Курс:
Программирование под Android с нуля

Тренер:

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W ЕВ
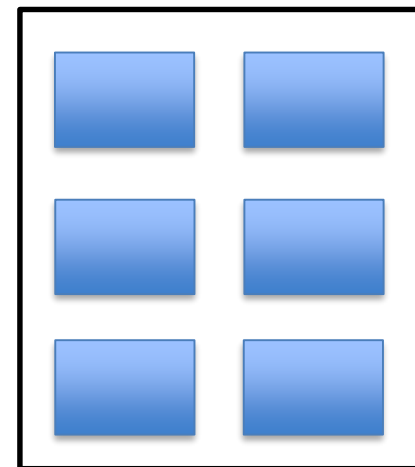ACADEMY
PROGRAMMING
COURSES

Лекция 9

Adapters, part 2

GridView

- **numColumns –** количество колонок

- **columnWidth –** ширина колонки. Число или AUTO_FIT

- **horizontalSpacing, verticalSpacing –** отступы между ячейками

- **stretchMode –** пустое пространство

ExpandableListView

- **Group** – первый уровень

- **Child** - подуровень

Group 1
Child 1
Child 2
Group 2
Child 1
Child 2

Simple adapter, part 1

```java
ArrayList<Map<String, String>> groups = new ArrayList<>();

HashMap<String, String> group = new HashMap<>();
group.put("Number", "1");
groups.add(group);


ArrayList<ArrayList<Map<String, String>>>
        childs = new ArrayList<>();

ArrayList<Map<String, String>> child = new ArrayList<>();

HashMap<String, String> childItem = new HashMap<>();
childItem.put("Name", "Ivan");
child.add(childItem);

childs.add(child);
```

Simple adapter, part 2

```
ExpandableListView listView =
   (ExpandableListView) findViewById(R.id.expListView);

SimpleExpandableListAdapter adapter =
new SimpleExpandableListAdapter(
        this,
        groups,
        android.R.layout.simple_expandable_list_item_1,
        new String[]{"Number"},
        new int[]{android.R.id.text1},
        childs,
        android.R.layout.simple_list_item_1,
        new String[]{"Name"},
        new int[]{android.R.id.text1});

listView.setAdapter(adapter);
```
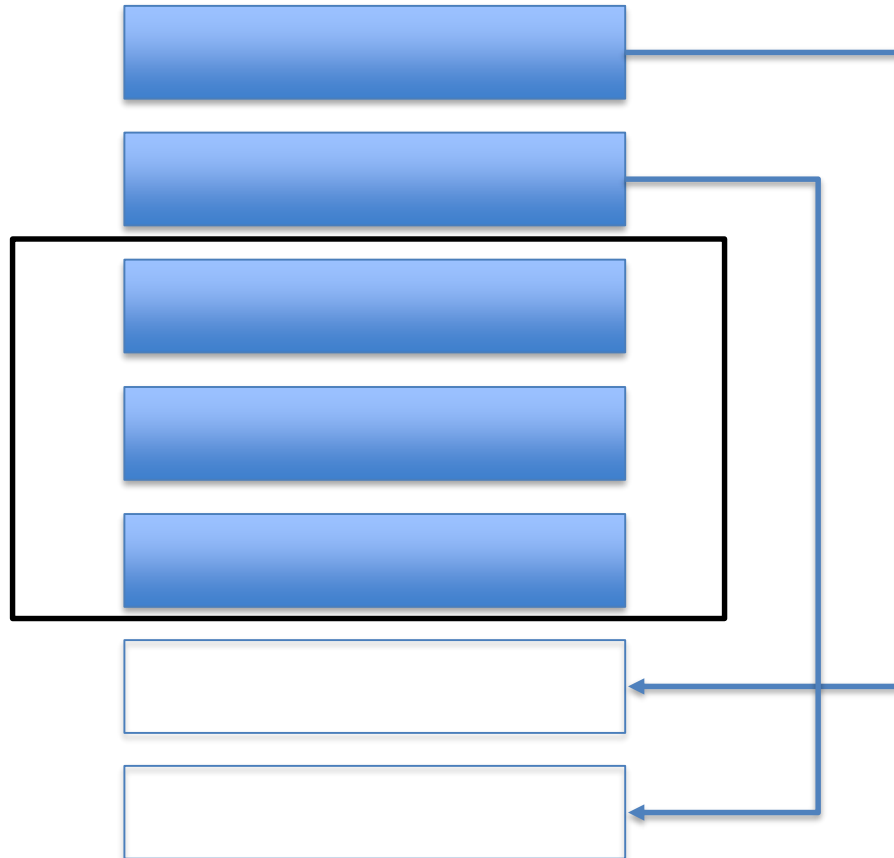
Custom adapter

