实验五 数据存储之文件存储与SharedPreferences

设计六个按钮，点击后分别实现内部文件写/读、SharedPreferences的写/读，外部文件写/读（选做，可能不成功）。

观察数据的存储位置。

数据直接写入程序（不需从界面输入）。

数据可自行设定2-3条不同类型的数据。

数据读出后，可以在日志中输出（Log类），也可以在屏幕上输出（Toast类）。

package com.shf.app29\_sy5;  
  
import android.content.Context;  
import android.database.sqlite.SQLiteDatabase;  
import android.database.sqlite.SQLiteOpenHelper;  
import androidx.annotation.Nullable;  
  
public class MyHelper extends SQLiteOpenHelper *{* public MyHelper*(*@Nullable Context context, @Nullable String name, @Nullable SQLiteDatabase.CursorFactory factory, int version*) {* super*(*context, name, factory, version*)*;  
 *}* @Override  
 public void onCreate*(*SQLiteDatabase sqLiteDatabase*) {* sqLiteDatabase.execSQL*(*"create table information(\_id INTEGER PRIMARY KEY AUTOINCREMENT,name VARCHAR(255),price INTEGER)"*)*;  
 *}* @Override  
 public void onUpgrade*(*SQLiteDatabase sqLiteDatabase, int i, int i1*) {  
  
 }  
}*

package com.shf.app29\_sy5;  
  
import android.Manifest;  
import android.annotation.SuppressLint;  
import android.app.Activity;  
import android.content.ContentValues;  
import android.content.Context;  
import android.content.SharedPreferences;  
import android.content.pm.PackageManager;  
import android.database.Cursor;  
import android.database.sqlite.SQLiteDatabase;  
import android.os.Environment;  
import android.util.Log;  
import android.view.View;  
import android.widget.Toast;  
import androidx.annotation.NonNull;  
import androidx.appcompat.app.AppCompatActivity;  
import android.os.Bundle;  
import androidx.core.app.ActivityCompat;  
import androidx.core.content.ContextCompat;  
  
import java.io.\*;  
  
public class MainActivity extends AppCompatActivity *{* @Override  
 protected void onCreate*(*Bundle savedInstanceState*) {* super.onCreate*(*savedInstanceState*)*;  
 setContentView*(*R.layout.*activity\_main)*;  
  
 RequestPermissions*(*MainActivity.this, Manifest.permission.*WRITE\_EXTERNAL\_STORAGE)*;  
 *}* private boolean RequestPermissions*(*@NonNull Context context, @NonNull String permission*) {* if *(*ContextCompat.*checkSelfPermission(*context, permission*)* != PackageManager.*PERMISSION\_GRANTED) {* Log.*i(*"requestMyPermissions",": 【 " + permission + " 】没有授权，申请权限"*)*;  
 ActivityCompat.*requestPermissions((*Activity*)* context, new String*[]{*permission*}*, 100*)*;  
 return false;  
 *}* else *{* Log.*i(*"requestMyPermissions",": 【 " + permission + " 】有权限"*)*;  
 return true;  
 *}  
 }  
  
 /\*\*  
 \* 内部文件读  
 \* @param view  
 \*/* public void read1*(*View view*) {* String data = "";  
 FileInputStream fis = null;  
 try *{* fis = openFileInput*(*"data.txt"*)*;  
 byte*[]* buffer = new byte*[*fis.available*()]*;  
 fis.read*(*buffer*)*;  
 data = new String*(*buffer*)*;  
  
 Toast.*makeText(*getApplicationContext*()*,data,Toast.*LENGTH\_LONG)*.show*()*;  
 *}* catch *(*IOException e*) {* throw new RuntimeException*(*e*)*;  
 *}  
 }  
  
 /\*\*  
 \* SharedPreferences读  
 \* @param view  
 \*/* public void read2*(*View view*) {* SharedPreferences sp = getSharedPreferences*(*"data", *MODE\_PRIVATE)*;  
 String data = sp.getString*(*"name", ""*)*;  
 Toast.*makeText(*getApplicationContext*()*,data,Toast.*LENGTH\_LONG)*.show*()*;  
 *}  
  
 /\*\*  
 \* 外部文件读  
 \* @param view  
 \*/* public void read3*(*View view*) {* String state = Environment.*getExternalStorageState()*;  
 if *(*state.equals*(*Environment.*MEDIA\_MOUNTED)){* File SDPath = Environment.*getExternalStorageDirectory()*;  
 File file = new File*(*SDPath,"data.txt"*)*;  
 FileInputStream fis = null;  
 BufferedReader br = null;  
 try *{* fis = new FileInputStream*(*file*)*;  
 br = new BufferedReader*(*new InputStreamReader*(*fis*))*;  
 String data = br.readLine*()*;  
  
