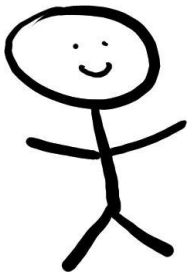
Rust:
the best and worst thing to happen to Tremor



Llanes, Asturias, Spain

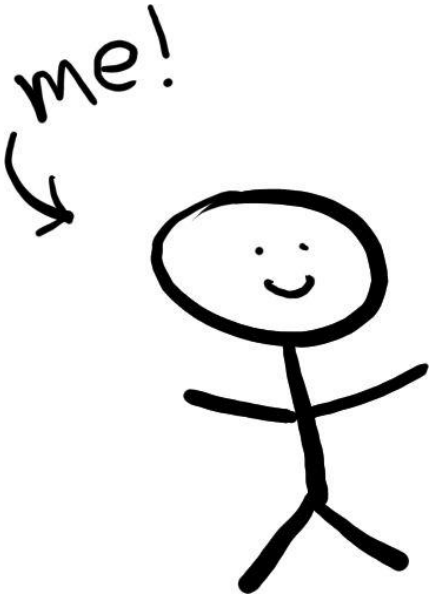
Mario Ortiz Manero

💻 SWE @ Lyft
❤️ Open source

📧 marioortizmanero@gmail.com

🌎 https://nullderef.com

Let me tell you a story...



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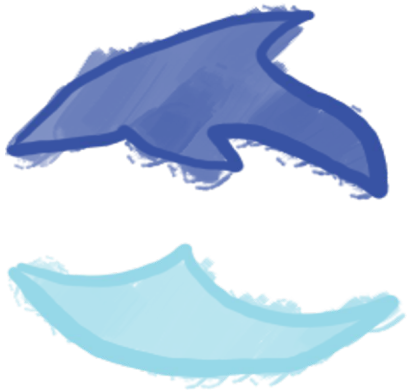
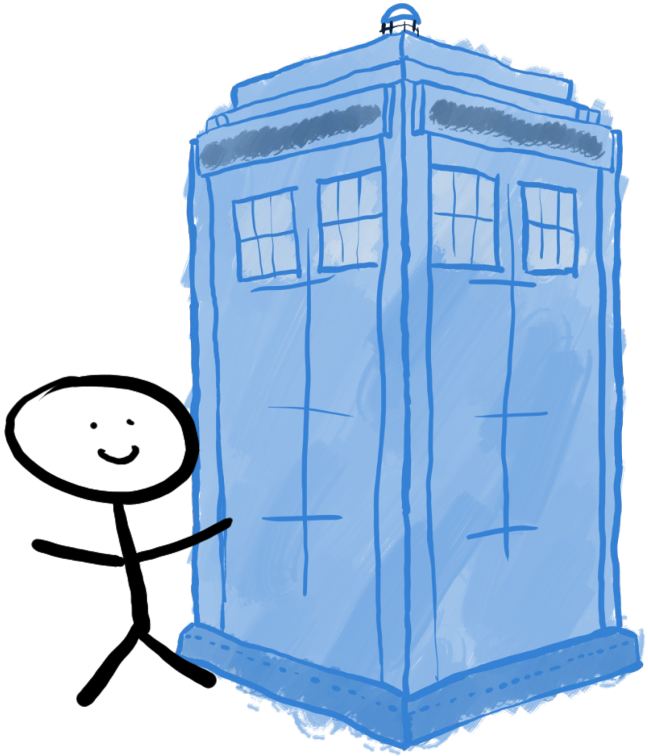
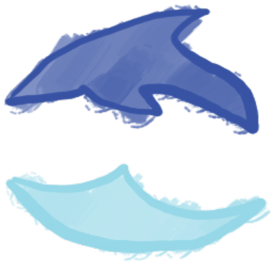


Tremor

Let me tell you a story...



Once upon a time...



Tremor

(Gary's video)

Once upon a time...

Tremor

HIGH PERFORMANCE + ROBUSTNESS

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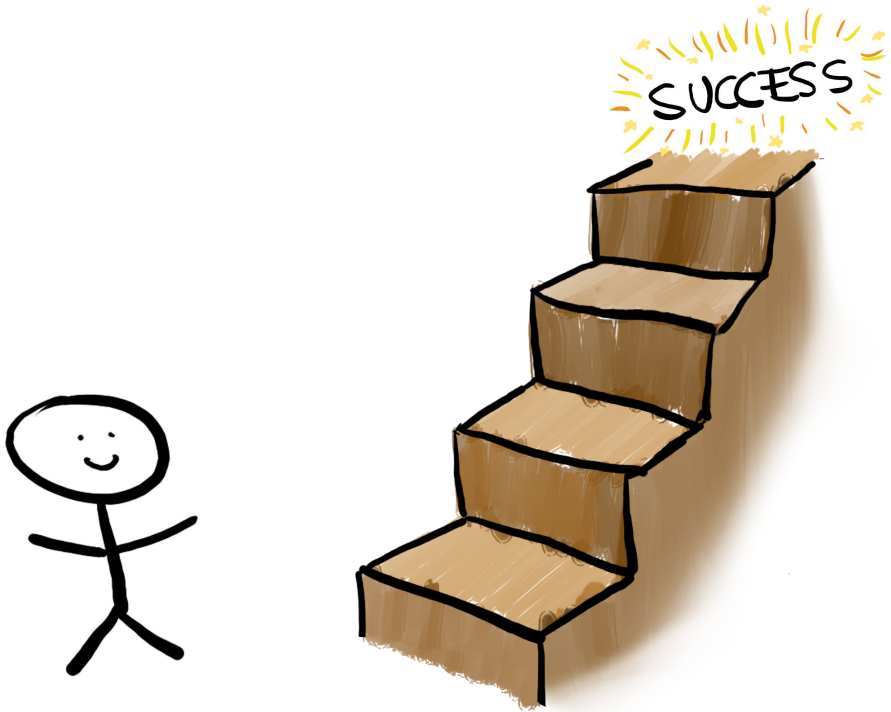

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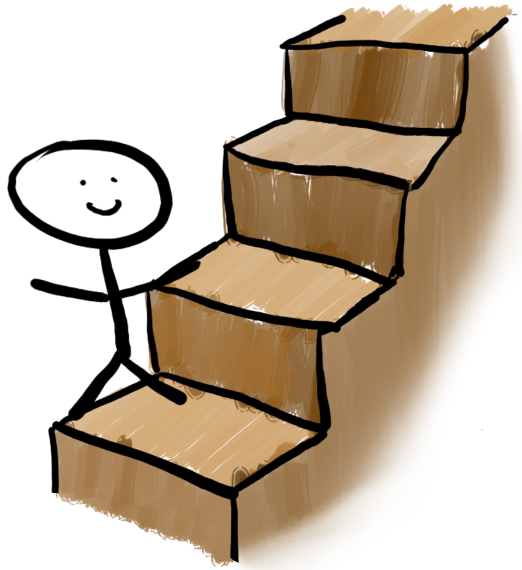

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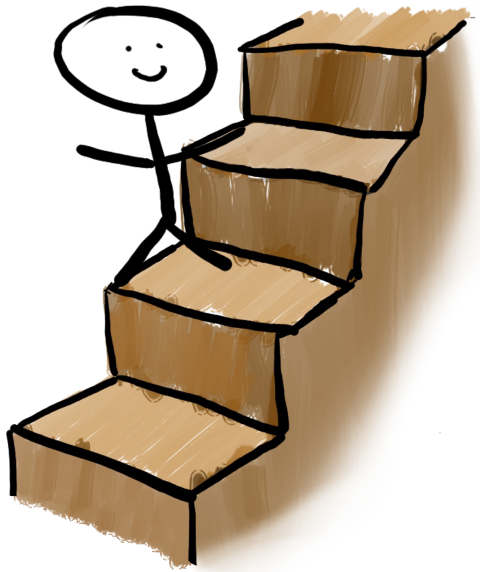

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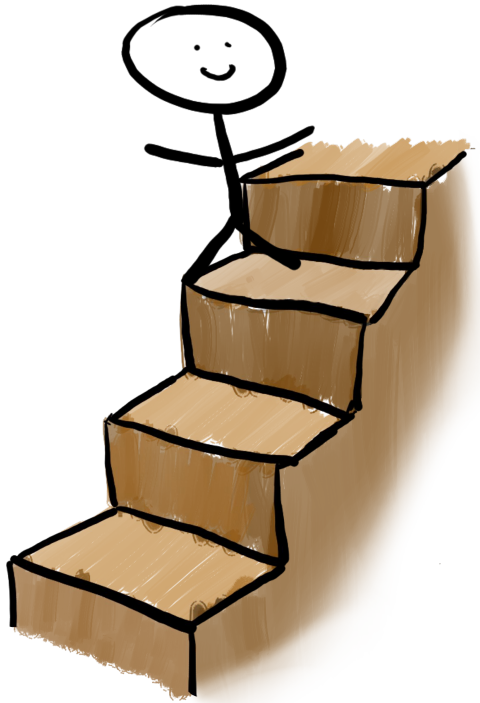

...BUT ALSO HIGH COMPILATION TIMES

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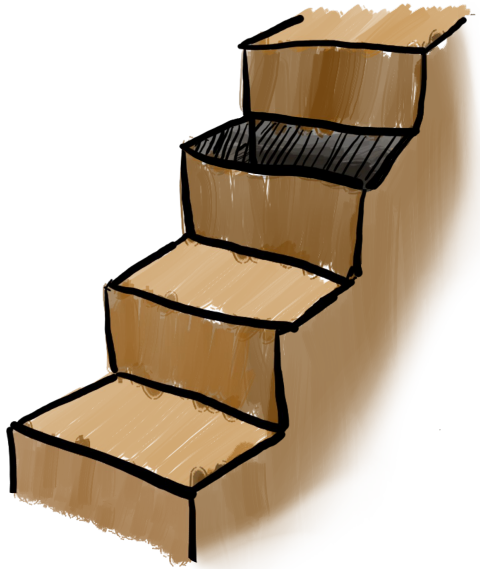

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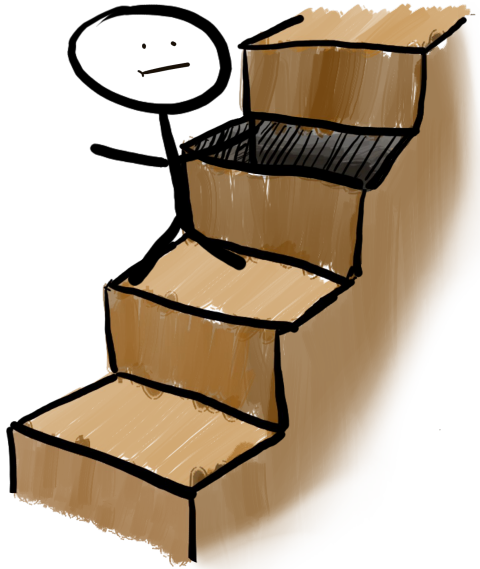
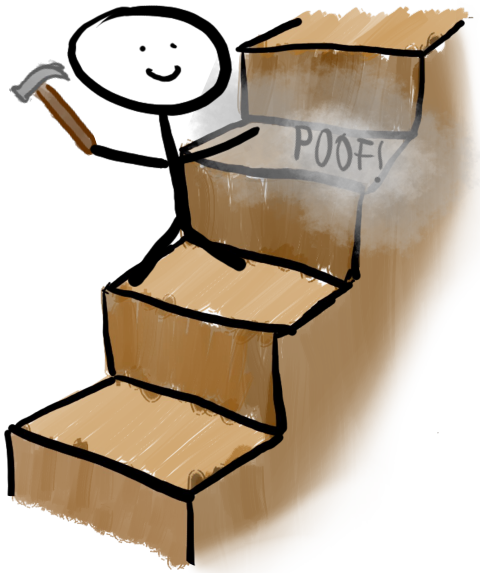


...BUT ALSO HIGH COMPILATION TIMES

(Aleksey's article)

Plugin systems to the rescue!



