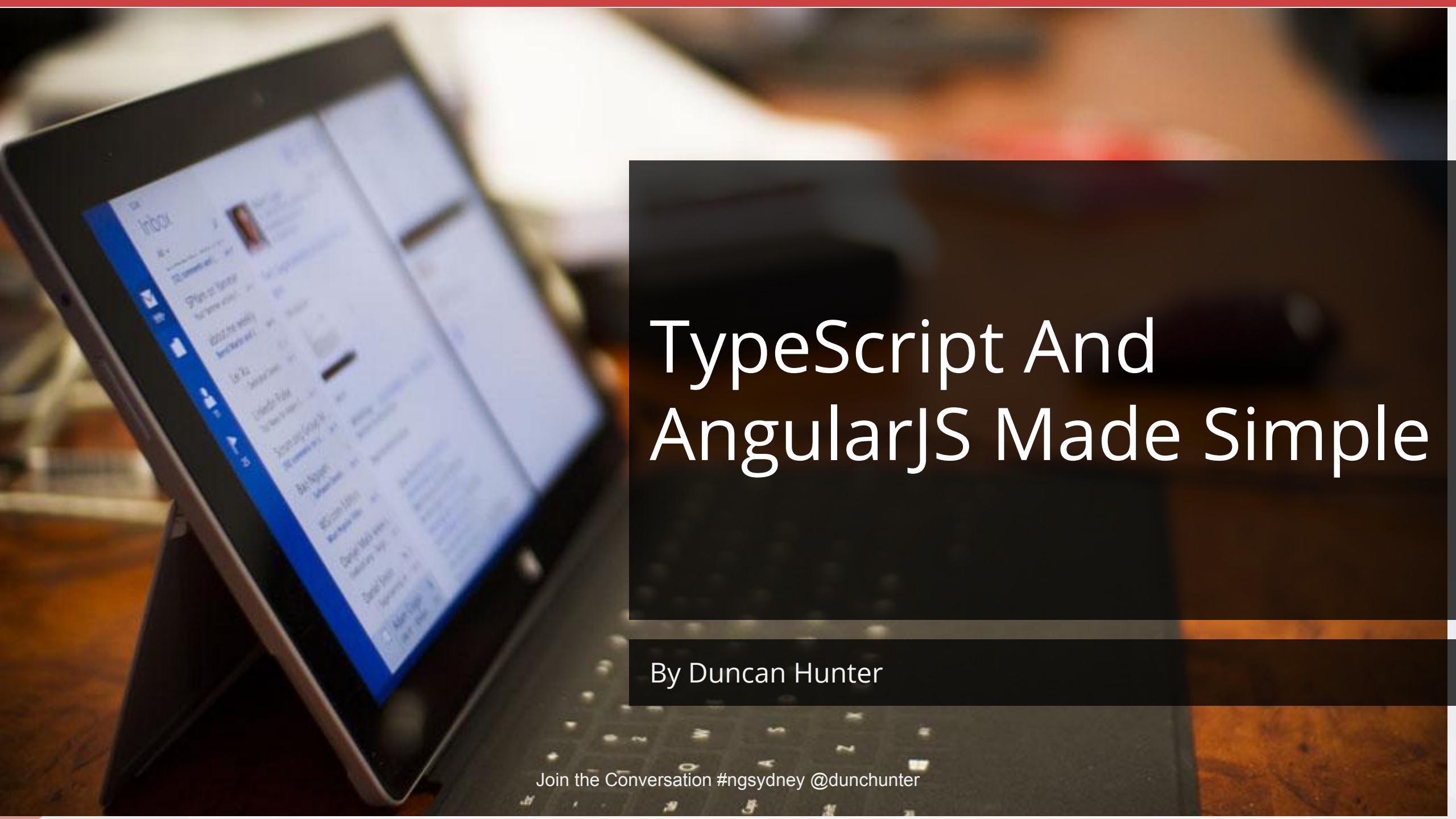
Enterprise Software Development



TypeScript And AngularJS Made Simple

By Duncan Hunter

Join the Conversation #ngsydney @dunchunter

Duncan Hunter

#dunchunter

www.duncanhunter.com.au

- .NET Developer
