget.\*;

public class LoginActivity extends AppCompatActivity {

Button btn;

EditText edtUn,edtPw;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_login);

btn=findViewById(R.id.button);

edtUn=findViewById(R.id.username);

edtPw=findViewById(R.id.password);

btn.setOnClickListener(v -> {

String username=edtUn.getText().toString();

String password=edtPw.getText().toString();

if(username.equals("Prajwal") && password.equals("12345")) {

Intent inte = new Intent(getApplicationContext(), DisplayActivity.class);

inte.putExtra("username", username);

startActivity(inte);

}

else{

Toast.makeText(LoginActivity.this, "Invalid username or password", Toast.LENGTH\_LONG).show();

}

});

}

}

**DisplayActivity.java**

package com.example.loginform;

import android.content.Intent;

import android.os.Bundle;

import android.widget.TextView;

import androidx.appcompat.app.AppCompatActivity;

public class DisplayActivity extends AppCompatActivity {

TextView tv;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_display);

tv=findViewById(R.id.textView);

Intent inte = getIntent();

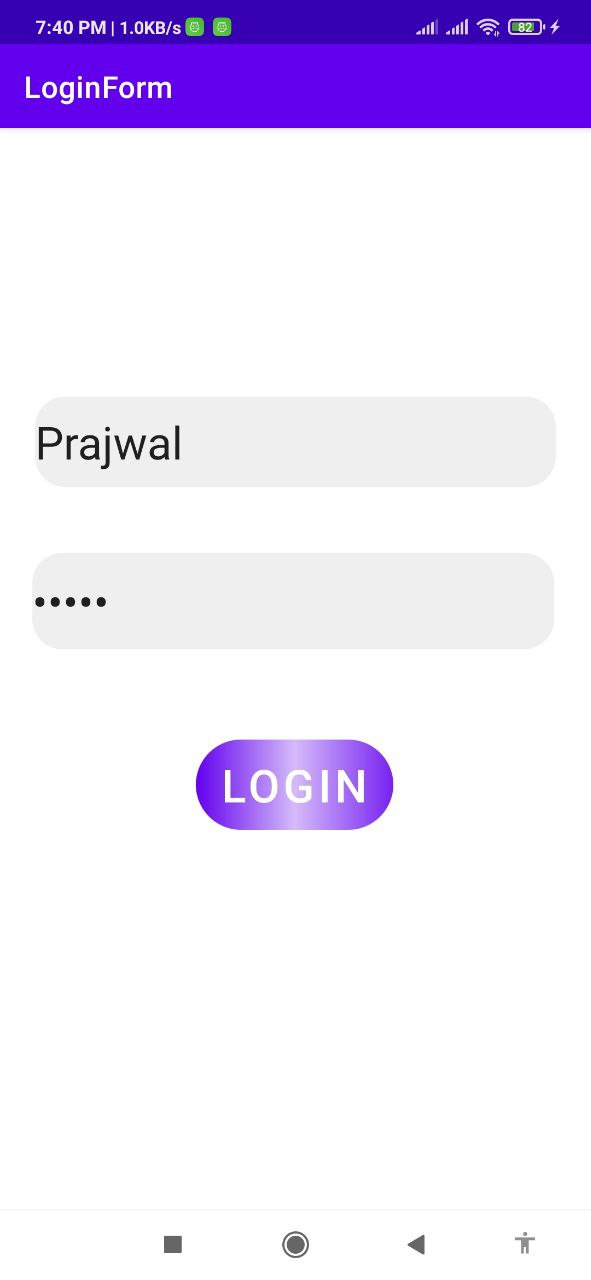
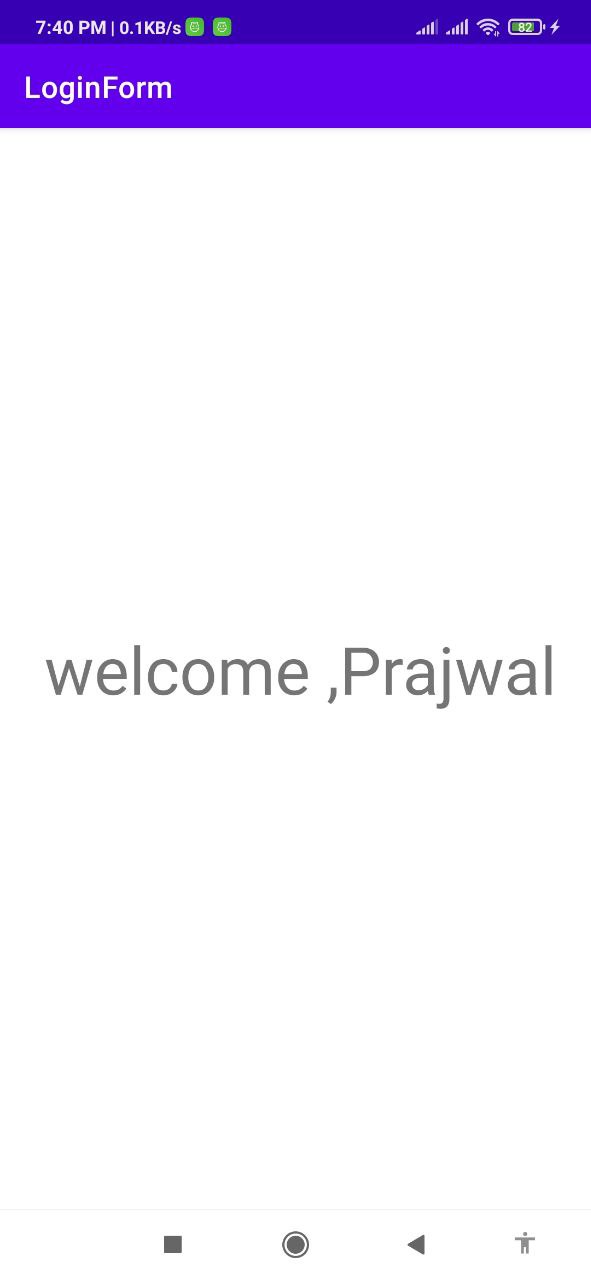
String uname=inte.getStringExtra("username");

tv.setText("welcome ,"+uname);

}

}

## Output Window



# Develop Android application to create two fragments and switch from one fragment to another fragment.

## Source Code

**activity\_main.xml**

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent">

<FrameLayout

android:id="@+id/fragment\_container"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:layout\_above="@+id/buttonSwitchFragment" />

