Sommaire

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Tracer le cycle de vie d'une activity

```java
package eu.centrale.myfirstapp;

import android.os.Bundle;
import android.app.Activity;
import android.util.Log;
import android.view.Menu;

public class MainActivity2 extends Activity {

    static final String TAG="centrale";

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main_activity2);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.main_activity2, menu);
```

```java
        return true;
    }

    @Override
    protected void onDestroy() {
        Log.d(TAG,"onDestroy");
        super.onDestroy();
    }

    @Override
    protected void onPause() {
        Log.d(TAG,"onPause");
        super.onPause();
    }

    @Override
    protected void onRestart() {
        Log.d(TAG,"onRestart");
        super.onRestart();
    }

    @Override
    protected void onResume() {
        Log.d(TAG,"onResume");
        super.onResume();
    }

    @Override
    protected void onStart() {
        Log.d(TAG,"onStart");
```

```java
        super.onStart();
    }

    @Override
    protected void onStop() {
        Log.d(TAG,"onStop");
        super.onStop();
    }

}
```

Lancer une activité

Activité principale

```java
package eu.centrale.myfirstapp;

import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class LaunchActivity extends Activity {
```

```java
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_launch);

        Button btn1 = (Button)findViewById(R.id.button1);
        btn1.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {
                Intent monIntent = new Intent(LaunchActivity.this,SecondActivity.class);
                startActivity(monIntent);

            }
        });
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.launch, menu);
        return true;
    }

}
```

Activité lancée

```java
package eu.centrale.myfirstapp;

import android.os.Bundle;
import android.app.Activity;
import android.view.Menu;

public class SecondActivity extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second);
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.second, menu);
        return true;
    }

}
```

Lancer une activité en lui passant des paramètres

Activité principale

```java
package eu.centrale.myfirstapp;

import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class LaunchActivityWithData extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_launch);

        Button btn1 = (Button)findViewById(R.id.button1);
        btn1.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {


                Intent monIntent = new Intent( LaunchActivityWithData.this,
SecondActivityWithData.class );
                monIntent.putExtra("Value1", "This value one for ActivityTwo ");
                monIntent.putExtra("Value2", "This value two ActivityTwo");
                startActivity(monIntent);
```

```
            }
        });
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.launch, menu);
        return true;
    }

}
```

Activité lancée

```
package eu.centrale.myfirstapp;

import android.app.Activity;
import android.os.Bundle;
import android.util.Log;
import android.view.Menu;

public class SecondActivityWithData extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second);
```

```java
        Bundle extras = getIntent().getExtras();
        if (extras != null) {
            // Get data via the key
            String value1 = extras.getString("Value1");
            if (value1 != null) {
                // Do something with the data
                Log.d("centrale",value1);
            }
        }
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.second, menu);
        return true;
    }
}
```

Lancer une activité pour récupérer un résultat

Activité principale

```java
package eu.centrale.myfirstapp;

import android.app.Activity;
```

```java
import android.content.Intent;
import android.os.Bundle;
import android.util.Log;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.Toast;

public class LaunchActivityForResult extends Activity {

    private static final int REQUEST_CODE = 9999;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_launch);

        Button btn1 = (Button)findViewById(R.id.button1);
        btn1.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {
                Intent monIntent = new Intent( LaunchActivityForResult.this,
SecondActivityForResult.class ) ;
                startActivityForResult(monIntent, REQUEST_CODE);

            }
        });
    }
```

```java
    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.launch, menu);
        return true;
    }

    @Override
    protected void onActivityResult(int requestCode, int resultCode, Intent data) {
        if (resultCode == RESULT_OK && requestCode == REQUEST_CODE) {
            if (data.hasExtra("returnKey1")) {
                //Traitement
                Log.d("centrale", data.getExtras().getString("returnKey1"));
                Toast.makeText(this, data.getExtras().getString("returnKey1"),
                        Toast.LENGTH_SHORT).show();
            }
        }
    }

}
```