- Rock climber

ANGULARJS

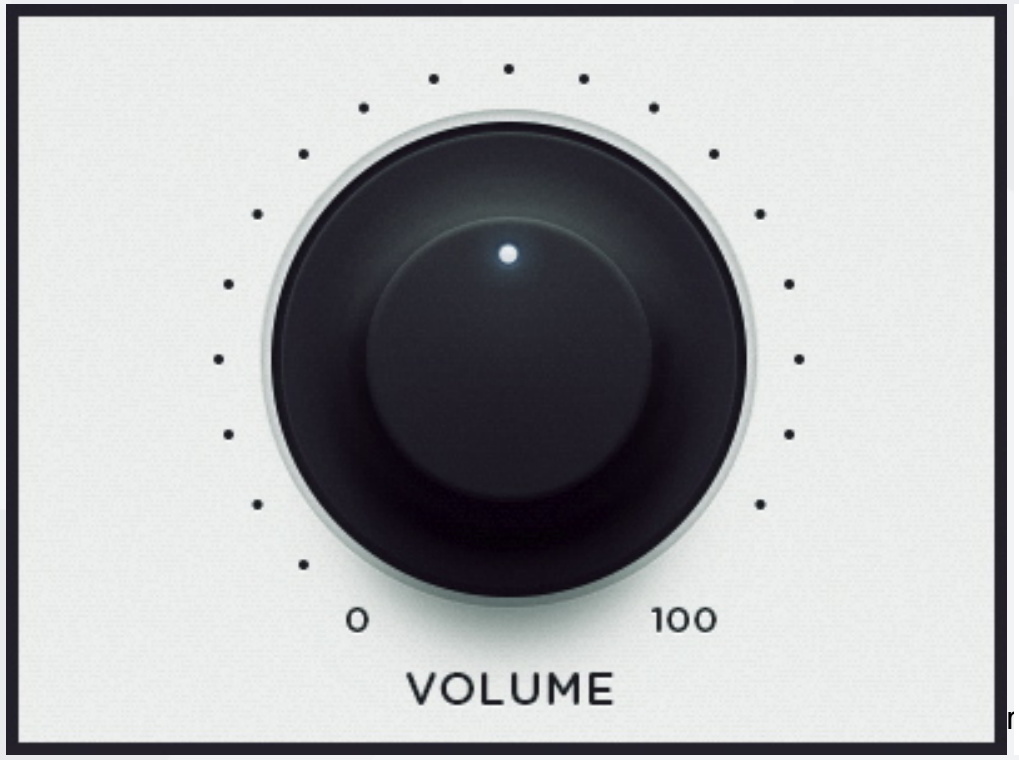
by Google

TypeScript

Microsoft

TypeScript

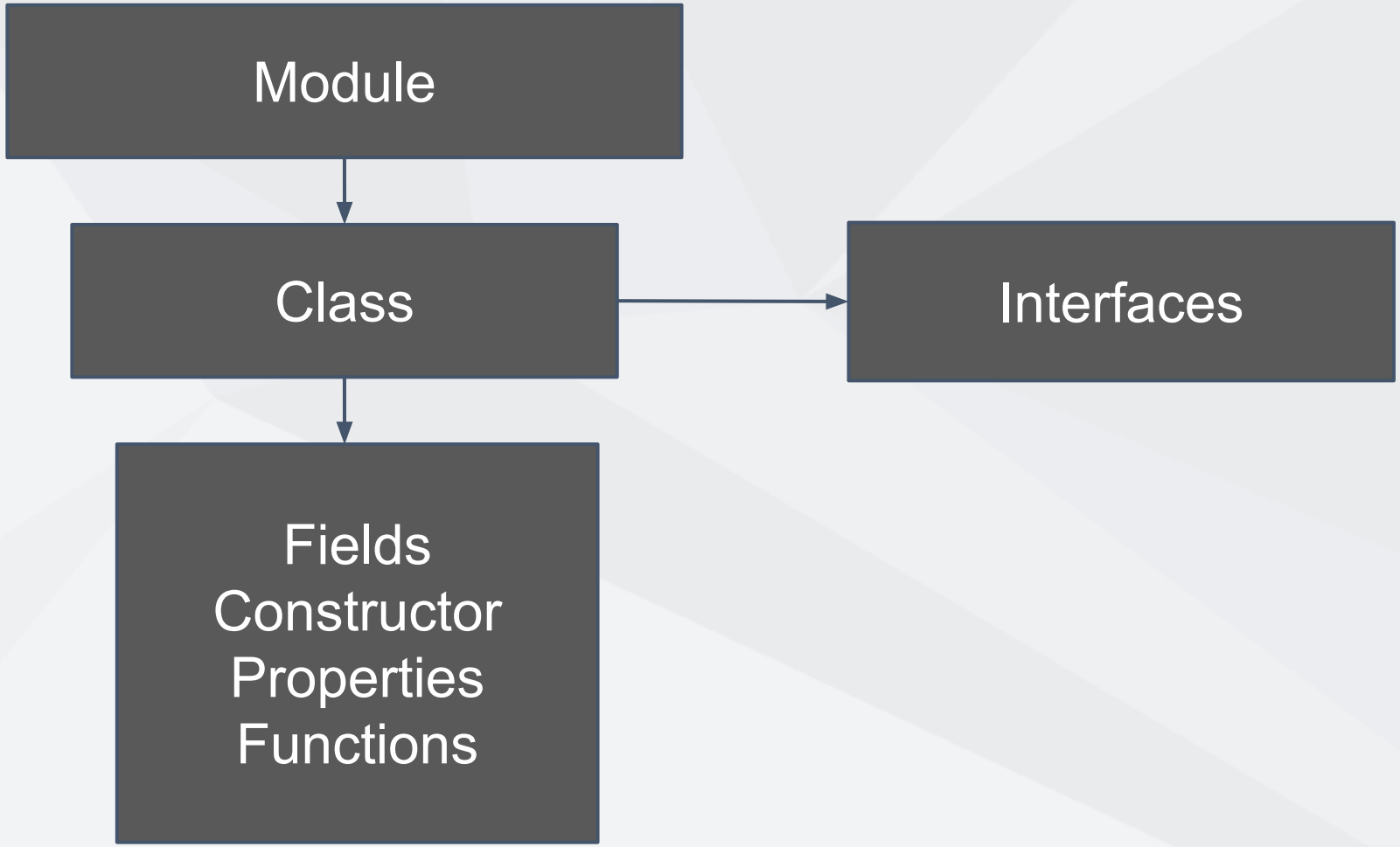
TypeScript is a typed superset of JavaScript that compiles to plain JavaScript.



