Exno:6 FILES

MainActivity.java

import android.content.Context;

import android.os.Bundle;

import android.support.v7.app.AppCompatActivity;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.TextView;

import java.io.BufferedReader;

import java.io.FileInputStream;

import java.io.FileOutputStream;

import java.io.InputStreamReader;

public class MainActivity extends AppCompatActivity {

EditText editText;

TextView textView;

Button saveButton;

private static final String FILE\_NAME = "example.txt";

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

editText = findViewById(R.id.edit\_text);

textView = findViewById(R.id.text\_view);

saveButton = findViewById(R.id.save\_button);

saveButton.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

saveData();

}

});

// Load data when the app starts

loadData();

}

private void saveData() {

String text = editText.getText().toString();

FileOutputStream fos = null;

try {

fos = openFileOutput(FILE\_NAME, Context.MODE\_PRIVATE);

fos.write(text.getBytes());

editText.getText().clear();

textView.setText("Data saved to file.");

} catch (Exception e) {

e.printStackTrace();

} finally {

try {

if (fos != null)

fos.close();

} catch (Exception e) {

e.printStackTrace();

}

}

}

private void loadData() {

FileInputStream fis = null;

try {

fis = openFileInput(FILE\_NAME);

InputStreamReader isr = new InputStreamReader(fis);

BufferedReader br = new BufferedReader(isr);

StringBuilder sb = new StringBuilder();

String text;

while ((text = br.readLine()) != null) {

sb.append(text).append("\n");

}

textView.setText(sb.toString());

} catch (Exception e) {

e.printStackTrace();

} finally {

try {

if (fis != null)

fis.close();

} catch (Exception e) {

e.printStackTrace();

}

}

}

}

Activity\_main.xml

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

<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"

android:padding="16dp"

tools:context=".MainActivity">

<EditText

android:id="@+id/edit\_text"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Enter text here"/>

<Button

android:id="@+id/save\_button"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_below="@id/edit\_text"

android:layout\_marginTop="16dp"

android:text="Save"/>

<TextView

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

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/save\_button"

android:layout\_marginTop="16dp"/>

</RelativeLayout>

ExNo7: **SMS messages**

**Activity\_main.xml**

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

**<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"**

**tools:context=".MainActivity">**

**<EditText**

**android:id="@+id/editTextPhone"**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:hint="Phone Number"/>**

**<EditText**

**android:id="@+id/editTextMessage"**

**android:layout\_width="match\_parent"**

**android:layout\_height="wrap\_content"**

**android:layout\_below="@id/editTextPhone"**

**android:hint="Message"/>**

**<Button**

**android:id="@+id/buttonSend"**

**android:layout\_width="wrap\_content"**

**android:layout\_height="wrap\_content"**

**android:layout\_below="@id/editTextMessage"**

**android:text="Send"/>**

**</RelativeLayout>**

**Open your** AndroidManifest.xml **and add permissions for sending SMS messages**

**<uses-permission android:name="android.permission.SEND\_SMS"/>**

MainActivity.java

import android.Manifest;

import android.content.pm.PackageManager; // system-level service

import android.os.Bundle;

import android.telephony.SmsManager;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

import androidx.core.app.ActivityCompat;

import androidx.core.content.ContextCompat;

public class MainActivity extends AppCompatActivity {

private EditText editTextPhone, editTextMessage;

private Button buttonSend;

private static final int PERMISSION\_REQUEST\_CODE = 1;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

editTextPhone = findViewById(R.id.editTextPhone);

editTextMessage = findViewById(R.id.editTextMessage);

buttonSend = findViewById(R.id.buttonSend);

buttonSend.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

if (checkPermission()) {

sendSMS();

} else {

requestPermission();

}

}

});

}

private void requestPermission() {

ActivityCompat.requestPermissions(this, new String[]{Manifest.permission.SEND\_SMS}, PERMISSION\_REQUEST\_CODE);

}

private boolean checkPermission() {

int result = ContextCompat.checkSelfPermission(getApplicationContext(), Manifest.permission.SEND\_SMS);

return result == PackageManager.PERMISSION\_GRANTED;

