



PureScript

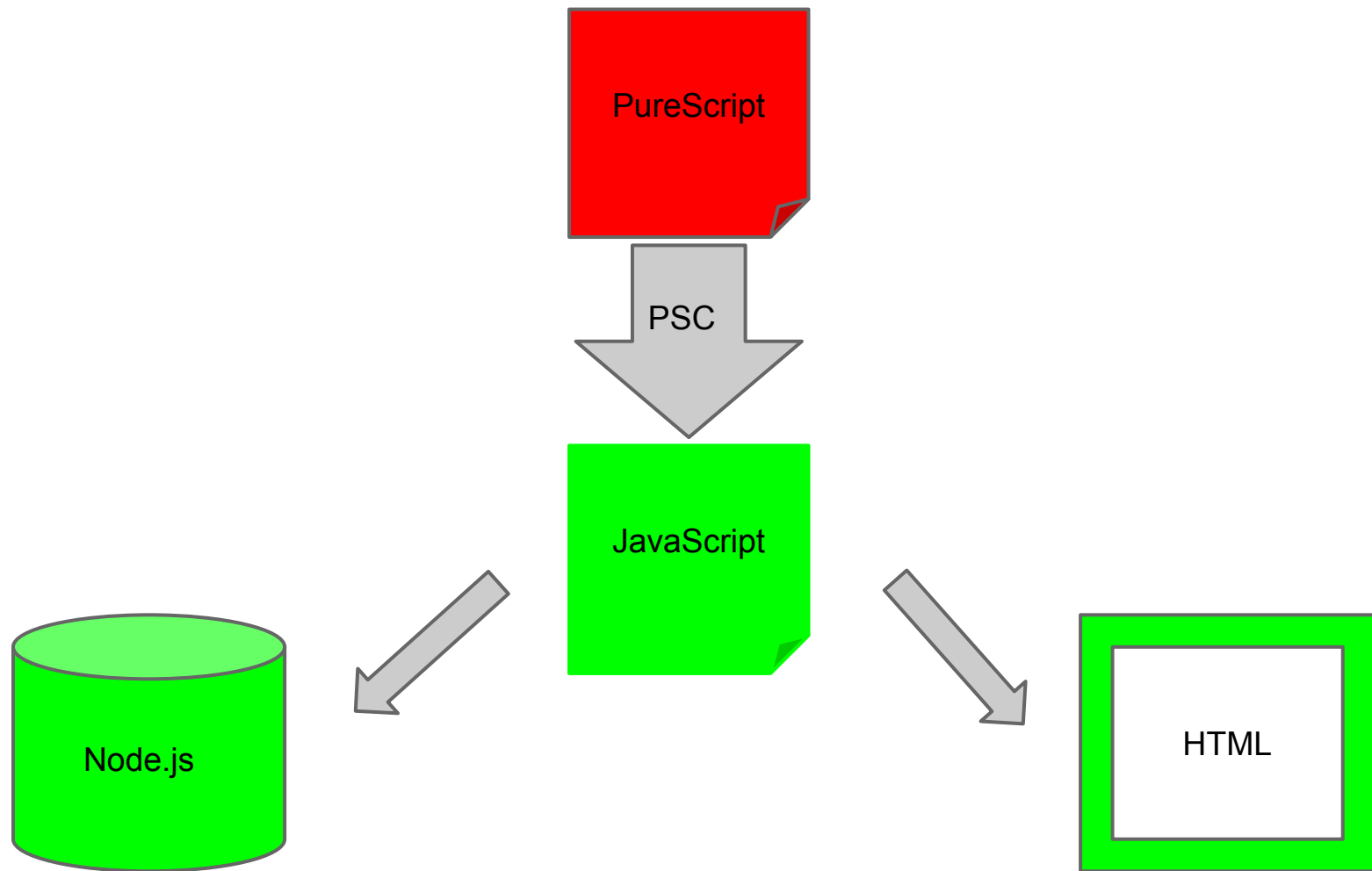
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PureScript (2013?)

PureScript is a small strongly typed programming language that compiles to JavaScript.

Phil Freeman





Features

- Algebraic data types
- Pattern matching
- Type inference
- Type classes
- Higher kinded types
- Rank-N types
- Extensible records
- Extensible effects
- Modules
- Simple FFI
- No runtime system
- Human-readable output

PureScript vs. Haskell (I)

- npm/bower/pulp instead of cabal
- strict evaluation
- `explicit forall`
- Numbers, Boolean, (extensible) Records
- `Unit`, not `()`
- no special support for lists or tuples
- `Eff (...)` instead of `IO`

PureScript vs. Haskell (II)

- type classes
 - arrow direction,
 - named instances
 - no default members
- no array comprehensions
- no extensions
- export lists, operator definitions, (\$) , ...

Mapping PS types to JS

- Number, String, Boolean -> Number, String, Boolean
- Array a -> Array
- Record -> Object
- Function -> Function (one argument!)
- Eff e a -> Function (no argument)
- Unit -> {}

Some Interesting Packages

- slamdata's [purescript-halogen](#)

a declarative, type-safe UI library for PureScript

- bodil's [purescript-signal](#)

a lightweight library heavily inspired by the Elm Signal implementation

- mpietrzak's [yesod-purescript](#)

integration of PureScript into Yesod