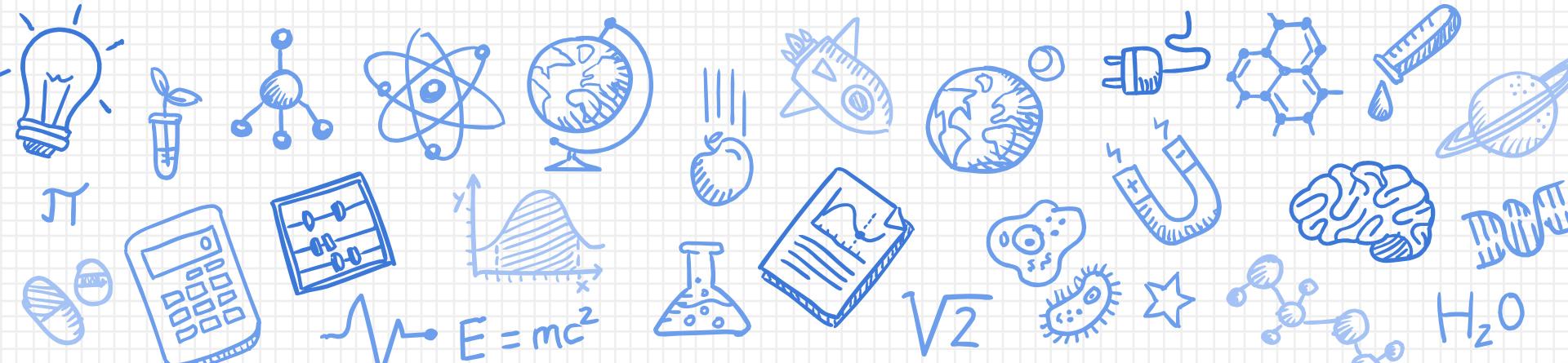


# Kotlin 101

## Basic Concepts



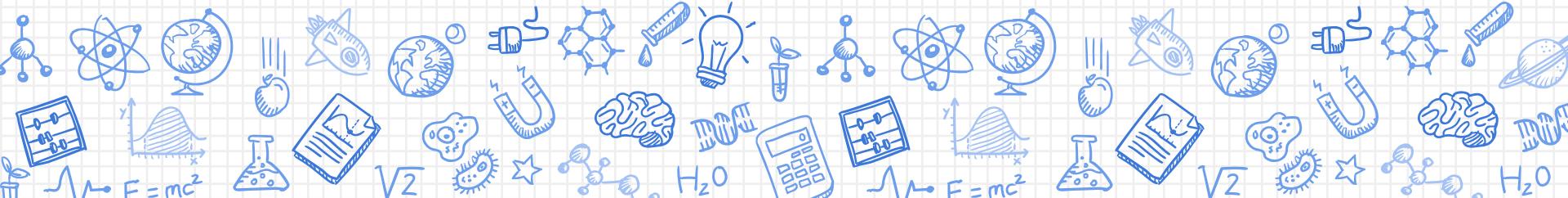


# Augusto Branquinho

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Email: [augustobranquinho@gmail.com](mailto:augustobranquinho@gmail.com)

