



# Dev Challenge - Android

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## Challenge One

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### Scenario

Consider the snippets at the end of this document as a single-file micro codebase which **is able to compile and execute its job**: be able to fetch and show a list of books available in a bookshop.

### Requirements

We are asking you to improve, if possible, the code structure and modify the actual codebase.

Fell free to:

- Refactor (obviously!) as much as you want;
- Add, remove and modify existing code;
- Add comments describing what, why and where you are improving the code

It is not necessary to dive deep down the single class implementation; wherever you see `... // Already implemented: <description>`, you can assume there is a block of code that do what the `description` explain.

E.g. you don't have to write down all the necessary implementation required for `saveItems(items: Array<Item>)` method, let's assume, as commented, that it is able to save an `Item` list on a local DB (also considering the changes you may apply to the `Item` model itself).

It is not necessary to create a new project which is able to build and run (i.e. you can create a Github gist with your solution).

```
class Item {
    var isbn: String? = null // https://en.wikipedia.org/wiki/ISBN
    var title: String? = null
    var author: String? = null
}
```

```
class ComicBook {
    var isbn: String? = null
    var title: String? = null
    var author: String? = null
    var marvelUniverse: Bool? = null
}
```

```
class Foo {

    constructor() {
        ... // Already implemented: DB connection setup
    }

    fun fetchItems(): Array<Item> {
        ... // Already implemented: fetch from DB
    }

    fun saveItems(items: Array<Item>) {
        ... // Already implemented: save on DB
    }

    fun fetchComicBooks(): Array<ComicBook> {
        ... // Already implemented: fetch from DB
    }

    fun saveComicBooks(comicBooks: Array<ComicBook>) {
        ... // Already implemented: save on DB
    }
}
```

```
class Network {
    var isFetching: Boolean = false

    private constructor() {
        ... // Already implemented: setup
    }

    companion object {
        val shared = Network()
    }

    fun getItems(): Array<Item> {
        ... // Already implemented: fetch from server
    }

    fun getComicBooks(): Array<ComicBook> {
```

```

        ... // Already implemented: fetch from server
    }
}

class FooActivity : Activity() {

    val foo = Foo()
    var networkManager = Network.shared
    var data: Array<Item> = emptyArray()

    override fun onStart() {
        super.onStart()
        data = foo.fetchBooks()
        foo.saveItems(items = data)

        // Reload Activity
        // ...
    }

    // Activity Declaration
    // ...
}

```

## Final thoughts

- In our opinion, this challenge should take a couple of hours
- Please send a link to your public Github with the repo / gist to [mobile@conio.com](mailto:mobile@conio.com)