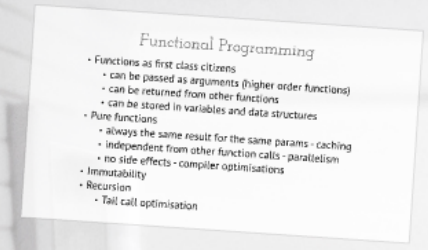
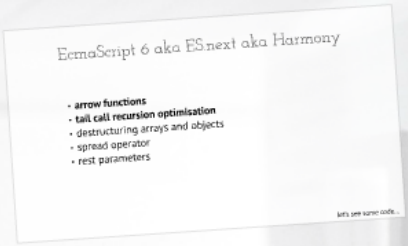
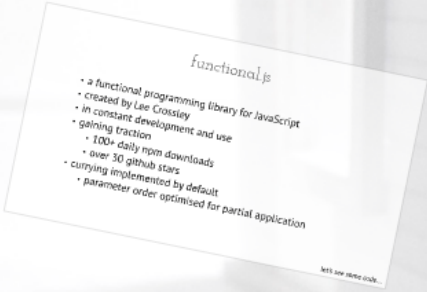
Fun with Functional JavaScript

seriously, no more slapping...







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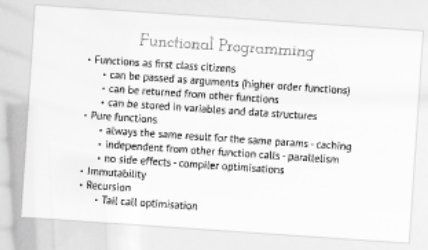

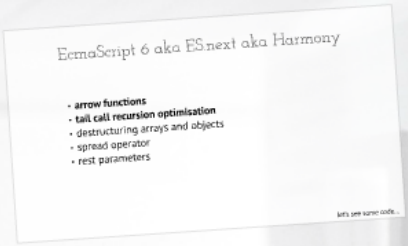

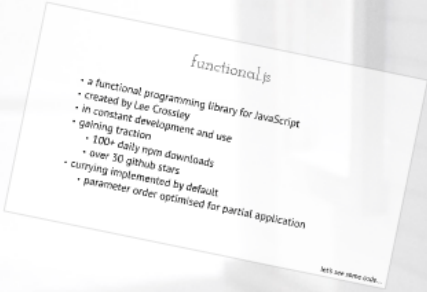

Hi, I'm Kuba Waliński

- C# Web Developer
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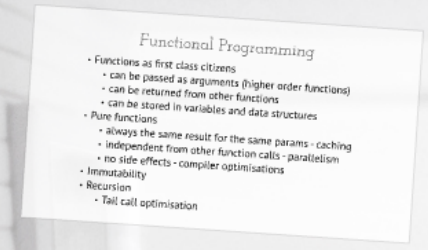

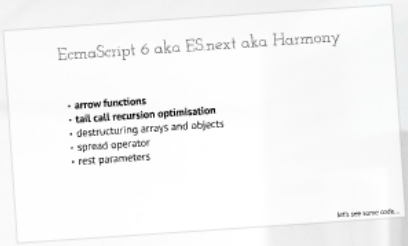

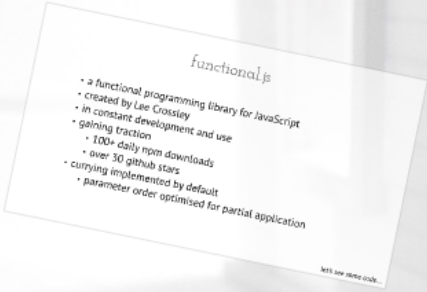

Functional Programming

- Functions as first class citizens
  - can be passed as arguments (higher order functions)
  - can be returned from other functions
  - can be stored in variables and data structures
- Pure functions
  - always the same result for the same params - caching
  - independent from other function calls - parallelism
  - no side effects - compiler optimisations
- Immutability
- Recursion
  - Tail call optimisation

Functional JavaScript?!

- first class functions :)
- closures :)
- lambdas (anonymous functions) :)
- pure functions :|
- immutability :|
- tail call optimisation :(

let's see some code...

lodash

- very useful "utility belt" library
- port of underscore.js (comes from _)
- provides loads of functions to manipulate
  - arrays
  - collections
  - functions
  - objects
- supports curry/partial application

let's see some code...

functional.js

- a functional programming library for JavaScript
- created by Lee Crossley
- in constant development and use
- gaining traction
  - 100+ daily npm downloads
  - over 30 github stars
- currying implemented by default
  - parameter order optimised for partial application

let's see some code...

EcmaScript 6 aka ES.next aka Harmony

- **arrow functions**
- **tail call recursion optimisation**
- destructuring arrays and objects
- spread operator
- rest parameters

let's see some code...

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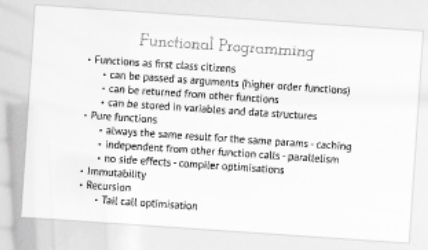

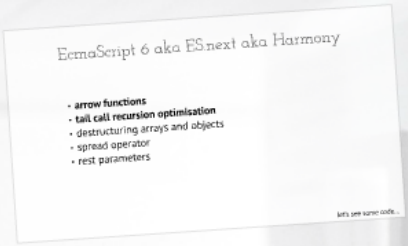

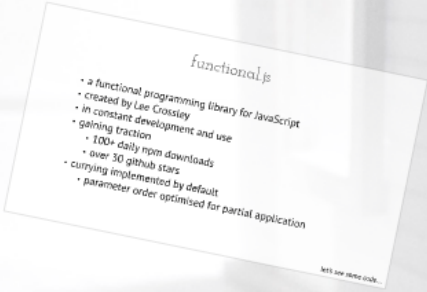

Resources

- http://bit.ly/lambda2015-funcjs/
- http://lodash.com/
- http://functionaljs.com/
- Functional Programming in JavaScript by Michael Fogus
  - http://www.functionaljavascript.com/
- JavaScript Allonge by @raganwald (Reginald Braithwaite)
  - https://leanpub.com/javascript-allonge
  - https://vimeo.com/97408202

Conclusions

- Functional programming in JS is lots of fun!
- A new way to look at the language
- Rapidly developing
  - new frameworks
  - new libraries
  - new language features
- Dear functional programmer, give JS a chance
  - not as good as your FP language
  - but maybe good enough?

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