# 1. Background

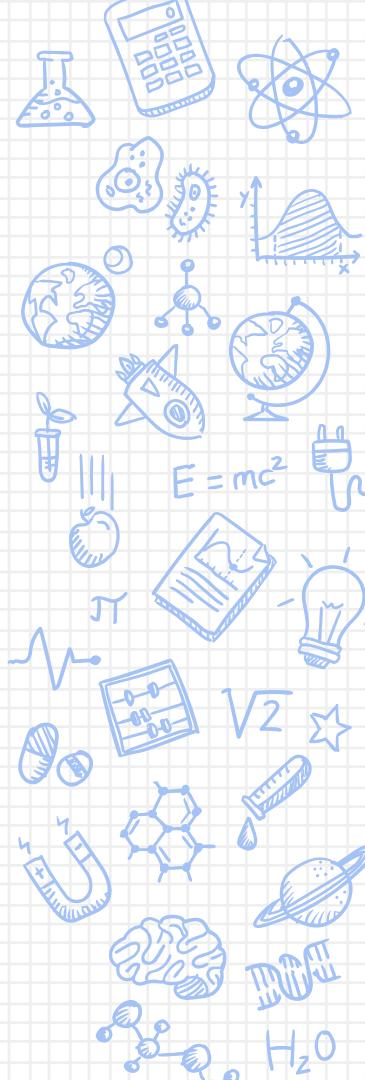


# 1. Background

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## X Kotlin

- Designed by 
- Java, Android, and Javascript
- Native
- Modern
- Reduce the boilerplate
- Kotlin in production: Google, N26, Pivotal, Uber, ...



# 1. Background

## X Professional experience with Kotlin

- 2 years
- Back-end projects
  - Microservices, Event Sourcing, CQRS, DDD, ...

## From Java to Kotlin #114

[Open](#) sandokandias wants to merge 15 commits into `sprint_20` from `RWAVE-8287`

