

A short intro to Dart

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Goals

Why and what is Dart?

Explore Dart

Please stop me and ask questions!

Why?

Hard to write large web apps

Hard to write fast web apps
chaotic performance (VM assumptions)
performance wall
startup performance

Javascript is here today and everywhere

What is Dart?

A pragmatic programming language for the web

Familiar syntax

Lexical scoping

Optional static types

Classes (single-inheritance, interfaces)

Toolable

Compile to Javascript for compatibility Runs crazy-fast on a VM

Explore Dart

Hello World Dart

http://try.dartlang.org/s/g0YN

Fibonacci

http://try.dartlang.org/s/PbId

Syntax sugar

String interpolation, foreach, closure syntax:

http://try.dartlang.org/s/pbAd

Getters/setters:

http://try.dartlang.org/s/q5Ed

Many more examples...

Basically static at runtime

No modifying object structure at runtime Javascript's adding of methods, properties

No eval()

Tools can do static analysis for fun and profit

Leads to faster, saner code

Lexical scoping

Aka: scoping rules that make sense

No global scope blocked scoping all the way up

No closure scoping issues

http://try.dartlang./s/Eqsd

(compare to http://jsfiddle.net/v7gjv/296)

Optional types

Light and scripty; has rigor if you want

Types example:

http://try.dartlang.org/s/2JId

Classes

Point example:

http://try.dartlang.org/s/9V0N

Interfaces are similar to Java:

dartlang.org/[interfaces]

Isolates

Dart is single-threaded

Has actor-like concurency model: **Isolates**No shared state, message passing
An Isolate is conceptually a process
More to come in this space

Isolate example:

http://try.dartlang.org/s/J08Q

Toolable

Dart Editor:

```
Dart Editor
# Libraries
                                         css.dart
                                                      runner.dart
                                                                     parser.dart 🖾
                                                                                                           edito
                                                                                     @ editor_model.dart
String str = '';
                                           155
    css.dart
                                           156
                                                       while (_read(1) != null) {
                                           157
                                                         if (_read(2) == _state().next) {
       dartboard.dart
                                           158
                                                           str += _advance(2);
       debug.dart
                                           159
                                                           _popState();
    dom.dart
                                           160
                                                           return new Token(Token.MULTICOMMENT, str);
    editor.dart
                                           161
                                                         } else if (_read(1) == NEWLINE) {
    editor_listener.dart
                                           162
                                                           if (str.length > 0) {
    editor_model.dart
                                                             return new Token(Token.MULTICOMMENT, str);
                                           163
      editor_presenter.dart
                                           164
                                                           } else {
                                           165
                                                             return new Token(Token.NEWLINE, _advance(1));
    parser.dart
                                           166
      runner.dart
                                           167
                                                         } else {
       tipsy.dart
                                                           str += _advance(1);
                                           168
       Imported Libraries
                                           169
                                           170
                                          171
                                                       // error state, no string end found
```

Is this a toy? I want real apps.

Total

http://total-dart.appspot.com

Swarm

http://swarm

Recap, links

Structured web programming language Simple and powerful syntax Works on JS, crazy-fast on a VM

Open source (still a tech preview!) http://www.dartlang.org

Much more on the site (html library, core library, samples, etc)