Activité lancée

```java
package eu.centrale.myfirstapp;

import android.os.Bundle;
import android.app.Activity;
```

```java
import android.content.Intent;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class SecondActivityForResult extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_second_activity_for_result);

        Button btn1 = (Button)findViewById(R.id.button1);
        btn1.setOnClickListener(new OnClickListener() {

            @Override
            public void onClick(View v) {
                Intent data = new Intent();
                data.putExtra("returnKey1", "Test retour");
                //data.putExtra("returnKey2", "You could be better then you are. ");
                // Activity finished ok, return the data
                setResult(RESULT_OK, data);
                finish();
            }
        });
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
```

```
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.second_activity_for_result, menu);
        return true;
    }

}
```

Exécuter un service

Activité principale

```
package eu.centrale.myfirstapp;

import android.app.Activity;
import android.content.Intent;
import android.os.Bundle;
import android.view.Menu;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;

public class MainActivity3 extends Activity {

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main_activity3);
```

```java
        Button btn1 = (Button) findViewById(R.id.button1);
        Button btn2 = (Button) findViewById(R.id.button2);

        btn1.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View v) {
                //Start service
                Intent service = new Intent(MainActivity3.this, UpdaterService.class);
                startService(service);
            }
        });

        btn2.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View arg0) {
                //Stop service
                Intent service = new Intent(MainActivity3.this, UpdaterService.class);
                stopService(service);
            }
        });
    }

    @Override
    public boolean onCreateOptionsMenu(Menu menu) {
        // Inflate the menu; this adds items to the action bar if it is present.
        getMenuInflater().inflate(R.menu.main_activity3, menu);
        return true;
    }
```

```
}
```

Classe UpdaterService

```java
package eu.centrale.myfirstapp;

import android.app.Service;
import android.content.Intent;
import android.os.IBinder;
import android.util.Log;

public class UpdaterService extends Service {

    static final String TAG = "centrale";

    public UpdaterService() {

    }

    @Override
    public IBinder onBind(Intent arg0) {
        // TODO: Return the communication channel to the service.
        throw new UnsupportedOperationException("Not yet implemented");
    }

    @Override
    public void onCreate() {
        Log.d(TAG,"Service onCreate");
```

```java
        // TODO Auto-generated method stub
        super.onCreate();
    }

    @Override
    public void onDestroy() {
        Log.d(TAG,"Service onDestroy");
        // TODO Auto-generated method stub
        super.onDestroy();
    }

}
```

Broadcast Receiver

Exemple 1 : Lancer un service au démarrage

Attention, requiert la permission `android.permission.RECEIVE_BOOT_COMPLETED`

```xml
<receiver android:name="MyScheduleReceiver" >
    <intent-filter>
        <action android:name="android.intent.action.BOOT_COMPLETED" />
    </intent-filter>
</receiver>
```

Broadcast Receiver

```java
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;

public class MyReceiver extends BroadcastReceiver {

  @Override
  public void onReceive(Context context, Intent intent) {
    Intent service = new Intent(context, WordService.class);
    context.startService(service);
  }
}
```

Exemple 2 : Afficher un Toast à la réception d'un SMS
Attention, il faut définir les permissions android.permission.RECEIVE_SMS

Déclaration du Broadcast Receiver

```java
import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.widget.Toast;

public class MySmsReceiver extends BroadcastReceiver {
```

```java
    @Override
    public void onReceive(Context context, Intent intent) {
        // TODO Auto-generated method stub
        Toast.makeText(context, "Vous avez reçu un sms.",
                Toast.LENGTH_LONG).show();

    }

}
```

Déclaration du receiver dans le manifest

```xml
<receiver android:name="MySmsReceiver" android:enabled="true">
    <intent-filter>
        <action android:name="android.provider.Telephony.SMS_RECEIVED"/>
    </intent-filter>
</receiver>
```

