

Graphical User Interfaces With Threepenny

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Haskell in Leipzig, 27 October 2017

Gallery

“A picture says more than a thousand **Word64**”

Gallery

“A picture says more than a thousand **Word64**”

“But less than an **Integer**”

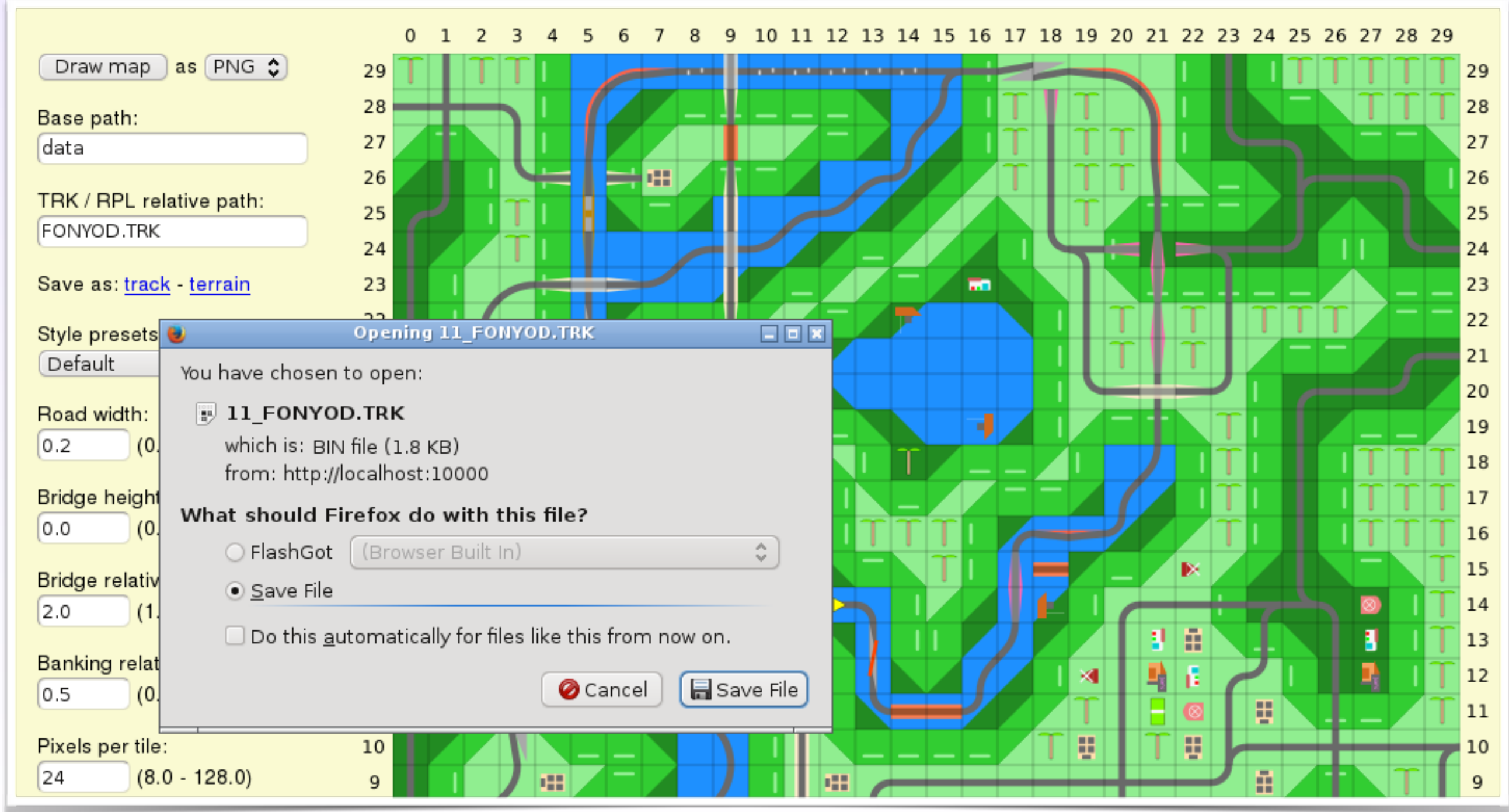
FNI Stash

by Daniel Austin



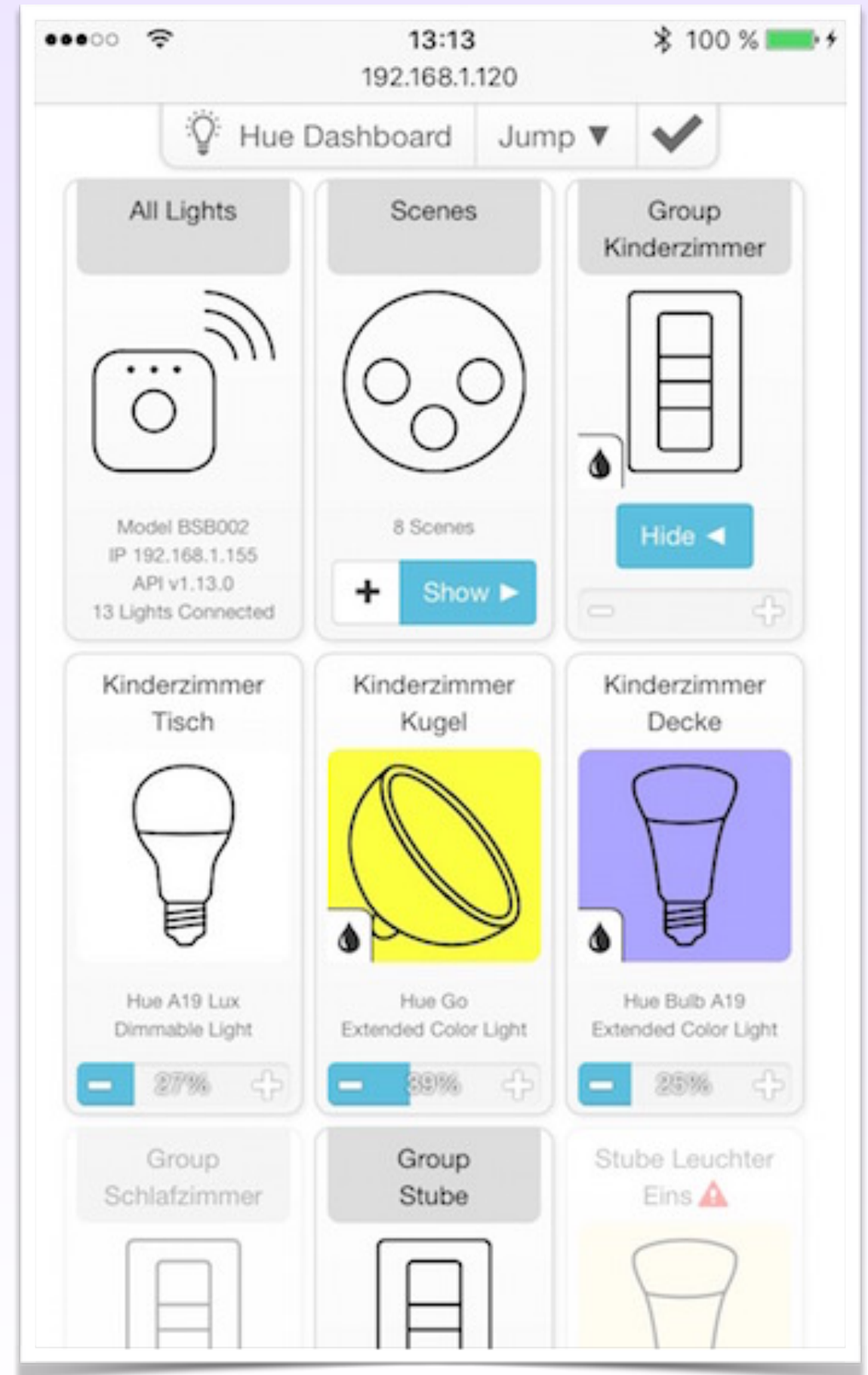
Stunts Cartography

by Daniel Mlot



Hue Dashboard

by Tim Schröder



Hoed (< 0.4)