<Button

android:id="@+id/buttonSwitchFragment"

android:layout\_width="234dp"

android:layout\_height="96dp"

android:layout\_alignParentBottom="true"

android:layout\_centerHorizontal="true"

android:layout\_marginBottom="16dp"

android:textSize="24dp"

android:text="Switch Fragment" />

</RelativeLayout>

**fragment\_one.xml**

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:padding="16dp">

<TextView

android:id="@+id/textViewFragmentOne"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Fragment One"

android:textSize="24sp"

android:layout\_centerInParent="true" />

</RelativeLayout>

**fragment\_two.xml**

<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

android:padding="16dp">

<TextView

android:id="@+id/textViewFragmentTwo"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Fragment Two"

android:textSize="24sp"

android:layout\_centerInParent="true" />

</RelativeLayout>

**MainActivity.java**

package com.example.fragmentexample;

import android.os.Bundle;

import androidx.appcompat.app.AppCompatActivity;

import androidx.fragment.app.\*;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

loadFragment(new FragmentOne());

findViewById(R.id.buttonSwitchFragment).setOnClickListener(v -> {

FragmentTwo fragmentTwo = new FragmentTwo();

Bundle args = new Bundle();

args.putString("dataKey", "Data from Fragment One");

fragmentTwo.setArguments(args);

loadFragment(fragmentTwo);

});

}

private void loadFragment(Fragment fragment) {

FragmentManager fragmentManager = getSupportFragmentManager();

FragmentTransaction fragmentTransaction = fragmentManager.beginTransaction();

fragmentTransaction.replace(R.id.fragment\_container, fragment);

fragmentTransaction.addToBackStack(null);

fragmentTransaction.commit();

}

}

**FragmentOne.java**

package com.example.fragmentexample;

import android.os.Bundle;

import android.view.\*;

import androidx.fragment.app.Fragment;

public class FragmentOne extends Fragment {

@Override

public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {

return inflater.inflate(R.layout.fragment\_one, container, false);

}

}

**FragmentTwo.java**

package com.example.fragmentexample;

import android.os.Bundle;

import android.view.\*;

import androidx.fragment.app.Fragment;

import android.widget.TextView;

public class FragmentTwo extends Fragment {

@Override

public View onCreateView(LayoutInflater inflater, ViewGroup container, Bundle savedInstanceState) {

View view = inflater.inflate(R.layout.fragment\_two, container, false);

TextView textViewFragmentTwo = view.findViewById(R.id.textViewFragmentTwo);

Bundle args = getArguments();

if (args != null) {

String data = args.getString("dataKey", "");

textViewFragmentTwo.setText(data);

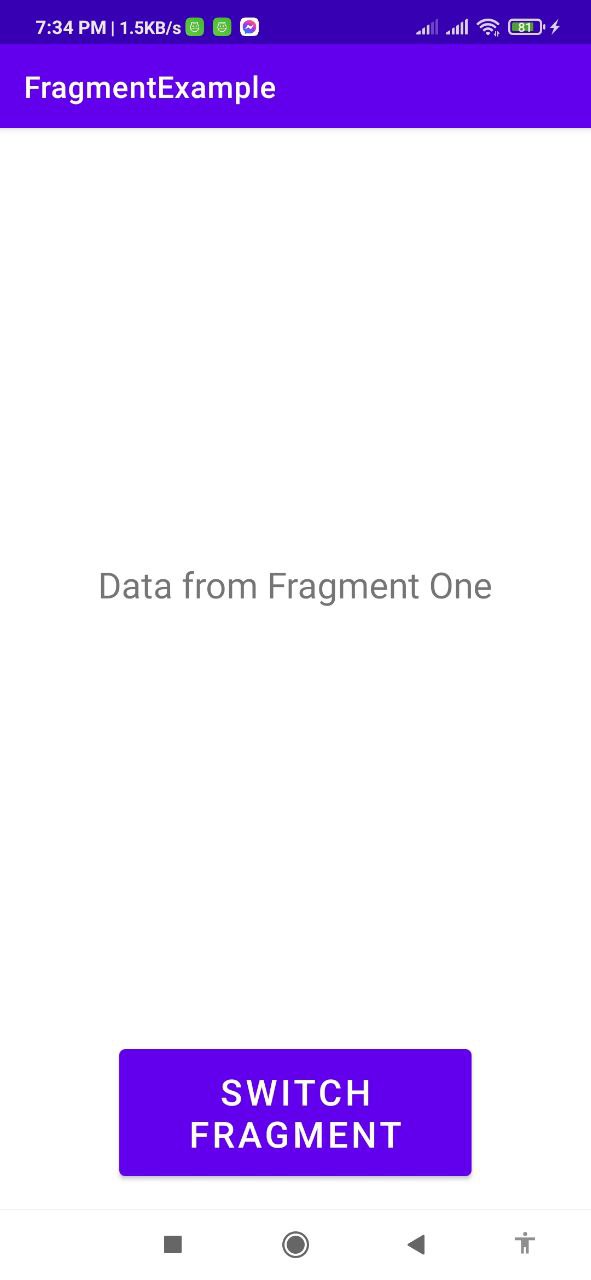
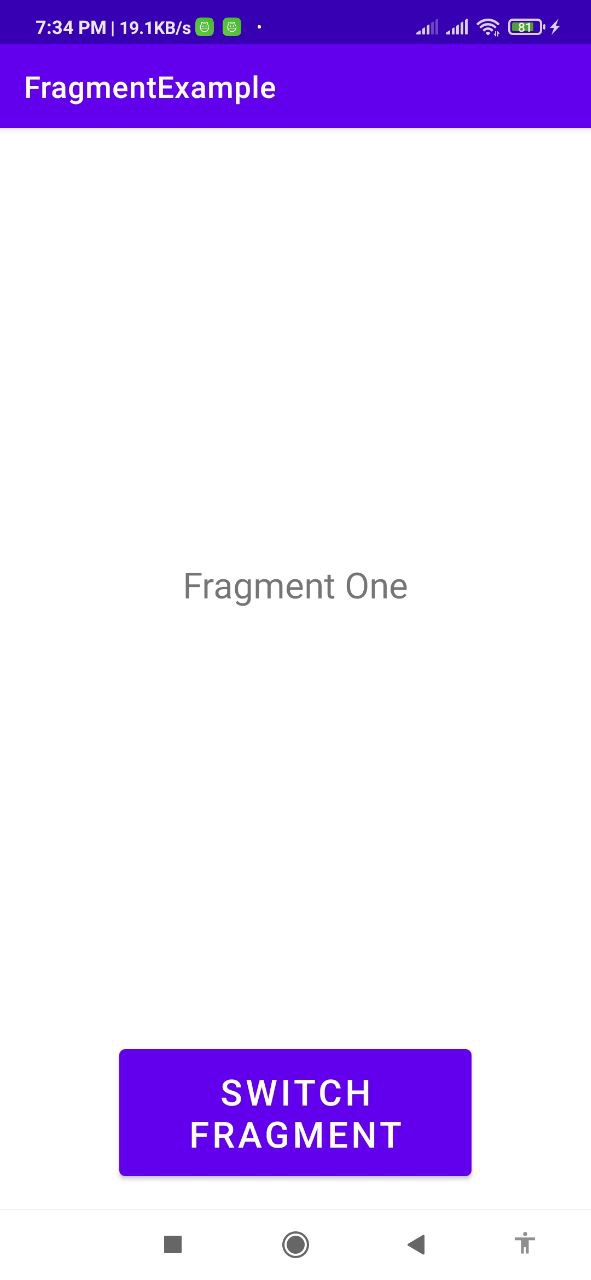
}