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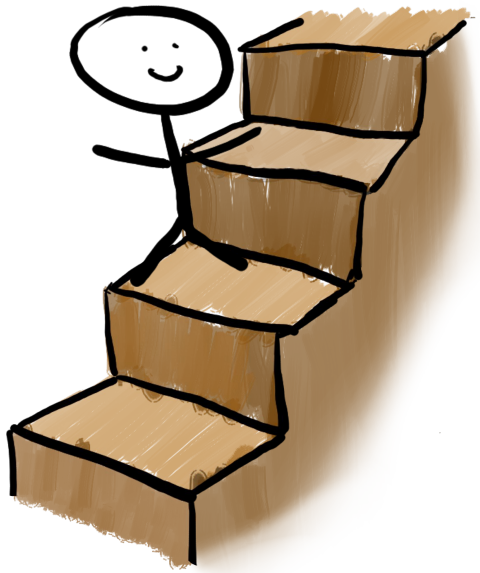

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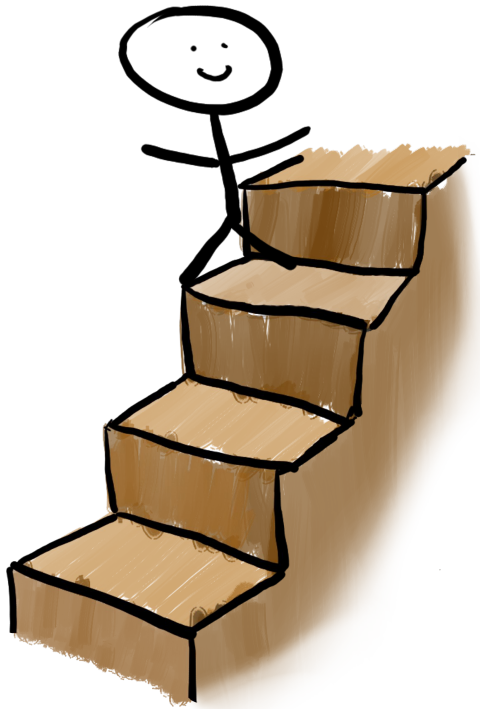

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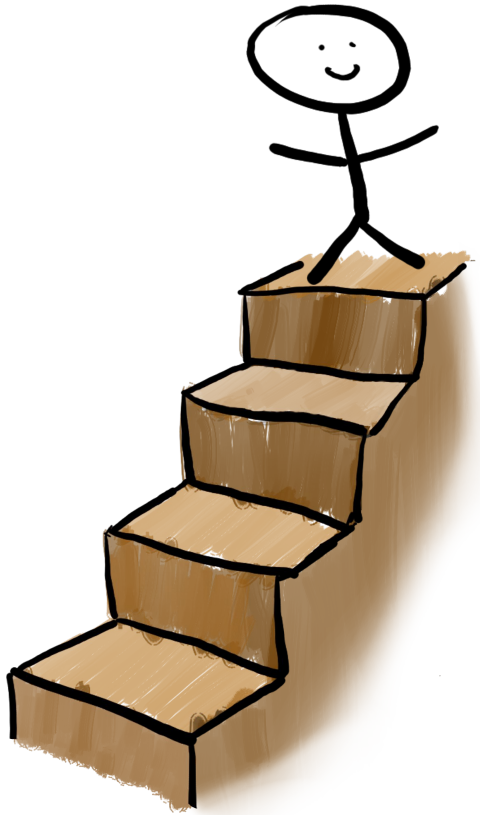
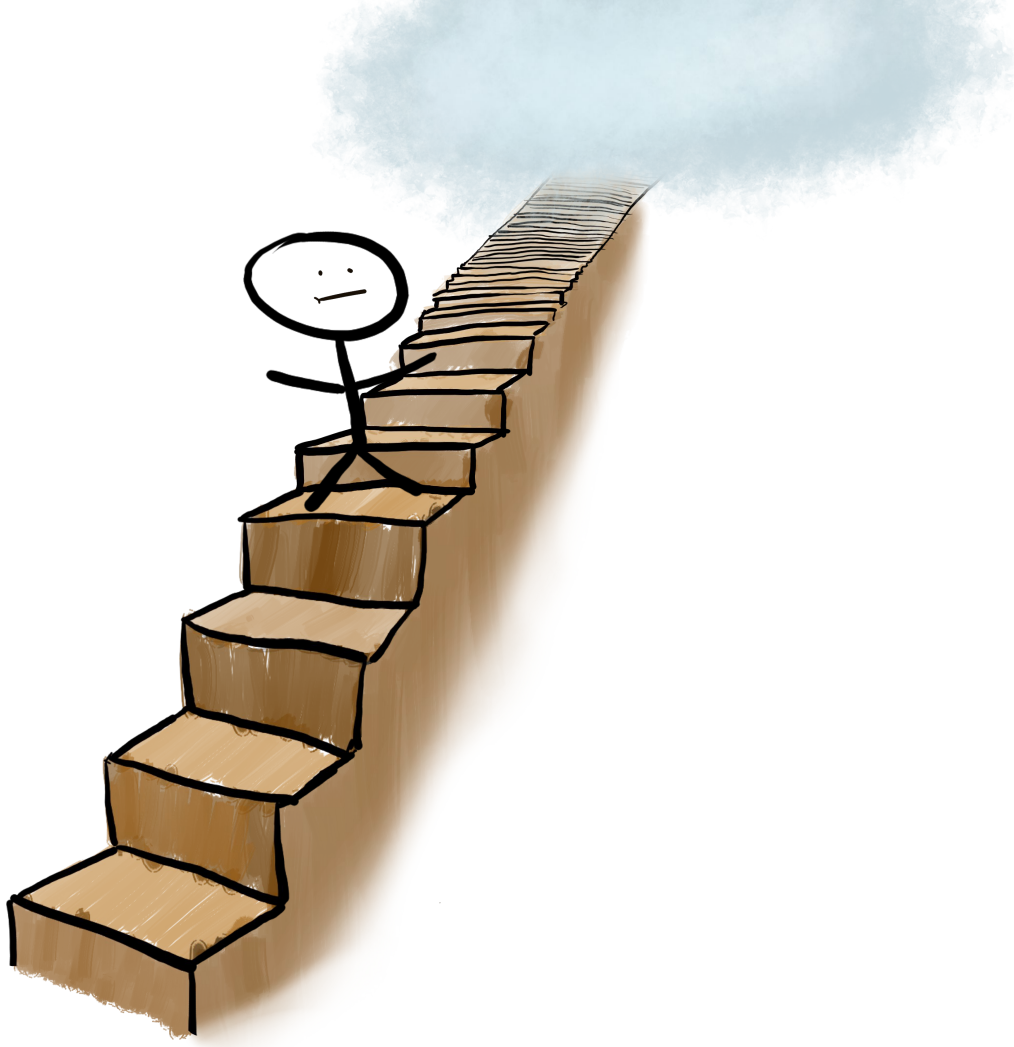
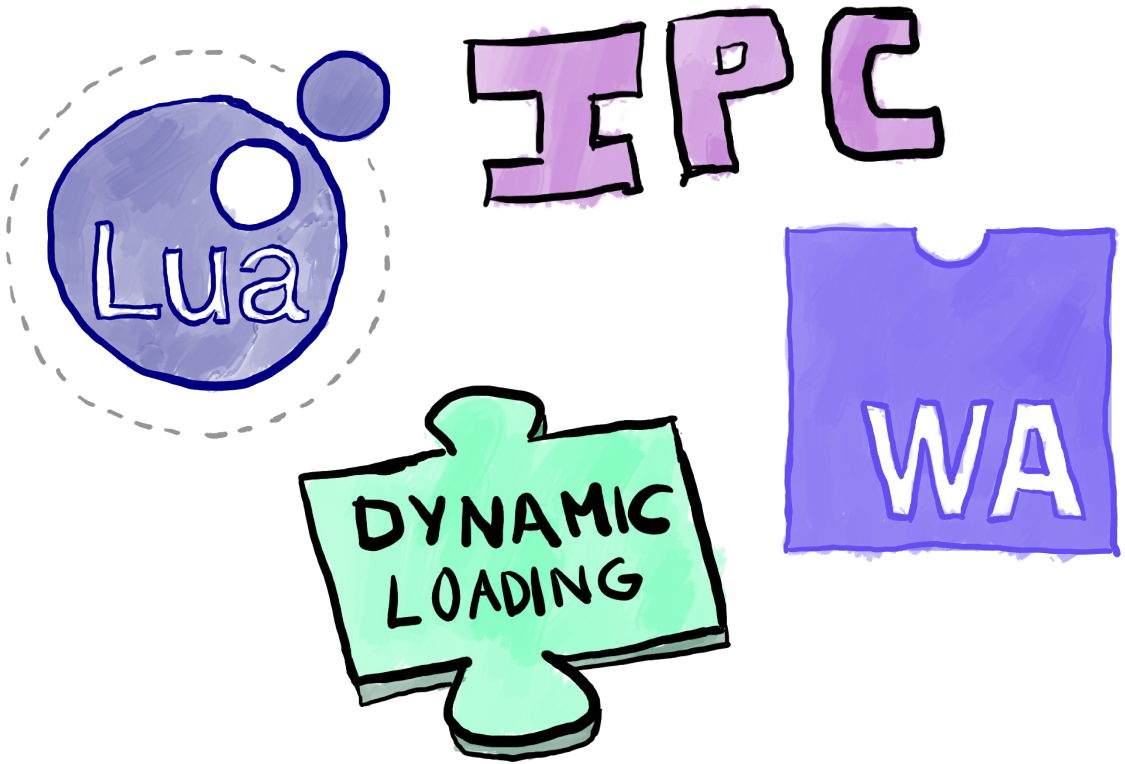




How to actually implement it?



