Open Source Laboratory
开源实验室
kymjs.com

学习，成为更好的自己

当机器人不再喝咖啡后…
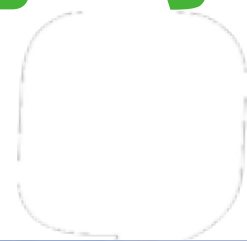
2 登上 **Kotlin** 岛

- Kotlin 开发 Android 靠谱吗?

- Kotlin 会取代 Java 吗?

学习，成为更好的自己

2 登上 **Kotlin** 岛

- Java++
  - Android
  - Server-side
- KotlinJavaScript
- Native(soon)

学习 . 成为更好的自己

3 **使用 Kotlin**

变量声明

```
var age: Int = 18

val name: String = "Zhang Tao"
```

使用 Kotlin

函数声明

```kotlin
fun echo(name: String):  String {
    println("$name")
    return name
}
```

使用 Kotlin

运算符

?

使用 Kotlin

运算符

String?

String!!

String

运算符

```
data?.let{
    //当data不为空的时候，执行语句块
}

data?:let{
    //当data为空时才会执行
}
```

恭喜你，已经入门了

好了，你可以放弃了

图样图森破

5 **Kotlin 的特性**

- 伴生对象
- 代理
- 函数与闭包(block、Lambda)

5 伴生对象

```kotlin
class StringUtils {
    companion object {
        fun isEmpty(str: String): Boolean {
            return "" == str
        }
    }
}
```

5 伴生对象

```kotlin
class Single private constructor() {
    companion object {
        fun get():Single{
            return Holder.instance
        }
    }

    private object Holder {
        val instance = Single()
    }
}
```

5 动态代理

```
class Dog : Animal{
    override fun bark() {
        println("Wang")
    }
}


class Cat(animal: Animal)
                : Animal by animal {

}
```

5 函数嵌套

```kotlin
fun function() {
  val str = "hello!"

  fun say(count: Int = 10) {
      println(say)
      if (count > 0) {
          say(count - 1)
      }
  }
  say()
}
```

```kotlin
val max = if (a > b) {
    print("is $a")
    a
} else {
    print("is $b")
    b
}
```

5 闭包

```
textView.setOnClickListener({
 v ->
    fun onTimer() {
      toast("")
    }
    toast("")
})
```

开源库

- Kotlin Extensions For Android
- Anko

6 Kotlin Extensions

```
apply plugin: 'kotlin-android-extensions'

classpath "org.jetbrains.kotlin:kotlin-
android-extensions:$kotlin_version"
```

学习，成为更好的自己

6 Kotlin Extensions

```kotlin
package com.kymjs.myapplication

import ...

class MainActivity : AppCompatActivity() {

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_main)
        textView.text = "hello"
    }
}
```

```java
public final class MainActivity extends AppCompatActivity {
    private HashMap _$_findViewCache;

    public void _$_clearFindViewByIdCache() {
        if (this._$_findViewCache != null) {
            this._$_findViewCache.clear();
        }
    }

    public View _$_findCachedViewById(int i) {
        if (this._$_findViewCache == null) {
            this._$_findViewCache = new HashMap();
        }
        View view = (View) this._$_findViewCache.get(Integer.valueOf(i));
        if (view != null) {
            return view;
        }
        view = findViewById(i);
        this._$_findViewCache.put(Integer.valueOf(i), view);
        return view;
    }

    protected void onCreate(@Nullable Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(2130968603);
        ((TextView) _$_findCachedViewById(R.id.textView)).setText("hello");
    }
}
```

学习，成为更好的自己

```java
public final class MainActivity extends AppCompatActivity {
    private HashMap _$_findViewCache;

    public void _$_clearFindViewByIdCache() {
        if (this._$_findViewCache != null) {
            this._$_findViewCache.clear();
        }
    }

    public View _$_findCachedViewById(int i) {
        if (this._$_findViewCache == null) {
            this._$_findViewCache = new HashMap();
        }
        View view = (View) this._$_findViewCache.get(Integer.valueOf(i));
        if (view != null) {
            return view;
        }
        view = findViewById(i);
        this._$_findViewCache.put(Integer.valueOf(i), view);
        return view;
    }

    protected void onCreate(@Nullable Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(2130968603);
        ((TextView) _$_findCachedViewById(R.id.textView)).setText("hello");
    }
}
```

Anko

- Anko是JetBrains开发的一个强大的库

- '**org.jetbrains.anko:anko-sdk25:0.10.0**'
- '**org.jetbrains.anko:anko-support-v4:0.10.0**'
- '**org.jetbrains.anko:anko-appcompat-v7:0.10.0**'

6 Anko

```kotlin
verticalLayout {
    val name = editText()
    button("Say Hello") {
        setOnClickListener { toast("Hello, ${name.text}!") }
    }
}
```