Conversation 0

Commits 15

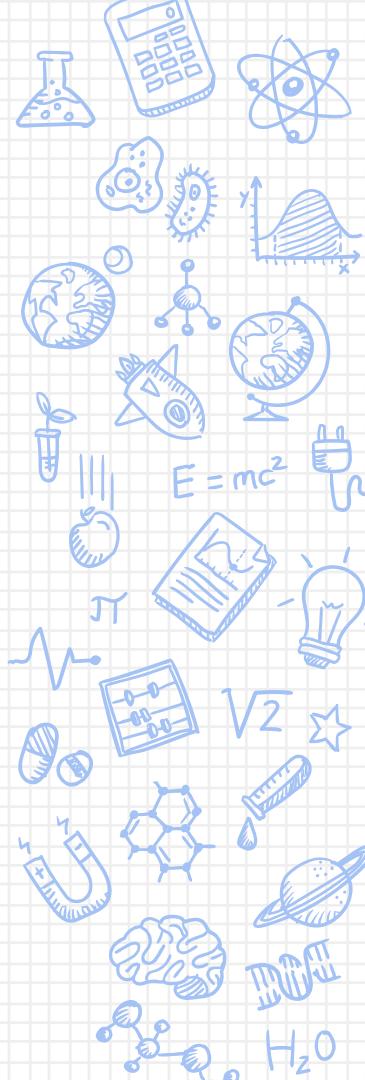
Files changed 504

Changes from all commits ▾

Jump to... ▾

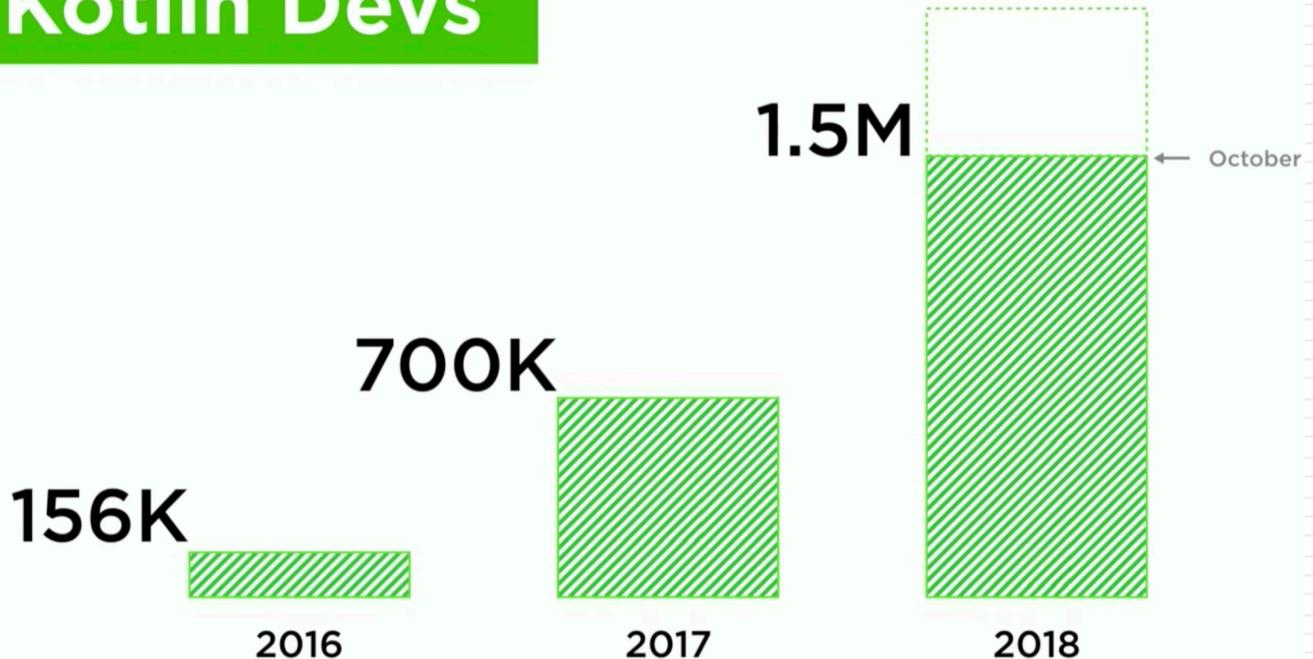
+3,536 -32,492 ■■■■■

**QCon**  
SÃO PAULO

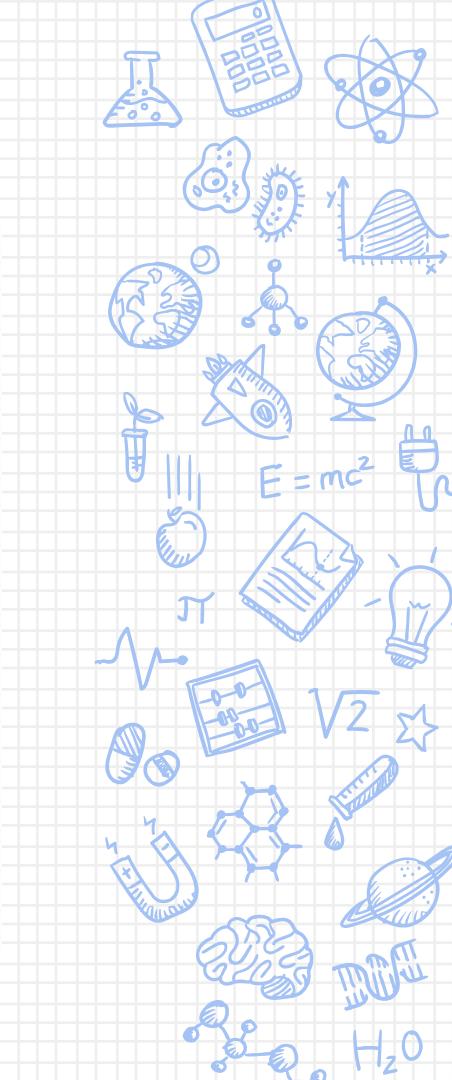


# 1. Background

## Kotlin Devs



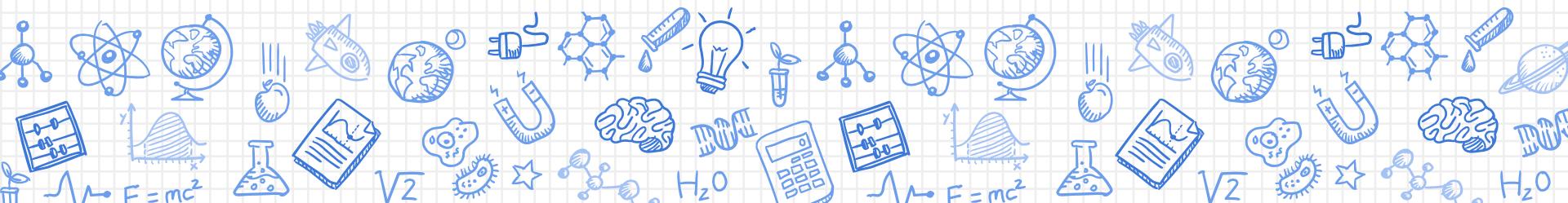
Kotlin Conf 2018 by Andrey Breslav - <https://www.youtube.com/watch?v=PsaFVLr8t4E>



## 2. Benefits

“Readability, reuse, interoperability, safety, tooling.”