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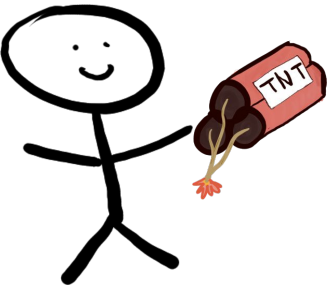


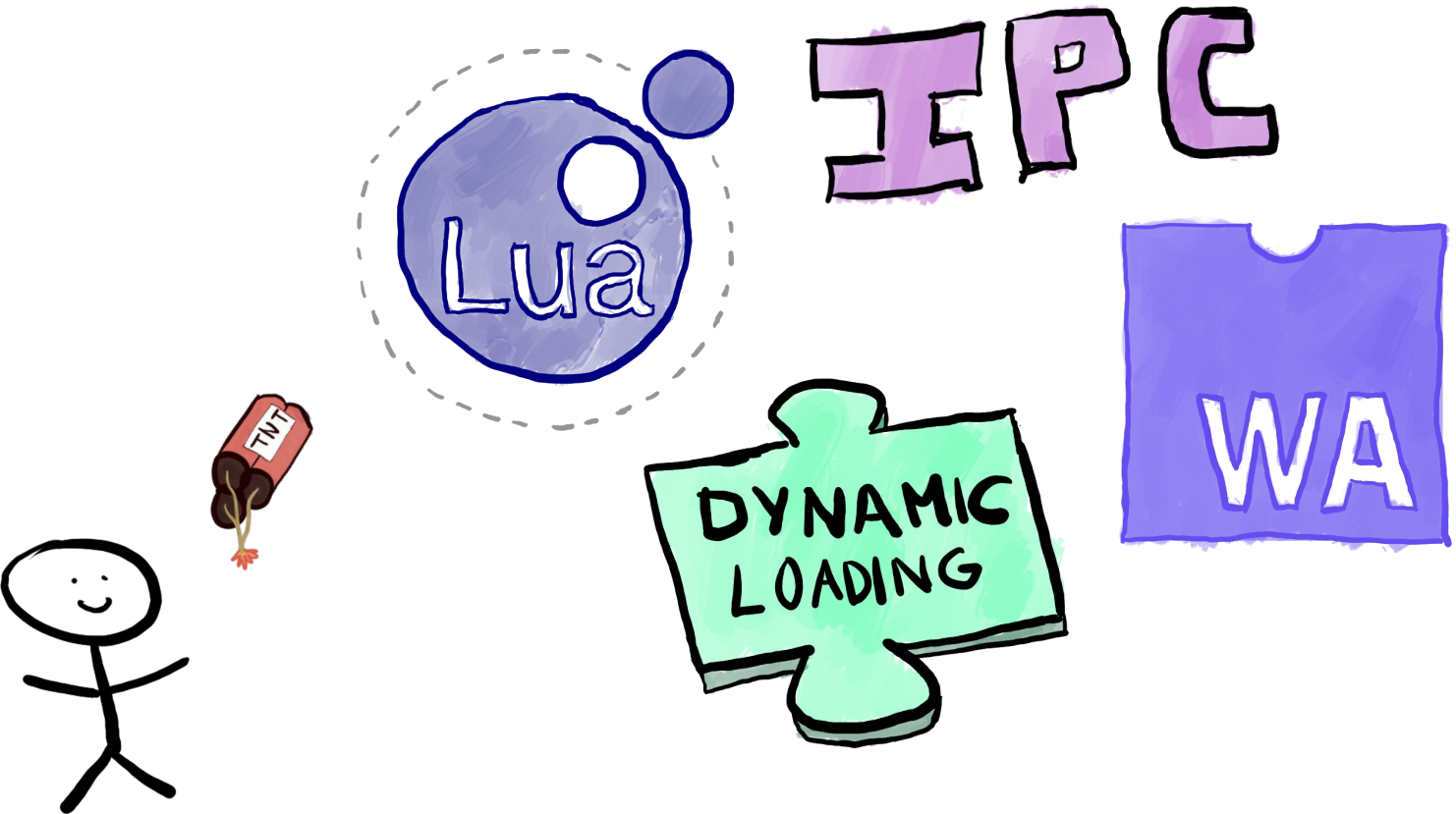
Lua

IPC

WA

DYNAMIC LOADING

How to actually implement it?



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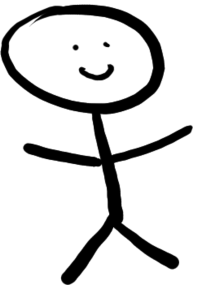

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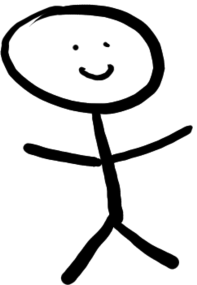

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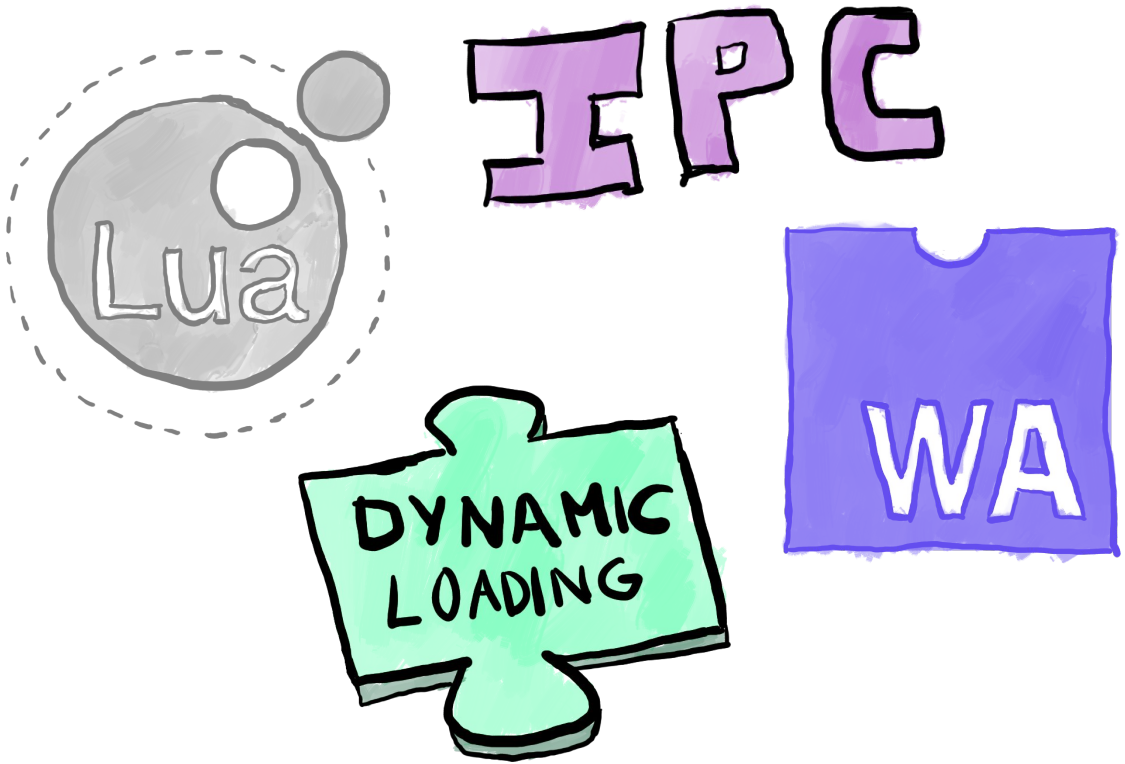

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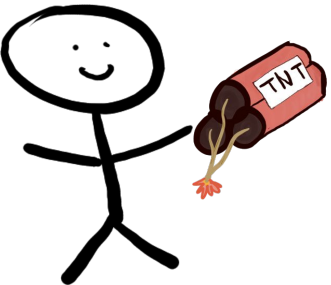

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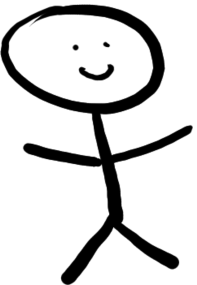

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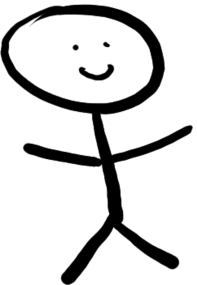

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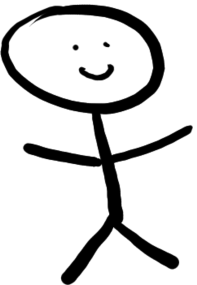

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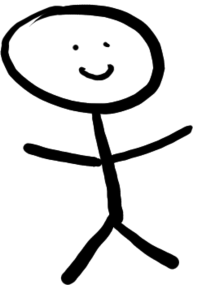