Exemple 3 : Créer ses propres événements

Broadcast Receiver

```java
package eu.central.test;

import android.content.BroadcastReceiver;
import android.content.Context;
import android.content.Intent;
import android.util.Log;
```

```java
public class MyBroadcastReceiver extends BroadcastReceiver {

    @Override
    public void onReceive(Context context, Intent intent) {
        String value1 = intent.getStringExtra("Value1");
        Log.i("MyBroadcastReceiver","value:"+value1);
    }

}
```

Manifest

```xml
<receiver android:name="MyBroadcastReceiver" >
    <intent-filter>
        <action android:name="eu.corellis.action.NEW_EVENT" />
    </intent-filter>
</receiver>
```

Déclenchement d'un événement

```java
Intent i = new Intent("eu.corellis.action.NEW_EVENT");
i.putExtra("Value1", "This value one for Broadcast ");
sendBroadcast(i);
```

Content Provider

Lister les contacts : attention il faut la permission : android.permission.READ_CONTACTS

```java
import android.app.Activity;
import android.content.ContentResolver;
import android.database.Cursor;
import android.net.Uri;
import android.os.Bundle;
import android.provider.ContactsContract;
import android.util.Log;

public class ContentAdapter extends Activity {

    private static final String TAG = "ContentAdapter";

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        Log.i(TAG, "Lancement activity");

        /*** Liste les colonnes dans contact ***/
        Uri uri = ContactsContract.Contacts.CONTENT_URI;
        String[] projection = null;
        String selection = null;
        String[] selectionArgs = null;
        String sortOrder = null;

        ContentResolver cr = getContentResolver();
        Cursor cur = cr.query(uri, projection, selection, selectionArgs,
                sortOrder);
```

```java
        if (cur.getCount() > 0) {

            while (cur.moveToNext()) {
                String id = cur.getString(cur
                        .getColumnIndex(ContactsContract.Contacts._ID));
                String displayName = cur
                        .getString(cur
                                .getColumnIndex(ContactsContract.Contacts.DISPLAY_NAME));
                Log.i(TAG, id + " : " + displayName);


            }
        } else {
            Log.i(TAG, "Cursor empty");
        }

        setContentView(R.layout.main);
    }
}
```

Intent

Lancer le navigateur :

```java
        Intent intent = new Intent(Intent.ACTION_VIEW, Uri.parse("http://www.google.fr"));
        startActivity(intent);
```

Afficher les contacts :

```java
Intent contacts = new Intent(android.content.Intent.ACTION_VIEW,
                    ContactsContract.Contacts.CONTENT_URI);
startActivity(contacts);
```

Lancer un appel :

```java
Intent intent = new Intent(Intent.ACTION_CALL, Uri.parse("tel:1234567890"));
startActivity(intent);
```

Listener

Exemple simple

```java
import android.app.Activity;
import android.os.Bundle;
import android.util.Log;
import android.widget.Button;
import android.widget.Toast;
import android.view.View;
import android.view.View.OnClickListener;

public class TestButtonActivity extends Activity {

    private static final String TAG = "MyActivity";
```

```java
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.button_layout);
        Log.i(TAG, "Lancement activity");

        Button button1 = (Button) findViewById(R.id.button1);
        button1.setOnClickListener(new OnClickListener() {
            public void onClick(View v) {
                Toast.makeText(getApplicationContext(), "click button",
                        Toast.LENGTH_SHORT).show();

            }
        });
    }

}
```