 Toast.*makeText(*getApplicationContext*()*,data,Toast.*LENGTH\_LONG)*.show*()*;  
 *}* catch *(*IOException e*) {* throw new RuntimeException*(*e*)*;  
 *}  
 }  
 }  
  
 /\*\*  
 \* 内部文件写  
 \* @param view  
 \*/* public void write1*(*View view*) {* String fileName = "data.txt";  
 String content = "内部文件读写";  
 FileOutputStream fos = null;  
 try *{* fos=openFileOutput*(*fileName,*MODE\_PRIVATE)*;  
 fos.write*(*content.getBytes*())*;  
 *}* catch *(*IOException e*) {* throw new RuntimeException*(*e*)*;  
 *}  
 }  
  
 /\*\*  
 \* SharedPreferences写  
 \* @param view  
 \*/* public void write2*(*View view*) {* SharedPreferences sp = getSharedPreferences*(*"data",*MODE\_PRIVATE)*;  
 SharedPreferences.Editor editor = sp.edit*()*;  
 editor.putString*(*"name", "SharedPreferences读写"*)*;  
 editor.putInt*(*"age",8*)*;  
 editor.commit*()*;  
 *}  
  
 /\*\*  
 \* 外部文件写  
 \* @param view  
 \*/* public void write3*(*View view*) {* String state = Environment.*getExternalStorageState()*;  
 if *(*state.equals*(*Environment.*MEDIA\_MOUNTED)){* File SDPath = Environment.*getExternalStorageDirectory()*;  
 File file = new File*(*SDPath,"data.txt"*)*;  
 String data = "外部文件读写";  
 FileOutputStream fos = null;  
 try *{* fos = new FileOutputStream*(*file*)*;  
 fos.write*(*data.getBytes*())*;  
 *}* catch *(*IOException e*) {* throw new RuntimeException*(*e*)*;  
 *}  
 }  
 }* MyHelper helper = new MyHelper*(*MainActivity.this, "shf.db", null, 1*)*;  
 public void SQLiteRead*(*View view*) {* SQLiteDatabase db = helper.getReadableDatabase*()*;  
 Cursor cursor = db.query*(*"information", null, "\_id=?", new String*[]{*"10"*}*, null, null, null*)*;  
 if *(*cursor.getCount*()*!=0*){* while *(*cursor.moveToNext*()){* @SuppressLint*(*"Range"*)* String \_id = cursor.getString*(*cursor.getColumnIndex*(*"\_id"*))*;  
 @SuppressLint*(*"Range"*)* String name = cursor.getString*(*cursor.getColumnIndex*(*"name"*))*;  
 @SuppressLint*(*"Range"*)* String price = cursor.getString*(*cursor.getColumnIndex*(*"price"*))*;  
  
 Toast.*makeText(*getApplicationContext*()*,\_id+"---"+name+"---"+price,Toast.*LENGTH\_LONG)*.show*()*;  
 *}  
 }  
 }* public void SQLiteAdd*(*View view*) {* SQLiteDatabase db = helper.getWritableDatabase*()*;  
 ContentValues values = new ContentValues*()*;  
 values.put*(*"name","SQLiteAdd"*)*;  
 values.put*(*"price",9999*)*;  
 db.insert*(*"information",null,values*)*;  
 db.close*()*;  
 *}* public int SQLiteUpdate*(*View view*) {* SQLiteDatabase db = helper.getWritableDatabase*()*;  
 ContentValues values = new ContentValues*()*;  
 values.put*(*"price",7777*)*;  
 int number = db.update*(*"information",values,"name=?",new String*[]{*"SQLiteAdd"*})*;  
 db.close*()*;  
 Toast.*makeText(*getApplicationContext*()*,number+"",Toast.*LENGTH\_LONG)*.show*()*;  
 return number;  
 *}* public int SQLiteDelete*(*View view*) {* SQLiteDatabase db = helper.getWritableDatabase*()*;  
 int number = db.delete*(*"information","\_id=?",new String*[]{*"1"*})*;  
 db.close*()*;  
 Toast.*makeText(*getApplicationContext*()*,number+"",Toast.*LENGTH\_LONG)*.show*()*;  
 return number;  
 *}  
}*



