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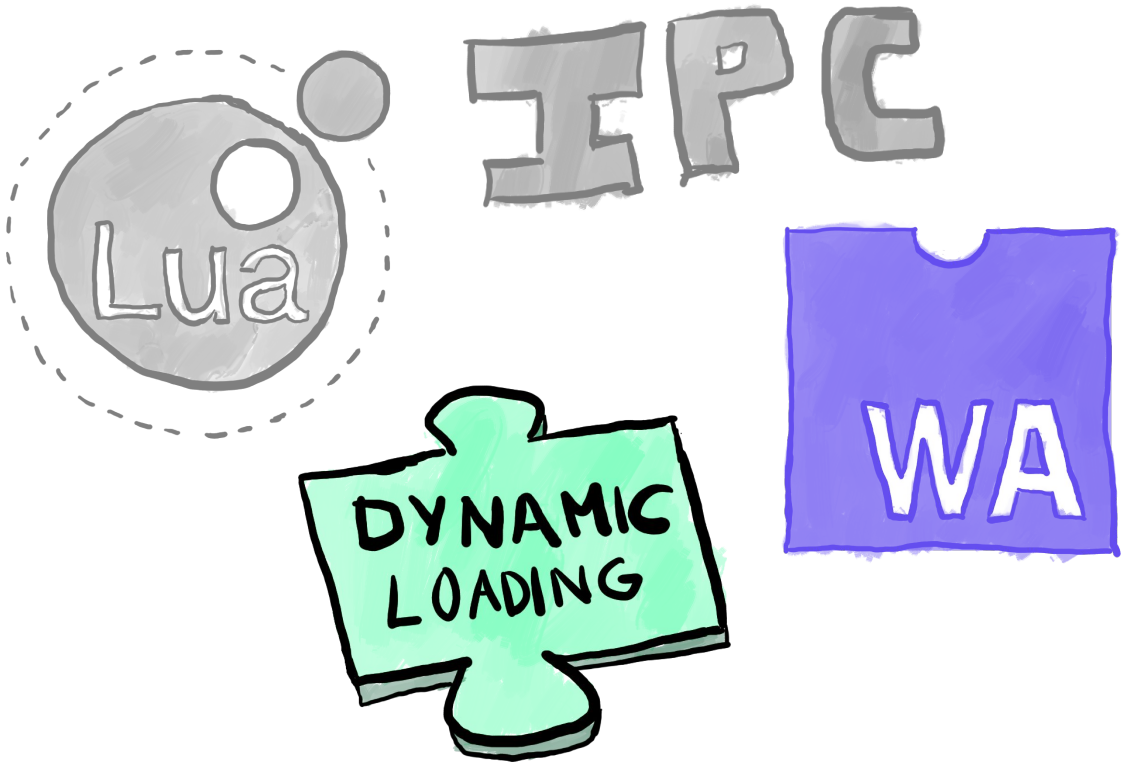

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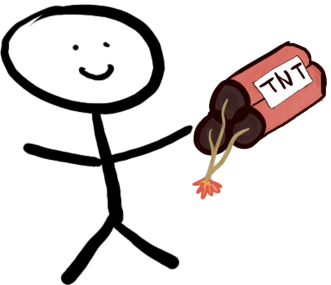

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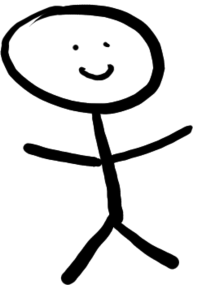

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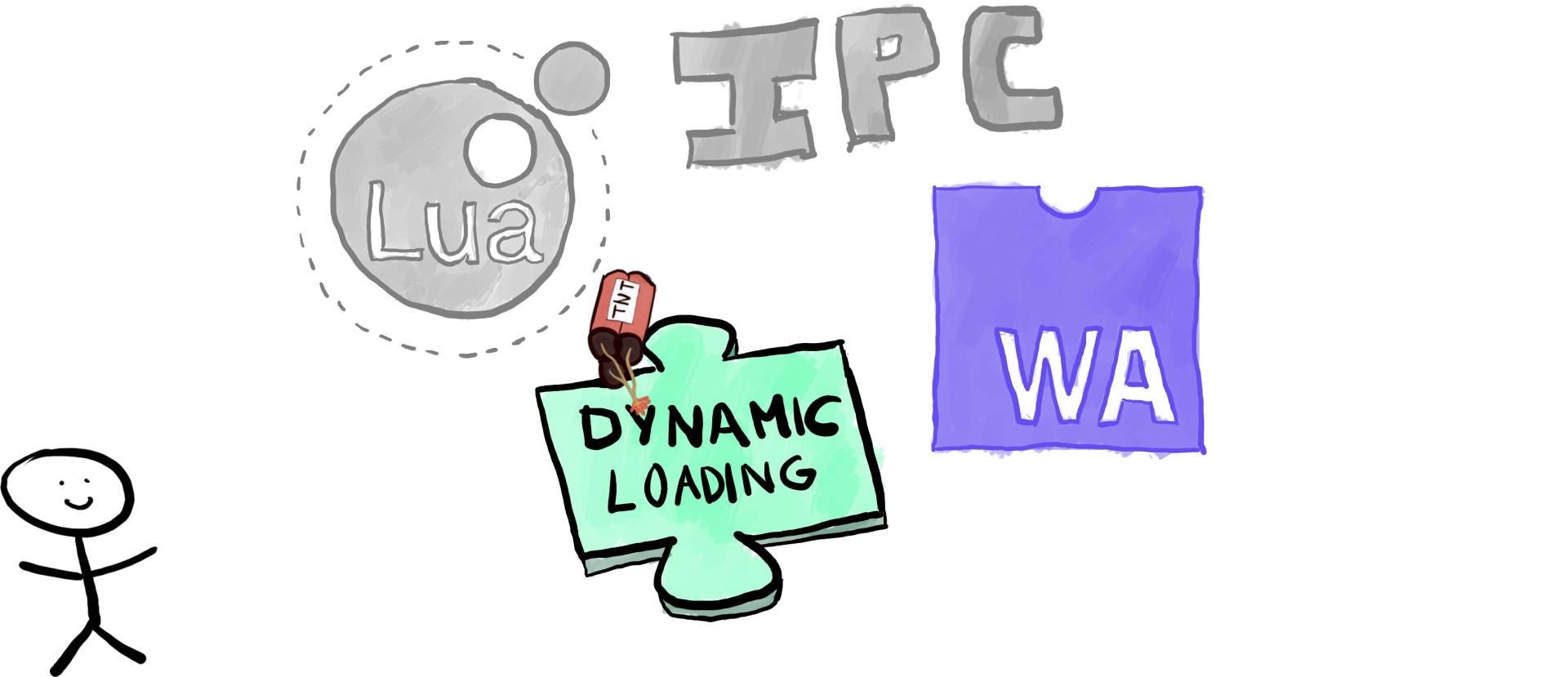

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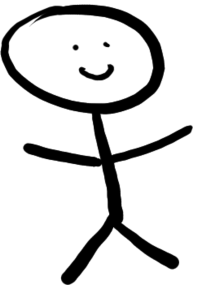

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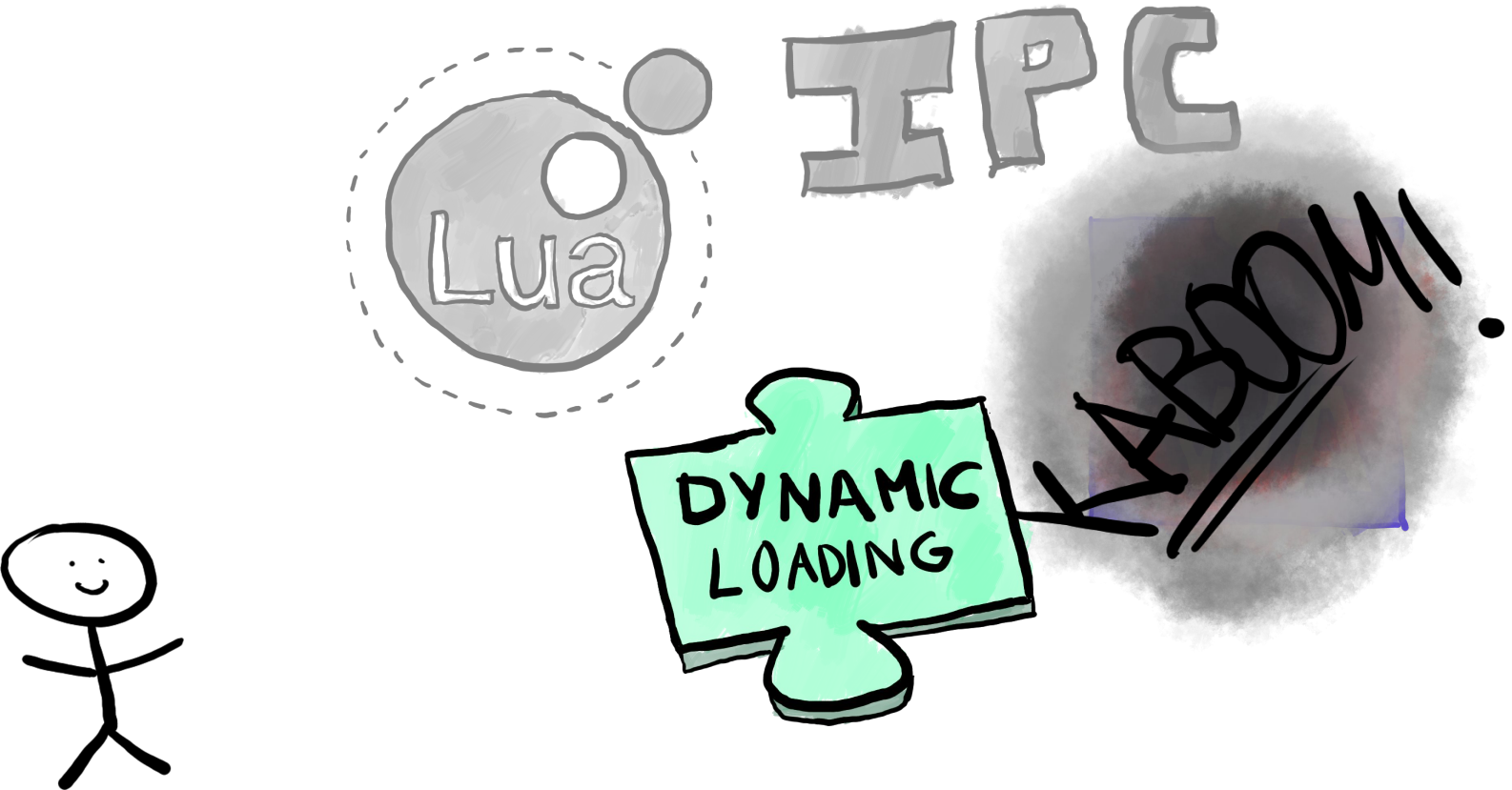