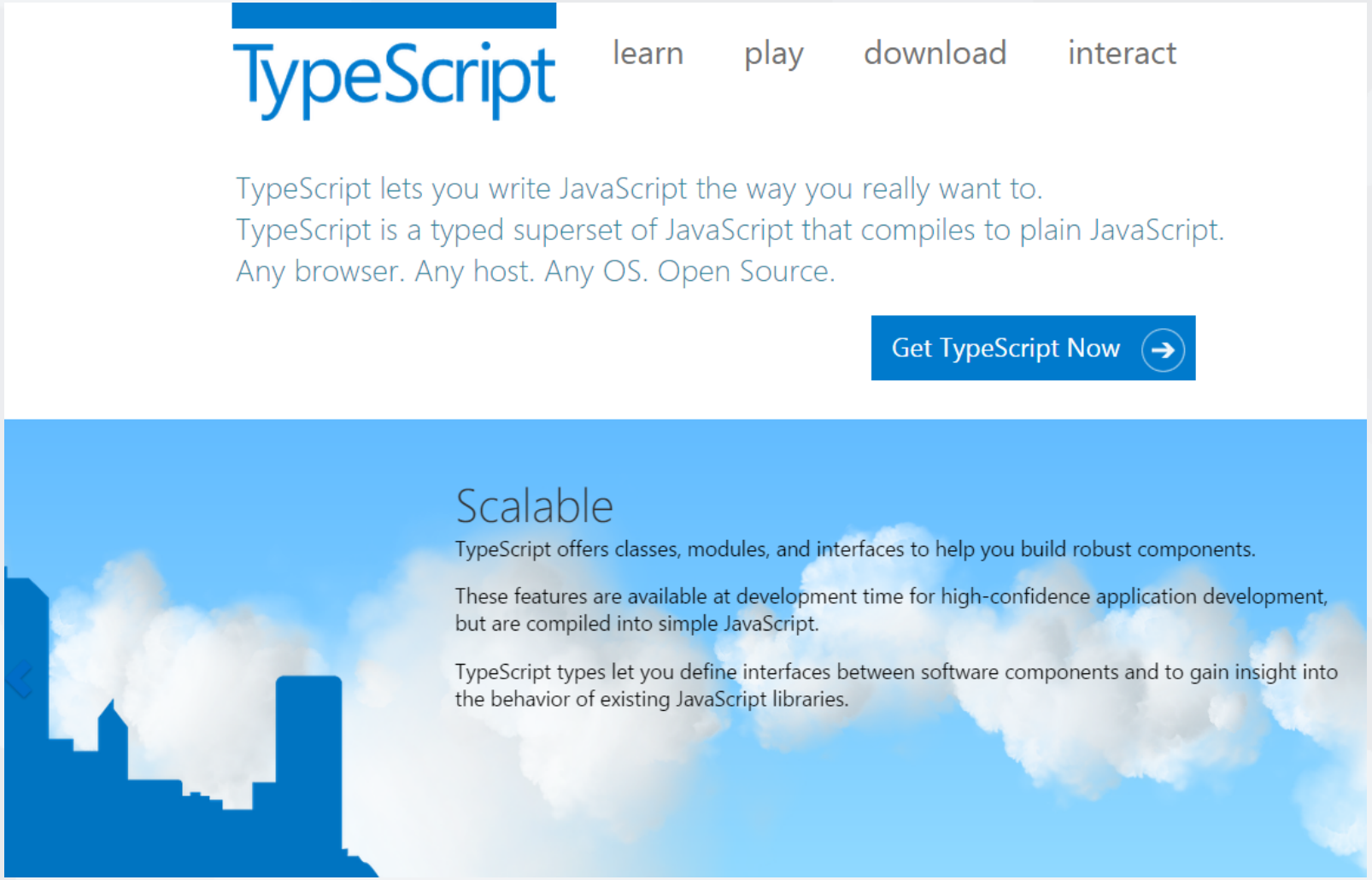

HOUSE RULES
IF YOU SLEEP ON IT MAKE IT UP!
IF YOU STEP ON IT WIPE IT UP!
IF YOU WEAR IT HANG IT UP!
IF YOU DROP IT PICK IT UP!
IF YOU EAT OUT OF IT WASH IT!
IF IT RINGS ANSWER IT!
IF IT HOWLS FEED IT!


GRANDMA'S
HOUSE RULES
EXPECT TO BE SPOILED
Dessert Comes First
NO PARENTS ALLOWED
laugh-giggle-snuggle
Sleepovers Welcome
Storytelling
play lots of games
BED TIME NEGOTIABLE
ALWAYS HAVE FUN
endless hugs & kisses
WHAT HAPPENS HERE
STAYS HERE