Метод	Описание
getGroupCount	Возвращает количество groups
getChildrenCount	Возвращает количество childs
getGroup	Возвращает group
getChild	Возвращает child
getGroupView	Возвращает view для group
getChildView	Возвращает view для child
getGroupId getChildId hasStableIds isChildSelectable	Дополнительные методы

```java
public class ExpandableAdapter extends BaseExpandableListAdapter {
    …
}
```

On click

Метод	Описание
setOnGroupClickListener	Клик на group
setOnChildClickListener	Клик на child
setOnGroupExpandListener	Group раскрыт
setOnGroupCollapseListener	Group закрыт

RecyclerView

Add

```
//build.gradle (Module: app)
dependencies {
    …
    compile 'com.android.support:recyclerview-v7:+'
}




//Разметка
<android.support.v7.widget.RecyclerView
    android:id="@+id/recyclerView"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:scrollbars="vertical"/>
```

ViewHolder

```java
public class StudentViewHolder extends RecyclerView.ViewHolder {
  public TextView FirstName;
  public TextView LastName;
  public TextView Age;

  public StudentViewHolder(View view) {
    super(view);

    FirstName = (TextView) view.findViewById(R.id.firstName);
    LastName = (TextView) view.findViewById(R.id.lastName);
    Age = (TextView) view.findViewById(R.id.age);
  }
}
```

Adapter

```java
public class RecyclerAdapter extends RecyclerView.Adapter<StudentViewHolder> {
    private ArrayList<Student> mStudents;
    private LayoutInflater mInflater;

    public RecyclerAdapter(android.content.Context context, ArrayList<Student> students) {
        this.mStudents = students;
        mInflater = LayoutInflater.from(context);
    }

    @Override
    public StudentViewHolder onCreateViewHolder(ViewGroup viewGroup, int i) {
        View view = mInflater.inflate(R.layout.child_item, null);

        StudentViewHolder viewHolder = new StudentViewHolder(view);
        return viewHolder;
    }

    @Override
    public void onBindViewHolder(StudentViewHolder studentViewHolder, final int i) {
        Student student = mStudents.get(i);

        studentViewHolder.mTextViewFirstName.setText(student.FirstName);
        studentViewHolder.mTextViewLastName.setText(student.LastName);
        studentViewHolder.mTextViewAge.setText(String.valueOf(student.Age));
    }

    @Override
    public int getItemCount() {
        return mStudents.size();
    }
}
```

Using

```java
Student[] arr = new Student[]{
        new Student("Ivan", "Ivanov", 22),
        new Student("Petro", "Petrovich", 23),
        new Student("Ann", "Semenovich", 24)
};

RecyclerView recyclerView =
(RecyclerView) findViewById(R.id.recyclerView);

LinearLayoutManager layoutManager =
new LinearLayoutManager(this);
recyclerView.setLayoutManager(layoutManager);

RecyclerAdapter adapter = new RecyclerAdapter(this, arr);
recyclerView.setAdapter(adapter);
```

ItemTouchHelper

```java
ArrayList<Student> arr = new ArrayList<>();

ItemTouchHelper.SimpleCallback itemTouchCallback = //Направление перетягивания
        new ItemTouchHelper.SimpleCallback(ItemTouchHelper.UP | ItemTouchHelper.DOWN,
                                ItemTouchHelper.LEFT | ItemTouchHelper.RIGHT) {
    @Override                                           //Жесты для удаления
    public boolean onMove(RecyclerView recyclerView, RecyclerView.ViewHolder viewHolder,
                    RecyclerView.ViewHolder target) {
        final int fromPos = viewHolder.getAdapterPosition();
        final int toPos = target.getAdapterPosition();

        Student student = arr.get(fromPos);
        arr.remove(fromPos);
        arr.add(toPos, student);

        adapter.notifyItemMoved(fromPos, toPos);
        return true;
    }

    @Override
    public void onSwiped(RecyclerView.ViewHolder viewHolder, int direction) {
        final int fromPos = viewHolder.getAdapterPosition();
        arr.remove(fromPos);
        adapter.notifyItemRemoved(fromPos);
    }
};

ItemTouchHelper itemTouchHelper = new ItemTouchHelper(itemTouchCallback);
itemTouchHelper.attachToRecyclerView(recyclerView);
```

OnClick

```java
public class RecyclerAdapter extends RecyclerView.Adapter<StudentViewHolder> {

    private OnItemClickListener Listener;
    …
    @Override
    public void onBindViewHolder(StudentViewHolder studentViewHolder, final int i) {
    …
        studentViewHolder.RootView.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                if(Listener != null){
                    Listener.onItemClick(i);
                }
            }
        });
    }
    …
    public void setOnItemClickListener(OnItemClickListener listener){
        this.Listener = listener;
    }

    public interface OnItemClickListener {
        public void onItemClick(int position);
    }
}
```

Спасибо за внимание

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