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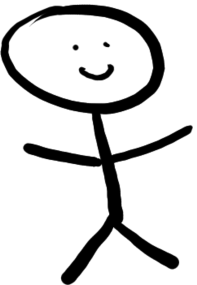
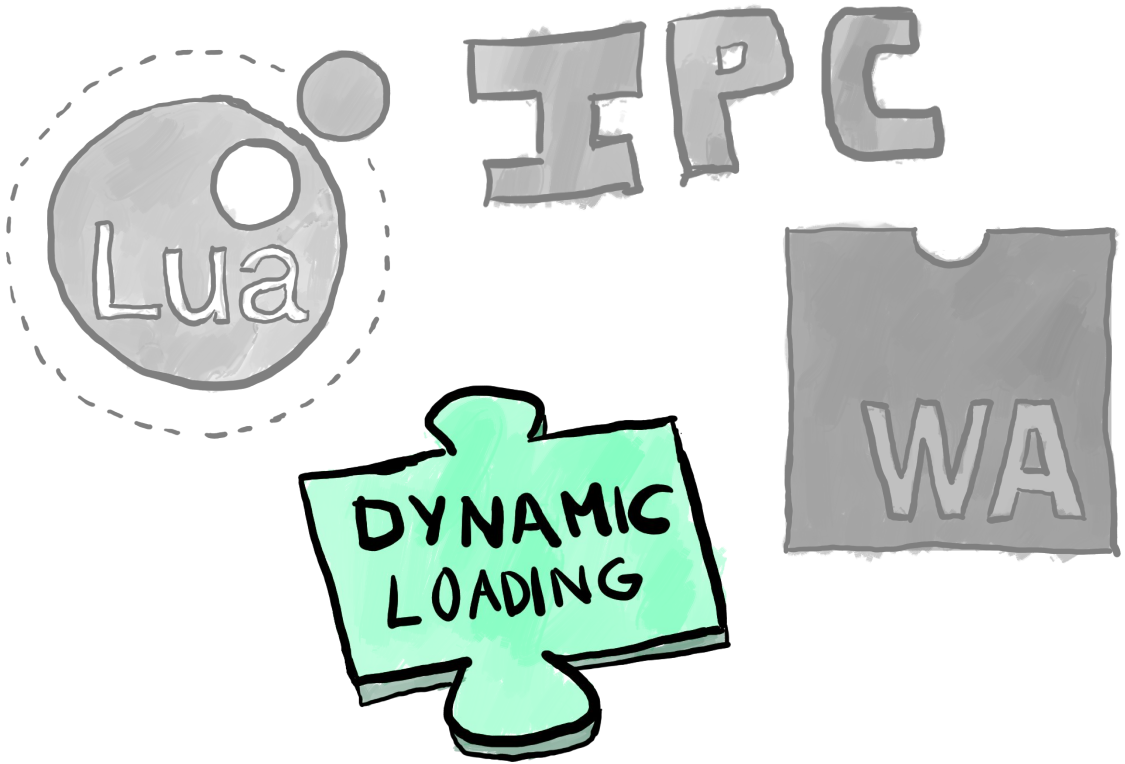
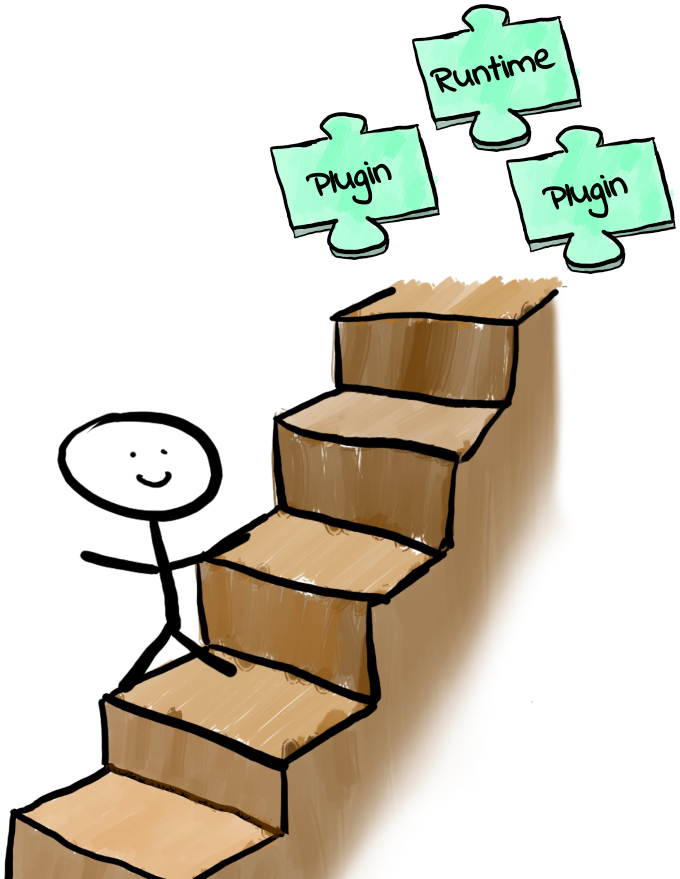




Dynamic Loading



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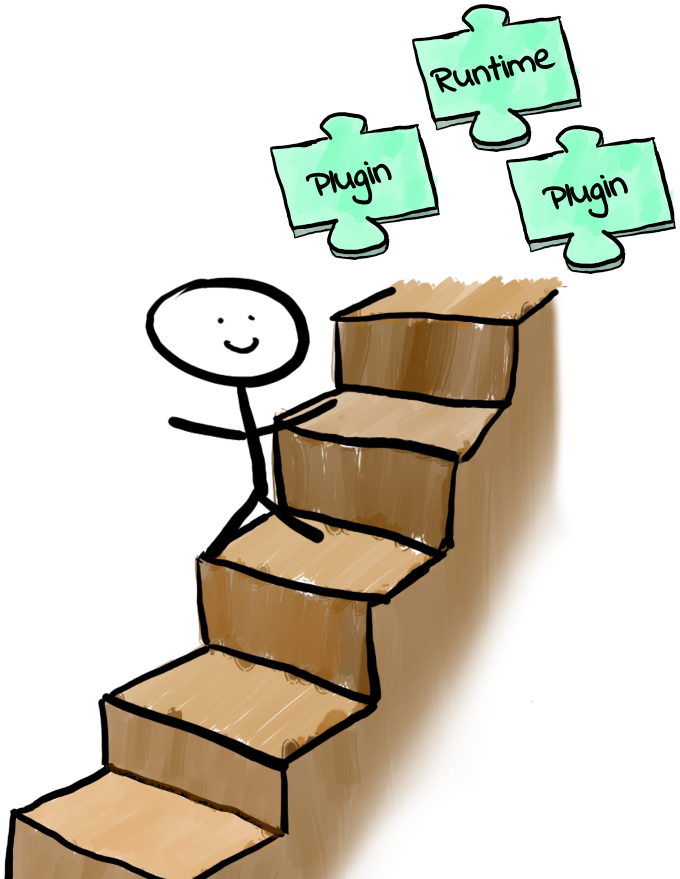
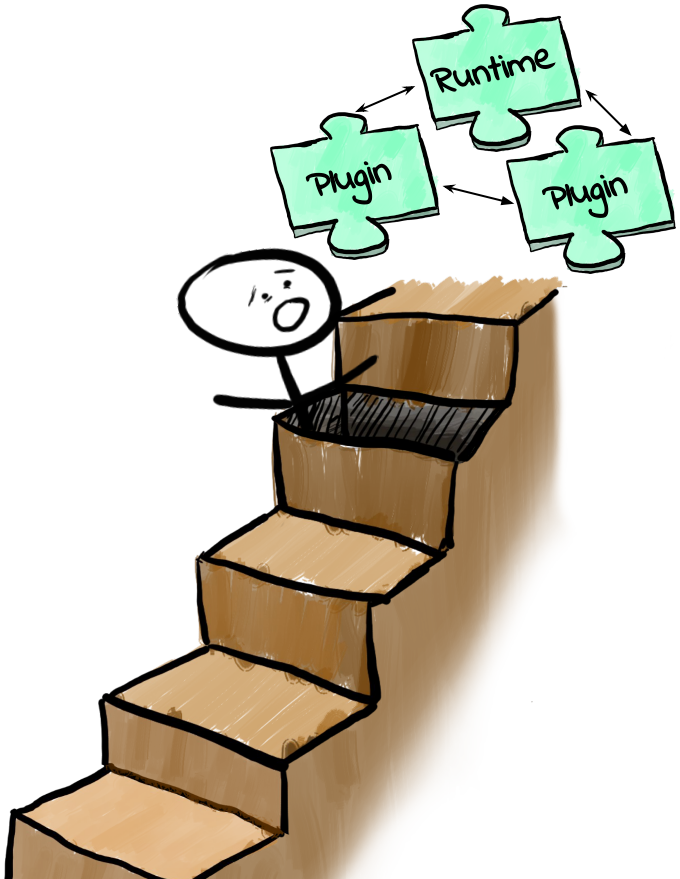


Dynamic Loading

...EXCEPT THERE'S NO STABLE ABI



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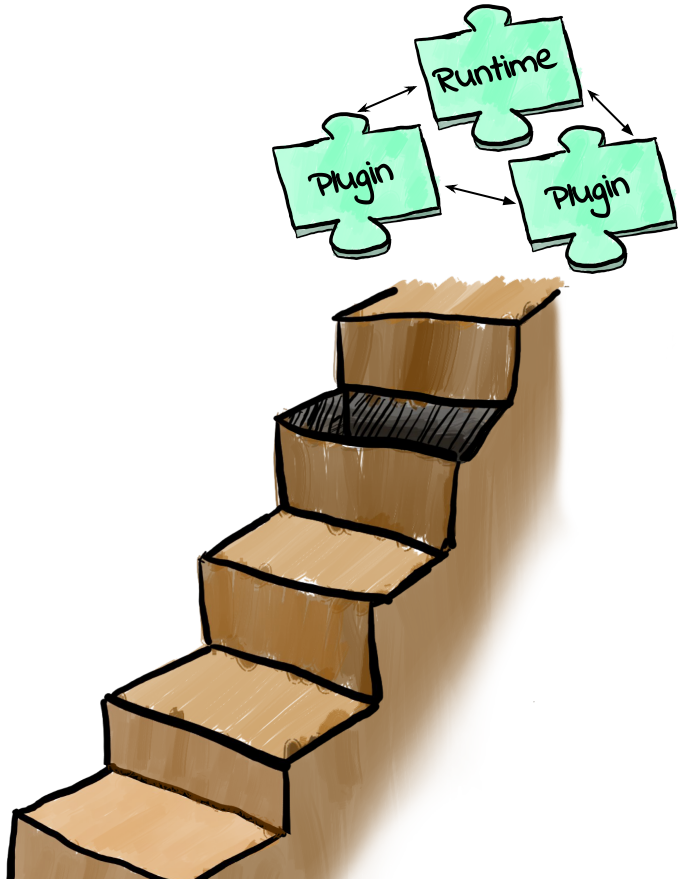

We can use the C ABI!