TypeScript structure



The TypeScript Documentation and Playground



Why bother with TypeScript

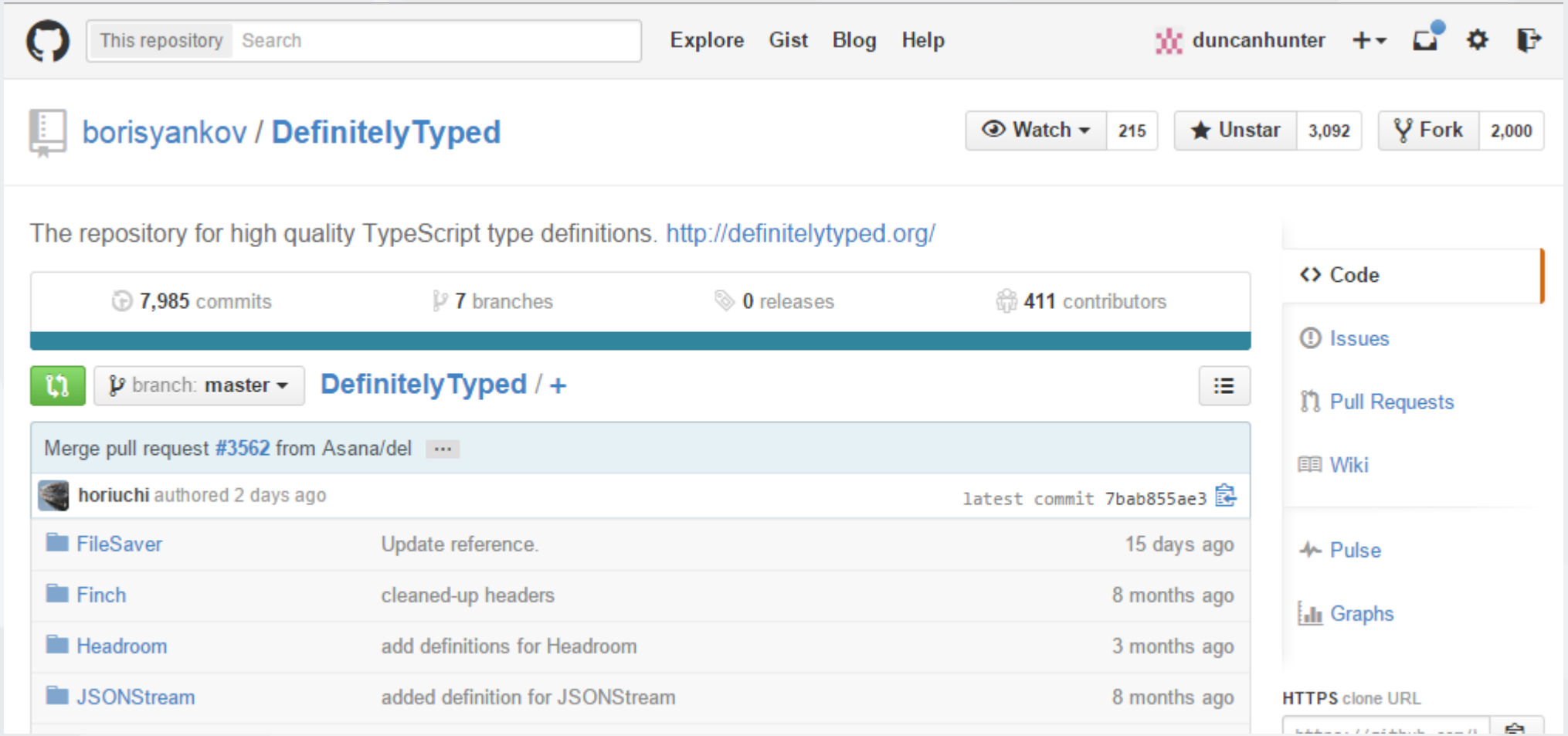
POSITIVES

1. Type safety
2. Code completion
3. Great tooling
4. AngularJS 2.0 is built on TypeScript

NEGATIVES

1. You write more code
2. It’s sometimes harder to read
3. Its another dependency
