# The future of languages

Conclusion for this course:

- That is all!
- My guess on where languages will be going: languages that combine:
  - Multiparadigm
  - High-level data structures
  - With: speed, simplicity (dynamic weakly typed)
- JavaScript frameworks, node.js, Google Go, Swift, and what else?
  - More and more languages every day!!! What should we learn? All!
    - Youtube is implemented with Python,
    - IBM Watson uses Prolog,
    - Wikipedia is implemented with PHP,
    - Microsoft F# is a functional programming language, etc.
  - More Scripting Languages: Writing programs by coordinating preexisting components, rather than writing components from scratch.

## The future of languages

- Scripting-style:
  - Speed : Trade almost everything for developer productivity
  - Economy of Expression
  - Lack of Declarations
  - Simple rules
  - Flexible dynamic typing
  - Access to the OS
  - Sophisticated string processing
  - High-level data structures: Maps, Lists, Tuples, Sets.
  - Batch and Interactive
  - Open and Portable
  - Single Canonical Implementation
  - Interpreted: Fast to start
  - Easily extended
  - Easily embedded

(c) Paul Fodor (CS Stony Brook) and Elsevier

#### Future is here



Enhanced Verification Errors Base64 HTTP URL Permissions Improve Contended Locking DocTree API Prepare for Modularization Lambda (JSR 335) Remove the Permanent Generation Generalized Target-Type Inference Date/Time API (JSR 310) Limited doPrivileged Java 8 Parallel Array Sorting **Bulk Data Operations** Repeating Annotations Compact Profiles Parameter Names Nashorn Unicode 6.2 Configurable Secure-Random Number Generation TLS Server Name Indication Type Annotations (JSR 308) Lambda-Form Representation for Method Handles Fence Intrinsics 2 Copyright © 2013, Oracle and/or its additates. All rights reserv JavaOne ORACLE

1:15:54 🐹 🔹

#### Future is here



### The future of languages

I'm hoping that this course prepared you for the change the future will bring in programming languages
Thank you!