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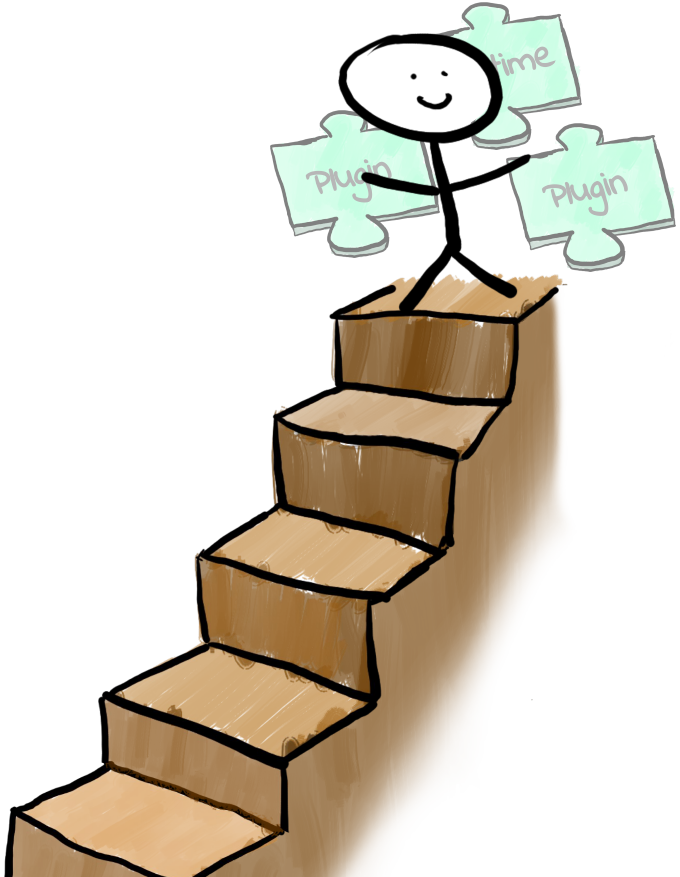
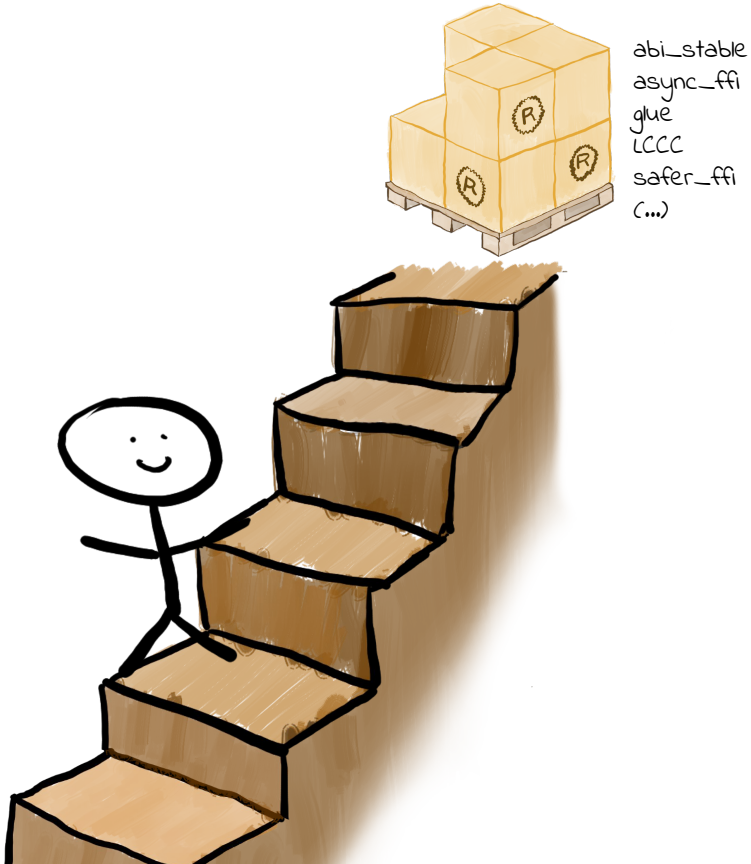


How to stay sane though?

We can use existing libraries



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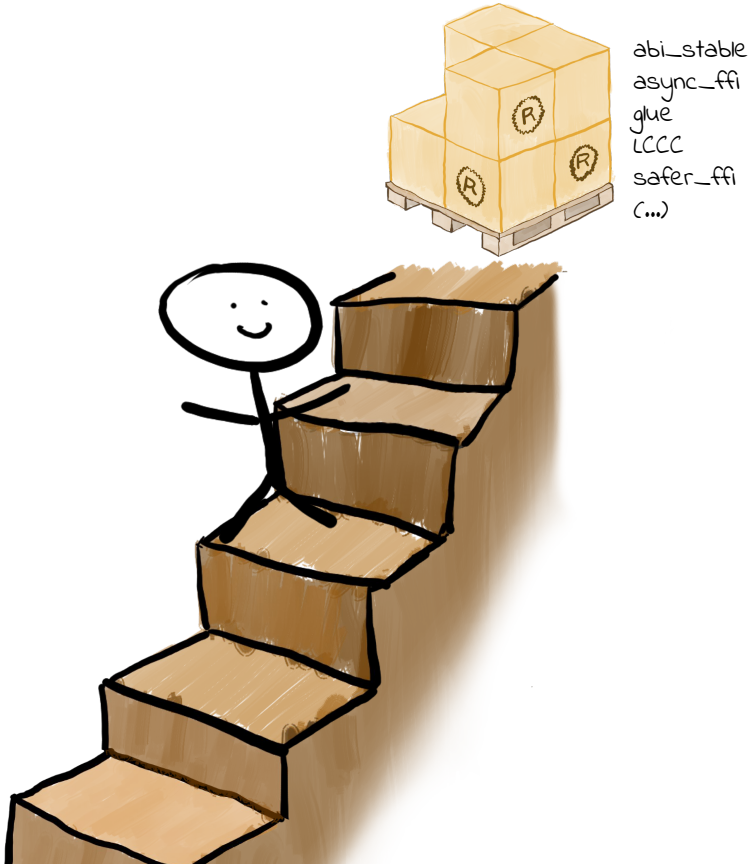

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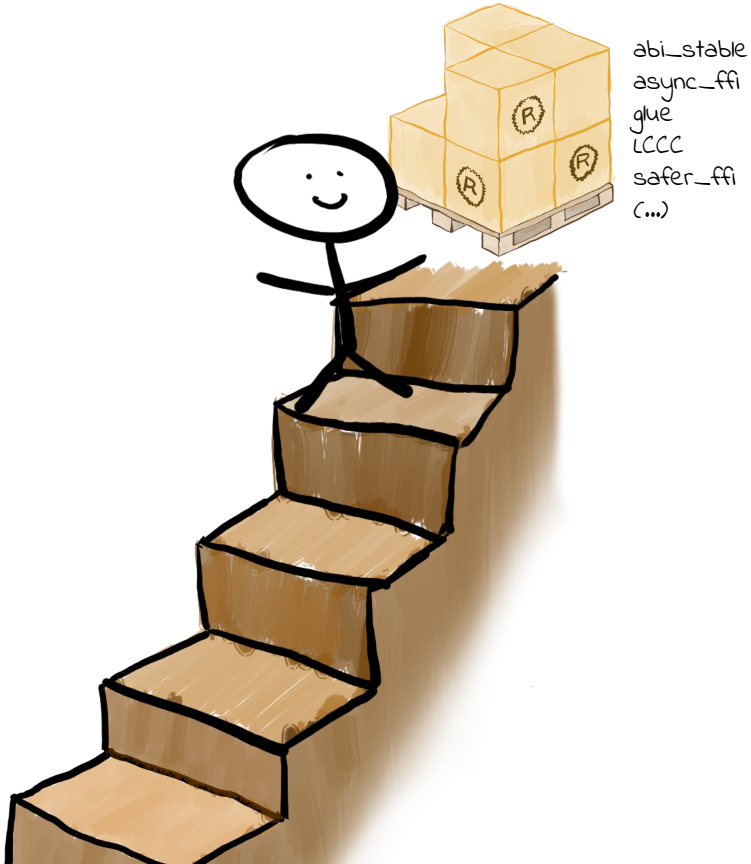
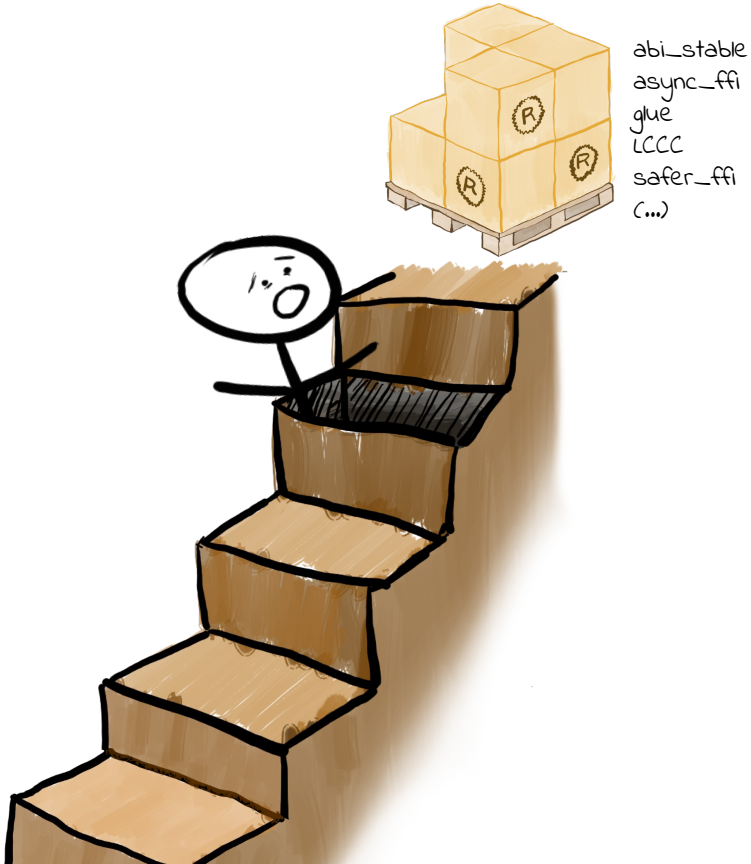