4. You can not always type everything

Definitely Typed Definitions



Definitely Typed Definitions

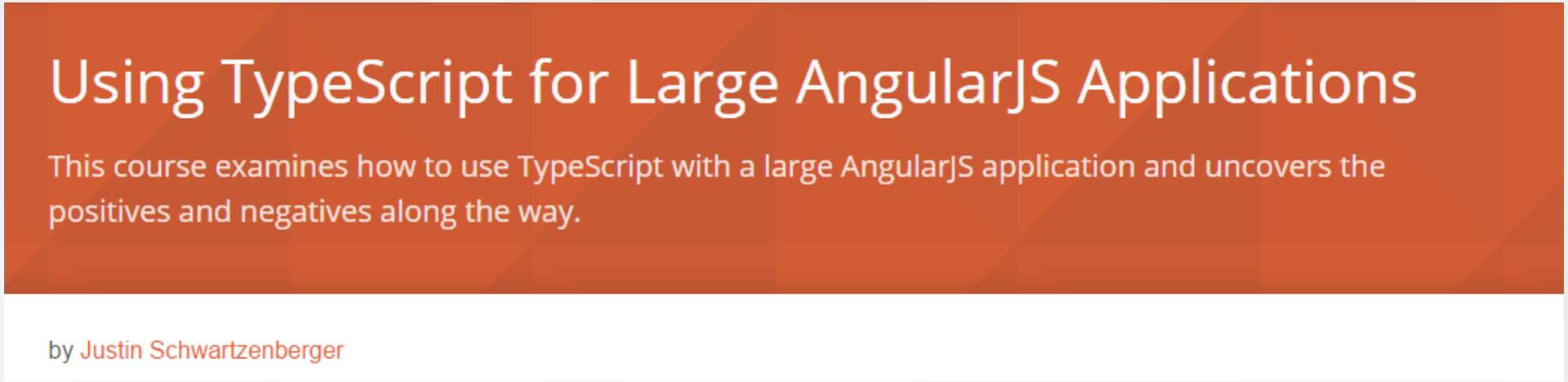
How to get the definitions

- Directly from the Github repos
- NuGet packages
- TypeScript Definition manager

```
C:\Demo\AngularAndTypeScriptMadeSimple\AngularAndTypeScriptMadeSimple> tsd install angular --save
```

