

Android ListView

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סדר פעולות יצירת listView

1. נחליף את ההורשה לירושה מ- `ListActivity`
2. יצירת `listview` בקובץ ה-`xml` עם `id` בשם `list`
3. יצירת
`private ArrayAdapter<String> myAdapter;` כתכונה
4. קריאת נתונים לתוך מבנה נתונים מסוג `List` או מערך של `String`
5. הפעלת `setAdapter` עם
a. `context`
b. `android.layout.simple_list_item1`
c. מבנה נתונים
6. הפעלת ה- `adapter`

listview סדר פעולות יצירת

```
public class MainActivity extends ListActivity {
    private ArrayAdapter<String> myAdapter;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        ArrayList<String> data = new ArrayList<String>();
        data.add("The Prolific Oven");
        data.add("Fraiche Yogurt");
        data.add("Patxis Pizza");
        data.add("Jing Jing");
        data.add("St. Michael's Alley");

        myAdapter = new ArrayAdapter<String>(
            this,
            android.R.layout.simple_list_item_1,
            data
        );
        setListAdapter(myAdapter);
    }
}
```

```
Button b1 = (Button) findViewById(R.id.
button1);
b1.setOnClickListener(new View.
OnClickListener() {
    public void onClick(View v) {
        addRow();
    }
});
}
```

הוספת שורה ל-listview

```
private void addRow() {  
    String now = String.valueOf(System.currentTimeMillis());  
    myAdapter.add(now);  
}
```

נגיעה בשורה מה-listview

```
protected void onListItemClick(ListView listView, View view, int position, long id) {  
    super.onListItemClick(listView, view, position, id);  
  
    String string = (String) getListAdapter().getItem(position);  
  
    Toast.makeText(this, "Behold: " + string, Toast.LENGTH_SHORT).show();  
}
```

2 אנגיד

2 אמצע

```
public class MainActivity extends ListActivity {
    int counter;//file 1 file 2 file 3 - depended for which
room we arrive
    EditText etstuff;
    Button btnAddStuff;
    String strstuff;
    String strfile;
    Button delete;
    private ArrayAdapter<String> myAdapter;
    ArrayList<String> data = new ArrayList<String>();

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        btnAddStuff=(Button)findViewById(R.id.
roomactivitybtnAddStuff);
```

```
etstuff=(EditText) findViewById(R.id.roomactivityetstuff);
delete=(Button) findViewById(R.id.roomactivitybtnDelete);
delete.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        // TODO Auto-generated
method stub
        SharedPreferences sp
        =getSharedPreferences(strfile, 0);
        Editor edit= sp.edit();
        edit.clear();
        edit.commit();
        data.clear();
        myAdapter.clear();
        counter=0;

    }
});
```

2 ΛΗΓΗ

```
int num=1;
strfile="file"+num;
    SharedPreferences sp=getSharedPreferences(strfile, 0);
    counter=sp.getInt("counter", 0);
    for(int i=1;i<counter+1;i++)
    {
        strstuff=sp.getString("stuff" + i , "" ) ;
        data.add(strstuff);
    }
    myAdapter = new ArrayAdapter<String>(        this,
        android.R.layout.simple_list_item_1,
        data
    );
setListAdapter(myAdapter);
```

```
        btnAddStuff.setOnClickListener(new View.
OnClickListener() {
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        counter++;
        SharedPreferences sp =getSharedPreferences(strfile, 0);
        String info=etstuff.getText().toString();
        if(info.length()!=0&&info!=null)
        {
            Editor edit= sp.edit();
            edit.putString("stuff" + counter,    etstuff.getText().
toString());
            edit.putInt("counter", counter);
            edit.commit();
            myAdapter.
add(etstuff.getText().toString());
            Toast.makeText(getApplicationContext(), info + "
add to your list", Toast.LENGTH_SHORT).show();
            etstuff.setText("");
        }else
            Toast.makeText(getApplicationContext(),
"Empty Text:please write text", Toast.LENGTH_SHORT).
show();
    }
}
```


xml

```
<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=".RoomActivity" >
```

```
    <EditText
```

```
        android:id="@+id/roomactivityetstuff"
```

```
        android:layout_width="match_parent"
```

```
        android:layout_height="wrap_content"
```

```
    >
```

```
    <requestFocus />
```

```
</EditText>
```

```
<Button
```

```
    android:id="@+id/roomactivitybtnAddStuff"
```

```
    android:layout_width="130dp"
```

```
    android:layout_height="wrap_content"
```

```
    android:text="Add stuff" />
```

```
<Button
```

```
    android:id="@+id/roomactivitybtnDelete"
```

```
    android:layout_width="130dp"
```

```
    android:layout_height="wrap_content"
```

```
    android:text="Delete all stuff" />
```

```
<TextView
```

```
    android:id="@+id/textView1"
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:text="List of stuff"
```

```
    android:layout_marginBottom="10dp"    android:
    textAppearance="?android:attr/textAppearanceLarge" />
```

```
<ListView
```

```
    android:id="@android:id/list"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_margin="5dp"
```

```
    > </ListView>
```

```
</LinearLayout>
```