}

private void sendSMS() {

String phoneNo = editTextPhone.getText().toString();

String message = editTextMessage.getText().toString();

try {

SmsManager smsManager = SmsManager.getDefault();

smsManager.sendTextMessage(phoneNo, null, message, null, null);

Toast.makeText(getApplicationContext(), "SMS sent successfully", Toast.LENGTH\_LONG).show();

} catch (Exception ex) {

Toast.makeText(getApplicationContext(), "SMS sending failed", Toast.LENGTH\_LONG).show();

ex.printStackTrace();

}

}

@Override

public void onRequestPermissionsResult(int requestCode, String permissions[], int[] grantResults) {

super.onRequestPermissionsResult(requestCode, permissions, grantResults);

switch (requestCode) {

case PERMISSION\_REQUEST\_CODE: {

if (grantResults.length > 0 && grantResults[0] == PackageManager.PERMISSION\_GRANTED) {

sendSMS();

} else {

Toast.makeText(getApplicationContext(), "Permission denied", Toast.LENGTH\_LONG).show();

}

}

}

}

}

**Ex no8: SMS USING INTENT**

Activity\_main.xml

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

<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"

tools:context=".MainActivity">

<EditText

android:id="@+id/editTextPhone"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Phone Number" />

<EditText

android:id="@+id/editTextMessage"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/editTextPhone"

android:hint="Message" />

<Button

android:id="@+id/buttonSend"

android:layout\_width="wrap\_content"

android:layout\_height="wrap\_content"

android:layout\_below="@id/editTextMessage"

android:text="Send"

android:onClick="sendMessage" />

</RelativeLayout>

MainActivity.java

import android.content.Intent;

import android.net.Uri;

import android.os.Bundle;

import android.view.View;

import android.widget.EditText;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

private EditText editTextPhone, editTextMessage;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

editTextPhone = findViewById(R.id.editTextPhone);

editTextMessage = findViewById(R.id.editTextMessage);

}

public void sendMessage(View view) {

String phoneNo = editTextPhone.getText().toString();

String message = editTextMessage.getText().toString();

Uri uri = Uri.parse("smsto:" + phoneNo);

Intent intent = new Intent(Intent.ACTION\_SENDTO, uri);

intent.putExtra("sms\_body", message);

startActivity(intent);

}

}

EX No :9 SharedPreferences

Mainactivity.java

import android.content.Context;

import android.content.SharedPreferences;

import android.os.Bundle;

import android.widget.EditText;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

EditText editText;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

// Initialize EditText

editText = findViewById(R.id.editText);

// Load previously saved text from SharedPreferences

loadTextFromSharedPreferences();

}

// Method to load text from SharedPreferences

private void loadTextFromSharedPreferences() {

SharedPreferences sharedPreferences = getSharedPreferences("MyPrefs", Context.MODE\_PRIVATE);

String savedText = sharedPreferences.getString("savedText", "");

editText.setText(savedText);

}

// Method to save text to SharedPreferences

private void saveTextToSharedPreferences(String text) {

SharedPreferences sharedPreferences = getSharedPreferences("MyPrefs", Context.MODE\_PRIVATE);

SharedPreferences.Editor editor = sharedPreferences.edit();

editor.putString("savedText", text);

editor.apply();

}

@Override

protected void onStop() {

super.onStop();

// Save the text to SharedPreferences when the activity is stopped

String textToSave = editText.getText().toString();

saveTextToSharedPreferences(textToSave);

Toast.makeText(this, "Text saved to SharedPreferences", Toast.LENGTH\_SHORT).show();

}

}

XML

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

<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"

android:padding="16dp"

tools:context=".MainActivity">

<EditText

android:id="@+id/editText"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Type something here..." />

</RelativeLayout>

ExNO 10:

SQLite Example:

Activity\_main.xml

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

<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"

android:padding="16dp"

tools:context=".MainActivity">

<EditText

android:id="@+id/editTextName"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:hint="Enter Name" />