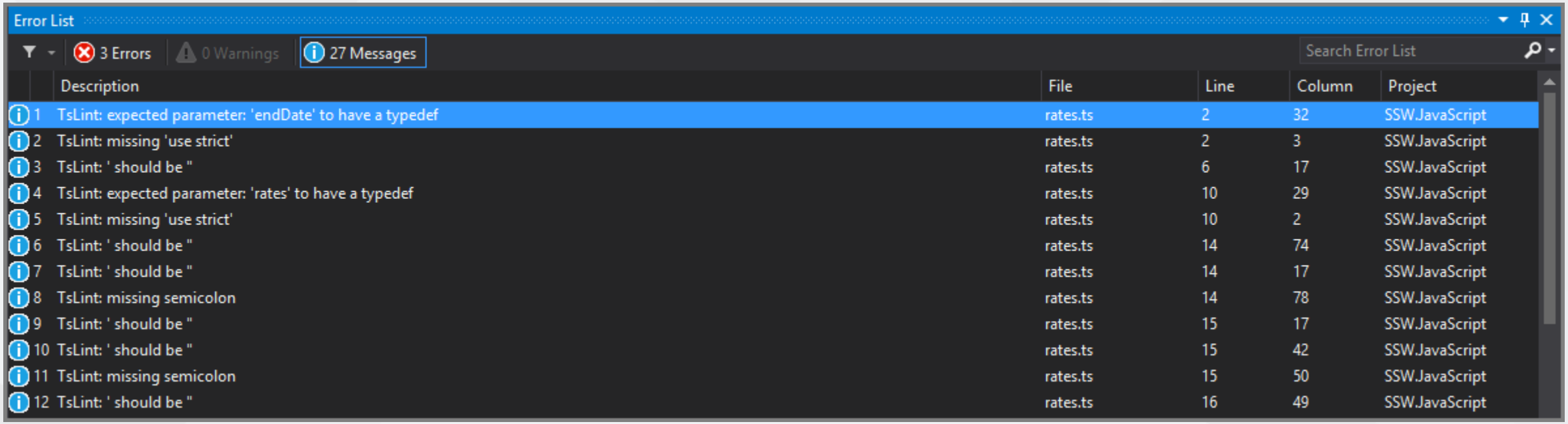
How to get the definitions

Pluralsight courses



TsLint

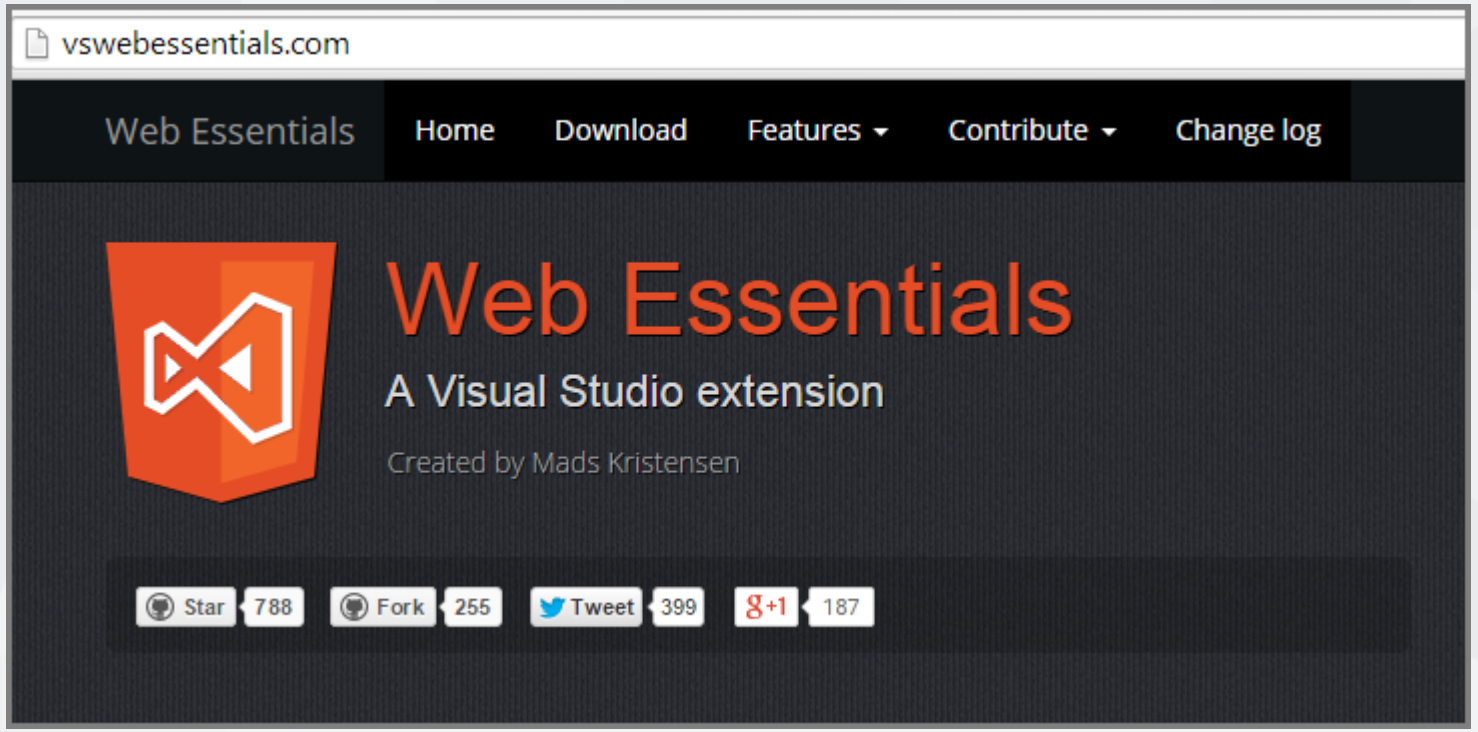
TsLint - https://github.com/palantir/tslint



