Open Data

1. 請參考投影片內容，建立以下的Android應用程式

並請將1.**建立過程**; 2.程式**執行結果**截圖; 2.程式**原始檔 copy&paste**置入作業中

1. 請參考範例1,2
   1. 自行挑選一個開放資訊(不可與範例相同),下載即時資訊,分析並於APP內顯示
   2. 請記得修改相關網址,資料結構,JSON解析方式

選擇的資料 https://data.gov.tw/dataset/96695

**package** parkinginformaiton.ite.mcu.edu.tw.newtaipeicityubikeinformaiton;  
  
**public class** CUBike {  
  
 **private** String **date**;*//日期* **private** String **subject**;*//項目* **private** String **nums**;*//參加人數* **public** CUBike(String date, String subject, String nums) {  
  
 **this**.**date** = date;  
  
 **this**.**subject** = subject;  
  
 **this**.**nums** = nums;  
 }  
  
 **public** String getDate() {  
 **return date**;  
 }  
  
 **public** String getSubject() {  
 **return subject**;  
 }  
  
 **public** String getNums() {  
 **return nums**;  
 }  
  
 **public void** setDate(String date){**this**.**date** = date;}  
  
 **public void** setSubject(String subject){**this**.**date** = subject;}  
  
 **public void** setNums(String nums){**this**.**date** = nums;}  
}

Main

**package** parkinginformaiton.ite.mcu.edu.tw.newtaipeicityubikeinformaiton;  
  
**import** android.os.StrictMode;  
**import** android.support.v7.app.AppCompatActivity;  
**import** android.os.Bundle;  
**import** android.view.View;  
**import** android.widget.Button;  
**import** android.widget.EditText;  
**import** android.widget.TextView;  
  
**import** org.json.JSONArray;  
**import** org.json.JSONException;  
**import** org.json.JSONObject;  
  
**import** java.io.BufferedReader;  
**import** java.io.IOException;  
**import** java.io.InputStream;  
**import** java.io.InputStreamReader;  
**import** java.net.MalformedURLException;  
**import** java.net.URL;  
**import** java.net.URLConnection;  
**import** java.util.ArrayList;  
  
**public class** MainActivity **extends** AppCompatActivity {  
  
 **private int position**=0;  
 ArrayList<CUBike> **list**;  
  
  
 EditText **txtdate**;*//時間* EditText **txtsubject**;*//項目* EditText **txtnums**;*//多少人* TextView **txtDatas**;  
  
 Button **btnFirst**;  
 Button **btnPrevious**;  
 Button **btnNext**;  
 Button **btnLast**;  
  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_main***);  
  
 StrictMode.ThreadPolicy l\_policy = **new** StrictMode.ThreadPolicy.Builder().permitAll().build();  
 StrictMode.*setThreadPolicy*( l\_policy);  
  
 initialComponent();  
 loadData();  
 }  
  
 **private void** initialComponent() {  
   
 **txtdate**=(EditText)findViewById(R.id.***txtdate***);  
 **txtsubject**=(EditText)findViewById(R.id.***txtsubject***);  
 **txtnums**=(EditText)findViewById(R.id.***txtnums***);  
  
 **txtDatas**=(TextView)findViewById(R.id.***txtDatas***);  
  
 **btnFirst**=(Button)findViewById(R.id.***btnFirst***);  
 **btnFirst**.setOnClickListener(**btnFirst\_click**);  
 **btnPrevious**=(Button)findViewById(R.id.***btnPrevious***);  
 **btnPrevious**.setOnClickListener(**btnPrevious\_click**);  
 **btnNext** =(Button)findViewById(R.id.***btnNext***);  
 **btnNext**.setOnClickListener(**btnNext\_click**);  
 **btnLast**=(Button)findViewById(R.id.***btnLast***);  
 **btnLast**.setOnClickListener(**btnLast\_click**);  
  
  
 }  
  
 **private void** loadData(){  
 **list**=**new** ArrayList<CUBike>();  
  
 **try** {  
 URL url=**new** URL(**" \n"** + **"http://data.ntpc.gov.tw/api/v1/rest/datastore/382000000A-003083-001"**);  
 URLConnection conn=url.openConnection();  
 InputStream streamIn=conn.getInputStream();  
  