...WHICH AREN'T PRODUCTION-READY



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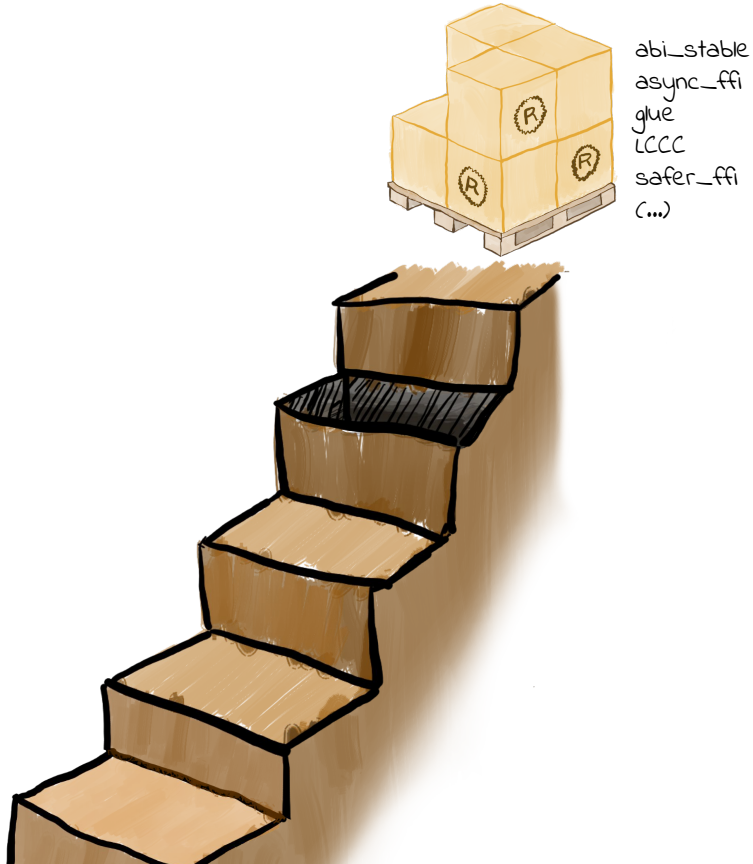
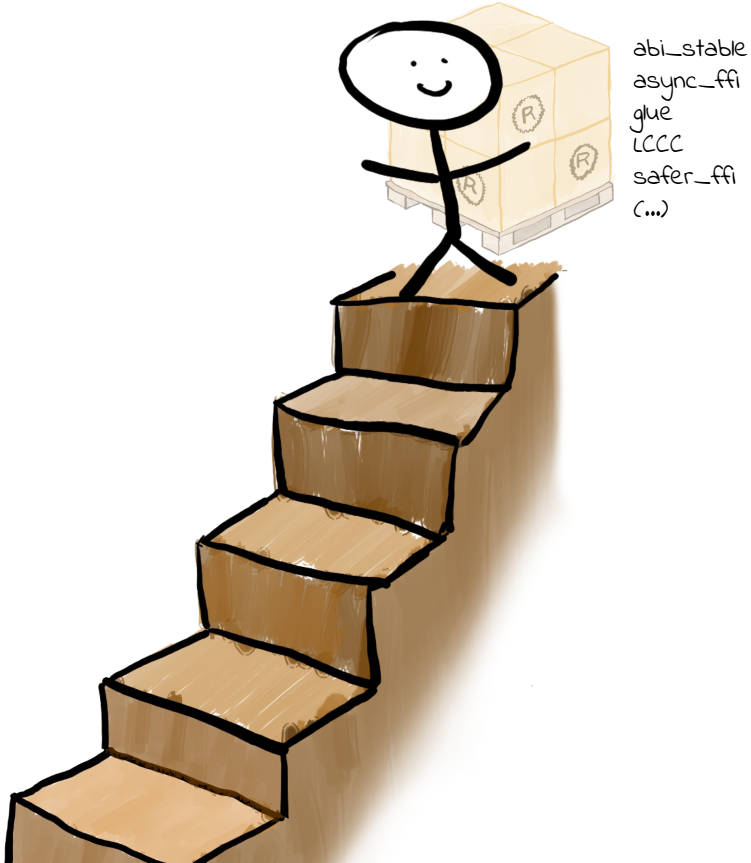
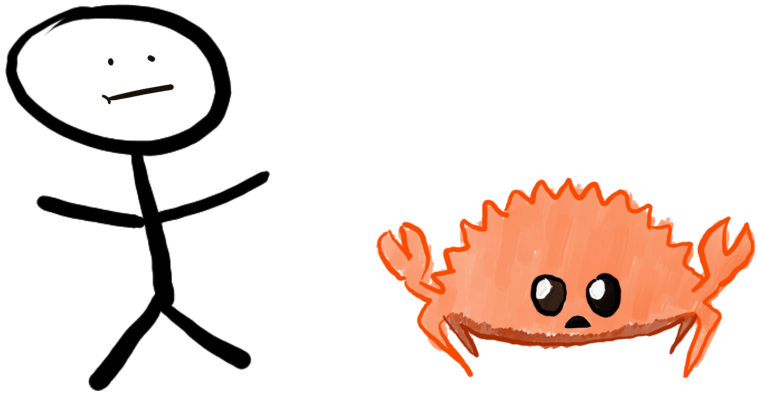


Nothing we can't fix ourselves!

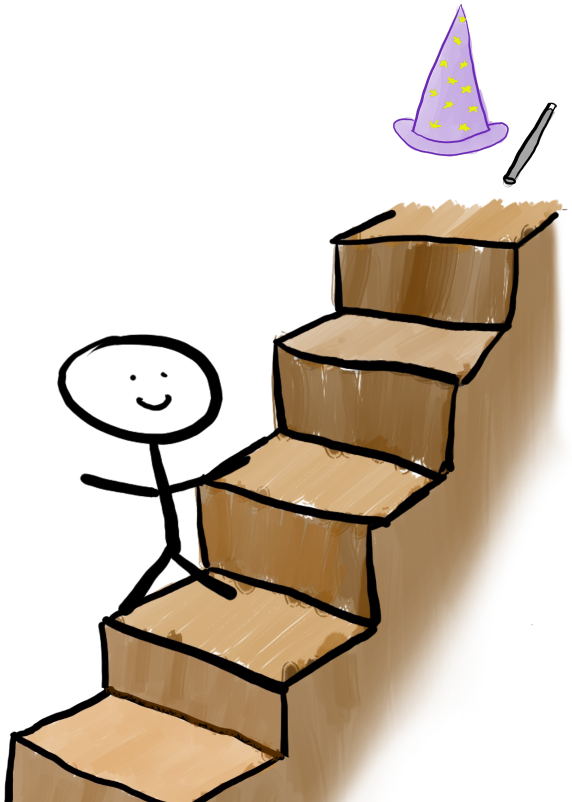
We can use existing libraries



How to leverage Rust?



Using advanced features



Using advanced features

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...SOME AREN'T COMPLETE

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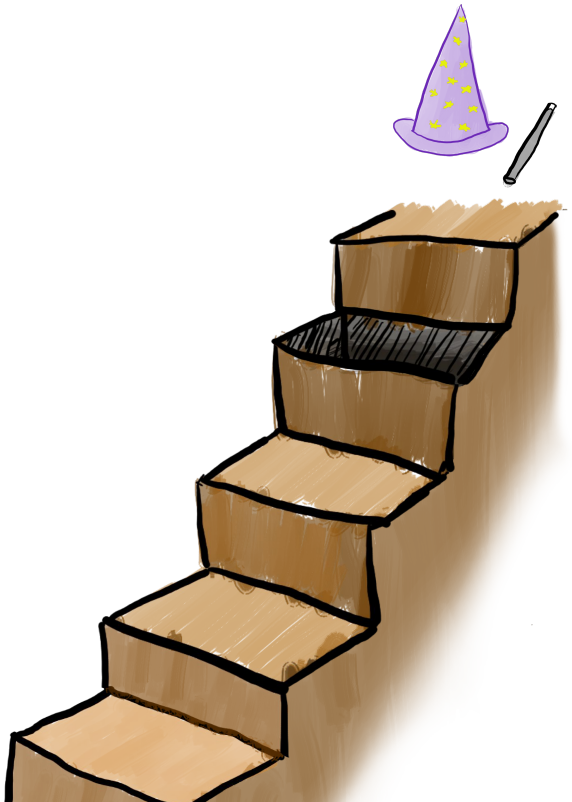

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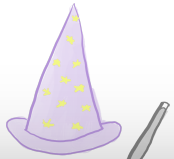
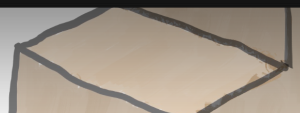


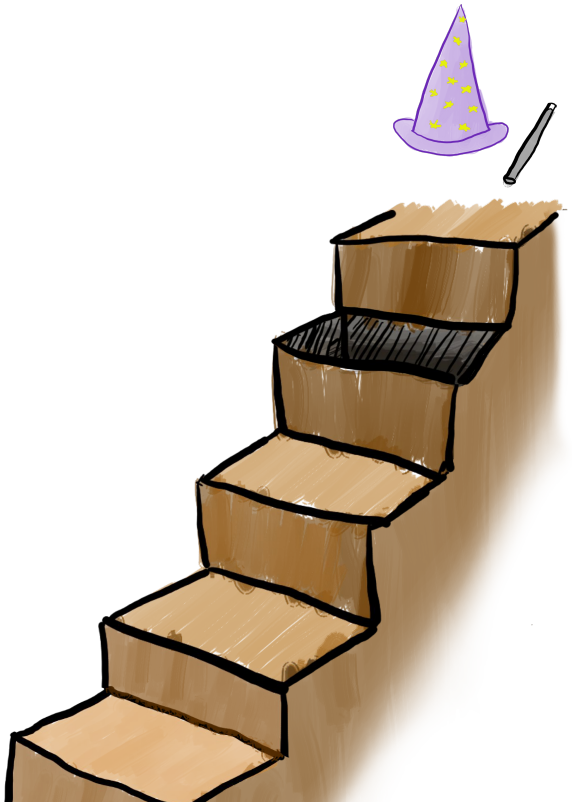
```rust
use abi_stable::std_types::RCow;
use std::borrow::Cow;

fn cmp_cow<'a, 'b>(left: &Cow<'a, ()>, right: &Cow<'b, ()>) -> bool {
    left == right
}

// This fails with a lifetime mismatch issue
fn cmp_rcow<'a, 'b>(left: &RCow<'a, ()>, right: &RCow<'b, ()>) -> bool {
    left == right
}
```



...SOME AREN'T COMPLETE

(Jon Gjengset's video)

(Rustnomicon's page)



