# layout

## activity\_main.xml代码:

<?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="com.example.mycalculator.MainActivity">  
 <TextView  
 android:id="@+id/display"  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="3"  
 android:textSize="40sp"  
 android:textColor="#000"  
 android:scrollbars="vertical"  
 android:gravity="left"  
 android:background="#89e9ff"/>  
 <GridLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:columnCount="4"  
 android:rowCount="5">  
 <Button  
 android:id="@+id/btn\_clean"  
 style="@style/keyStyle"  
 android:text="清空"/>  
 <Button  
 android:id="@+id/btn\_del"  
 style="@style/keyStyle"  
 android:layout\_width="180dp"  
 android:layout\_columnSpan="2"  
 android:text="删 除"/>  
  
 <Button  
 android:id="@+id/btn\_add"  
 style="@style/keyStyle"  
 android:text="+"/>  
 <Button  
 android:id="@+id/btn\_7"  
 style="@style/keyStyle"  
 android:text="7"/>  
 <Button  
 android:id="@+id/btn\_8"  
 style="@style/keyStyle"  
 android:text="8"/>  
 <Button  
 android:id="@+id/btn\_9"  
 style="@style/keyStyle"  
 android:text="9"/>  
 <Button  
 android:id="@+id/btn\_minus"  
 style="@style/keyStyle"  
 android:text="-"/>  
  
 <Button  
 android:id="@+id/btn\_4"  
 style="@style/keyStyle"  
 android:text="4"/>  
 <Button  
 android:id="@+id/btn\_5"  
 style="@style/keyStyle"  
 android:text="5"/>  
 <Button  
 android:id="@+id/btn\_6"  
 style="@style/keyStyle"  
 android:text="6"/>  
 <Button  
 android:id="@+id/btn\_multiply"  
 style="@style/keyStyle"  
 android:text="×"/>  
 <Button  
 android:id="@+id/btn\_1"  
 style="@style/keyStyle"  
 android:text="1"/>  
 <Button  
 android:id="@+id/btn\_2"  
 style="@style/keyStyle"  
 android:text="2"/>  
 <Button  
 android:id="@+id/btn\_3"  
 style="@style/keyStyle"  
 android:text="3"/>  
 <Button  
 android:id="@+id/btn\_divide"  
 style="@style/keyStyle"  
 android:text="÷"/>  
  
 <Button  
 android:id="@+id/btn\_0"  
 style="@style/keyStyle"  
 android:text="0" />  
 <Button  
 android:id="@+id/btn\_point"  
 style="@style/keyStyle"  
 android:text="."/>  
 <Button  
 android:id="@+id/btn\_equal"  
 android:layout\_width="180dp"  
 style="@style/keyStyle"  
 android:layout\_columnSpan="2"  
 android:text="="/>  
  
 </GridLayout>  
 <Button  
 android:id="@+id/btn\_history"  
 android:layout\_width="match\_parent"  
 android:layout\_height="0dp"  
 android:layout\_weight="1"  
 android:textColor="#ff00c3"  
 android:textSize="35sp"  
 android:background="#fffcbb"  
 android:text="历 史 记 录"/>  
</LinearLayout>

## activity\_history.xml代码:

<?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="com.example.mycalculator.HistoryActivity">  
  
 <ListView  
 android:id="@+id/listView"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:divider="#000"  
 android:dividerHeight="1dp"/>  
 <Button  
 android:id="@+id/showco"  
 android:layout\_width="match\_parent"  
 android:layout\_height="70dp"  
 android:layout\_alignParentBottom="true"  
 android:background="@drawable/bg\_selector"  
 android:textColor="#fff"  
 android:text="查看收藏夹"  
 android:textSize="45sp"/>  
</RelativeLayout>

## activity\_ collection.xml代码:

<?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="com.example.mycalculator.CollectionActivity">  
 <ListView  
 android:id="@+id/listView\_co"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:divider="#000"  
 android:dividerHeight="1dp"/>  
 <Button  
 android:id="@+id/back"  
 android:layout\_width="match\_parent"  
 android:layout\_height="70dp"  
 android:layout\_alignParentBottom="true"  
 android:background="#8494ff"  
 android:textColor="#fff"  
 android:text="返回计算"  
 android:textSize="40sp"/>  
  