6 Anko

```kotlin
package com.kymjs.myapplication

import ...

class MainActivity : AppCompatActivity() {

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        verticalLayout {
            val name = editText()
            button("Say Hello") {
                setOnClickListener { toast("Hello, ${name.text}!") }
            }
        }
    }
}
```
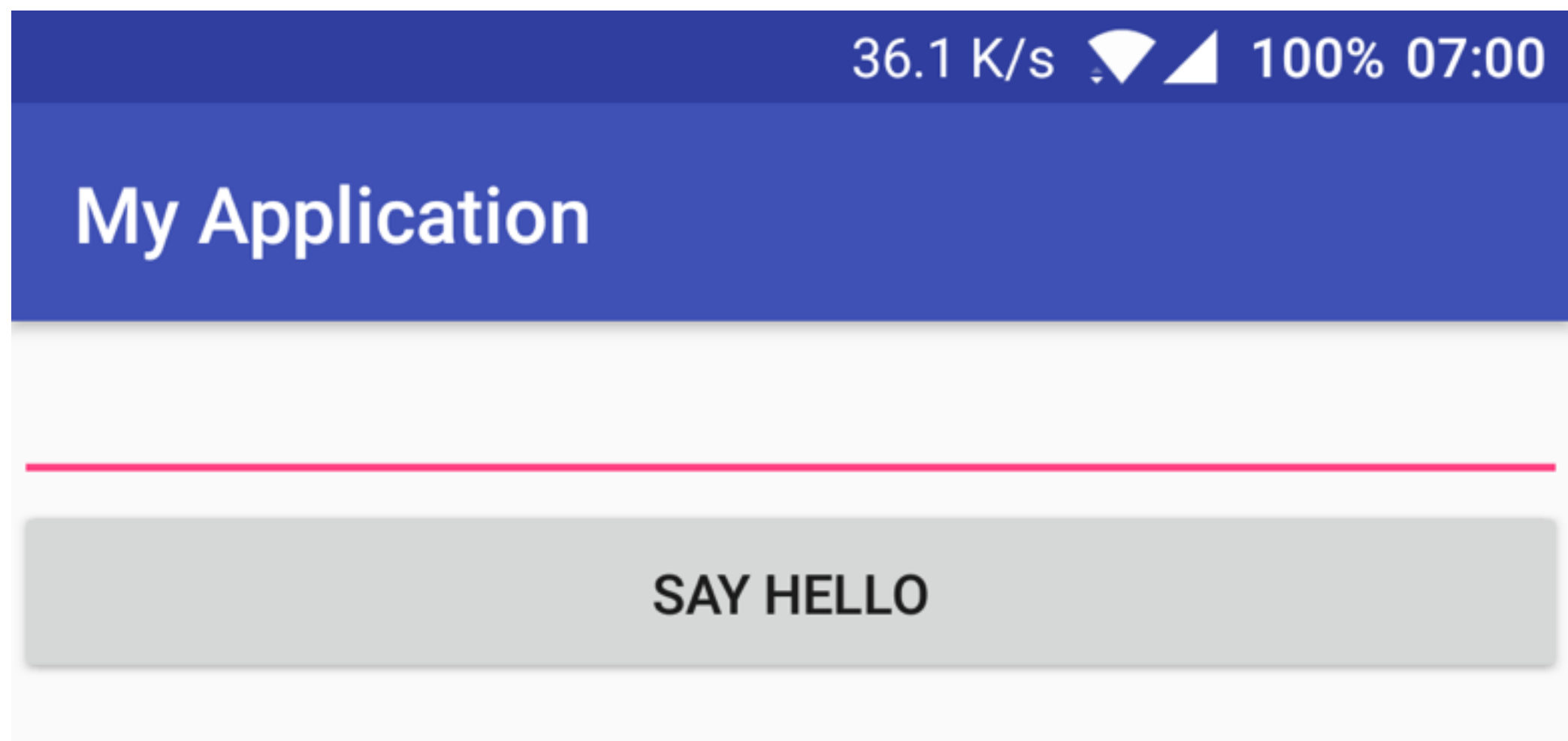
6 Anko

学习，成为更好的自己

7 **从 Java 到 kotlin**

- 阅读源码实现
- class 文件
- 网络

学习．成为更好的自己

8 当机器人不再喝咖啡后

```java
final String[] a = new String[]{"0", "1", "2", "6", "7", "h", "j"};
Integer[] indexArray = new Integer[]{5, 9, 6, 8, 2, 7, 0, 1, 4, 0, 3};
List<Integer> list = Arrays.asList(indexArray);

Observable.just(list)
        .flatMap((Func1) (integers) → { return Observable.from(integers); })
        .filter((Func1) (integer) → { return integer < a.length; })
        .map((Func1) (integer) → { return a[integer]; })
        .reduce((s, s2) → { return s + s2; })
        .subscribe((Action1) (s) → {

            Log.i( tag: "kymjs", msg: "wifiPassword::" + s);
        });
```

8 当机器人不再喝咖啡后

```kotlin
var wifiPassword = "?"

val a = arrayOf("0", "1", "2", "6", "7", "h", "j")
wifiPassword = arrayOf(5, 9, 6, 8, 2, 7, 0, 1, 4, 0, 3)
        .filter {
            it in 0 until a.size
        }
        .map {
            a[it]
        }
        .reduce { s1, s2 ->
            "$s1$s2"
        }

print(wifiPassword)
```

9 有些麻烦

- 三目运算符
- 基本数据类型

9 **麻烦还挺多**

- 反射
- 断点调试
- 从 Kotlin 转回 Java

Q&A

Thanks

学习，成为更好的自己

沪江

学习，成为更好的自己