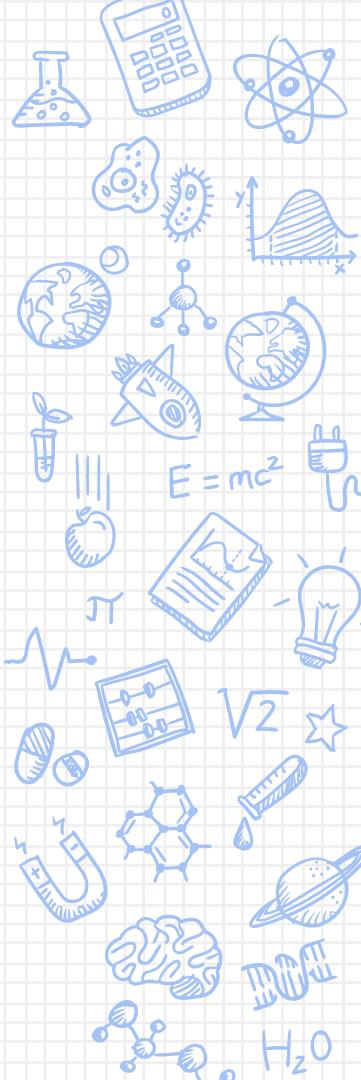
Andrey Breslav – Kotlin Conf 2018



## 2. Benefits

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- ✗ Easy to learn
- ✗ Fun to code
- ✗ Used in production by many companies
- ✗ Java Interoperability
- ✗ Modern and clean
  - How Java can be improved?
  - New features (other languages)
  - Constant evolution
  - Multi-platform



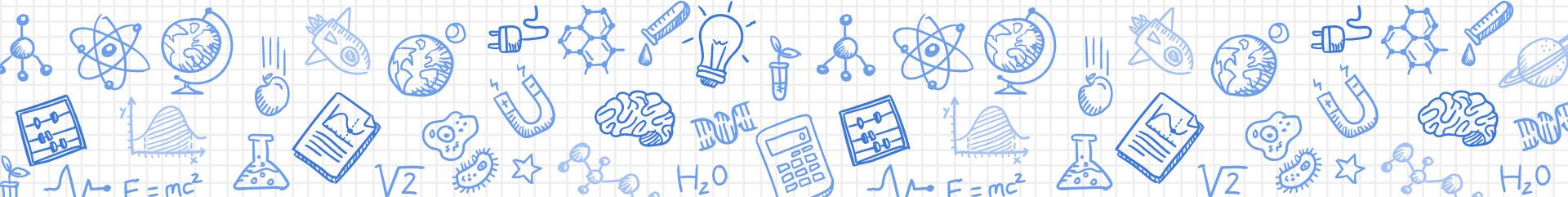




Kotlin is much safer  
than Java!