	Description	File	Line	Column	Project
1	TsLint: expected parameter: 'endDate' to have a typedef	rates.ts	2	32	SSW.JavaScript
2	TsLint: missing 'use strict'	rates.ts	2	3	SSW.JavaScript
3	TsLint: ' should be "	rates.ts	6	17	SSW.JavaScript
4	TsLint: expected parameter: 'rates' to have a typedef	rates.ts	10	29	SSW.JavaScript
5	TsLint: missing 'use strict'	rates.ts	10	2	SSW.JavaScript
6	TsLint: ' should be "	rates.ts	14	74	SSW.JavaScript
7	TsLint: ' should be "	rates.ts	14	17	SSW.JavaScript
8	TsLint: missing semicolon	rates.ts	14	78	SSW.JavaScript
9	TsLint: ' should be "	rates.ts	15	17	SSW.JavaScript
10	TsLint: ' should be "	rates.ts	15	42	SSW.JavaScript
11	TsLint: missing semicolon	rates.ts	15	50	SSW.JavaScript
12	TsLint: ' should be "	rates.ts	16	49	SSW.JavaScript

Web Essentials

Web Essentials - http://vswebessentials.com/



beer.controller.ts • | beer.service.ts

BeerController (class) | getBeers (method)

```
app.beer {
e strict';

ort IBeer = app.services.IBeer;

erface IBeerScope {
  beers: IBeer[];
  getBeers(): ng.IPromise<IBeer[]>;


ss BeerController implements IBeerScope {
  beers: IBeer[];

  static $inject = ['app.services.BeerService'];
  constructor(private beerService: services.IBeerService) {
      this.getBeers();
  }

  getBeers(): angular.IPromise<IBeer[]> {
      return this.beerService.getBeers()
          .then((data: ng.IHttpPromiseCallbackArg<IBeer[]>): any
          return this.beers = <IBeer[]>data;
      });
  }


ular
  .module('app')
  .controller('app.beer.BeerController', BeerController);
```

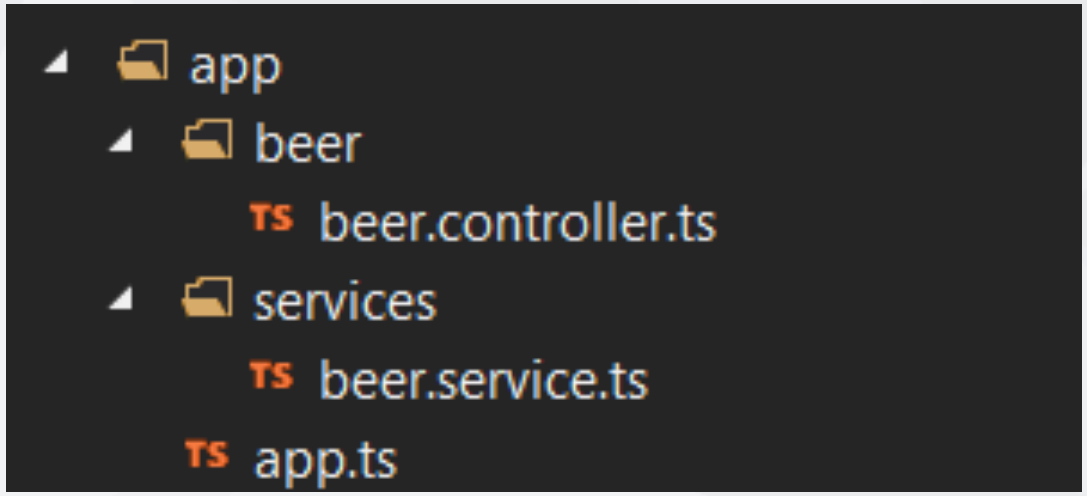
```
var app;
(function (app) {
    var beer;
    (function (beer) {
        'use strict';
        var BeerController = (function ()
            function BeerController(beerSe
                this.beerService = beerSer
                this.getBeers();
            }
            BeerController.prototype.getBe
                var _this = this;
                return this.beerService.ge
                    _this.beers = data;
                });
            };
            BeerController.$inject = ['app
            return BeerController;
        })();
        angular.module('app').controller('
    })(beer = app.beer || (app.beer = {}))
})(app || (app = {}));
//# sourceMappingURL=beer.controller.js.ma
```

Solution Explorer

Search Solution Explorer (Ctrl+;)

