

Курс:

Программирование под Android с нуля

Тренер:

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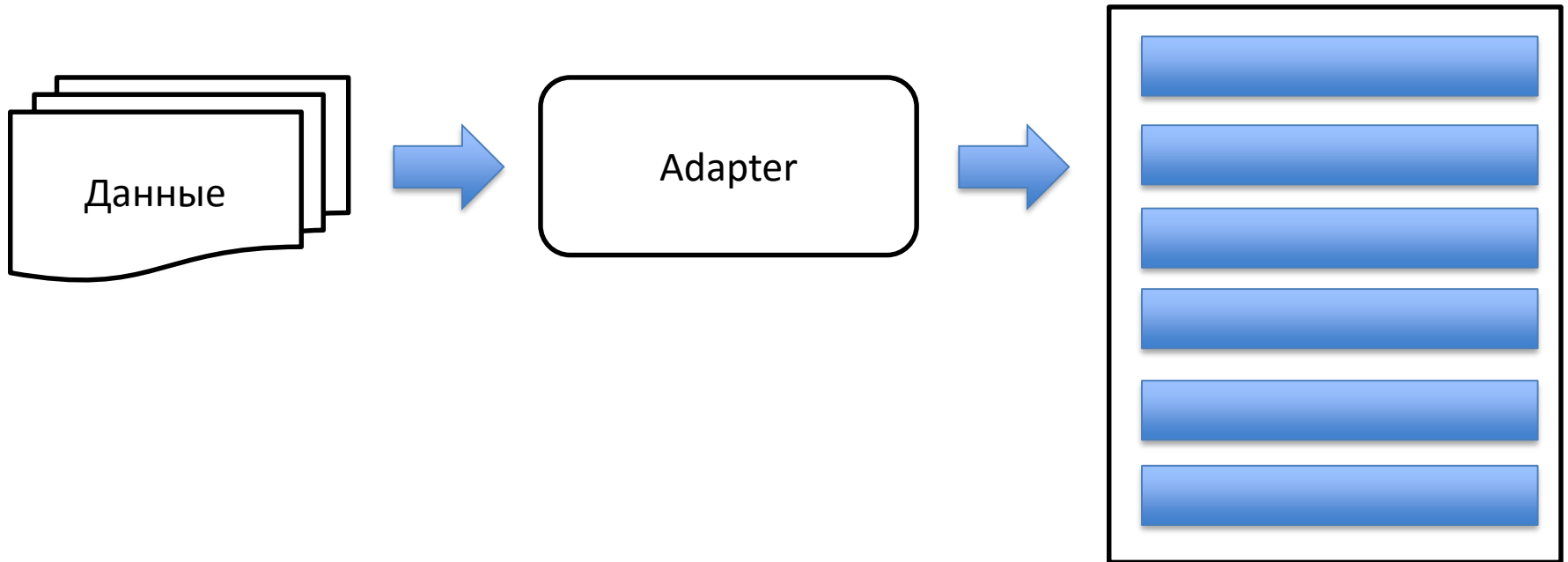
Лекция 8

Adapters, part 1



Adapters

- **Adapter** – это посредник между данными и интерфейсом.



SimpleAdapter

```
ListView listView = (ListView) findViewById(R.id.listView);  
//Массив массивов  
ArrayList<HashMap<String, String>> myArrList =  
    new ArrayList<HashMap<String, String>>();  
  
HashMap<String, String> map = new HashMap<String, String>();  
map.put("Name", "Ivan");  
myArrList.add(map);  
  
SimpleAdapter adapter = new SimpleAdapter(  
    this,                                     //Context  
    myArrList,                               //Массив  
    android.R.layout.simple_list_item_1,    //Разметка  
    new String[]{"Name"},                  //Ключи  
    new int[]{android.R.id.text1});         //id TextViews  
  
listView.setAdapter(adapter);
```

Not so simple Adapter

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

ArrayList<HashMap<String, String>> myArrList =
    new ArrayList<HashMap<String, String>>();

HashMap<String, String> map = new HashMap<String, String>();
map.put("Name", "Ivan");
map.put("Age", "22");
myArrList.add(map);

SimpleAdapter adapter = new SimpleAdapter(
    this,
    myArrList,
    android.R.layout.simple_list_item_2,
    new String[]{"Name", "Age"},
    new int[]{android.R.id.text1, android.R.id.text2});

listView.setAdapter(adapter);
```

ArrayAdapter

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

String[] myArrList = new String[]{"Ivan", "Petro", "Ann"};

ArrayAdapter<String> adapter = new ArrayAdapter<>(
    this,                                //Context
    android.R.layout.simple_list_item_1, //Разметка
    android.R.id.text1,                  //id TextView
    myArrList);                          //Массив

listView.setAdapter(adapter);
```

Class ArrayAdapter

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

```
//Массив студентов
```

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

```
ArrayAdapter<Student> adapter = new ArrayAdapter<>(  
    this,                                //Context  
    android.R.layout.simple_list_item_1, //Разметка  
    android.R.id.text1,                  //id TextView  
    myArrList);                          //Массив  
listView.setAdapter(adapter);
```

```
public class Student {  
    @Override                //Переопределить ToString  
    public String toString() {  
        return String.format("%s %s, %s", FirstName, LastName, String.valueOf(Age));  
    }  
}
```