</RelativeLayout>

## item.xml:

<?xml version="1.0" encoding="utf-8"?>  
<RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:orientation="vertical"  
 android:layout\_width="match\_parent"  
 android:layout\_height="70dp">  
 <ImageView  
 android:id="@+id/imageview"  
 android:layout\_width="70dp"  
 android:layout\_height="70dp"  
 android:layout\_alignParentLeft="true" />  
 <TextView  
 android:id="@+id/textview"  
 android:layout\_width="fill\_parent"  
 android:layout\_height="70dp"  
 android:background="#42f9ff"  
 android:textColor="#ea00ff"  
 android:layout\_toRightOf="@+id/imageview"  
 android:textSize="25sp" />  
</RelativeLayout>

## style.xml:

<resources>  
 <!-- Base application theme. -->  
 <style name="AppTheme" parent="Theme.AppCompat.Light.DarkActionBar">  
 <!-- Customize your theme here. -->  
 <item name="colorPrimary">@color/colorPrimary</item>  
 <item name="colorPrimaryDark">@color/colorPrimaryDark</item>  
 <item name="colorAccent">@color/colorAccent</item>  
 </style>  
  
 <style name="keyStyle" parent="Theme.AppCompat.Light.DarkActionBar">  
 <item name="android:layout\_width">90dp</item>  
 <item name="android:layout\_height">70dp</item>  
 <item name="android:textSize">35sp</item>  
 <item name="android:textColor">#fff</item>  
 <item name="android:background">@drawable/bg\_selector</item>  
 <item name="android:radius">50dip</item>  
 </style>  
</resources>

# Drawable

## bg\_selector.xml:

<?xml version="1.0" encoding="utf-8"?>  
<selector xmlns:android="http://schemas.android.com/apk/res/android">  
 <item android:state\_pressed="true" android:drawable="@drawable/blue" />  
 <item android:state\_hovered="true" android:drawable="@drawable/yellow" />  
 <item android:drawable="@drawable/black" />  
</selector>

# JAVA

## MainActivity.java代码:

package com.example.mycalculator;  
  
import android.content.Intent;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.text.method.ScrollingMovementMethod;  
import android.view.View;  
import android.widget.Button;  
import android.widget.TextView;  
import android.widget.Toast;  
import java.text.SimpleDateFormat;  
import java.util.Date;  
  
  
  
public class MainActivity extends AppCompatActivity implements View.OnClickListener {  
  
 TextView display; //显示屏  
 Button btn\_0, btn\_1, btn\_2, btn\_3, btn\_4, btn\_5, btn\_6, btn\_7, btn\_8, btn\_9; //数字按钮  
 Button btn\_point; //小数点按钮  
 Button btn\_clean; //清空按钮  
 Button btn\_del; //删除按钮  
 Button btn\_add, btn\_minus, btn\_multiply, btn\_divide;//加减乘除按钮  
 Button btn\_equal; //等于号按钮  
 Button btn\_history; //历史记录按钮  
 boolean clean\_flag;//清空标识  
 int i = 0; //记录添加历史的次数  
 String[] history =new String[15]; //存放15条记录的数组  
  
 @Override  
 public void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_main*);  
 myset();  
  
 }  
  
 //自定义方法  
 public void myset() {  
 display = (TextView) findViewById(R.id.*display*);//实例化显示屏  
 btn\_0 = (Button) findViewById(R.id.*btn\_0*);  
 btn\_1 = (Button) findViewById(R.id.*btn\_1*);  
 btn\_2 = (Button) findViewById(R.id.*btn\_2*);  
 btn\_3 = (Button) findViewById(R.id.*btn\_3*);  
 btn\_4 = (Button) findViewById(R.id.*btn\_4*);  
 btn\_5 = (Button) findViewById(R.id.*btn\_5*);  
 btn\_6 = (Button) findViewById(R.id.*btn\_6*);  
 btn\_7 = (Button) findViewById(R.id.*btn\_7*);  
 btn\_8 = (Button) findViewById(R.id.*btn\_8*); //实例化按钮  
 btn\_9 = (Button) findViewById(R.id.*btn\_9*);  
 btn\_point = (Button) findViewById(R.id.*btn\_point*);  
 btn\_clean = (Button) findViewById(R.id.*btn\_clean*);  
 btn\_del = (Button) findViewById(R.id.*btn\_del*);  
 btn\_add = (Button) findViewById(R.id.*btn\_add*);  
 btn\_minus = (Button) findViewById(R.id.*btn\_minus*);  
 btn\_multiply = (Button) findViewById(R.id.*btn\_multiply*);  
 btn\_divide = (Button) findViewById(R.id.*btn\_divide*);  
 btn\_equal = (Button) findViewById(R.id.*btn\_equal*);  
 btn\_history = (Button) findViewById(R.id.*btn\_history*);  
  