return view;

}

}

## Output Window



# Develop android to create context, option and popup menu.

## Source Code

**Menu.xml**

<?xml version="1.0" encoding="utf-8"?>

<menu xmlns:android="http://schemas.android.com/apk/res/android">

<item android:id="@+id/home"

android:title="home">Home</item>

<item android:id="@+id/about\_us"

android:title="About us">About Us</item>

<item android:id="@+id/rate\_us"

android:title="Share">Share</item>

<item android:id="@+id/context\_menu"

android:title="contextmenu">context menu</item>

<item android:id="@+id/popup\_menu"

android:title="popup menu">popup menu</item>

</menu>

**Context\_menu.xml**

<?xml version="1.0" encoding="utf-8"?>

<menu xmlns:android="http://schemas.android.com/apk/res/android">

<item android:id="@+id/profile"

android:title="profile">view profile</item>

<item android:id="@+id/call"

android:title="call">call</item>

</menu>

**Popup.xml**

<?xml version="1.0" encoding="utf-8"?>

<menu xmlns:android="http://schemas.android.com/apk/res/android">

<item android:id="@+id/hide"

android:title="hide">hide</item>

<item android:id="@+id/show"

android:title="show">show</item>

</menu>

**activity\_popup\_menu.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"

tools:context=".PopupMenuShow">

<Button

android:id="@+id/btn"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="show popup menu"

/>

</LinearLayout>

**activity\_context\_menu.java**

<?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=".ContextMenu">

<ListView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:id="@+id/listview"

/>

</LinearLayout>

**PopMenuShow.java**

package com.example.menuexample;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.\*;

import android.widget.\*;

public class PopupMenuShow extends AppCompatActivity {

Button btn;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_popup\_menu);

btn=findViewById(R.id.btn);

btn.setOnClickListener(v -> {

PopupMenu popupMenu = new PopupMenu(this,btn);

popupMenu.getMenuInflater().inflate(R.menu.popup,popupMenu.getMenu());

popupMenu.show();

popupMenu.setOnMenuItemClickListener(item -> {

Toast.makeText(PopupMenuShow.this, "you clicked"+item.getTitle(), Toast.LENGTH\_SHORT).show();

return true;

});

});

}

}

**MainActivity.java**

package com.example.menuexample;

import androidx.annotation.NonNull;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;

import android.os.Bundle;

import android.view.Menu;

import android.view.MenuItem;

import android.widget.Toast;

public class MainActivity extends AppCompatActivity {

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

}

@Override

public boolean onCreateOptionsMenu(Menu menu) {

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

return super.onCreateOptionsMenu(menu);

}

@Override

public boolean onOptionsItemSelected(@NonNull MenuItem item) {

switch(item.getItemId()){

case R.id.about\_us:

Toast.makeText(this, "you are going to about us activity....", Toast.LENGTH\_SHORT).show();

break;

case R.id.rate\_us:

Toast.makeText(this, "you are going to share activity....", Toast.LENGTH\_SHORT).show();

break;

case R.id.home:

Toast.makeText(this, "you are going to home activity....", Toast.LENGTH\_SHORT).show();

break;

case R.id.context\_menu:

Intent intent = new Intent(this,ContextMenu.class);

startActivity(intent);

break;

case R.id.popup\_menu:

Intent intent2 = new Intent(this, PopupMenuShow.class);

startActivity(intent2);

break;

}

return super.onOptionsItemSelected(item);

}

}

**ContextMenu.java**

package com.example.menuexample;

import androidx.annotation.NonNull;

import androidx.appcompat.app.AppCompatActivity;

import android.os.Bundle;

import android.view.\*;

import android.widget.\*;

public class ContextMenu extends AppCompatActivity {

ListView listView;

String contacts[]={"Roshan","subhanjal","padam","shreya","roshni"};

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_context\_menu);

listView=findViewById(R.id.listview);

ArrayAdapter<String> adapter=new ArrayAdapter<>(this,android.R.layout.simple\_list\_item\_1,contacts);

listView.setAdapter(adapter);

registerForContextMenu(listView);

}

@Override

public void onCreateContextMenu(android.view.ContextMenu menu, View v, android.view.ContextMenu.ContextMenuInfo menuInfo) {

super.onCreateContextMenu(menu, v, menuInfo);

getMenuInflater().inflate(R.menu.context\_menu,menu);

}

@Override

public boolean onContextItemSelected(@NonNull MenuItem item) {

switch(item.getItemId()){

case R.id.profile:

Toast.makeText(this, "viewing profile....", Toast.LENGTH\_SHORT).show();

break;

case R.id.call:

Toast.makeText(this, "calling....", Toast.LENGTH\_SHORT).show();

break;

