Introduction to a type system: Session Types

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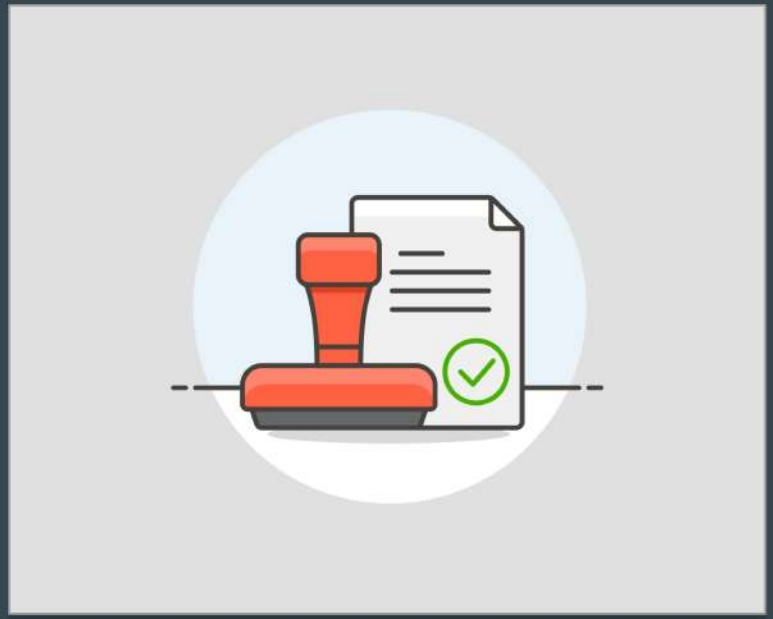
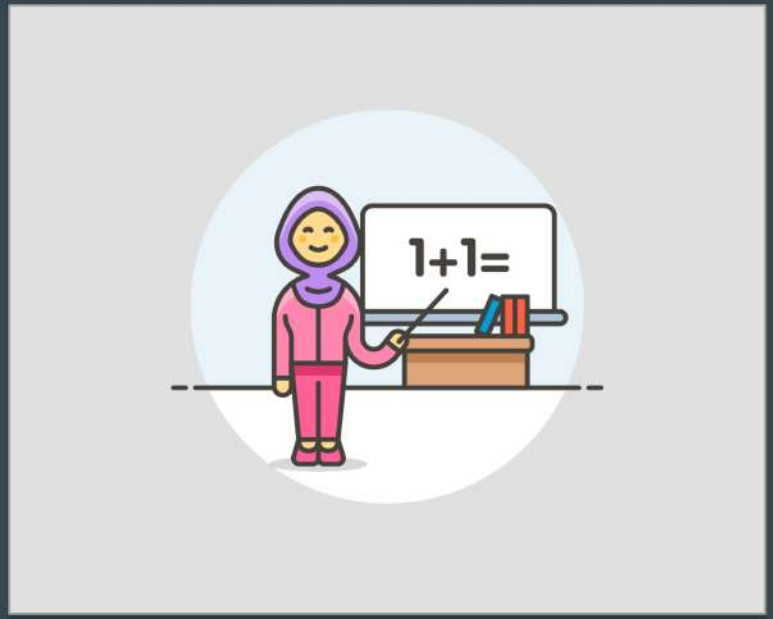
Charlotte

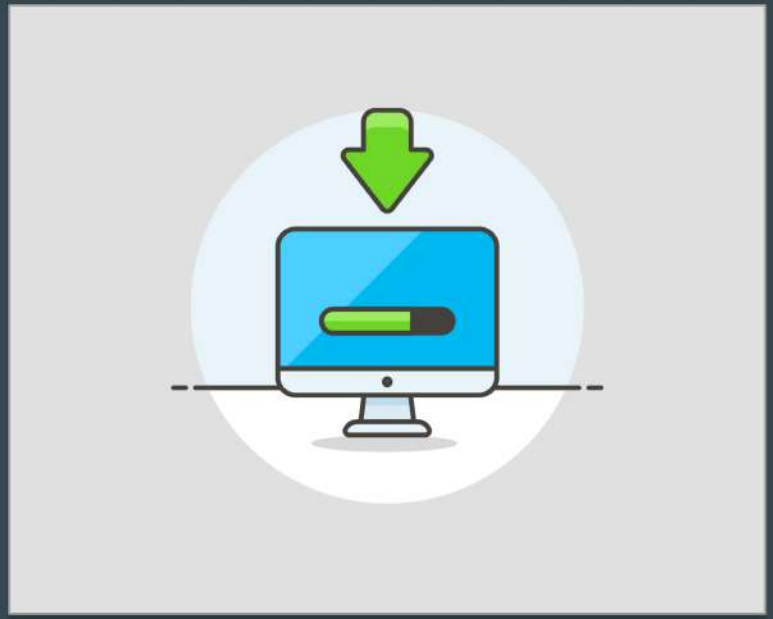
What is a type system



It’s all about setting expectations



And proving by math that things works



So we can spend our time working on business logic

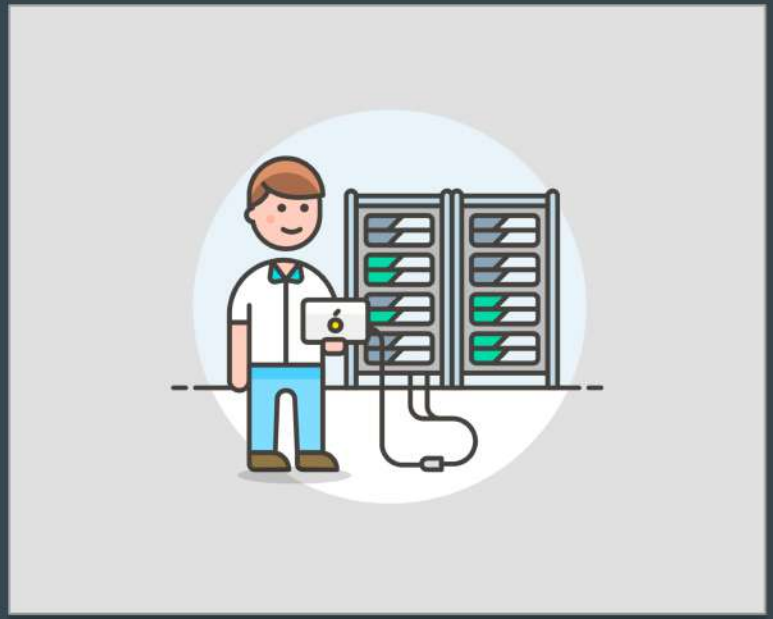
A new speaker appears

Lottinha, future PhD in Food

“Type systems are tools to ensure software doesn’t lock itself and that it has certain properties”

“Ideally it would catch bugs even before you have to run your code”

Why isn’t Erlang typed ?



First and foremost: Erlang didn't need a type system

Actors have unpredictable behaviour

“It’s hard to predict if things will work the way you want if you don’t know what could happen”

Actors communicate with messages

“When you expect something but can’t prove it, it’s subject to expectation breaks”

Session types: why and how

The academy has been theorizing about things

“We are starting to get into the industry the fruits of academic research from a few decades ago”

Now we can formalize protocols as types

By proving linear causality, we can know what to expect

“By mapping the timeline of communication within actors we can prove the data flow”

Academic research can improve Software Engineering