לסיכום

כדי ליצור list בסיסי אנו זקוקים ל -
adapter

listview עם id בשם list מתיקיית האנדרואיד
מבנה נתונים כגון : List,ArrayList או מערך של string
ניתן לממש את הפונקציה :

```
protected void onItemClick(ListView listView, View view, int position, long id) { super.onItemClick(listView,  
view, position, id);
```

ששולחת לנו פרמטרים ב- position את השורה בה
נגענו

Custom List

יצירת custom listview

כדי ליצור Custom List

1. ניצור layout נעצבו כרצוננו. את layout זה נדחוף בהמשך לכל שורה.

2. ניצור class adapter משלנו בשם כלשהו לדוגמא

MyAdapter שיורש מ ArrayAdapter<string >

3. נממש constructor עם 4 פרמטרים

```
public MyAdapter(Context context, int resource, int textViewResourceId,  
    List<String> objects) {  
    super(context, resource, textViewResourceId, objects);  
    // TODO Auto-generated constructor stub  
}
```

המשך

4. ניצור מבנה נתונים בהתאם לרצוננו. `text` תמונות וכו
5. נקרא את הנתונים למבנה הנתונים
6. וניצר `MyAdapter`

```
d=new MyAdapter(this, R.layout.listview_layout, com.example.lessonw_list9.R.id.txt,data);  
setListAdapter(d);
```

המשך

7. נממש את הפוקציה

```
@Override  
public View getView(int position, View convertView, ViewGroup parent) {  
    // TODO Auto-generated method stub  
    return row;  
}
```

תפקיד ה-adapter

תפקידיו של ה-adppter הוא לתאם בין מבני הנתונים ל-
ListView.

custom listview **אמא**

חלק 1 - יצירת custom layout

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.
com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="horizontal"
    >
    <ImageView
        android:id="@+id/colorImage"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:paddingTop="10dp"
        android:paddingRight="10dp"
        android:paddingBottom="10dp"
    />
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:orientation="vertical"
    >
```

```
        <TextView
            android:id="@+id/txt"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textSize="15dp"
        />
        <TextView
            android:id="@+id/subtitle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:textSize="10dp"
        />
    </LinearLayout>
</LinearLayout>
```

חלק 2 יצירת mainlayout

```
<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=".RoomActivity" >
```

```
    <EditText
```

```
        android:id="@+id/roomactivityetstuff"
```

```
        android:layout_width="match_parent"
```

```
        android:layout_height="wrap_content"    >
```

```
    </EditText>
```

```
    <Button
```

```
        android:id="@+id/roomactivitybtnAddStuff"
```

```
        android:layout_width="130dp"
```

```
        android:layout_height="wrap_content"
```

```
        android:text="Add stuff" />
```

```
    <Button
```

```
        android:id="@+id/roomactivitybtnDelete"
```

```
        android:layout_width="130dp"
```

```
        android:layout_height="wrap_content"
```

```
        android:text="Delete all stuff" />
```

```
<Button
```

```
    android:id="@+id/btndeleteline"
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:text="delete last line" />
```

```
<TextView
```

```
    android:id="@+id/textView1"
```

```
    android:layout_width="wrap_content"
```

```
    android:layout_height="wrap_content"
```

```
    android:text="List of stuff"
```

```
    android:layout_marginBottom="10dp"    android:
    textAppearance="?android:attr/textAppearanceLarge" />
```

```
<ListView
```

```
    android:id="@android:id/list"
```

```
    android:layout_width="match_parent"
```

```
    android:layout_height="wrap_content"
```

```
    android:layout_margin="5dp"
```

```
    > </ListView>
```

```
</LinearLayout>
```

חלק 3 - הגדרת adapter ו־MyAdapter

```
public class MainActivity extends ListActivity {  
    int counter;//file 1 file 2 file 3 - depended for which room we arrive  
    EditText etstuff;  
    Button btnAddStuff;  
    String strstuff;  
    String strfile;  
    Button delete;  
    MyAdapter d;  
  