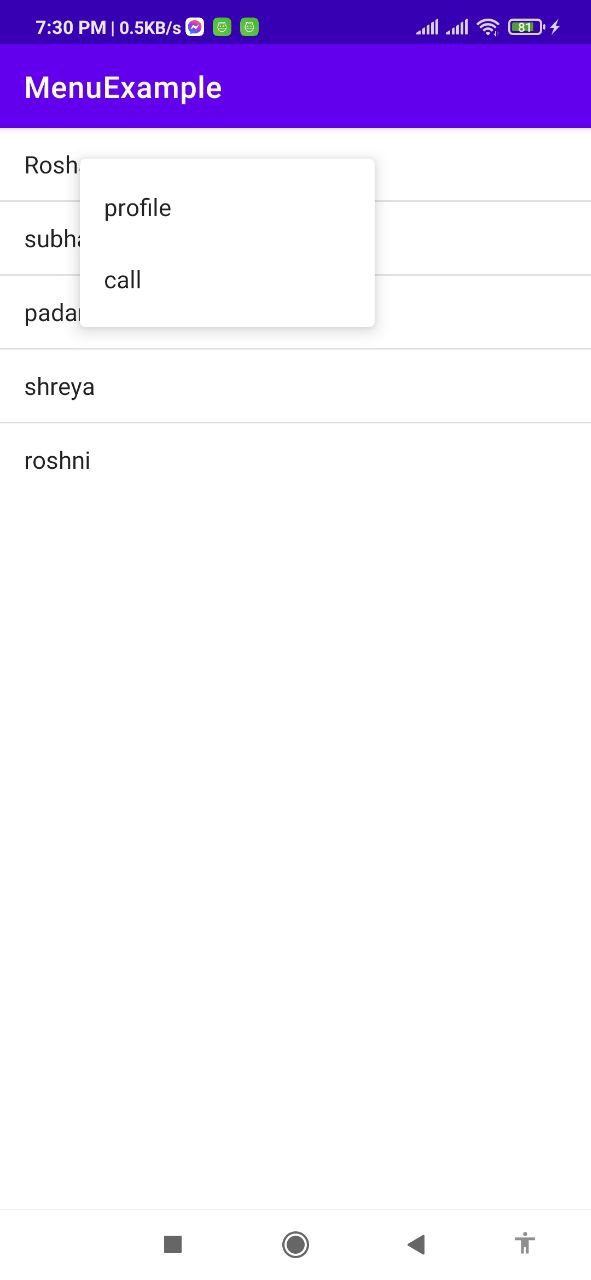
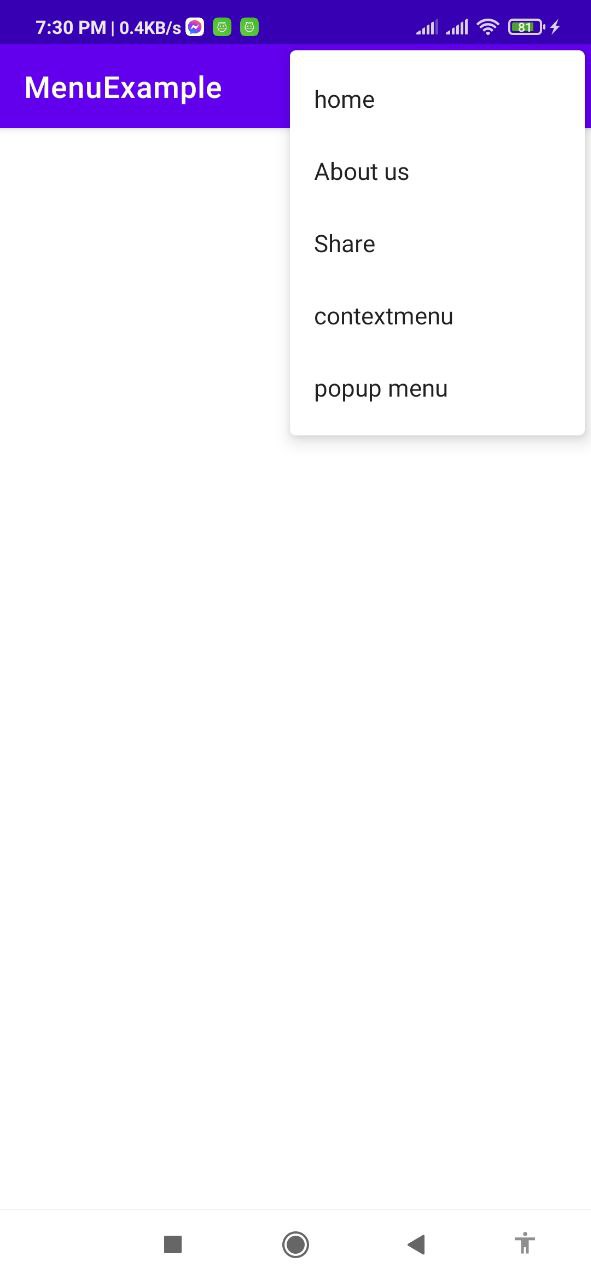
}

return super.onContextItemSelected(item);

}

}

## Output Window



# Develop an android application to create a dialog box.

## Source Code

**activity\_main.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:orientation="vertical"

android:gravity="center"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<LinearLayout

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:orientation="vertical"

>

<Button

android:id="@+id/one\_button\_dialog"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="one button Dialog"

/>

<Button

android:id="@+id/multi\_button\_dialog"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="multi button Dialog"

/>

<Button

android:id="@+id/custom\_dialog"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="custom Dialog"

/>

<Button

android:id="@+id/dialog\_frgment"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:text="Dialog Fragment"

/>

</LinearLayout>

</LinearLayout>

**fragment\_custom\_dialog.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="match\_parent"

android:orientation="vertical"

android:gravity="center">

<TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textColor="#DD922121"

android:textSize="44dp"

android:textAllCaps="false"

android:text="do you want to close this dialog: "/>

<Button

android:id="@+id/yesf"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textSize="30dp"

android:text="yes"

/>

<Button

android:id="@+id/nof"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textSize="30dp"

android:text="no"

/>

</LinearLayout>

**activity\_custom\_dialog.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"

android:gravity="center">

` <TextView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textColor="#DD922121"

android:textSize="44dp"

android:text="do you want to close this dialog: "/>

<Button

android:id="@+id/yes"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textSize="30dp"

android:text="yes"

/>

<Button

android:id="@+id/no"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:textSize="30dp"

android:text="no"