Exemple avec des boutons multiples

```java
package eu.central.test;

import android.app.Activity;
import android.os.Bundle;
import android.util.Log;
import android.widget.Button;
import android.widget.Toast;
import android.view.View;
```

```java
import android.view.View.OnClickListener;

public class TestButtonsActivity extends Activity implements OnClickListener {

    private static final String TAG = "MyActivity";
    Button monBouton1 = null;
    Button monBouton2 = null;
    Button monBouton3 = null;

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.buttons_layout);
        Log.i(TAG, "Lancement activity");

        monBouton1 = (Button) findViewById(R.id.button1);
        monBouton1.setOnClickListener(this);
        monBouton2 = (Button) findViewById(R.id.button2);
        monBouton2.setOnClickListener(this);
        monBouton3 = (Button) findViewById(R.id.button3);
        monBouton3.setOnClickListener(this);
    }

    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        if (v == monBouton1) {
            Toast.makeText(getApplicationContext(), "Bouton 1",
                        Toast.LENGTH_SHORT).show();
```

```
        }
        if (v == monBouton2) {
            Toast.makeText(getApplicationContext(), "Bouton 2",
                        Toast.LENGTH_SHORT).show();
        }
        if (v == monBouton3) {
            Toast.makeText(getApplicationContext(), "Bouton 3",
                        Toast.LENGTH_SHORT).show();
        }

    }

}
```

Boites de Dialog

Toast

Afficher une alerte

```
Toast.makeText(getApplicationContext(), "Boîte de Dialog",
                        Toast.LENGTH_SHORT).show();
```

Dialog

```
/*
   * Appelée qu'à la première création d'une boîte de dialogue
```

```
   * Les fois suivantes, on se contente de récupérer la boîte de dialogue déjà créée…
   * Sauf si la méthode « onPrepareDialog » modifie la boîte de dialogue.
  */
  @Override
  public Dialog onCreateDialog (int id) {
    Dialog box = null;
    switch(id) {
    // Quand on appelle avec l'identifiant de la boîte normale
    case ID_NORMAL_DIALOG:
      box = new Dialog(this);
      box.setTitle("Je viens tout juste de naître.");
      break;

    // Quand on appelle avec l'identifiant de la boîte qui s'énerve
    case ID_ENERVEE_DIALOG:
      box = new Dialog(this);
      box.setTitle("ET MOI ALORS ???");
    }
    return box;
  }

  @Override
  public void onPrepareDialog (int id, Dialog box) {
    if(id == ID_NORMAL_DIALOG && compteur > 1)
      box.setTitle("On est au " + compteur + "ème lancement !");
     //On ne s'intéresse pas au cas où l'identifiant vaut 1, puisque cette boîte affiche le même texte à
chaque lancement
  }
```

Custom Dialog

Layout

```xml
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
  xmlns:android="http://schemas.android.com/apk/res/android"
  android:orientation="vertical"
  android:layout_width="fill_parent"
  android:layout_height="fill_parent">
  <LinearLayout
    android:layout_width="fill_parent"
    android:layout_height="wrap_content"
    android:orientation="horizontal">
    <ImageView
      android:layout_width="wrap_content"
      android:layout_height="wrap_content"
      android:src="@drawable/ic_launcher"/>
    <TextView
      android:layout_width="fill_parent"
      android:layout_height="fill_parent"
      android:text="Je suis une jolie boîte de dialogue !"/>
  </LinearLayout>
</LinearLayout>

Dialog box = new Dialog(this);
box.setContentView(R.layout.dialog);
box.setTitle("Une boîte de Dialog Custom!");
```

AlertDialog

```java
AlertDialog.Builder boite;
            boite = new AlertDialog.Builder(this);
            boite.setTitle("boite de dialogue 1");
            boite.setIcon(R.drawable.ic_launcher);
                boite.setMessage("Message de la 1ere boite");
            boite.setPositiveButton("Oui", new DialogInterface.OnClickListener() {

                public void onClick(DialogInterface dialog, int which) {
                // ... action si réponse = Oui
                }
                }
            );
            boite.show();
```

