



One language to rule (ruin?) them all.

Also, how to get started building a PWA.

Yes, this is going to be boring. Take out your phone and adopt a puppy from tears.org.za

Quick History

- Been around Google since 2011
- Originally intended to fix JavaScript issues (insert manic laughter from TypeScript)
- Is a general purpose language
- Standardised as ECMA 408
- Used as the primary language for Flutter
- Version 2 released in 2018 to enhance types



Dart out and adopt a puppy

Or kitten. Kittens are ok.

tears.org.za

Multiple Runtime Targets

- **Compiled to JavaScript**
Runs in most browsers with decent JavaScript support in use today
Not ideal for feature-phone browsers like Opera Mini
- **Stand-alone**
Ships an SDK that can run from the command-line (Win, Mac, *nix)
Used to write web servers, general utilities
Shippable as a Docker application
- **Ahead-of-time (AOT)**
Compiled to machine code for things like Flutter (iOS, Android)

This is what TypeScript was supposed to be, but they got lazy. True story, I read it in the paper this morning.

Why learn yet *another* language?

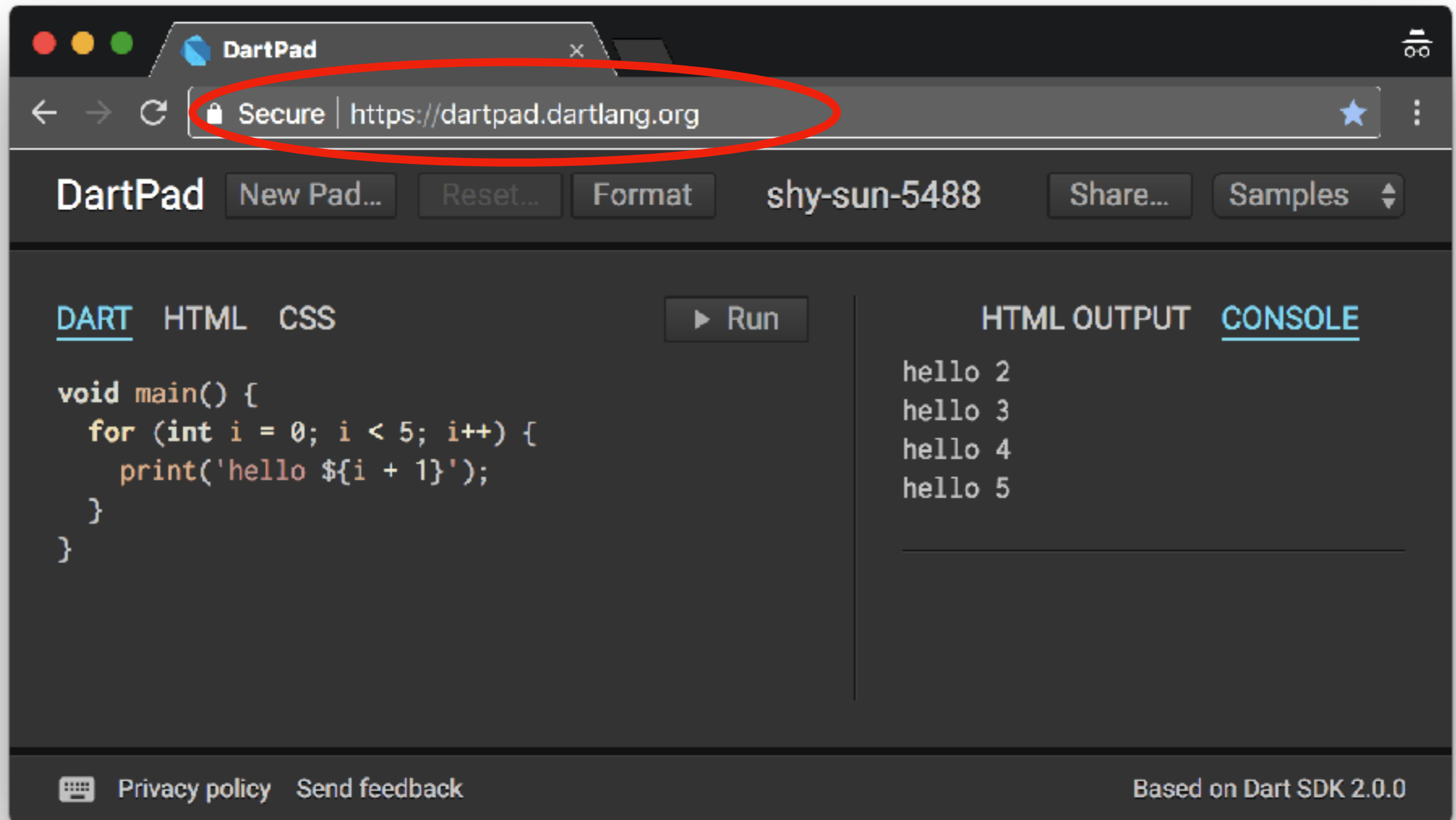
Again.

Dart offers an easier way to use a single language across client and server tiers. Code sharing saves time, effort and cuts down on bugs.



Try before you buy

You don't have to install anything to try Dart.



The image shows a browser window with the DartPad application. The address bar is highlighted with a red circle, showing the URL `https://dartpad.dartlang.org`. The application interface includes a top navigation bar with buttons for "New Pad...", "Reset...", "Format", "shy-sun-5488", "Share...", and "Samples". Below this is a code editor with tabs for "DART", "HTML", and "CSS". The code editor contains the following Dart code:

```
void main() {  
  for (int i = 0; i < 5; i++) {  
    print('hello ${i + 1}');  
  }  
}
```

To the right of the code editor is a "Run" button and a "CONSOLE" tab. The console output shows the following text:

```
hello 2  
hello 3  
hello 4  
hello 5
```

At the bottom of the browser window, there are links for "Privacy policy" and "Send feedback", and a note that says "Based on Dart SDK 2.0.0".

How to start Darting

- Installers available for Windows, Mac and Debian/Ubuntu

<https://www.dartlang.org/tools/sdk>

- Chocolatey and HomeBrew also supported
- Tools include the Dart VM, Dart2JS compiler, static analyser, code formatter, documentation generator and package manager
- IDE's supported are Visual Studio Code and IntelliJ IDEA
Also has plugins for Atom, Emacs and Vim



What is a PWA anyway?

(Or, why am I listening to this oke drone on again?)

It's something that makes Google Lighthouse happy. That's it. Really.

Dart and Angular

- Built to scale - *Used by AdWords, AdSense, Fiber and more*
- Familiar to Angular developers
- Fast development cycle
- Dart type system eliminates many JS errors
- Compiler generates bindings for change detection, dependency injection
- Works with CI tools like Travis



Dart and Angular II

- Documentation <https://webdev.dartlang.org/angular>
- Plugin for PWA <https://pub.dartlang.org/packages/pwa>
- Sample app : https://isoos.github.io/offline_pop_pop_win/

Load the game, close your browser, go offline and open the game again. Magic.



Learning Dart

- <https://www.dartlang.org/>
- <https://webdev.dartlang.org/angular/tutorial>
- <https://www.udemy.com/>
- <https://www.udacity.com/google>

Most courses focus on Flutter, the mobile framework, but the Dart language is used in them all.



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“It’s done, you can *Dart* out of here now and get your puppy.”

–Ewald Horn

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