/>

</LinearLayout>

**MainActivity.java**

package com.example.dialogexample;

import android.app.Dialog;

import android.content.DialogInterface;

import android.graphics.Color;

import android.graphics.drawable.ColorDrawable;

import android.os.Bundle;

import android.view.View;

import android.widget.\*;

import androidx.appcompat.app.\*;

public class MainActivity extends AppCompatActivity {

Button one,multi,custom,dialogFragmentbtn;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

one=findViewById(R.id.one\_button\_dialog);

multi=findViewById(R.id.multi\_button\_dialog);

custom=findViewById(R.id.custom\_dialog);

dialogFragmentbtn=findViewById(R.id.dialog\_frgment);

one.setOnClickListener(v -> {

AlertDialog alertDialog=new AlertDialog.Builder(MainActivity.this).create();

alertDialog.setTitle("press ok");

alertDialog.setMessage("this is single button");

alertDialog.setCancelable(false);

alertDialog.setButton(DialogInterface.BUTTON\_POSITIVE, "Ok", (dialog, which) -> Toast.makeText(MainActivity.this, "you just finished single button test", Toast.LENGTH\_SHORT).show());

alertDialog.show();

});

multi.setOnClickListener(v -> {

AlertDialog.Builder alertDialogBuilder = new AlertDialog.Builder(MainActivity.this);

alertDialogBuilder.setTitle("multi button check");

alertDialogBuilder.setIcon(R.drawable.ic\_launcher\_background);

alertDialogBuilder.setCancelable(false);

alertDialogBuilder.setMessage("this is three");

alertDialogBuilder.setPositiveButton("yes", (dialog, which) -> { Toast.makeText(MainActivity.this, "you just press yes button ", Toast.LENGTH\_SHORT).show();

System.out.println(which);

});

alertDialogBuilder.setNegativeButton("No", (dialog, which) -> {

Toast.makeText(MainActivity.this, "you just press No button ", Toast.LENGTH\_SHORT).show();

System.out.println(which);

});

alertDialogBuilder.setNeutralButton("cancel", (dialog, which) -> {

Toast.makeText(MainActivity.this, "you just press cancel button ", Toast.LENGTH\_SHORT).show();

System.out.println(which);

});

alertDialogBuilder.show();

});

custom.setOnClickListener(v -> {

Button yes,no;

Dialog dialog = new Dialog(MainActivity.this);

dialog.setContentView(R.layout.activity\_custom\_dialog);

dialog.getWindow().setBackgroundDrawable(new ColorDrawable(Color.TRANSPARENT));

yes=dialog.findViewById(R.id.yes);

no=dialog.findViewById(R.id.no);

yes.setOnClickListener(v1 -> {

dialog.dismiss();

Toast.makeText(MainActivity.this, "you close dialog", Toast.LENGTH\_SHORT).show();

});

no.setOnClickListener(v12 -> Toast.makeText(MainActivity.this, "you clicked no ", Toast.LENGTH\_SHORT).show());

dialog.show();

});

dialogFragmentbtn.setOnClickListener(v -> {

CustomDialogFragment customDialogFragment = new CustomDialogFragment();

customDialogFragment.setCancelable(false);

customDialogFragment.show(getSupportFragmentManager(),"dialog");

});

}

}

**CustomDialogFragment.java**

package com.example.dialogexample;

import android.graphics.Color;

import android.graphics.drawable.ColorDrawable;

import android.os.Bundle;

import android.view.\*;

import android.widget.\*;

import androidx.fragment.app.DialogFragment;

public class CustomDialogFragment extends DialogFragment {

public View onCreateView(LayoutInflater inflater, ViewGroup parent, Bundle savedInstanceState) {

Button yes,no;

View view = inflater.inflate(R.layout.fragment\_custom\_dialog,parent,false);

yes=view.findViewById(R.id.yesf);

no=view.findViewById(R.id.nof);

getDialog().getWindow().setBackgroundDrawable(new ColorDrawable(Color.TRANSPARENT));

yes.setOnClickListener(v -> {

getDialog().dismiss();

Toast.makeText(getContext(), "you close dialog", Toast.LENGTH\_SHORT).show();

});

