

# A BASIC AKKA PRESENTATION

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# SCHEDULE

Today we will

Give a small theory presentation about **akka**

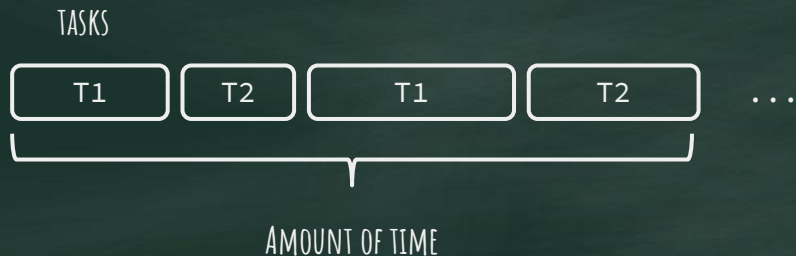
Give a **scala crash course** for java devs **:P**

Present a trivial **bank account management** system written using **akka-typed, akka-http and scala**

# SOME BASIC NOTIONS (1)

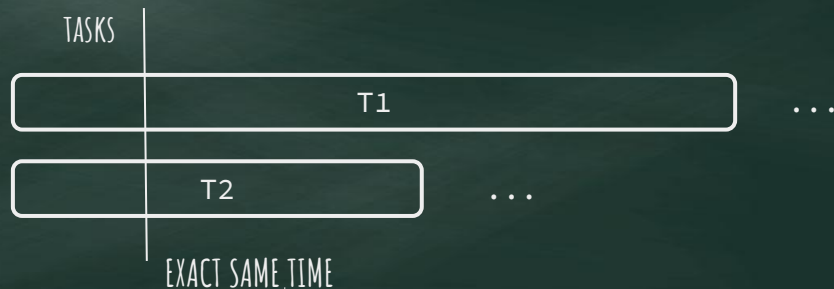
## CONCURRENCY

Means that we can execute **multiple** things at a given **amount of time**.



## PARALLELISM

Means that we can execute things at **the exact same time**.



# SOME BASIC NOTIONS (2)

## PERFORMANCE

Means **how fast** things are being executed.

## SCALABILITY

Is the ability of a **system** to **handle** larger amounts of **work** by **adding** resources.

## ORTHOGONAL PROPERTIES

You may have both but many times you may **sacrifice** a little bit of **performance to gain scalability**.

# SOME BASIC NOTIONS (3)

There are more properties that we are interested in ...

RESILIENCE  
(SYSTEM)

ELASTICITY  
(SYSTEM)

AVAILABILITY  
(SYSTEM)

RESPONSIVENESS  
(SYSTEM)

EFFICIENCY  
(HUMANS)

CONSISTENCY  
(DATA)

# WHAT IS AKKA ?

“Akka is a set of open source **libraries** for designing **scalable, resilient** system that **span processor** cores and **networks.**”

(\*quoted from [akka.io](http://akka.io) documentation)

Akka is about:

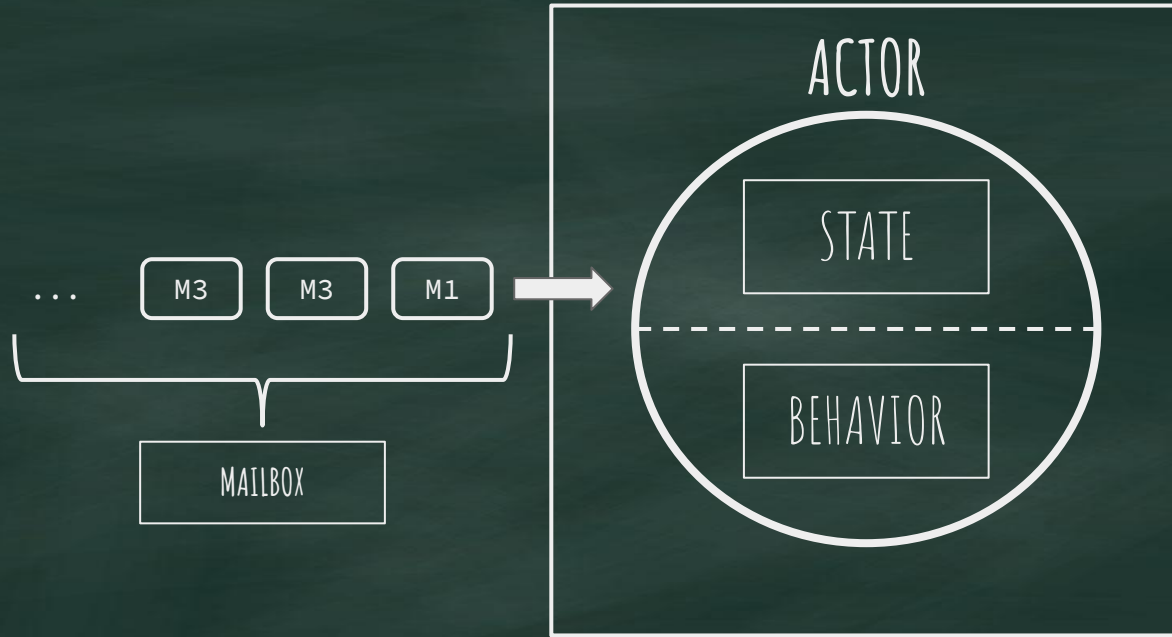
- Scalability
- Concurrency & Parallelism
- Resiliency
- Workload distribution
- Performance
- Efficiency

# ARCHITECTURE EAGLE VIEW



\*\* FROM ECOSYSTEM AND MANY MORE....

# ANATOMY OF AN ACTOR





AN ACTOR IS NO ACTOR

# ENOUGH TALKING SHOW ME THE CODE

A bank account management system example

<https://github.com/fpaschos/simple-bank-system>