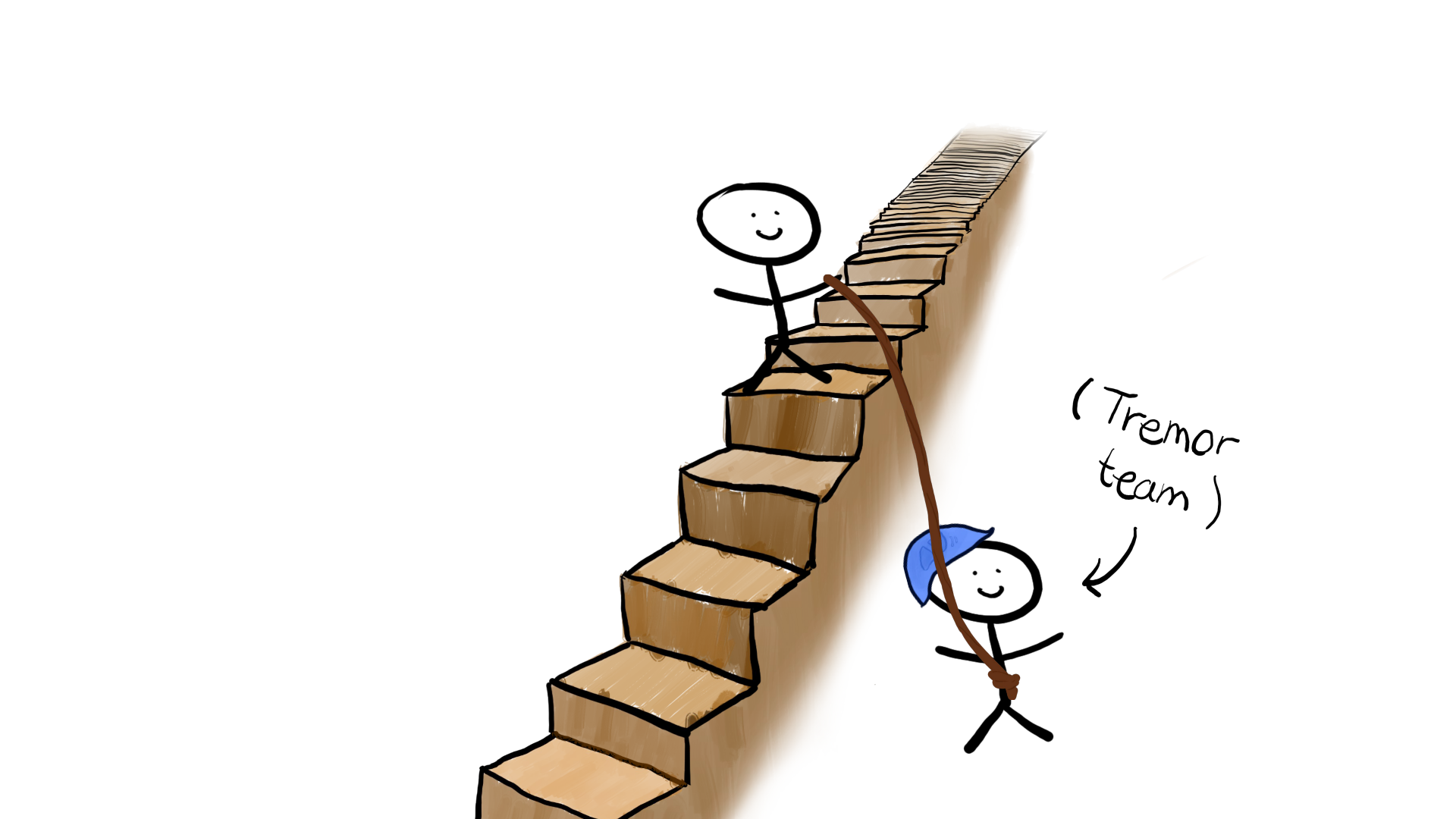
(Reference page)

(Wikipedia page)

WE CAN ALWAYS FIGURE IT OUT!

(PR in abi_stable)

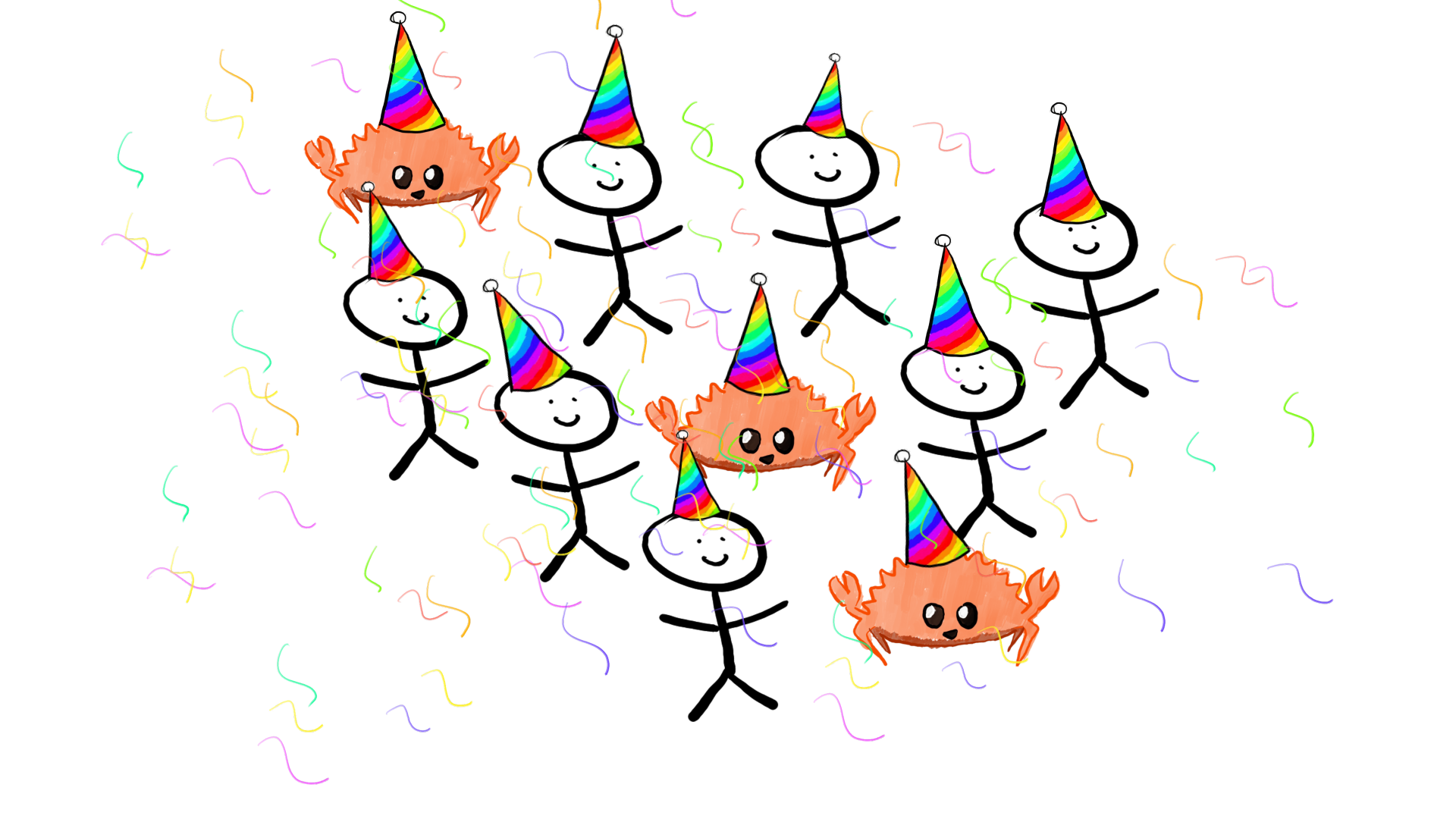
WE CAN ALWAYS FIGURE IT OUT!

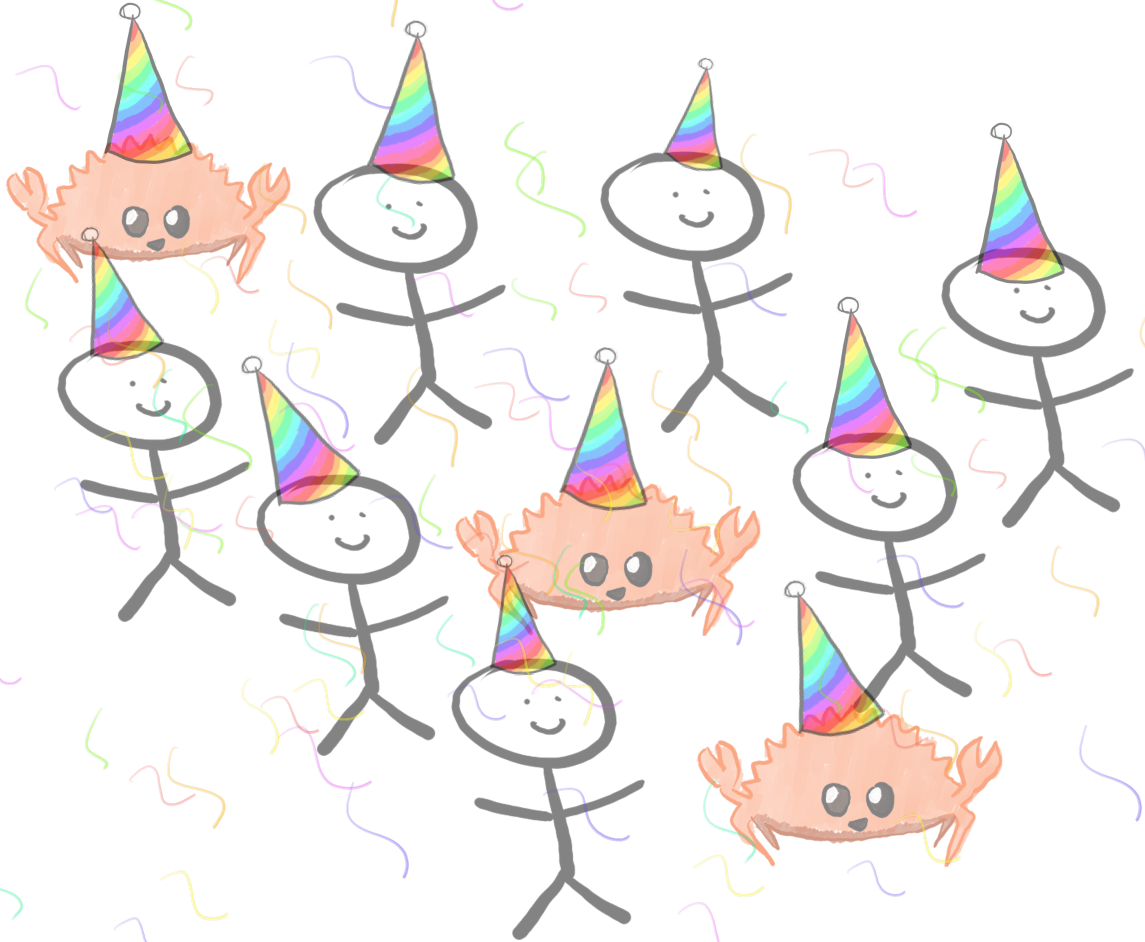

(Tremor
team)

4 takeaways

4/4

4/?





Q + A

(NullDeref)

(Tremor)