

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

Introduction to ReasonML

Ryan Watkins

July 31, 2018

Outline

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- 1 Javascript so far
 - Features
 - Problems
- 2 What is ReasonML?
- 3 Ocaml to JS?
- 4 Reason Primitives
- 5 Pattern Matching
- 6 Comparing Reason to Elm
- 7 References

Features (JS)

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

Features (JS)

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- ES6 (Babel + Webpack)

Features (JS)

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- ES6 (Babel + Webpack)
- Template literals

Features (JS)

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- ES6 (Babel + Webpack)
- Template literals
- Destructuring (single-branch pattern-matching)

Features (JS)

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- ES6 (Babel + Webpack)
- Template literals
- Destructuring (single-branch pattern-matching)
- Promises + (async/await)

Features (JS)

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- ES6 (Babel + Webpack)
- Template literals
- Destructuring (single-branch pattern-matching)
- Promises + (async/await)
- Spread operator

Features (JS)

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- ES6 (Babel + Webpack)
- Template literals
- Destructuring (single-branch pattern-matching)
- Promises + (async/await)
- Spread operator
- Get/set on class definitions (some OOP)

Problems (JS)

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

Problems (JS)

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- No great pattern matching

Problems (JS)

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- No great pattern matching
- Non statically typed, i.e. you get typed errors at runtime

Problems (JS)

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- No great pattern matching
- Non statically typed, i.e. you get typed errors at runtime
- Module system not great, you have to take care of it yourself

What is ReasonML?

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

**What is
ReasonML?**

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

What is ReasonML?

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- It's Ocaml with JS-like syntax

What is ReasonML?

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- It's Ocaml with JS-like syntax
- Contains pattern-matching

What is ReasonML?

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- It's Ocaml with JS-like syntax
- Contains pattern-matching
- Several FP features (currying by default)

What is ReasonML?

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- It's Ocaml with JS-like syntax
- Contains pattern-matching
- Several FP features (currying by default)
- Solid type system (30+ years of research)

What is ReasonML?

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- It's Ocaml with JS-like syntax
- Contains pattern-matching
- Several FP features (currying by default)
- Solid type system (30+ years of research)
- Extremely fast compilation to JS (10x faster than TypeScript)

Ocaml to JS?

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

Ocaml to JS?

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- Made possible by bucklescript

Ocaml to JS?

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- Made possible by bucklescript
- Human readable output

Ocaml to JS?

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- Made possible by bucklescript
- Human readable output
- Ocaml to Native and JS

Ocaml to JS?

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- Made possible by bucklescript
- Human readable output
- Ocaml to Native and JS
- But we are not writing Ocaml, ReasonML is a javascript-like syntax of Ocaml.

Reason Primitives

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

Primitive	Example
Strings	'test'
Characters	'c'
Integers	23, -23
Floats	23.0, -23.0

Pattern Matching

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

**Pattern
Matching**

Comparing
Reason to Elm

References

Pattern Matching

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

**Pattern
Matching**

Comparing
Reason to Elm

References

- Javascript already has single-branch pattern matching

Pattern Matching

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

**Pattern
Matching**

Comparing
Reason to Elm

References

- Javascript already has single-branch pattern matching
- I.e. `const foo, bar, baz = props`

Comparing Reason to Elm

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

Comparing Reason to Elm

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- From the FAQ (paraphrased)

Comparing Reason to Elm

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features
Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References

- From the FAQ (paraphrased)
- TL;DR. Elm is pure, while Reason is pragmatic (support for React).

References / more useful information

Introduction
to ReasonML

Ryan Watkins

Javascript so
far

Features

Problems

What is
ReasonML?

Ocaml to JS?

Reason
Primitives

Pattern
Matching

Comparing
Reason to Elm

References