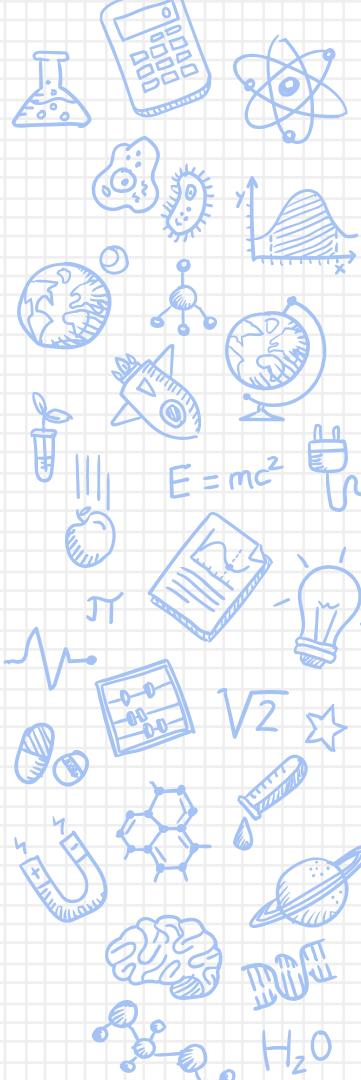
## 3. Challenges



# 3. Challenges

---

- ✗ Teams speaking only Java
- ✗ Interoperability
  - Old libraries (Java)
  - Order of Compilation
  - Specific Kotlin modules
- ✗ Convince your company to try Kotlin



# 4. Basic Concepts

“We've gone from about 0 to 80% of new code in Kotlin in 2018 alone.”

Adam Conrad – Why Airbnb is Moving Off Of React

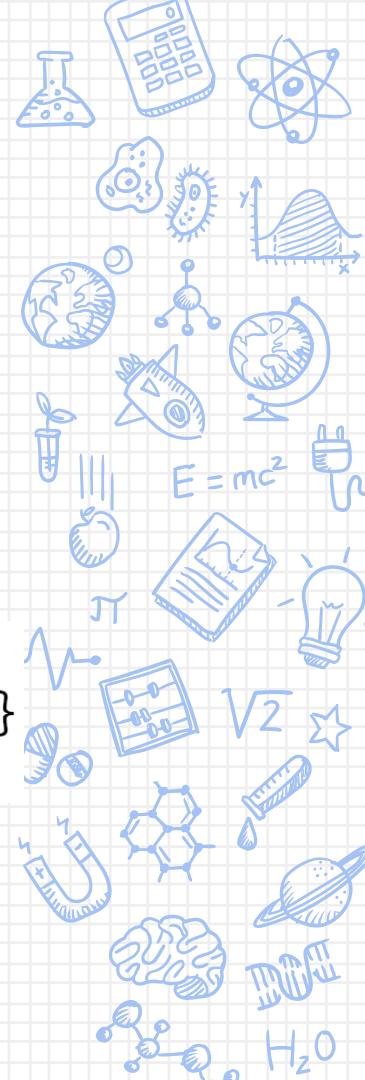
# 4. Basic Concepts

- ✗ Class, Data class, Object

```
class People(val service: PeopleService) {  
    fun something(person: Person): Unit { }  
}
```

```
object PeopleRestService: PeopleService {  
    override fun findAll(): List<Person> { TODO() }  
}
```

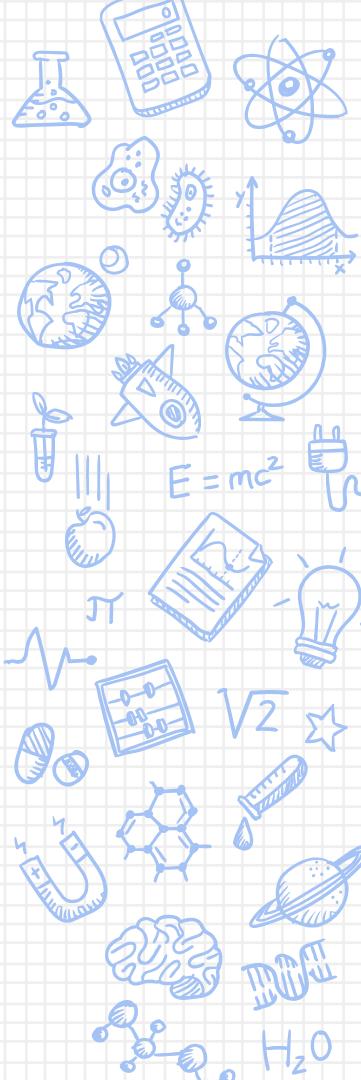
```
data class Person(var name: String,  
                 val age: Int = 0)
```