 BufferedReader r = **new** BufferedReader(**new** InputStreamReader(streamIn));  
 StringBuilder html = **new** StringBuilder();  
 String line;  
 **while** ((line = r.readLine()) != **null**) {  
 html.append(line);  
 }  
 **try** {  
 String tmp=html.toString();  
 **txtdate**.setText(String.*valueOf*(html.length()));*//第一個* JSONArray ja=**new** JSONObject(tmp).getJSONObject(**"result"**).getJSONArray(**"records"**);  
 **for**(**int** i=0;i<ja.length();i++){  
 JSONObject o = ja.getJSONObject(i);  
 **list**.add(**new** CUBike(o.getString(**"date"**),  
 o.getString(**"subject"**),  
 o.getString(**"nums"**)  
 ));  
 }  
 displayData();  
 } **catch** (JSONException e) {  
 e.printStackTrace();  
  
 }  
  
 } **catch** (MalformedURLException e) {  
 e.printStackTrace();  
 }**catch** (IOException e) {  
 e.printStackTrace();  
 }**catch** (Exception e) {  
 e.printStackTrace();  
 }  
  
 }  
  
 **private** View.OnClickListener **btnFirst\_click**=**new** View.OnClickListener(){  
 @Override  
 **public void** onClick(View view) {  
 **position**=0;  
 displayData();  
 }  
 };  
  
 **private void** displayData() {  
 **txtDatas**.setText(**"第"**+String.*valueOf*(**position**+1)+**"筆,總共"**+String.*valueOf*(**list**.size())+**"筆"**);  
  
  
 **txtdate**.setText(**list**.get(**position**).getDate());  
 **txtsubject**.setText(**list**.get(**position**).getSubject());  
 **txtnums**.setText(**list**.get(**position**).getNums());  
  
 }  
  
 **private** View.OnClickListener **btnPrevious\_click**=**new** View.OnClickListener(){  
 @Override  
 **public void** onClick(View view) {  
 **position**--;  
 **if**(**position**<0)  
 **position**=0;  
 displayData();  
 }  
 };  
 **private** View.OnClickListener **btnNext\_click**=**new** View.OnClickListener(){  
 @Override  
 **public void** onClick(View view) {  
 **position**++;  
 **if**(**position**>=**list**.size())  
 **position**=**list**.size()-1;  
 displayData();  
  
 }  
 };  
 **private** View.OnClickListener **btnLast\_click**=**new** View.OnClickListener(){  
 @Override  
 **public void** onClick(View view) {  
 **position**=**list**.size()-1;  
 displayData();  
 }  
 };  
}

activity

*<?***xml version="1.0" encoding="utf-8"***?>*<**ScrollView xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"**>  
  
  
 <**LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"  
 android:layout\_width="match\_parent"  
 android:layout\_height="match\_parent"  
 android:orientation="vertical"**>  
 <**LinearLayout  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"**>  
  
 <**Button  
 android:id="@+id/btnFirst"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:background="@drawable/first"** />  
  
 <**Button  
 android:id="@+id/btnPrevious"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:background="@drawable/previous"** />  
  
 <**Button  
 android:id="@+id/btnNext"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:background="@drawable/next"** />  
  
 <**Button  
 android:id="@+id/btnLast"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:layout\_weight="1"  
 android:background="@drawable/last"** />  
  
 </**LinearLayout**>  
 <**TextView  
 android:id="@+id/txtDatas"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text=""  
 android:textSize="20dp"** />  
 <**TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="日期"  
 android:textSize="20dp"** />  
  
 <**EditText  
 android:id="@+id/txtdate"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:textSize="20dp"** />  
  
 <**TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="主題"  
 android:textSize="20dp"** />  
  
 <**EditText  
 android:id="@+id/txtsubject"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:textSize="20dp"** />  
  
 <**TextView  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:text="參加人數"  
 android:textSize="20dp"** />  
  
 <**EditText  
 android:id="@+id/txtnums"  
 android:layout\_width="match\_parent"  
 android:layout\_height="wrap\_content"  
 android:textSize="20dp"** />  
  
 </**LinearLayout**>  
</**ScrollView**>