<EditText

android:id="@+id/editTextAge"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/editTextName"

android:layout\_marginTop="16dp"

android:hint="Enter Age"

android:inputType="number" />

<Button

android:id="@+id/buttonAdd"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/editTextAge"

android:layout\_marginTop="16dp"

android:text="Add Student" />

<ListView

android:id="@+id/listViewStudents"

android:layout\_width="match\_parent"

android:layout\_height="wrap\_content"

android:layout\_below="@id/buttonAdd"

android:layout\_marginTop="16dp" />

</RelativeLayout>

MainActivity.java

import android.content.ContentValues;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.os.Bundle;

import android.view.View;

import android.widget.Button;

import android.widget.EditText;

import android.widget.ListView;

import android.widget.SimpleCursorAdapter;

import android.widget.Toast;

import androidx.appcompat.app.AppCompatActivity;

public class MainActivity extends AppCompatActivity {

private EditText editTextName, editTextAge;

private Button buttonAdd;

private ListView listViewStudents;

private DatabaseHelper dbHelper;

@Override

protected void onCreate(Bundle savedInstanceState) {

super.onCreate(savedInstanceState);

setContentView(R.layout.activity\_main);

editTextName = findViewById(R.id.editTextName);

editTextAge = findViewById(R.id.editTextAge);

buttonAdd = findViewById(R.id.buttonAdd);

listViewStudents = findViewById(R.id.listViewStudents);

dbHelper = new DatabaseHelper(this);

buttonAdd.setOnClickListener(new View.OnClickListener() {

@Override

public void onClick(View v) {

String name = editTextName.getText().toString();

String age = editTextAge.getText().toString();

if (!name.isEmpty() && !age.isEmpty()) {

long result = dbHelper.insertData(name, Integer.parseInt(age));

if (result != -1) {

Toast.makeText(MainActivity.this, "Student added successfully", Toast.LENGTH\_SHORT).show();

displayStudents();

editTextName.setText("");

editTextAge.setText("");

} else {

Toast.makeText(MainActivity.this, "Failed to add student", Toast.LENGTH\_SHORT).show();

}

} else {

Toast.makeText(MainActivity.this, "Please enter name and age", Toast.LENGTH\_SHORT).show();

}

}

});

displayStudents();

}

private void displayStudents() {

Cursor cursor = dbHelper.getAllData();

String[] fromColumns = {DatabaseHelper.COL\_NAME, DatabaseHelper.COL\_AGE};

int[] toViews = {android.R.id.text1, android.R.id.text2};

SimpleCursorAdapter adapter = new SimpleCursorAdapter(this,

android.R.layout.simple\_list\_item\_2, cursor, fromColumns, toViews, 0);

listViewStudents.setAdapter(adapter);

}

}

Create new java class “DatabaseHelper.java”

import android.content.ContentValues;

import android.content.Context;

import android.database.Cursor;

import android.database.sqlite.SQLiteDatabase;

import android.database.sqlite.SQLiteOpenHelper;

public class DatabaseHelper extends SQLiteOpenHelper {

private static final String DATABASE\_NAME = "students.db";

private static final int DATABASE\_VERSION = 1;

public static final String TABLE\_NAME = "students";

public static final String COL\_ID = "\_id";

public static final String COL\_NAME = "name";

public static final String COL\_AGE = "age";

public DatabaseHelper(Context context) {

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

}

@Override

public void onCreate(SQLiteDatabase db) {

String createTableQuery = "CREATE TABLE " + TABLE\_NAME + " (" +

COL\_ID + " INTEGER PRIMARY KEY AUTOINCREMENT, " +

COL\_NAME + " TEXT, " +

COL\_AGE + " INTEGER)";

db.execSQL(createTableQuery);

}

@Override

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

db.execSQL("DROP TABLE IF EXISTS " + TABLE\_NAME);

onCreate(db);

}

public long insertData(String name, int age) {

SQLiteDatabase db = this.getWritableDatabase();

ContentValues contentValues = new ContentValues();

contentValues.put(COL\_NAME, name);

contentValues.put(COL\_AGE, age);

return db.insert(TABLE\_NAME, null, contentValues);

}

public Cursor getAllData() {

SQLiteDatabase db = this.getReadableDatabase();

return db.query(TABLE\_NAME, null, null, null, null, null, null);

}

}