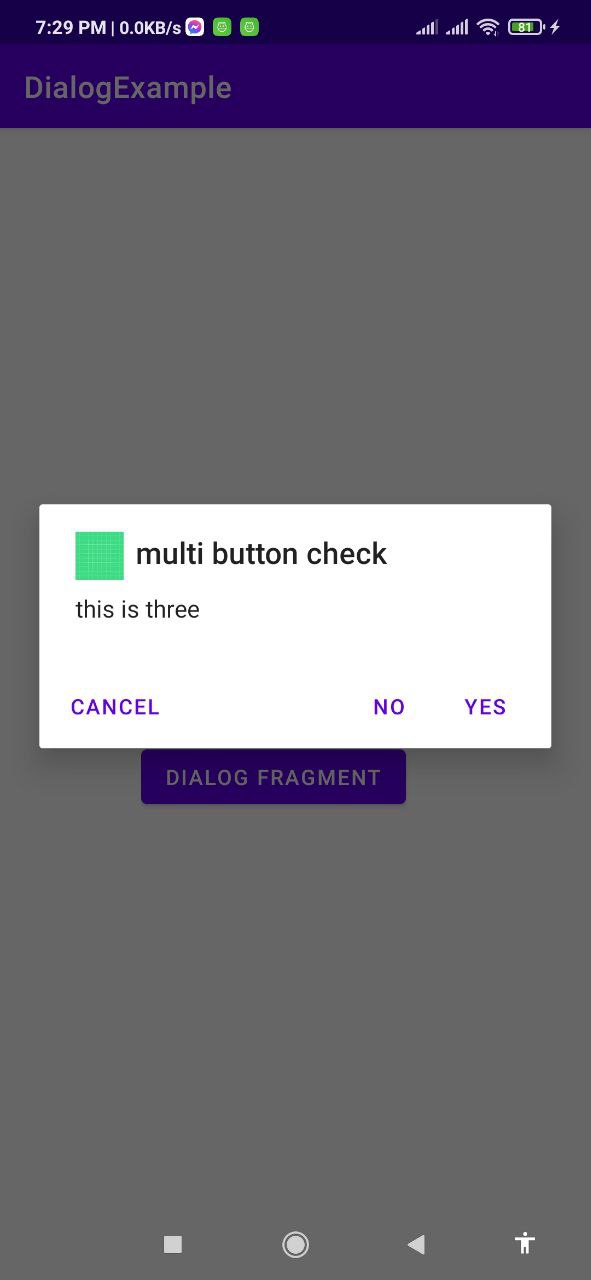
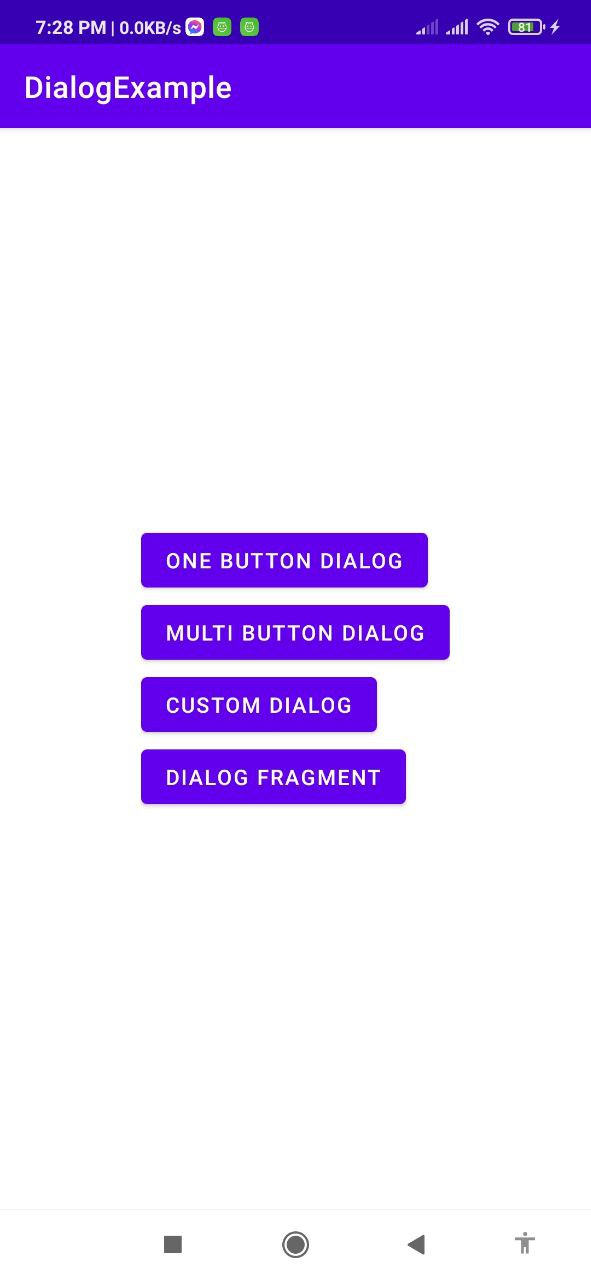
no.setOnClickListener(v -> Toast.makeText(getContext(), "you clicked no ", Toast.LENGTH\_SHORT).show());

return view;

}

}

## Output Window



# Develop an android application to store the data in database and display it using recycler view.

## Source Code

**activity\_main.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:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MainActivity">

<androidx.recyclerview.widget.RecyclerView

android:id="@+id/rv\_quotes"

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

</androidx.constraintlayout.widget.ConstraintLayout>

**contact\_item.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="wrap\_content"

android:background="#E6E5E5"

android:id="@+id/ll\_contact\_item"

android:padding="16dp">

<ImageView

android:id="@+id/contact\_image"

android:layout\_width="64dp"

android:layout\_height="64dp"

android:scaleType="centerCrop"

android:src="@drawable/avatar" />

<LinearLayout

android:layout\_width="0dp"

android:layout\_height="wrap\_content"

android:layout\_weight="1"

android:orientation="vertical"

android:paddingStart="16dp">

<TextView

android:id="@+id/contact\_name"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:textColor="#000"

android:textSize="16sp"

tools:text="John Doe" />

<TextView

android:id="@+id/contact\_email"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:textColor="#666"

android:textSize="14sp"

tools:text="john.doe@example.com" />

<TextView

android:id="@+id/contact\_phone"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:textColor="#666"

android:textSize="14sp"

tools:text="(555) 555-1212" />

</LinearLayout>

</LinearLayout>

**MainActivity.java**

package com.example.sqllitedemo;

import android.os.Bundle;

import android.view.Menu;

import androidx.appcompat.app.AppCompatActivity;

import androidx.recyclerview.widget.\*;

import java.util.ArrayList;

public class MainActivity extends AppCompatActivity {

private RecyclerViewAdapter recyclerViewAdapter;

private RecyclerView rvContacts;

private LinearLayoutManager layoutManager;

private ArrayList<Contact> contacts;

private DatabaseHelper dbHelper;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

rvContacts = findViewById(R.id.rv\_quotes);

layoutManager = new LinearLayoutManager(this);

rvContacts.setLayoutManager(layoutManager);

dbHelper = new DatabaseHelper(this);

saveSomeTempContacts();

contacts = dbHelper.getAllContacts();

recyclerViewAdapter = new RecyclerViewAdapter(this , contacts);

rvContacts.setAdapter(recyclerViewAdapter);

}

public boolean onCreateOptionsMenu(Menu menu) {

getMenuInflater().inflate(R.menu.recycler\_view\_option\_menu,menu);

return true;

}

private void saveSomeTempContacts(){

String[] names = {

"John Smith",

"Mary Jones",

"Peter Brown",

"Susan Green",

"David Williams",

"Sarah Davis",

"Michael Carter",

"Jessica Garcia",

"William Hernandez",

"Linda Lopez"

};

String[] emails = {

"john.smith@gmail.com",

"mary.jones@yahoo.com",

"peter.brown@hotmail.com",

"susan.green@aol.com",

"david.williams@outlook.com",

"sarah.davis@icloud.com",

"michael.carter@msn.com",

"jessica.garcia@yahoo.com",

"william.hernandez@gmail.com",

"linda.lopez@hotmail.com"

};

String[] phoneNumbers = {

"9841234567",

"9851234567",

"9861234567",

"9871234567",

"9881234567",

"9891234567",

"9841234567",

"9851234567",

"9861234567",

"9871234567",

};

for (int i = 0; i < names.length; i++) {

Contact contact = new Contact(i + 1, names[i], phoneNumbers[i], emails[i]);

dbHelper.saveContact(contact);