# 4. Basic Concepts

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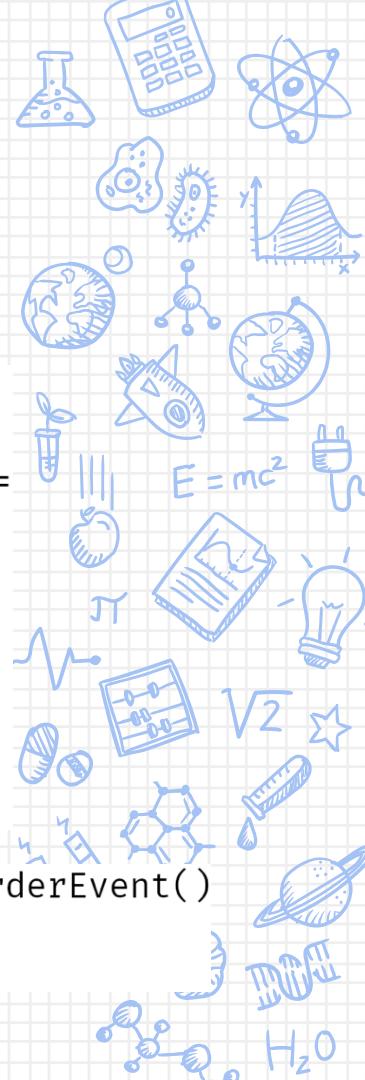
- ✖ Data class
  - Equals
  - ToString
  - GetHashCode
  - Copy
  - “Builder”
  - Destructuring Declarations



# 4. Basic Concepts

## ✗ Sealed class

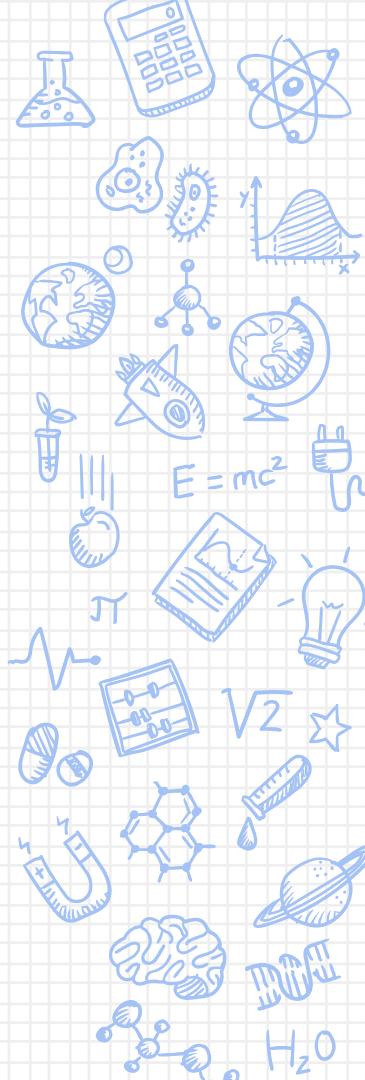
```
sealed class OrderEvent : Event() {  
  
    fun apply(aggregateId: AggregateId, handler: OrderEventHandler) =  
        when (this) {  
            is OrderCreated → handler.on(aggregateId, this)  
            is ProductAdded → handler.on(aggregateId, this)  
            is ProductDeleted → handler.on(aggregateId, this)  
        }  
  
    }  
  
    data class OrderCreated(val orderId: String, val status: OrderStatus) : OrderEvent()  
    data class ProductAdded(val productId: String) : OrderEvent()  
    data class ProductDeleted(val productId: String) : OrderEvent()
```



# 4. Basic Concepts

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- ✗ Null safety
- ✗ High order function
- ✗ Extension methods
- ✗ Inline
- ✗ Reified
- ✗ Lambda