  
 //文字超出显示屏范围可滚动  
 display.setMovementMethod(ScrollingMovementMethod.*getInstance*());  
 btn\_0.setOnClickListener(this);  
 btn\_1.setOnClickListener(this);  
 btn\_2.setOnClickListener(this);  
 btn\_3.setOnClickListener(this);  
 btn\_4.setOnClickListener(this);  
 btn\_5.setOnClickListener(this);  
 btn\_6.setOnClickListener(this);  
 btn\_7.setOnClickListener(this);  
 btn\_8.setOnClickListener(this); //设置按钮的点击事件  
 btn\_9.setOnClickListener(this);  
 btn\_point.setOnClickListener(this);  
 btn\_clean.setOnClickListener(this);  
 btn\_del.setOnClickListener(this);  
 btn\_add.setOnClickListener(this);  
 btn\_minus.setOnClickListener(this);  
 btn\_multiply.setOnClickListener(this);  
 btn\_divide.setOnClickListener(this);  
 btn\_equal.setOnClickListener(this);  
 btn\_history.setOnClickListener(this);  
 }  
  
 @Override  
 public void onClick(View v) {  
  
 String str = display.getText().toString();  
 switch (v.getId()) {  
 case R.id.*btn\_clean*:  
 str = "";  
 display.setText("");  
 break;  
 case R.id.*btn\_del*:  
 try {  
 str = str.substring(0, str.length() - 1);  
 } catch (Exception e) {  
 str = "";  
 }  
 display.setText(str + "");  
 break;  
 case R.id.*btn\_point*:  
 if (str.length() == 0) {  
 str = "0.";  
 } else {  
 str += ".";  
 }  
 display.setText(str + "");  
 break;  
 case R.id.*btn\_0*:  
 case R.id.*btn\_1*:  
 case R.id.*btn\_2*:  
 case R.id.*btn\_3*:  
 case R.id.*btn\_4*:  
 case R.id.*btn\_5*:  
 case R.id.*btn\_6*:  
 case R.id.*btn\_7*:  
 case R.id.*btn\_8*:  
 case R.id.*btn\_9*:  
 if (clean\_flag) {  
 str="";  
 display.setText("");  
 clean\_flag = false;  
 }  
 display.setText(str + ((Button) v).getText());  
 break;  
 //加减乘除  
 case R.id.*btn\_add*:  
 case R.id.*btn\_minus*:  
 case R.id.*btn\_multiply*:  
 case R.id.*btn\_divide*:  
 if (str.length() != 0 && !str.contains(" ")) {  
 display.setText(str + " " + ((Button) v).getText() + " ");  
 }  
 if (clean\_flag) {  
 clean\_flag = false;  
 str = str.substring(str.indexOf("=")+1).replace(" ","");  
 display.setText( str + " " + ((Button) v).getText() + " ");  
 }  
 break;  
 //等于  
 case R.id.*btn\_equal*:  
 if (str.length() != 0 && !str.contains("=")) {  
 display.setText(str + " = " + getResult());  
 str = display.getText().toString();  
 while (true) {  
 SimpleDateFormat formatter = new SimpleDateFormat("HH:mm:ss");  
 Date date = new Date(System.*currentTimeMillis*());  
 String time = formatter.format(date);  
 history[i]=str+"\n ---- "+time;  
 i++;  
 break;  
 }  
 if(i==15){  
 i=0;  
 }  
 }  
 break;  
 //历史记录  
 case R.id.*btn\_history*:  
 Intent intent = new Intent(this, HistoryActivity.class);  
 Bundle bundle = new Bundle();  
 bundle.putStringArray("history",history);  
 intent.putExtras(bundle);  
 MainActivity.this.startActivity(intent);  
 break;  
 default:  
 break;  
  
 }  
 }  
  
  
  