}

}

}

**DatabaseHelper.java**

package com.example.sqllitedemo;

import android.content.ContentValues;

import android.content.Context;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.database.sqlite.SQLiteOpenHelper;

import android.util.Log;

import android.widget.Toast;

import androidx.annotation.Nullable;

import java.util.ArrayList;

import java.util.Arrays;

public class DatabaseHelper extends SQLiteOpenHelper {

private String TAG = "Database Helper";

private static final String DB\_NAME = "phone\_directory\_db";

private static final int DB\_VERSION = 1;

private Context context;

public DatabaseHelper(@Nullable Context context) {

super(context, DB\_NAME, null, DB\_VERSION);

this.context=context;

}

@Override

public void onCreate(SQLiteDatabase db) {

String CREATE\_TABLE\_QUERY = "CREATE TABLE contacts(id INTEGER PRIMARY KEY AUTOINCREMENT, name TEXT, phone TEXT, email TEXT)";

db.execSQL(CREATE\_TABLE\_QUERY);

Toast.makeText(context, "", Toast.LENGTH\_SHORT).show();

}

@Override

public void onUpgrade(SQLiteDatabase db, int oldVersion, int newVersion) {

String DROP\_TABLE\_QUERY = "DROP TABLE IF EXISTS contacts";

db.execSQL(DROP\_TABLE\_QUERY);

onCreate(db);

}

public boolean saveContact(Contact contact){

SQLiteDatabase db = this.getWritableDatabase();

ContentValues values = new ContentValues();

values.put("id", contact.getId());

values.put("name", contact.getName());

values.put("phone", contact.getPhone());

values.put("email", contact.getEmail());

long result = db.insert("contacts", null, values);

db.close();

return result > -1;

}

public ArrayList<Contact> getAllContacts() {

ArrayList<Contact> contactList = new ArrayList<>();

SQLiteDatabase database = this.getReadableDatabase();

Cursor cursor = database.rawQuery("SELECT \* FROM contacts", null);

String[] columns = {"id", "name", "email", "phone"};

String[] args = {"Ram", "2"};

Log.d(TAG, "getAllContacts: " + Arrays.toString(columns));

Cursor cursor1 = database.query("contacts", columns, null, null, null, null, null);

if (cursor.moveToFirst()) {

int idIndex = cursor.getColumnIndex("id");

int nameIndex = cursor.getColumnIndex("name");

int emailIndex = cursor.getColumnIndex("email");

int phoneIndex = cursor.getColumnIndex("phone");

do {

int id = cursor.getInt(idIndex);

String name = cursor.getString(nameIndex);

String email = emailIndex != -1 ? cursor.getString(emailIndex) : null;

String phone = phoneIndex != -1 ? cursor.getString(phoneIndex) : null;

Contact contact = new Contact(id, name, email, phone);

contactList.add(contact);

} while (cursor.moveToNext());

cursor.close();

}

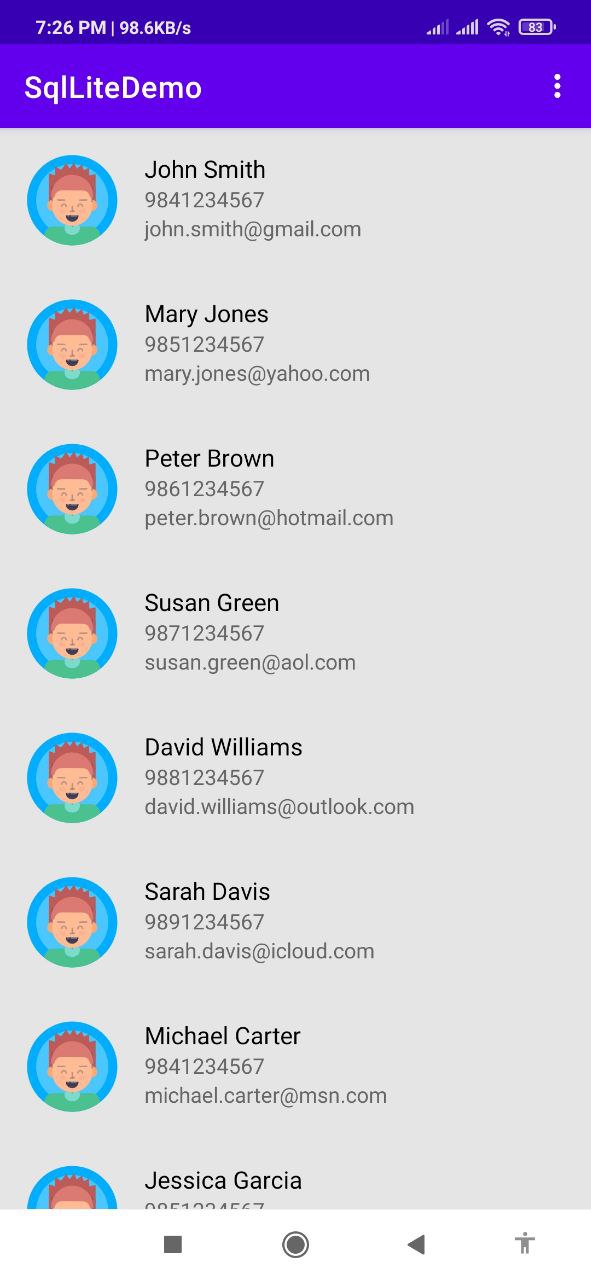
database.close();

return contactList;

}

}

## Output Window



# Develop android application to read data from the server and display it.

## Source Code

**activity\_main.java**

<?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=".MainActivity">

<ScrollView

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

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:text="TextView"

android:textSize="30dp"

app:layout\_constraintBottom\_toBottomOf="parent"

app:layout\_constraintEnd\_toEndOf="parent"

app:layout\_constraintStart\_toStartOf="parent"

app:layout\_constraintTop\_toTopOf="parent" />

</ScrollView>

</androidx.constraintlayout.widget.ConstraintLayout>

**MainActivity.java**

package com.example.retrofitexample;

import android.os.Bundle;

import android.util.Log;

import android.webkit.\*;

import android.widget.\*;

import androidx.annotation.NonNull;

import androidx.appcompat.app.AppCompatActivity;

import com.google.gson.Gson;

import com.google.gson.GsonBuilder;

import java.io.IOException;

import java.util.List;

import retrofit2.Call;

import retrofit2.Callback;

import retrofit2.Response;

import retrofit2.Retrofit;

import retrofit2.converter.gson.GsonConverterFactory;

public class MainActivity extends AppCompatActivity {

private TextView textView;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

textView = findViewById(R.id.textView);