Adapters

Array Adapter

```java
package eu.central.test;

import android.app.ListActivity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.AdapterView;
import android.widget.AdapterView.OnItemClickListener;
import android.widget.ArrayAdapter;
```

```java
import android.widget.ListView;
import android.widget.TextView;
import android.widget.Toast;

public class TestActivityArrayAdapterListView extends ListActivity {
    // public class TestActivityArrayAdapterListView extends Activity {

    private static final String TAG = "MyActivity";

    static final String[] COUNTRIES = new String[] { "Afghanistan", "Albania",
            "Algeria", "American Samoa", "Andorra", "Angola", "Anguilla",
            "Antarctica", "Antigua and Barbuda", "Argentina", "Armenia",
            "Aruba", "Australia", "Austria", "Azerbaijan", "Bahrain",
            "Bangladesh", "Barbados", "Belarus", "Belgium", "Belize", "Benin",
            "Bermuda", "Bhutan", "Bolivia", "Bosnia and Herzegovina",
            "Botswana", "Bouvet Island", "Brazil",
            "British Indian Ocean Territory", "British Virgin Islands",
            "Brunei", "Bulgaria", "Burkina Faso", "Burundi", "Cote d'Ivoire",
            "Cambodia", "Cameroon", "Canada", "Cape Verde", "Cayman Islands",
            "Central African Republic", "Chad", "Chile", "China",
            "Christmas Island", "Cocos (Keeling) Islands", "Colombia",
            "Comoros", "Congo", "Cook Islands", "Costa Rica", "Croatia",
            "Cuba", "Cyprus", "Czech Republic",
            "Democratic Republic of the Congo", "Denmark", "Djibouti",
            "Dominica", "Dominican Republic", "East Timor", "Ecuador", "Egypt",
            "El Salvador", "Equatorial Guinea", "Eritrea", "Estonia",
            "Ethiopia", "Faeroe Islands", "Falkland Islands", "Fiji",
            "Finland", "Former Yugoslav Republic of Macedonia", "France",
            "French Guiana", "French Polynesia", "French Southern Territories",
            "Gabon", "Georgia", "Germany", "Ghana", "Gibraltar", "Greece",
```

```
"Greenland", "Grenada", "Guadeloupe", "Guam", "Guatemala",
"Guinea", "Guinea-Bissau", "Guyana", "Haiti",
"Heard Island and McDonald Islands", "Honduras", "Hong Kong",
"Hungary", "Iceland", "India", "Indonesia", "Iran", "Iraq",
"Ireland", "Israel", "Italy", "Jamaica", "Japan", "Jordan",
"Kazakhstan", "Kenya", "Kiribati", "Kuwait", "Kyrgyzstan", "Laos",
"Latvia", "Lebanon", "Lesotho", "Liberia", "Libya",
"Liechtenstein", "Lithuania", "Luxembourg", "Macau", "Madagascar",
"Malawi", "Malaysia", "Maldives", "Mali", "Malta",
"Marshall Islands", "Martinique", "Mauritania", "Mauritius",
"Mayotte", "Mexico", "Micronesia", "Moldova", "Monaco", "Mongolia",
"Montserrat", "Morocco", "Mozambique", "Myanmar", "Namibia",
"Nauru", "Nepal", "Netherlands", "Netherlands Antilles",
"New Caledonia", "New Zealand", "Nicaragua", "Niger", "Nigeria",
"Niue", "Norfolk Island", "North Korea", "Northern Marianas",
"Norway", "Oman", "Pakistan", "Palau", "Panama",
"Papua New Guinea", "Paraguay", "Peru", "Philippines",
"Pitcairn Islands", "Poland", "Portugal", "Puerto Rico", "Qatar",
"Reunion", "Romania", "Russia", "Rwanda", "Sqo Tome and Principe",
"Saint Helena", "Saint Kitts and Nevis", "Saint Lucia",
"Saint Pierre and Miquelon", "Saint Vincent and the Grenadines",
"Samoa", "San Marino", "Saudi Arabia", "Senegal", "Seychelles",
"Sierra Leone", "Singapore", "Slovakia", "Slovenia",
"Solomon Islands", "Somalia", "South Africa",
"South Georgia and the South Sandwich Islands", "South Korea",
"Spain", "Sri Lanka", "Sudan", "Suriname",
"Svalbard and Jan Mayen", "Swaziland", "Sweden", "Switzerland",
"Syria", "Taiwan", "Tajikistan", "Tanzania", "Thailand",
"The Bahamas", "The Gambia", "Togo", "Tokelau", "Tonga",
"Trinidad and Tobago", "Tunisia", "Turkey", "Turkmenistan",
```

```java
                "Turks and Caicos Islands", "Tuvalu", "Virgin Islands", "Uganda",
                "Ukraine", "United Arab Emirates", "United Kingdom",
                "United States", "United States Minor Outlying Islands", "Uruguay",
                "Uzbekistan", "Vanuatu", "Vatican City", "Venezuela", "Vietnam",
                "Wallis and Futuna", "Western Sahara", "Yemen", "Yugoslavia",
                "Zambia", "Zimbabwe" };

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);

        ListView myListView = getListView(); //cas ou on n'utilise pas de Layout
        // setContentView(R.layout.listview_layout);
        // ListView myListView = (ListView) findViewById(R.id.myListView);
        ArrayAdapter<String> aa = new ArrayAdapter<String>(this,
                R.layout.list_item, COUNTRIES);
        myListView.setAdapter(aa);

        // setTheme(R.style.WidgetBackground);

        myListView.setTextFilterEnabled(true);
        myListView.setOnItemClickListener(new OnItemClickListener() {
            @Override
            public void onItemClick(AdapterView<?> parent, View view,
                    int position, long id) {
                // When clicked, show a toast with the TextView text
                Toast.makeText(getApplicationContext(),
                        ((TextView) view).getText(), Toast.LENGTH_SHORT).show();
            }
```

```
        });

        Log.i(TAG, "Lancement activity");
    }

}
```

