TypeScript

What is TypeScript?

What is TypeScript?

- Is a superset of JavaScript
- JavaScript code runs on TypeScript
- TypeScript compiles to plain old JS

Info.ts

```typescript
/*
    This is TypeScript code
*/
class Address{
    city:string="Cebu City";
    country:string="Philippines"
    getAddress():string{
        return this.city + this.country;
    }
}



/*
    This is normal JavaScript code
*/
function getAddress(){
    var city="Cebu City";
    var country="Philippines"
    return city + country;
}
```

Info.js

```javascript
/*
    This is TypeScript code
*/
var Address = (function () {
    function Address() {
        this.city = "Cebu City";
        this.country = "Philippines";
    }
    Address.prototype.getAddress = function () {
        return this.city + this.country;
    };
    return Address;
}());
/*
    This is normal JavaScript code
*/
function getAddress() {
    var city = "Cebu City";
    var country = "Philippines";
    return city + country;
}
```

TypeScript's Main Feature

TypeScript's Main Feature

- Static Type Checking

MainJS.js

```javascript
//JAVASCRIPT

var id=0;
id="ABC";


function setAccountNumber(value){
  var acctNum="value";
}
setAccountNumber("XYZ");


function getName(){
  var name="uzumaki naruto";
}
var myVariable=getName();
```

Main.ts

```typescript
//TYPESCRIPT

var id:number=0;
id="ABC";


function setAccountNumber(value:number){
  var acctNum:number="value";
}
setAccountNumber("XYZ");


function getName():string{
  var name="uzumaki naruto";
}
var myVariable:number=getName();
```

Effects of Static Type Checking

- *Allows IDEs to perform live error checks*
- *Exposes auto-completion and code hinting*

LibraryTest.js

```
1
2
3  //Trying to use JQuery
4  $("")
5
6
7
8
9  //Trying to get the div's height
10 $("#myDiv")
11
12
13
14
15
16
17
18
19
20 //Trying to define a click event
21 $("myDiv").click("")
```

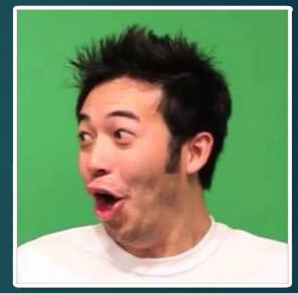
LibraryTest.ts

```
1  ///<reference path="jquery.d.ts"/>
2
3  //Trying to use JQuery
4  $("")
5
6
7
8
9  //Trying to get the div's height
10 $("#myDiv").h
11
12
13
14
15
16
17
18
19
20 //Trying to define a click event
21 $("myDiv").click("")
```

```
$(selector: string, context?: Element | JQuery): JQuery
  Accepts a string containing a CSS selector which is then used to match a set of elements.
selector: A string containing a selector expression
1/9
```

```
has          method
height       method
hide         method
hover        method
html         method
hasClass     method
innerHeight  method
```

```
click(eventData?: any, handler?: (eventObject: JQueryEventObject) => any): JQuery
  Bind an event handler to the "click" JavaScript event
eventData: An object containing data that will be passed to the event handler.
3/3
```



A few of the other cool features

- Support for Object Oriented Programming
- Compile to a specific ECMAScript version
- Integration with Gulp/Grunt
- and much more:

http://www.typescriptlang.org/docs/index.html

End