Retrofit retrofit = new Retrofit.Builder()

.baseUrl("https://conforming-entrance.000webhostapp.com/api/")

.addConverterFactory(GsonConverterFactory.create())

.build();

JsonPlaceHolderApi jsonPlaceHolderApi = retrofit.create(JsonPlaceHolderApi.class);

Call<List<Book>> call = jsonPlaceHolderApi.getPost("104006205261242708831");

call.enqueue(new Callback<List<Book>>() {

@Override

public void onResponse(@NonNull Call<List<Book>> call, Response<List<Book>> response) {

if (response.isSuccessful()) {

StringBuilder content = new StringBuilder();

String id, file, name;

List<Book> books = response.body();

for (Book book : books) {

id = book.getIsbnno();

name = book.getName();

file = book.getAuthor();

content.append("\n\nid= ").append(id).append("\nname= ").append(name).append("\nauthor=").append(file);

}

textView.setText(content.toString());

} else {

textView.setText("error response code: " + response.code());

Log.d("fail", "onResponse: " + response.code());

}

}

@Override

public void onFailure(Call<List<Book>> call, Throwable t) {

textView.setText("Error: " + t.getMessage());

Log.d("API Call Error", t.getMessage(), t);

}

});

}

}

**Book.java**

package com.example.retrofitexample;

public class Book {

private String isbnno;

private String name;

private String author;

public Book(String isbnno, String name, String author) {

this.isbnno = isbnno;

this.name = name;

this.author = author;

}

public String getIsbnno() {

return isbnno;

}

public String getName() {

return name;

}

public String getAuthor() {

return author;

}

}

**JsonPlaceholderApi.java**

package com.example.retrofitexample;

import java.util.List;

import retrofit2.Call;

import retrofit2.http.\*;

public interface JsonPlaceHolderApi {

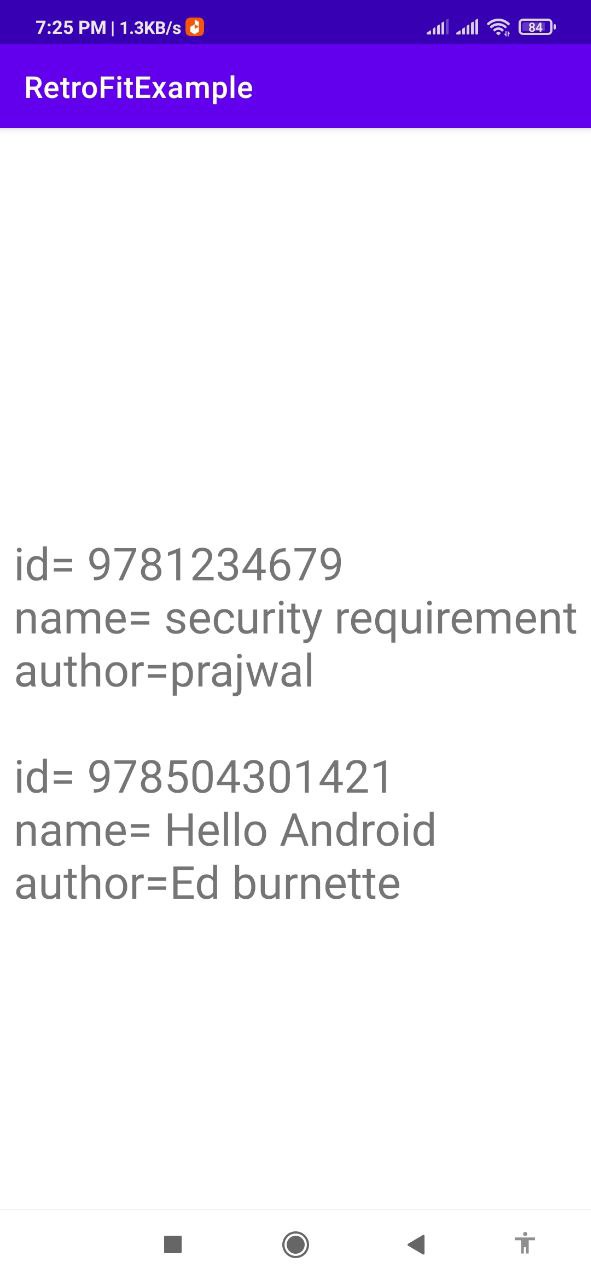
@Headers({"Accept: application/json","Accept-Language:en-US,en"})

@GET("{username}")

Call<List<Book>> getPost(@Path("username") String username);

}

## Output Window



# Develop android application to implement Google map.

## Source Code

**MapsActivity.java**

package com.example.map;

import androidx.annotation.NonNull;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.app.ActivityCompat;

import androidx.core.content.ContextCompat;

import androidx.fragment.app.FragmentActivity;

import android.content.pm.PackageManager;

import android.location.\*;

import android.os.Bundle;

import android.widget.Toast;

import com.google.android.gms.maps.\*;

import com.google.android.gms.maps.model.\*;

public class MapsActivity extends AppCompatActivity implements OnMapReadyCallback {

private GoogleMap mMap;

private MapView mapView;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_maps);

mapView = findViewById(R.id.map\_view);

mapView.onCreate(savedInstanceState);

mapView.getMapAsync(this);

}

@Override

public void onMapReady(GoogleMap map) {

mMap = map;

LatLng sydney = new LatLng(-33.870453, 151.208755);

mMap.addMarker(new MarkerOptions().position(sydney).title("Sydney"));

CameraUpdate cameraUpdate = CameraUpdateFactory.newLatLngZoom(sydney, 15.0f);

mMap.moveCamera(cameraUpdate);

mMap.animateCamera(cameraUpdate);

mMap.setMapType(GoogleMap.MAP\_TYPE\_SATELLITE);

}

}

**activity\_maps.xml**

<RelativeLayout 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">

<com.google.android.gms.maps.MapView

android:id="@+id/map\_view"

android:layout\_width="match\_parent"

android:layout\_height="match\_parent"

tools:context=".MapsActivity" />

</RelativeLayout>

## Output Window