 //计算方法  
 private String getResult() {  
 clean\_flag = true;  
 String text = display.getText().toString();  
 String s1, s2, op;  
 try {  
 s1 = text.substring(0, text.indexOf(" "));//截取运算符前面的字符串  
 op = text.substring(text.indexOf(" ") + 1, text.indexOf(" ") + 2); //截取运算符  
 s2 = text.substring(text.indexOf(" ") + 3); //截取运算符后面的字符串  
 } catch (Exception e) {  
 return text;  
 }  
 if(".".equals(s2)||"".equals(s2))  
 s2="0";  
 double d1 = Double.*parseDouble*(s1);  
 double d2 = Double.*parseDouble*(s2);  
 double result = d1;  
 switch (op) {  
 case "+":  
 result = d1 + d2;  
 break;  
 case "-":  
 result = d1 - d2;  
 break;  
 case "×":  
 result = d1 \* d2;  
 break;  
 case "÷":  
 if (d2 == 0) {  
 Toast.*makeText*(MainActivity.this, "0不能作除数", Toast.*LENGTH\_LONG*).show();  
 return "无效";  
 } else {  
 result = d1 / d2;  
 }  
 break;  
 default:  
 break;  
 }  
  
 if (result % 1 == 0) {  
 return "" + (int) result;  
 } else {  
 return String.*format*("%.2f", result); //返回结果保留两位小数  
 }  
  
 }  
  
}

## HistoryActyvity.java代码:

package com.example.mycalculator;  
  
import android.content.Intent;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.AdapterView;  
import android.widget.Button;  
import android.widget.ListView;  
import android.widget.SimpleAdapter;  
import android.widget.Toast;  
import java.util.ArrayList;  
import java.util.HashMap;  
import java.util.List;  
  
public class HistoryActivity extends AppCompatActivity {  
 ListView listView;  
 List<HashMap<String, Object>> listdata;  
 HashMap<String, Object> data;  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_history*);  
 Intent intent = getIntent();  
 Bundle bundle = intent.getExtras();  
 String[] histories = bundle.getStringArray("history");  
  
 listView = (ListView) findViewById(R.id.*listView*);  
 listdata = new ArrayList<HashMap<String, Object>>();  
 int[] imgs = {R.drawable.*tian*,R.drawable.*sheng*,R.drawable.*wo*,R.drawable.*cai*,  
 R.drawable.*bi*,R.drawable.*you*,R.drawable.*yong*,R.drawable.*di*,  
 R.drawable.*zao*,R.drawable.*wu3*,R.drawable.*shen*,R.drawable.*shi*,  
 R.drawable.*wu2*,R.drawable.*shuang*};  
 for (int i = 0; i < histories.length ;i++){  
 data = new HashMap<String, Object>();  
 if(i<=13){  
 data.put("img",imgs[i]);  
 }else {  
 data.put("img",imgs[i-14]);  
 }  
 data.put("history",histories[i]);  
 listdata.add(data);  
 }  
 String[] from = {"img","history"};  
 int[] to = {R.id.*imageview*, R.id.*textview*};  
 SimpleAdapter adapter = new SimpleAdapter(HistoryActivity.this,listdata,R.layout.*item*,from,to);  
 listView.setAdapter(adapter);  
  
 final ArrayList<String> collection = new ArrayList<String>(); //将要传给收藏夹的ArrayList  
  
 Toast.*makeText*(HistoryActivity.this, "长按记录可加入收藏夹", Toast.*LENGTH\_LONG*).show();  
 listView.setOnItemLongClickListener(new AdapterView.OnItemLongClickListener() {  
 @Override  
 public boolean onItemLongClick(AdapterView<?> parent, View view, int position, long id) {  
 HashMap<String, Object> itemdata = listdata.get(position);  
 String coll = itemdata.get("history").toString();  
 if(!collection.contains(coll)) {  
 collection.add(coll + "");  
 Toast.*makeText*(HistoryActivity.this, "加入收藏成功", Toast.*LENGTH\_SHORT*).show();  
 }else{  
 Toast.*makeText*(HistoryActivity.this, "不能重复收藏呦", Toast.*LENGTH\_SHORT*).show();  
 }  
 return true;  
 }  
 });  
  