Custom ArrayAdapter

```
public class StudentsArrayAdapter extends ArrayAdapter<Student> {
    private int mResourceId;
    private List<Student> mStudents;
    private LayoutInflater mInflater;
    //Конструктор
    public StudentsArrayAdapter(Context context, int resource, List<Student> students) {
        super(context, resource, students);

        this.mStudents = students;
        this.mResourceId = resource;
        mInflater = LayoutInflater.from(context);
    }

    @Override //Вернуть View для каждого элемента
    public View getView(int position, View convertView, ViewGroup parent) {
        convertView = mInflater.inflate(mResourceId, null);

        Student student = mStudents.get(position);

        ((TextView) convertView.findViewById(R.id.textViewFirstName))
            .setText(student.FirstName);
        ((TextView) convertView.findViewById(R.id.textViewLastName))
            .setText(student.LastName);
        ((TextView) convertView.findViewById(R.id.textViewAge))
            .setText(String.valueOf(student.Age));

        return convertView;
    }
}
```

Using custom ArrayAdapter

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

```
ArrayList<Student> myArrList = new ArrayList<>();  
myArrList.add(new Student("Ivan", "Ivanov", 22));  
myArrList.add(new Student("Petro", "Petrovich", 23));  
myArrList.add(new Student("Ann", "Semenovich", 24));
```

```
StudentsArrayAdapter adapter = new StudentsArrayAdapter(  
    this,                                //Context  
    R.layout.list_item,                 //Разметка  
    myArrList);                         //Массив
```

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


Add click listeners, part 1

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

//Нажатие

```
listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
    @Override  
    public void onItemClick(AdapterView<?> parent, View view, int position, long id) {  
  
    }  
});
```

//Долгое нажатие

```
listView.setOnItemLongClickListener(new AdapterView.OnItemLongClickListener() {  
    @Override  
    public boolean onItemLongClick(AdapterView<?> parent, View view, int  
        position, long id) {  
        return true;  
    }  
});
```

Add click listeners, part 2

```
public class Activity9 extends AppCompatActivity implements
    AdapterView.OnItemClickListener, AdapterView.OnItemLongClickListener {

    ...

    @Override    //Нажатие
    public void onItemClick(AdapterView<?> parent, View view, int position, long id) {
    }

    @Override    //Долгое нажатие
    public boolean onItemLongClick(AdapterView<?> parent, View view, int position,
long id) {
        return true;
    }
}
```

SingleSelect

```
ListView listView = (ListView) findViewById(R.id.listView);  
listView.setChoiceMode(AbsListView.CHOICE_MODE_SINGLE);//Одиночный выбор  
  
String[] myArrList = new String[]{"Ivan", "Petro", "Ann"};  
  
ArrayAdapter<String> adapter = new ArrayAdapter<>(  
    this, //Context  
    android.R.layout.simple_list_item_single_choice, //Разметка  
    android.R.id.text1, //id TextView  
    myArrList); //Массив  
  
listView.setAdapter(adapter);  
  
int position = listView.getCheckedItemPosition(); //Выбранная позиция
```

MultiSelect

```
ListView listView = (ListView) findViewById(R.id.listView);
listView.setChoiceMode(AbsListView.CHOICE_MODE_MULTIPLE);//Мульти выбор

String[] myArrList = new String[]{"Ivan", "Petro", "Ann"};

ArrayAdapter<String> adapter = new ArrayAdapter<>(
    this,                                     //Context
    android.R.layout.simple_list_item_multiple_choice, //Разметка
    android.R.id.text1,                       //id TextView
    myArrList);                               //Массив

listView.setAdapter(adapter);

SparseBooleanArray itemPositions = listView.getCheckedItemPositions();
for (int i = 0; i < itemPositions.size(); i++) { //Выбранные элементы
    if (itemPositions.get(i)) {
        //item selected
    }
}
```

Simple Spinner

```
Spinner spinner = (Spinner) findViewById(R.id.spinner);

ArrayList<HashMap<String, String>> myArrList =
    new ArrayList<HashMap<String, String>>();

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

SimpleAdapter adapter = new SimpleAdapter(
    this,                                //Context
    myArrList,                           //Массив
    android.R.layout.simple_list_item_1, //Разметка
    new String[]{"Name"},                //Ключи
    new int[]{android.R.id.text1});       //id TextViews
//Разметка для выпадающего списка
adapter.setDropDownViewResource(android.R.layout.simple_spinner_dropdown_item);

spinner.setAdapter(adapter);
```

SpinnerAdapter

```
public class StudentsArrayAdapter extends ArrayAdapter<Student> {  
    ...  
  
    @Override //Вернуть View для выбранного элемента  
    public View getView(int position, View convertView, ViewGroup parent) {  
        ...  
    }  
  
    @Override //Вернуть View для каждого элемента  
    public View getDropDownView(int position, View convertView, ViewGroup parent) {  
        ...  
    }  
}
```

Spinner click listeners

```
spinner.setOnItemSelectedListener(new AdapterView.OnItemSelectedListener() {  
    @Override    //При выборе  
    public void onItemSelected(AdapterView<?> parent, View view, int position, long id)  
    {  
  
    }  
  
    @Override    //Выбора не было  
    public void onNothingSelected(AdapterView<?> parent) {  
  
    }  
});
```

Спасибо за внимание

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Лекция 8

Adapters, part 1