by Maarten Faddegon

The screenshot shows the Hoed web application running on localhost:10000. The interface includes a navigation bar with tabs: 'About Hoed', 'Observe', 'Algorithmic Debugging', 'Assisted Debugging', and 'Explore'. A search bar is also present. Below the navigation bar, a status bar shows 'isEven 4 = False :(' with buttons for 'right' (green checkmark) and 'wrong' (red X). The main area displays a diagram with two arrows pointing from a central point to two expressions: 'isEven 4 = False' (marked with a red X) and 'plusOne 3 = 4' (marked with a green checkmark). An arrow points from 'isEven 4 = False' down to 'mod2 4 = 2' (marked with a question mark). At the bottom, a section labeled 'Judged 2/3' shows the code 'isEven 4' followed by '= False'.

localhost:10000

About Hoed | Observe | Algorithmic Debugging | Assisted Debugging | Explore

isEven 4 = False :(| right ✓ | wrong ✗

✗ isEven 4 = False ✓ plusOne 3 = 4

↓

② mod2 4 = 2

Judged 2/3

```
isEven 4
= False
```

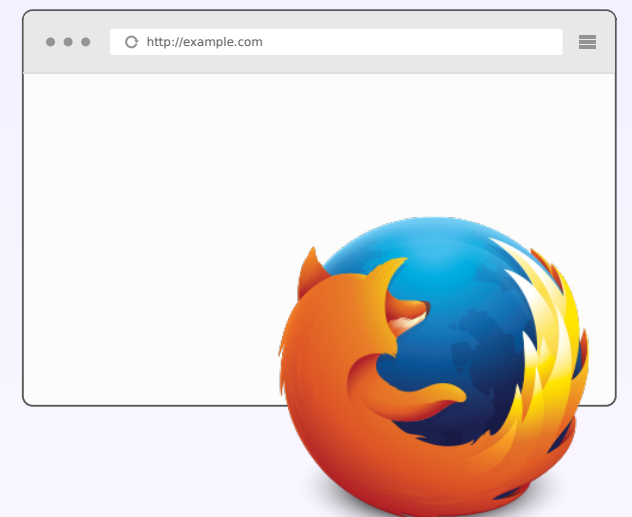
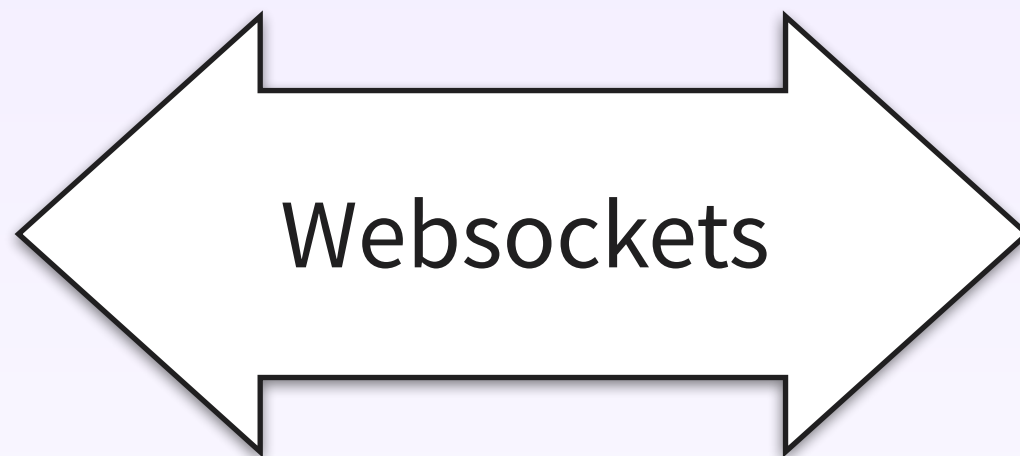
Architecture