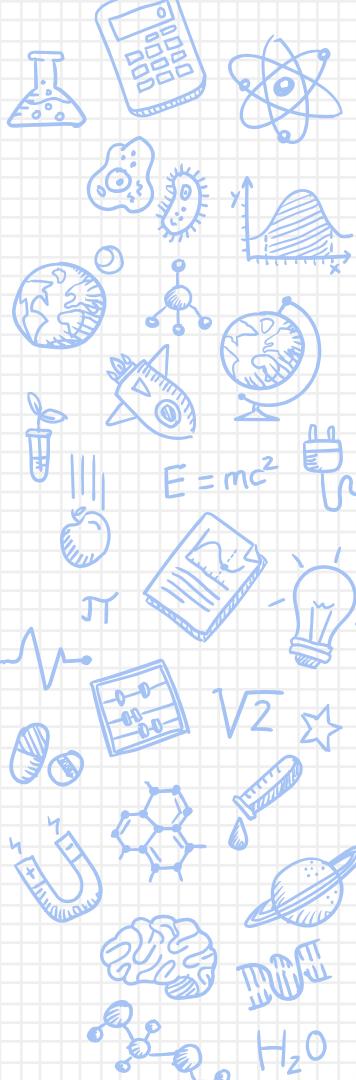
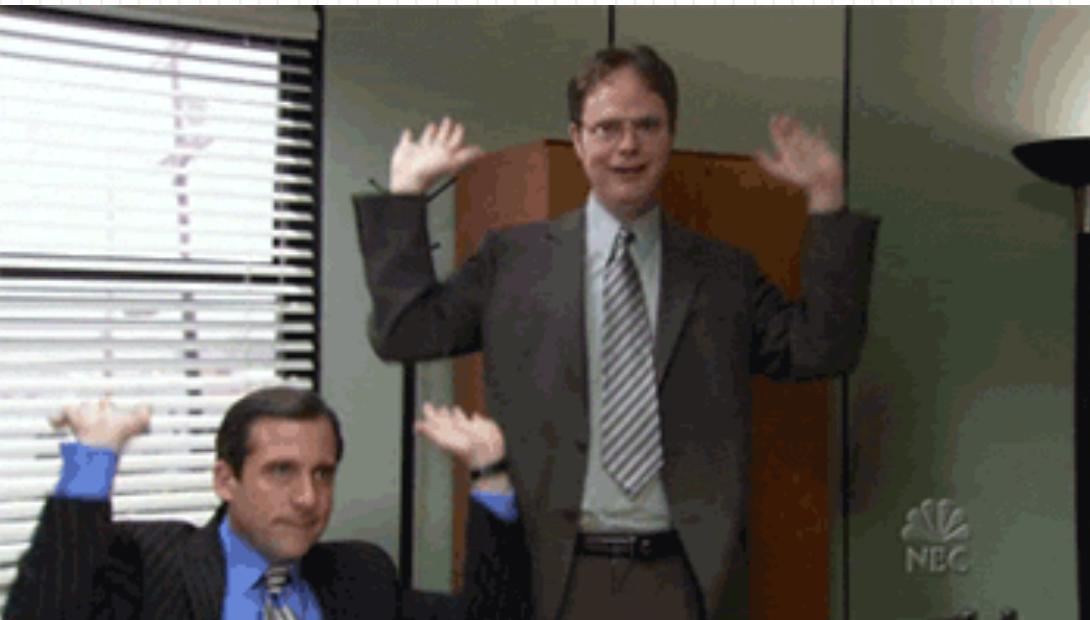
# 5. Conclusion

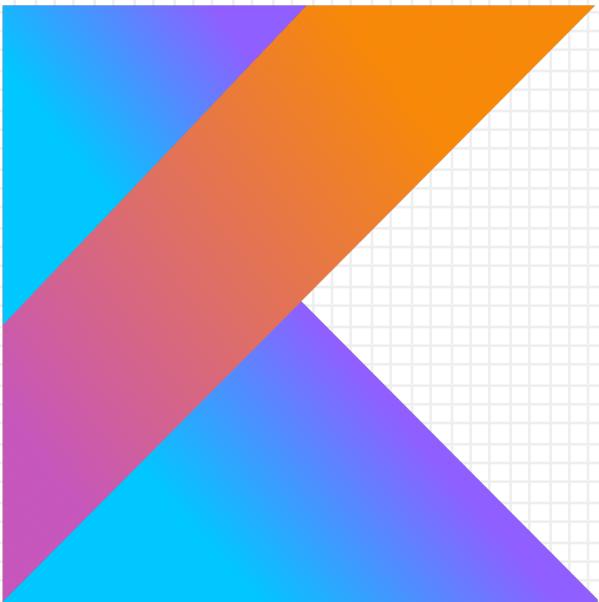
"Kotlin is beautiful!"

