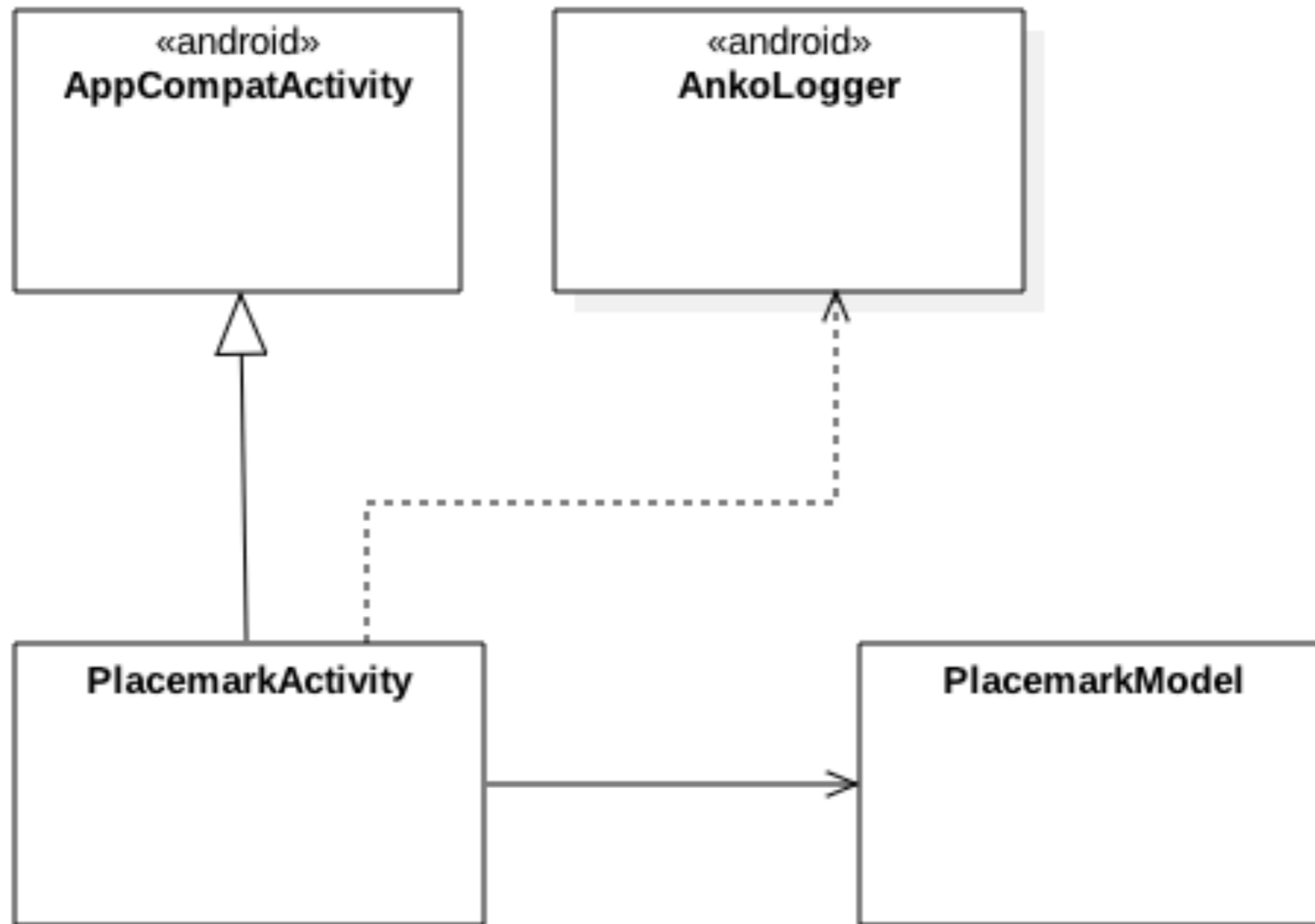


Application Objects

Current Model (Lab 01)



```

class PlacemarkActivity : AppCompatActivity(), AnkoLogger {

    var placemark = PlacemarkModel()
    val placemarks = ArrayList<PlacemarkModel>()

    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContentView(R.layout.activity_placemark)

        btnAdd.setOnClickListener() {
            placemark.title = placemarkTitle.text.toString()
            if (placemark.title.isNotEmpty()) {
                placemarks.add(placemark)
                info("add Button Pressed: $placemarkTitle")
                placemarks.forEach { info("add Button Pressed: ${it.title}")}
            }
            else {
                toast ("Please Enter a title")
            }
        }
    }
}