 //查看收藏  
 Button showco = (Button)findViewById(R.id.*showco*);  
 showco.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 Intent intent1 = new Intent(HistoryActivity.this,CollectionActivity.class);  
 if(collection!= null && !collection.isEmpty()) {  
 intent1.putStringArrayListExtra("collection", collection);  
 HistoryActivity.this.startActivity(intent1);  
 }else {  
 Toast.*makeText*(HistoryActivity.this, "请先至少收藏一条记录", Toast.*LENGTH\_SHORT*).show();  
 }  
 }  
 });  
 }  
  
}

## CollectionActivity.java

package com.example.mycalculator;  
  
import android.content.Intent;  
import android.support.v7.app.AppCompatActivity;  
import android.os.Bundle;  
import android.view.View;  
import android.widget.AdapterView;  
import android.widget.Button;  
import android.widget.ListView;  
import android.widget.SimpleAdapter;  
import android.widget.Toast;  
import java.util.ArrayList;  
import java.util.HashMap;  
import java.util.List;  
  
public class CollectionActivity extends AppCompatActivity {  
  
 @Override  
 protected void onCreate(Bundle savedInstanceState) {  
 super.onCreate(savedInstanceState);  
 setContentView(R.layout.*activity\_collection*);  
 Intent intent = getIntent();  
 ArrayList<String> collection = (ArrayList<String>)intent.getStringArrayListExtra("collection");  
  
 final ListView lv\_co = (ListView) findViewById(R.id.*listView\_co*);  
 final List<HashMap<String, Object>> listdata = new ArrayList<HashMap<String, Object>>();  
 HashMap<String, Object> data ;  
  
 int[] imgs = {R.drawable.*qian*,R.drawable.*bu*,R.drawable.*jian*,R.drawable.*gu*,  
 R.drawable.*ren*,R.drawable.*hou*,R.drawable.*bu*,R.drawable.*jian*,  
 R.drawable.*lai*,R.drawable.*zhe*};  
 for (int i = 0; i < collection.size() ;i++){  
 data = new HashMap<String, Object>();  
 if(i<=9){  
 data.put("img",imgs[i]);  
 }else {  
 data.put("img",imgs[i-10]);  
 }  
 data.put("collection",collection.get(i));  
 listdata.add(data);  
 }  
 String[] from = {"img","collection"};  
 int[] to ={R.id.*imageview*,R.id.*textview*};  
 final SimpleAdapter adapter = new SimpleAdapter(CollectionActivity.this,listdata,R.layout.*item*,from,to);  
 lv\_co.setAdapter(adapter);  
  
 Toast.*makeText*(CollectionActivity.this, "长按可删除收藏", Toast.*LENGTH\_LONG*).show();  
 lv\_co.setOnItemLongClickListener(new AdapterView.OnItemLongClickListener() {  
 @Override  
 public boolean onItemLongClick(AdapterView<?> parent, View view, int position, long id) {  
 listdata.remove(position);  
 adapter.notifyDataSetChanged();  
 Toast.*makeText*(CollectionActivity.this, "已删除", Toast.*LENGTH\_SHORT*).show();  
 return true;  
 }  
 });  
 Button back = (Button)findViewById(R.id.*back*);  
 back.setOnClickListener(new View.OnClickListener() {  
 @Override  
 public void onClick(View v) {  
 Intent intent1 = new Intent(CollectionActivity.this,MainActivity.class);  
 CollectionActivity.this.startActivity(intent1);  
 }  
 });  
 }  
}

# Androidmanifest.xml

<?xml version="1.0" encoding="utf-8"?>  
<manifest xmlns:android="http://schemas.android.com/apk/res/android"  
 package="com.example.mycalculator">  
  
 <application  
 android:allowBackup="true"  
 android:icon="@mipmap/calculator"  
 android:label="计算器"  
 android:supportsRtl="true"  
 android:theme="@style/AppTheme">  
 <activity  
 android:name=".MainActivity"  
 android:label="计算器">  
 <intent-filter>  
 <action android:name="android.intent.action.MAIN" />  
  
 <category android:name="android.intent.category.LAUNCHER" />  
 </intent-filter>  
 </activity>  
 <activity  
 android:name=".HistoryActivity"  
 android:label="计算历史">  
 </activity>  
 <activity  
 android:name=".CollectionActivity"  
 android:label="收藏夹">  
 </activity>  
 </application>  
  
</manifest>