Simple Adapter

```java
package eu.central.test;

import java.util.ArrayList;
import java.util.HashMap;

import android.app.ListActivity;
import android.os.Bundle;
import android.util.Log;
import android.view.View;
import android.widget.ListView;
import android.widget.SimpleAdapter;
import android.widget.Toast;

public class TestActivitySimpleAdapterListView extends ListActivity {

    private static final String TAG = "MyActivity";


    /** Called when the activity is first created. */
```

```java
@Override
public void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);

  //Création de la ArrayList qui nous permettra d'alimenter la listView
    ArrayList<HashMap<String, String>> listItem = new ArrayList<HashMap<String, String>>();

    //On déclare la HashMap qui contiendra les informations pour un item
    HashMap<String, String> map;

    //Création d'une HashMap pour insérer les informations du premier item de notre listView
    map = new HashMap<String, String>();

    map.put("title", "Android");
    map.put("description", "Hello Android");
    map.put("img", String.valueOf(R.drawable.logo_android));

    listItem.add(map);

    //On refait la même chose pour remplir le reste des items de la liste
    map = new HashMap<String, String>();

    map.put("title", "iOS");
    map.put("description", "Hello iOS");
    map.put("img", String.valueOf(R.drawable.logo_apple));
    listItem.add(map);

    map = new HashMap<String, String>();

    map.put("title", "Bada");
```

```java
        map.put("description", "Hello Bada");
        map.put("img", String.valueOf(R.drawable.logo_samsung));
        listItem.add(map);

        map = new HashMap<String, String>();
        map.put("title", "Windows Phone 7");
        map.put("description", "Hello Windows Phone 7");
        map.put("img", String.valueOf(R.drawable.logo_windows));
        listItem.add(map);

        //Création d'un SimpleAdapter qui se chargera de mettre les items présent dans notre list
(listItem) dans la vue affichageitem
        SimpleAdapter mSchedule = new SimpleAdapter (this.getBaseContext(), listItem,
R.layout.layoutitem,
                new String[] {"img", "title", "description"}, new int[] {R.id.img, R.id.title,
R.id.description});

        //On attribut à notre listActivity l'adapter que l'on vient de créer
        setListAdapter(mSchedule);

        Log.i(TAG,"Lancement activity");
    }

    @Override
    protected void onListItemClick(ListView l, View v, int position, long id) {
        //Récupèrer la Map qui contient les informations de l'item (titre, decription et image)
        HashMap<String, String> map = (HashMap<String, String>) getListAdapter().getItem(position);
        Toast.makeText(this, map.get("title")+ " selected", Toast.LENGTH_LONG).show();
    }
```

```
}
```