```

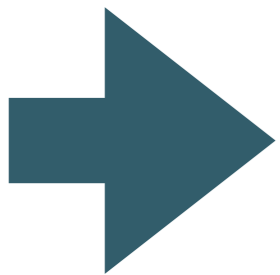
Create
placemarks
array

..add
placemark
to array

```
placemarks.add(placemark)
```

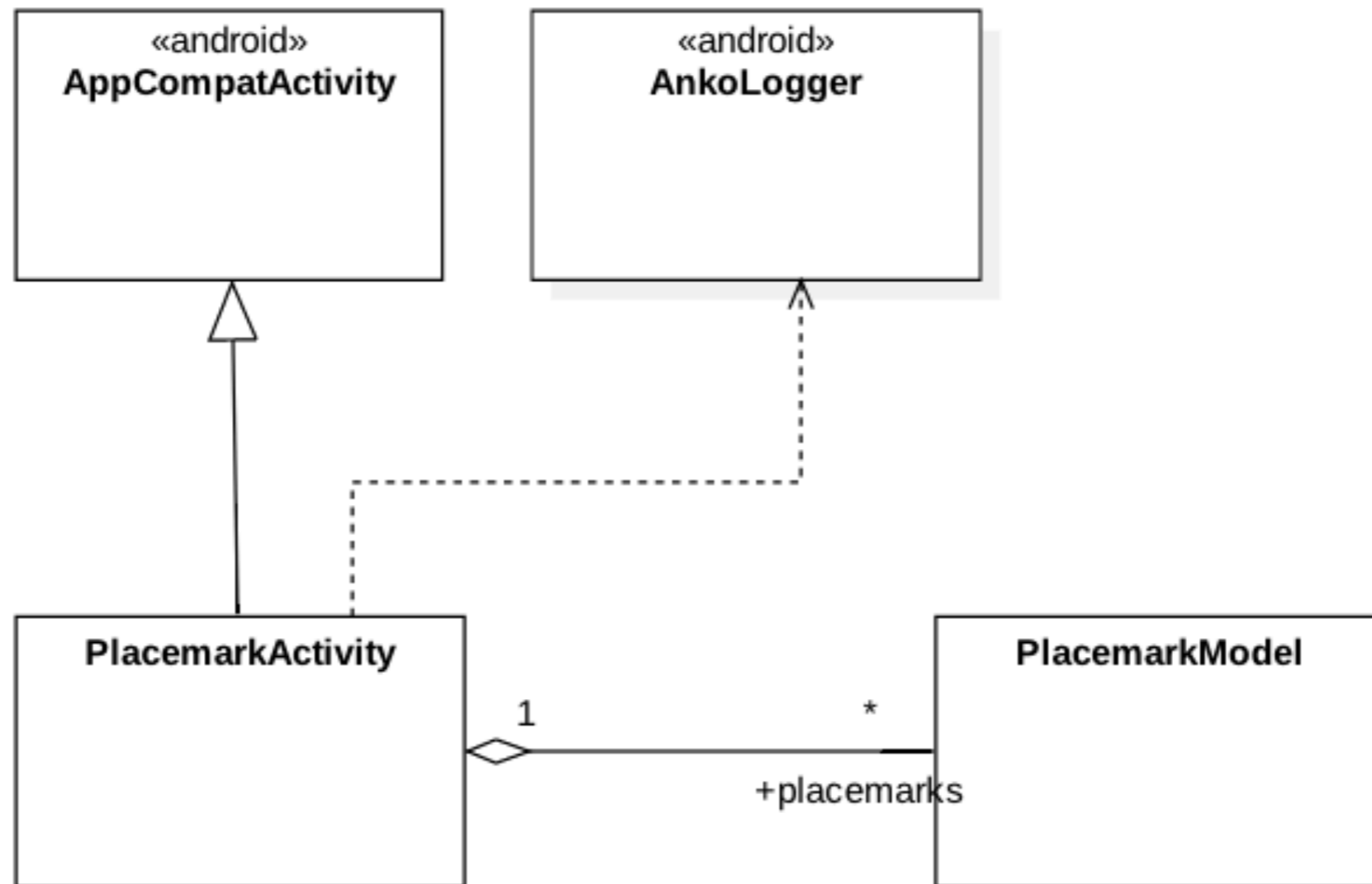
```
placemarks.add(placemark.copy())
```

Make copy of
placemark
first, and then
add the copy



Otherwise - we are adding same object,
overwriting properties of previous object each time

Revised model



Exercise 2:

Create new text field `description` + log when entered. This will require you to:

- and a new field in the layout
- add a new entry in the strings.xml file
- extend the model
- recover the field in the event handler and include in the model objects
- log the new field

PlacemarkModel.kt

```
data class PlacemarkModel(var title: String = "",  
                           var description: String = "")
```

PlacemarkActivity.kt

```
...  
    placemark.description = description.text.toString()  
...
```