# 5. Conclusion

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- ✗ Try Kotlin: <https://try.kotlinlang.org>





# THANKS!

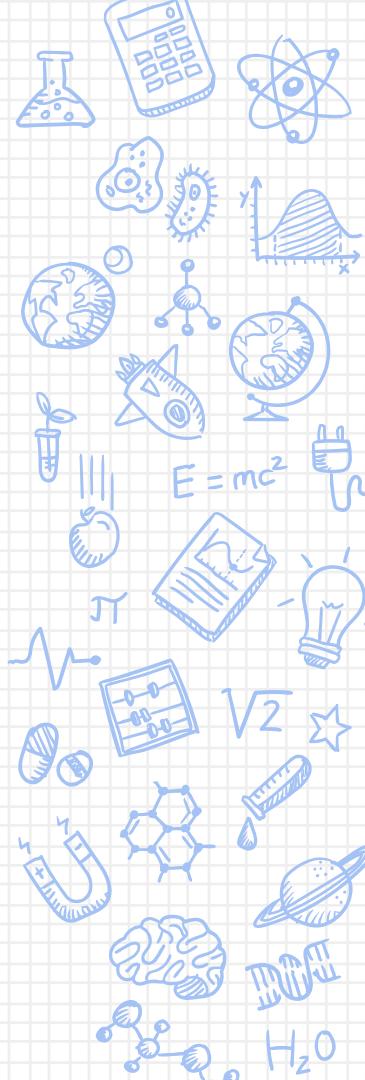
## Any questions?

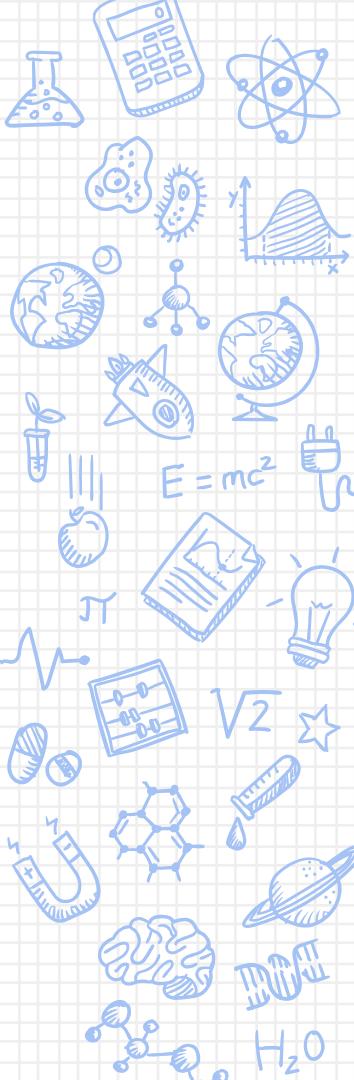
- ✗ Github: [bbranquinho](#)
- ✗ [augustobranquinho@gmail.com](mailto:augustobranquinho@gmail.com)

# References

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- ✖️ Kotlin Conf 2018- Keynote:  
<https://www.youtube.com/watch?v=PsaFVLr8t4E>
- ✖️ Foundation: <http://kotl.in/foundation>
- ✖️ Coroutines: <http://kotl.in/coroutines>
- ✖️ Kotlin Native: <http://kotl.in/native>
- ✖️ Multiplatform: <http://kotl.in/multiplatform>
- ✖️ Learn: <http://kotl.in/learn>
- ✖️ Airbnb:  
<https://softwareengineeringdaily.com/2018/09/24/show-summary-react-native-at-airbnb/>





## Credits

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Special thanks to all the people who made and released these awesome resources for free:

- ✗ Presentation template by [SlidesCarnival](#)
- ✗ Photographs by [Unsplash](#)