Custom Adapter

Classe Livre

```java
package eu.central.test;

public class Livre {
    private String titre;
    private String auteur;

    public String getTitre() {
        return titre;
    }

    public void setTitre(String titre) {
        this.titre = titre;
    }

    public String getAuteur() {
        return auteur;
    }

    public void setAuteur(String auteur) {
        this.auteur = auteur;
    }

    public Livre(String titre, String auteur) {
        this.titre = titre;
```

```
            this.auteur = auteur;
    }

}
```

Livre Activity

```java
package eu.central.test;

import java.util.ArrayList;
import java.util.List;

import android.app.Activity;
import android.os.Bundle;
import android.widget.ListView;

public class LivreActivity extends Activity {

    List<Livre> maBibliotheque = new ArrayList<Livre>();

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.listview_layout);

        this.RemplirLaBibliotheque();

        ListView myListView = (ListView) findViewById(R.id.myListView);
```

```java
        LivreAdapter adapter = new LivreAdapter(this, maBibliotheque);
        myListView.setAdapter(adapter);
        adapter.notifyDataSetChanged();

    }

    private void RemplirLaBibliotheque() {

        maBibliotheque.clear();
        maBibliotheque.add(new Livre("Starcraft 2 : Les diables du ciel",
                "William-C Dietz"));
        maBibliotheque.add(new Livre("L'art du développement Android",
                "Mark Murphy"));
        maBibliotheque.add(new Livre("Le seuil des ténèbres", "Karen Chance"));
        maBibliotheque.add(new Livre("Starcraft 2 : Les diables du ciel",
                "William-C Dietz"));
        maBibliotheque.add(new Livre("L'art du développement Android",
                "Mark Murphy"));
        maBibliotheque.add(new Livre("Le seuil des ténèbres", "Karen Chance"));
        maBibliotheque.add(new Livre("Starcraft 2 : Les diables du ciel",
                "William-C Dietz"));
        maBibliotheque.add(new Livre("L'art du développement Android",
                "Mark Murphy"));
        maBibliotheque.add(new Livre("Le seuil des ténèbres", "Karen Chance"));

    }

}
```

Livre Adapter

```java
package eu.central.test;

import java.util.List;

import android.content.Context;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.BaseAdapter;
import android.widget.TextView;

/* On surcharge ArrayAdapter */
public class LivreAdapterBad extends BaseAdapter {
    List<Livre> biblio;
    // LayoutInflater aura pour mission de charger notre fichier XML
    LayoutInflater inflater;
    public LivreAdapterBad(Context context,List<Livre> objects) {
        inflater = LayoutInflater.from(context);
        this.biblio = objects;
    }
    /**
     * Génère la vue pour un objet
     */
    @Override
    public View getView(int position, View convertView, ViewGroup parent) {

        convertView = inflater.inflate(R.layout.livre_item, null);
        TextView tvTitre = (TextView) convertView.findViewById(R.id.txtTitre);
```

```java
            TextView tvAuteur = (TextView) convertView.findViewById(R.id.txtAuteur);

            Livre livre = biblio.get(position);
            tvTitre.setText(livre.getTitre());
            tvAuteur.setText(livre.getAuteur());
            return convertView;
        }
        /**
         * Retourne le nombre d'éléments
         */
        @Override
        public int getCount() {
            return biblio.size();
        }
        /**
         * Retourne l'item à la position
         */
        @Override
        public Livre getItem(int position) {
            return biblio.get(position);
        }
        /**
         * Retourne la position de l'item
         */
        @Override
        public long getItemId(int position) {
            return position;
        }
    }
}
```