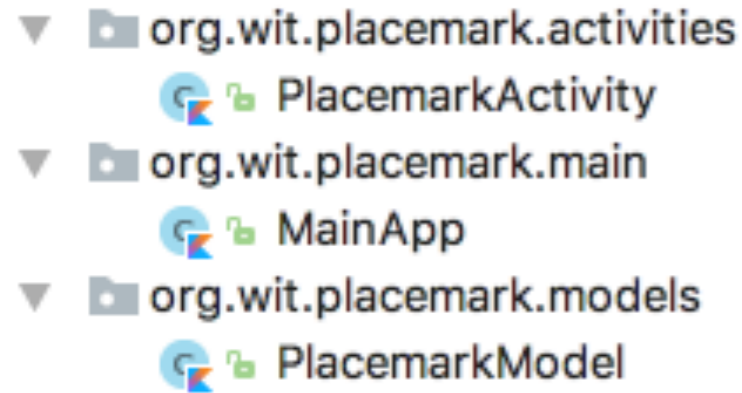
strings.xml

```
...  
<string name="hint_placemarkDescription">Description </string>  
...
```

activity_placemark.xml

```
...  
    <android.support.design.widget.TextInputEditText  
        android:id="@+id/description"  
        android:layout_width="match_parent"  
        android:layout_height="wrap_content"  
        android:layout_margin="8dp"  
        android:hint="@string/hint_placemarkDescription"  
        android:inputType="text"  
        android:maxLength="25"  
        android:maxLines="1"  
        android:padding="8dp"  
        android:textColor="@color/colorPrimaryDark"  
        android:textSize="14sp"/>  
...
```

Introduce MainApp



▼ org.wit.placemark.activities
 PlacemarkActivity
▼ org.wit.placemark.main
 MainApp
▼ org.wit.placemark.models
 PlacemarkModel

```
...  
<application  
    android:name="org.wit.placemark.main.MainApp"  
...  
}
```

Include in AndroidManifest.xml

One instance of
this class
created for the
application

```
class MainApp : Application(), AnkoLogger {  
    override fun onCreate() {  
        super.onCreate()  
        info("Placemark started")  
    }  
}
```

Move
placemarks
Array into this
class

It can be
accessed from
multiple
Activities form
here

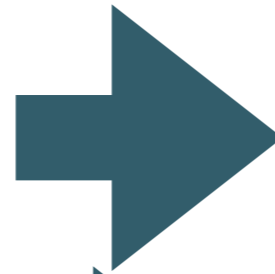
```
class MainApp : Application(), AnkoLogger {  
    val placemarks = ArrayList<PlacemarkModel>()  
  
    override fun onCreate() {  
        super.onCreate()  
        info("Placemark started")  
    }  
}
```


Any Activity can ask for a reference to this MainApp object

Locate placemarks array through the app object

```
class PlacemarkActivity : AppCompatActivity(), AnkoLogger {  
  
    var placemark = PlacemarkModel()  
    var app : MainApp? = null  
  
    override fun onCreate(savedInstanceState: Bundle?) {  
        super.onCreate(savedInstanceState)  
        setContentView(R.layout.activity_placemark)  
        app = application as MainApp  
  
        btnAdd.setOnClickListener() {  
            placemark.title = placemarkTitle.text.toString()  
            placemark.description = description.text.toString()  
            if (placemark.title.isNotEmpty()) {  
                app!!.placemarks.add(placemark.copy())  
                info("add Button Pressed: $placemarkTitle")  
                app!!.placemarks.forEach { info("add Button Pressed: ${it}")}  
            }  
            else {  
                toast ("Please Enter a title")  
            }  
        }  
    }  
}
```

Declare the **app** object



```
var app : MainApp? = null
```

Initialise the **app** object

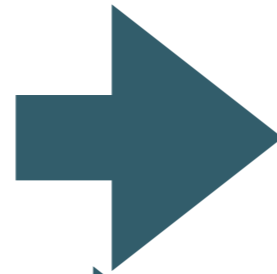


```
app = application as MainApp
```

```
app!!.placemarks.add(placemark.copy())  
info("add Button Pressed: $placemarkTitle")  
app!!.placemarks.forEach { info("add Button Pressed: ${it}")}
```

Use the **app** object to store the placemarks

Declare the **app** object
as 'lateinit'



```
lateinit var app : MainApp
```

Initialise the **app** object












```
app = application as MainApp
```

```
app.placemarks.add(placemark.copy())  
info("add Button Pressed: $placemarkTitle")  
app.placemarks.forEach { info("add Button Pressed: ${it}")}
```

Because the app object is declared as
'lateinit' - we can assume it has been
initialised, and we access without !!
operators

```
class PlacemarkActivity : AppCompatActivity(), AnkoLogger {  
  
    var placemark = PlacemarkModel()  
    lateinit var app : MainApp  
  
    override fun onCreate(savedInstanceState: Bundle?) {  
        super.onCreate(savedInstanceState)  
        setContentView(R.layout.activity_placemark)  
        app = application as MainApp  
  
        btnAdd.setOnClickListener() {  
            placemark.title = placemarkTitle.text.toString()  
            placemark.description = description.text.toString()  
            if (placemark.title.isNotEmpty()) {  
                app.placemarks.add(placemark.copy())  
                info("add Button Pressed: $placemarkTitle")  
                app.placemarks.forEach { info("add Button Pressed: ${it}")}  
            }  
            else {  
                toast ("Please Enter a title")  
            }  
        }  
    }  
}
```

- ▼  org.wit.placemark.activities
 -   PlacemarkActivity
- ▼  org.wit.placemark.main
 -   MainApp
- ▼  org.wit.placemark.models
 -   PlacemarkModel