- Solution 'AngularAndTypeScriptMa
- AngularAndTypeScriptMadeSi
  - Properties
  - References
  - App
    - beer
      - beer.controller.js
      - beer.controller.js.map
      - beer.controller.ts
    - modals
    - services
      - beer.service.js
      - beer.service.js.map
      - beer.service.ts
    - app.js
    - app.js.map
    - app.ts
    - demo.js
    - demo.js.map
  - App_Data
  - App_Start
  - bin
  - bower_components
  - Content
  - Controllers
  - fonts

Code

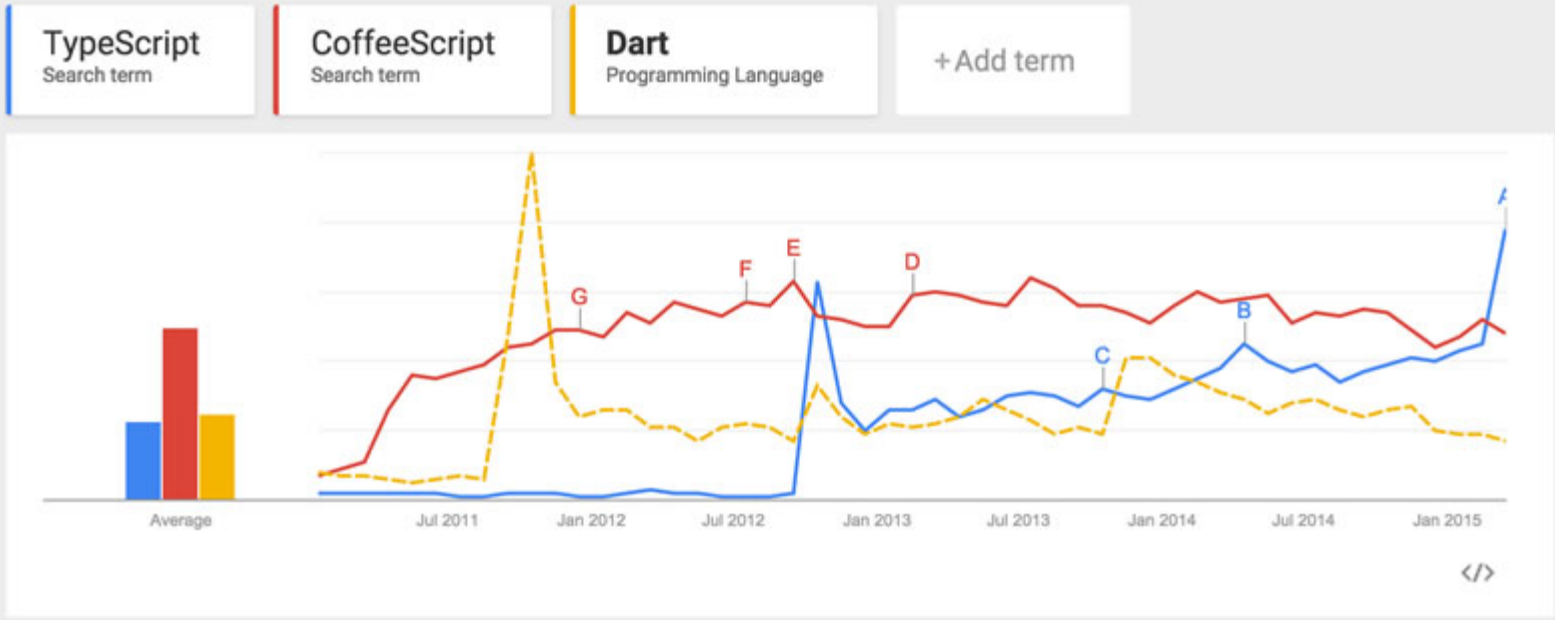


```
module app.beer {

    class BeerController {
        beers = null;

        static $inject = ['app.services.BeerService'];
        constructor(private beerService) {
            this.getBeers();
        }

        getBeers() {
            return this.beerService.getBeers()
                .then((response) => {
                    this.beers = response.data;
                });
        }
    }

    angular
        .module('app')
        .controller('app.beer.BeerController', BeerController);
}
```

```
module app.services {

    export class BeerService {
        beers: any;

        static $inject = ['$http'];
        constructor(private $http: ng.IHttpService) {
        }

        getBeers() {
            return this.$http.get('/api/beer');
        }
    }

    angular
        .module('app')
        .service('app.services.BeerService', BeerService);
}
```

Typescripts future?

1. ES6
2. async/await
3. AngularJS
4. Community adoption



Thank you!

duncanhunter@ssw.com.au

www.ssw.com.au

Sydney | Melbourne | Brisbane | Adelaide