“Software gets slower faster
than hardware gets faster”

Client & Server

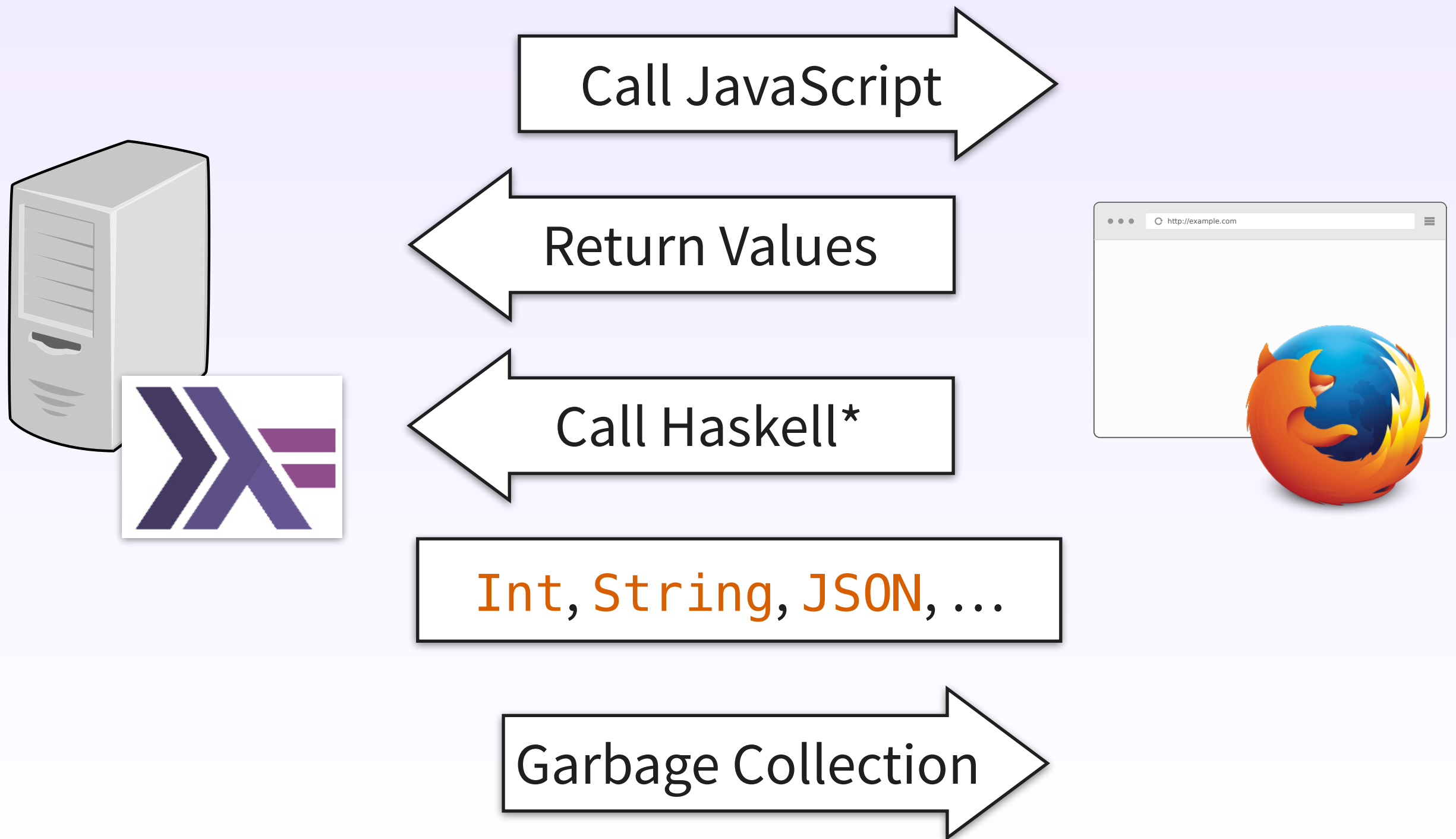


Haskell Program

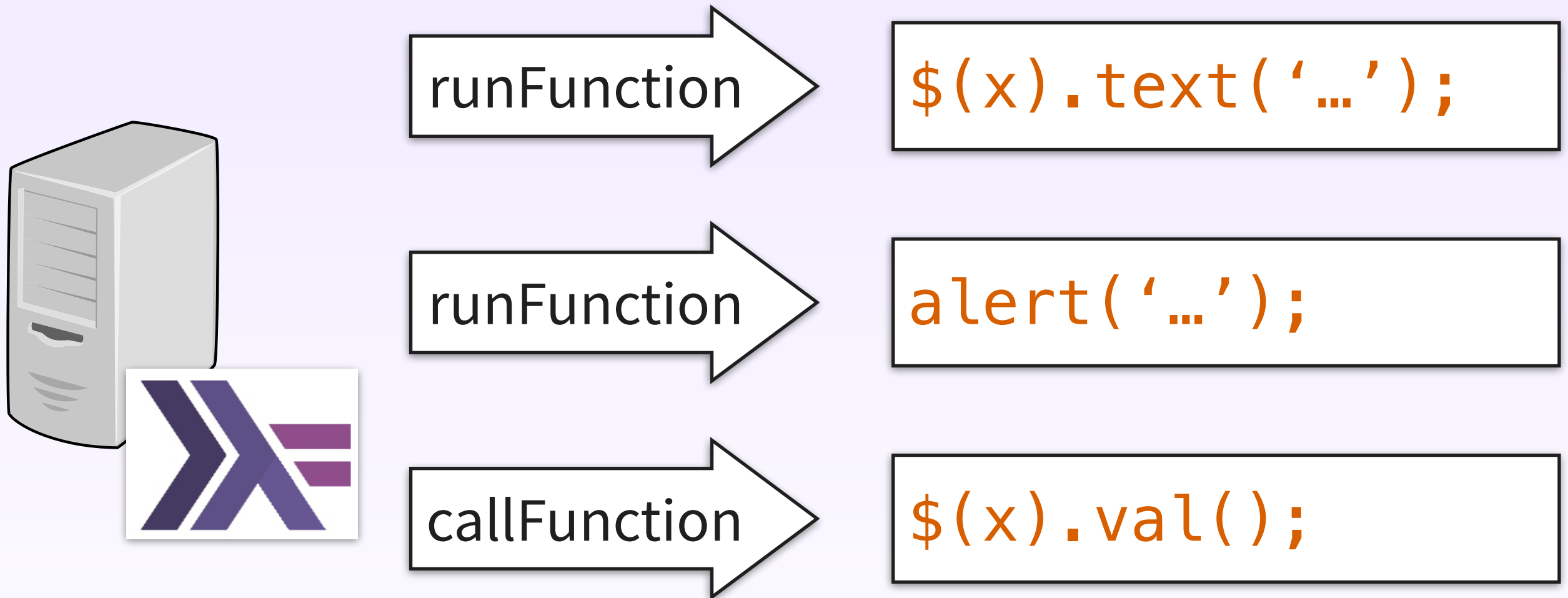


User Interface

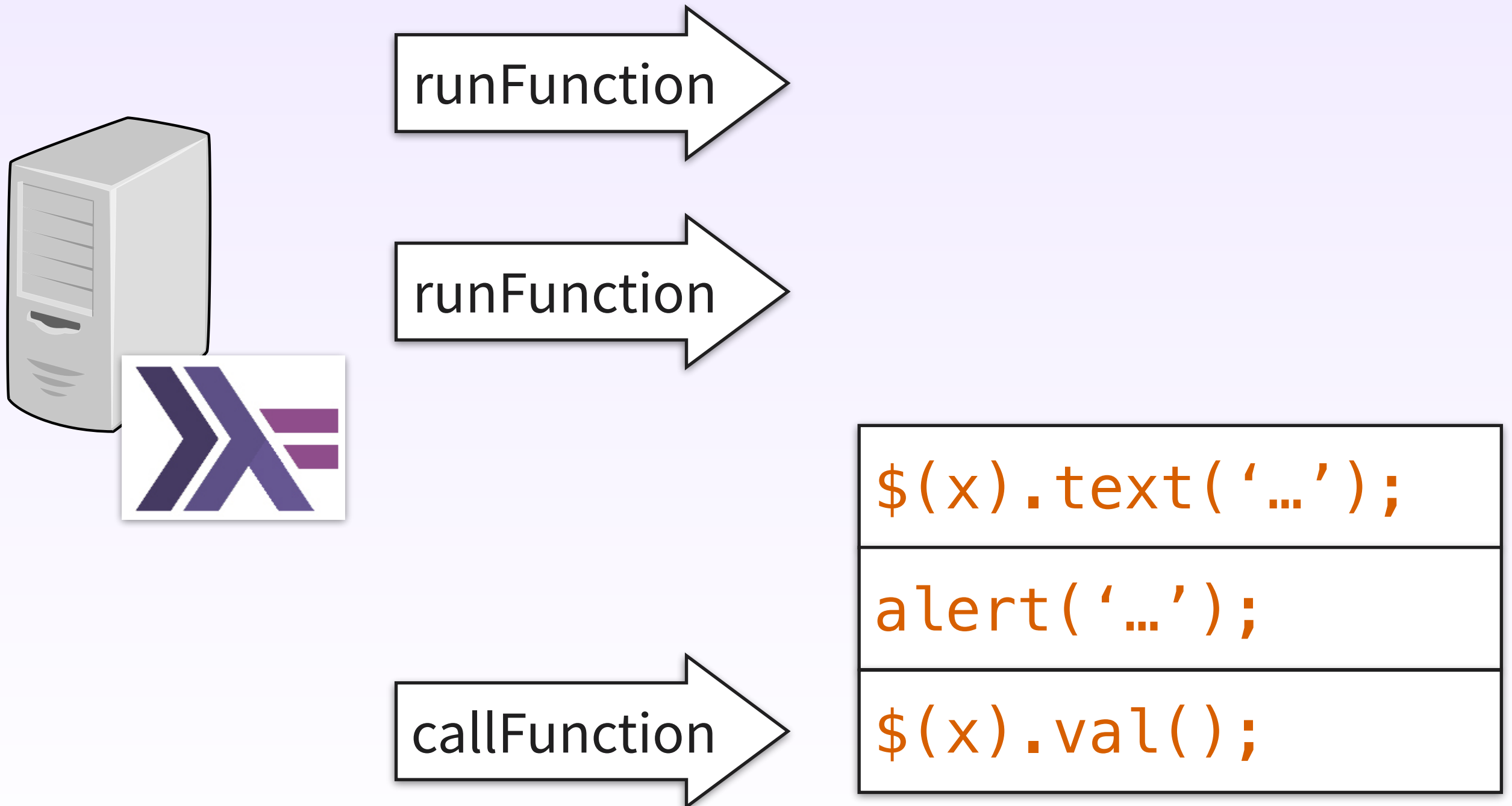
Foreign.JavaScript



Buffering: NoBuffering



Buffering: BufferRun



Graphics.UI.Threepenny

HTML
document
object model

FRP
functional reactive
programming

UI monad

Haskell time!

Installation

EITHER Stack

```
$ stack build threepenny-gui  
$ ./runhaskell E01_hello_world.hs
```

OR Cabal

```
$ cabal install threepenny-gui  
$ ./runhaskell E01_hello_world.hs
```

THEN



<http://localhost:8023>

Project Ideas

Chat (1 User)

Me: First Message
Me: Second Message
Eliza: Response

Message

Send

Pie Chart