Livre Adpater optimisé

```java
package eu.central.test;

import java.util.List;

import android.content.Context;
import android.util.Log;
import android.view.LayoutInflater;
import android.view.View;
import android.view.ViewGroup;
import android.widget.BaseAdapter;
import android.widget.TextView;

/* On surcharge ArrayAdapter */
public class LivreAdapter extends BaseAdapter {

    List<Livre> biblio;

    // LayoutInflater aura pour mission de charger notre fichier XML
    LayoutInflater inflater;

    /**
     * Elle nous servira à mémoriser les éléments de la liste en mémoire pour
     * qu'à chaque rafraichissement l'écran ne scintille pas
     *
     * @author patrice
     */
    private class ViewHolder {
        TextView tvTitre;
```

```java
        TextView tvAuteur;
    }

    public LivreAdapter(Context context, List<Livre> objects) {
        inflater = LayoutInflater.from(context);
        this.biblio = objects;

    }

    /**
     * Génère la vue pour un objet
     */
    @Override
    public View getView(int position, View convertView, ViewGroup parent) {
        ViewHolder holder;
        if (convertView == null) {
            Log.v("test", "convertView is null");
            holder = new ViewHolder();
            convertView = inflater.inflate(R.layout.livre_item, null);
            holder.tvTitre = (TextView) convertView.findViewById(R.id.txtTitre);
            holder.tvAuteur = (TextView) convertView
                        .findViewById(R.id.txtAuteur);
            convertView.setTag(holder);
        } else {
            Log.v("test", "convertView is not null");
            holder = (ViewHolder) convertView.getTag();
        }
        Livre livre = biblio.get(position);
        holder.tvTitre.setText(livre.getTitre());
        holder.tvAuteur.setText(livre.getAuteur());
```

```java
        return convertView;
    }

    /**
     * Retourne le nombre d'éléments
     */
    @Override
    public int getCount() {
        // TODO Auto-generated method stub
        return biblio.size();
    }

    /**
     * Retourne l'item à la position
     */
    @Override
    public Livre getItem(int position) {
        // TODO Auto-generated method stub
        return biblio.get(position);
    }

    /**
     * Retourne la position de l'item
     */
    @Override
    public long getItemId(int position) {
        // TODO Auto-generated method stub
        return position;
    }
```

```
    }
```

Loading et parsing JSON

Récupération du flux

```java
        HttpClient httpclient = new DefaultHttpClient();
        HttpGet httpget = new HttpGet("http://cci.corellis.eu/pois.php");
        try {
            HttpResponse response = httpclient.execute(httpget);
            if(response != null) {
                String line = "";
                InputStream inputstream = response.getEntity().getContent();
                line = convertStreamToString(inputstream);
                JSONObject theObject = new JSONObject(line);

                JSONArray jsonArray = theObject.getJSONArray("results");
                Log.i(TAG,
                        "Number of entries " + jsonArray.length());
            } else {
                Toast.makeText(this, "Unable to complete your request", Toast.LENGTH_LONG).show();
            }
        } catch (ClientProtocolException e) {
            Toast.makeText(this, "Caught ClientProtocolException", Toast.LENGTH_SHORT).show();
            Log.e("test",e.getMessage());
        } catch (IOException e) {
            Toast.makeText(this, "Caught IOException", Toast.LENGTH_SHORT).show();
```

```
            Log.e("test",e.getMessage());
    } catch (Exception e) {
        Toast.makeText(this, "Caught Exception", Toast.LENGTH_SHORT).show();
        Log.e("test",e.getMessage());
    }
```

Conversion du flux en String

```
    private String convertStreamToString(InputStream is) {
        String line = "";
        StringBuilder total = new StringBuilder();
        BufferedReader rd = new BufferedReader(new InputStreamReader(is));
        try {
            while ((line = rd.readLine()) != null) {
                total.append(line);
            }
        } catch (Exception e) {
            Toast.makeText(this, "Stream Exception", Toast.LENGTH_SHORT).show();
        }
        return total.toString();
    }
```