    ArrayList<String> data = new ArrayList<String>();  
  
    int[] colorImage = new int[]{  
        R.drawable.yellow,  
        R.drawable.red,  
        R.drawable.green,R.drawable.green  
    };  
};
```

חלק 3

```
@Override
protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);
    btnAddStuff=(Button)findViewById(R.id.
roomactivitybtnAddStuff);
    etstuff=(EditText) findViewById(R.id.
roomactivityetstuff);
    delete=(Button) findViewById(R.id.
roomactivitybtnDelete);
    delete.setOnClickListener(new View.
OnClickListener() {
        @Override
        public void onClick(View v) {
            // TODO Auto-generated method
stub
```

```
        SharedPreferences sp
=getSharedPreferences(strfile, 0);
        Editor edit= sp.edit();
        edit.clear();
        edit.commit();
        data.clear();
        d.clear();
        counter=0;
    }
});
```

חלק 3- קריאת הנתונים מקובץ והוספה למבנה הנתונים

```
int num=1;
strfile="file"+num;
SharedPreferences sp=getSharedPreferences(strfile, 0);
    counter=sp.getInt("counter", 0);
    for(int i=1;i<counter+1;i++)
    {

        strstuff=sp.getString("stuff" + i , "" ) ;
        data.add(strstuff);
    }
```

חלק 4 - הגדרת ה-adapter

```
d=new MyAdapter(this, R.layout.listview_layout, com.example.  
lessonw_list9.R.id.txt,data);  
setListAdapter(d);
```

חלק 5 - כתיבת class MyAdapter

```
private class MyAdapter extends ArrayAdapter<String>
{
    public MyAdapter(Context context, int resource, int textViewResourceId,
        List<String> objects) {
        super(context, resource, textViewResourceId, objects);
    }
    @Override
    public View getView(int position, View convertView, ViewGroup parent) {
        // TODO Auto-generated method stub
        LayoutInflater inflater=(LayoutInflater) getSystemService(Context.LAYOUT_INFLATER_SERVICE);
        View row=inflater.inflate(com.example.lessonw_list9.R.layout.listview_layout,parent, false);
        ImageView img=(ImageView) row.findViewById(com.example.lessonw_list9.R.id.colorImage);
        TextView tvTxt=(TextView) row.findViewById(com.example.lessonw_list9.R.id.txt);
        TextView tvSubtitle=(TextView) row.findViewById(com.example.lessonw_list9.R.id.subtitle);
        tvTxt.setText(data.get(position));
        tvSubtitle.setText(data.get(position));
        if(position<3)
            img.setImageResource(colorImage[position]);
        else img.setImageResource(colorImage[0]);
        return row;
    }
}
```

onItemClickListener חלק 7 הוספת

@Override

```
protected void onItemClick(ListView l, View v, int position, long id)
```

```
{
```

```
    // TODO Auto-generated method stub
```

```
    super.onItemClick(l, v, position, id);
```

```
    String string = (String) getListAdapter().getItem(position);
```

```
    Toast.makeText(this, "you touch : " + string, oast.LENGTH_SHORT).show();
```

```
}
```


הוספת פונקציונלית דינמית לדוגמה הוספת שורה

```
btnAddStuff.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View v) {
        // TODO Auto-generated method stub
        counter++;
        SharedPreferences sp =getSharedPreferences(strfile, 0);
        String info=etstuff.getText().toString();
        if(info.length()!=0&&info!=null)
        {
            Editor edit= sp.edit();
            edit.putString("stuff" + counter, etstuff.getText().toString());
            edit.putInt("counter", counter);
            edit.commit();
            //myAdapter.add(etstuff.getText().toString());
            data.add(strstuff);
            d.add(info);
            Toast.makeText(getBaseContext(), info + " add to your list", Toast.LENGTH_SHORT).show();
            etstuff.setText("");
        }
        else    Toast.makeText(getBaseContext(), "Empty Text:please write text", Toast.
LENGTH_SHORT).show();
    }
});
```

הוספת פונקציאנליות דינאמית לדוגמא מחיקת כל השורות

```
@Override
public void onClick(View v) {
    // TODO Auto-generated method stub
    SharedPreferences sp =getSharedPreferences(strfile, 0);
    Editor edit= sp.edit();
    edit.clear();
    edit.commit();
    data.clear();
    d.clear();
    counter=0;
}
});
```

יום ללא תכנות הוא יום מבוזבז!