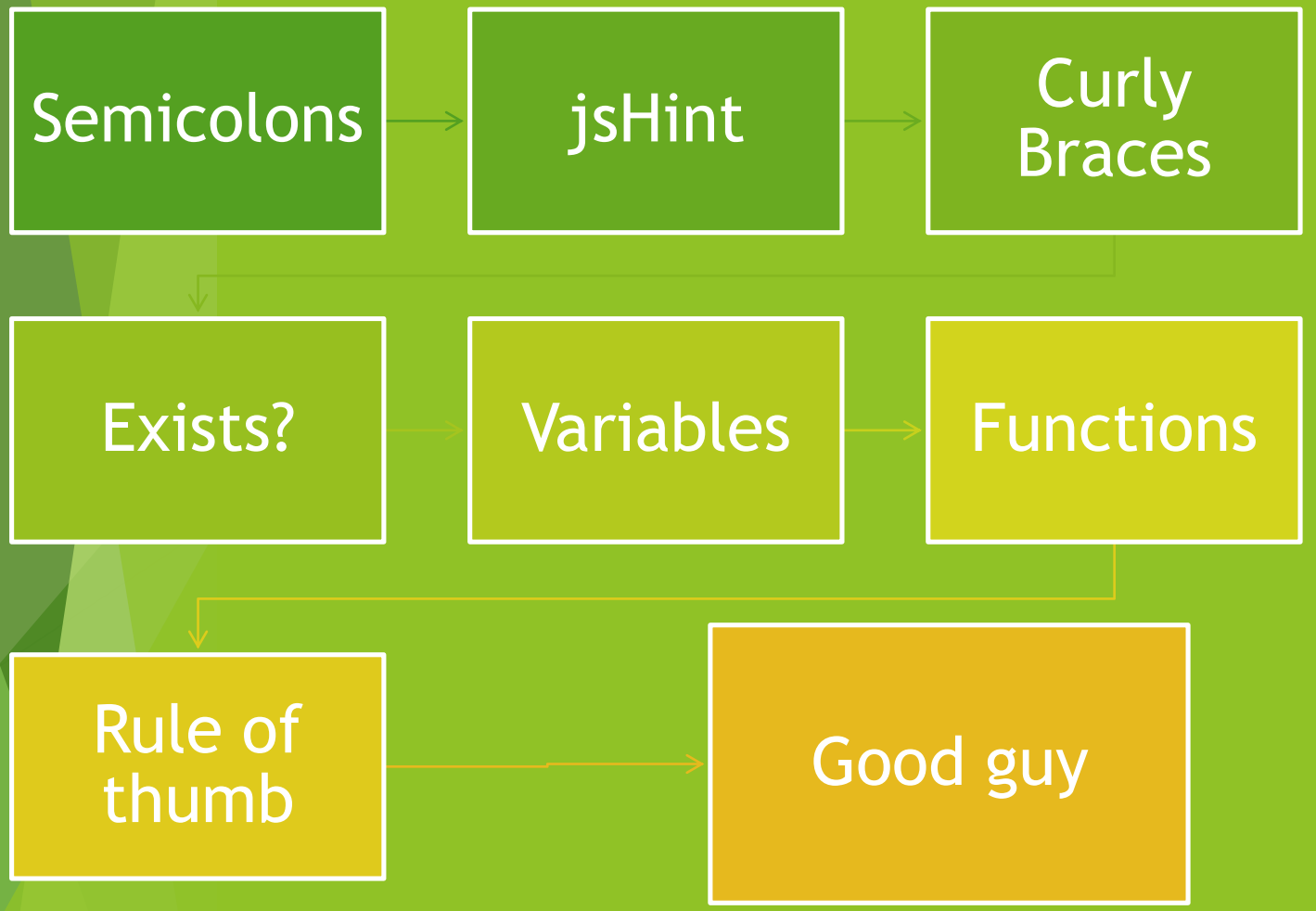

ACHIEVEMENT UNLOCKED
Reach 2 semester

Syntax

Syntax


Semicolons
jsHint
Curly Braces
Exists?
Variables
Functions
Rule of thumb
Good guy

Semicolons

“Semicolons are optional”

– *the people*

- Ale to chyba ludzie decydują

- To dowiedz się jacy ludzie i porozmawiaj z nimi po swojemu

"Certain ECMAScript statements (variable statement, expression statement, do-while statement, continue statement, break statement, return statement, and throw statement) ***must be terminated*** with semicolons. "

– *the facts*

“For convenience, however, such semicolons may be omitted from the source text in certain situations.”

– *the facts*


RULES
1.
2.
3.

"When, as the program is parsed from left to right, a token (called the offending token) is encountered that is not allowed by any production of the grammar, then a semicolon is automatically inserted before the offending token"

– *the facts*


TOKEN
TOKEN
TOKEN
AMUSEMENT ONLY
MINO

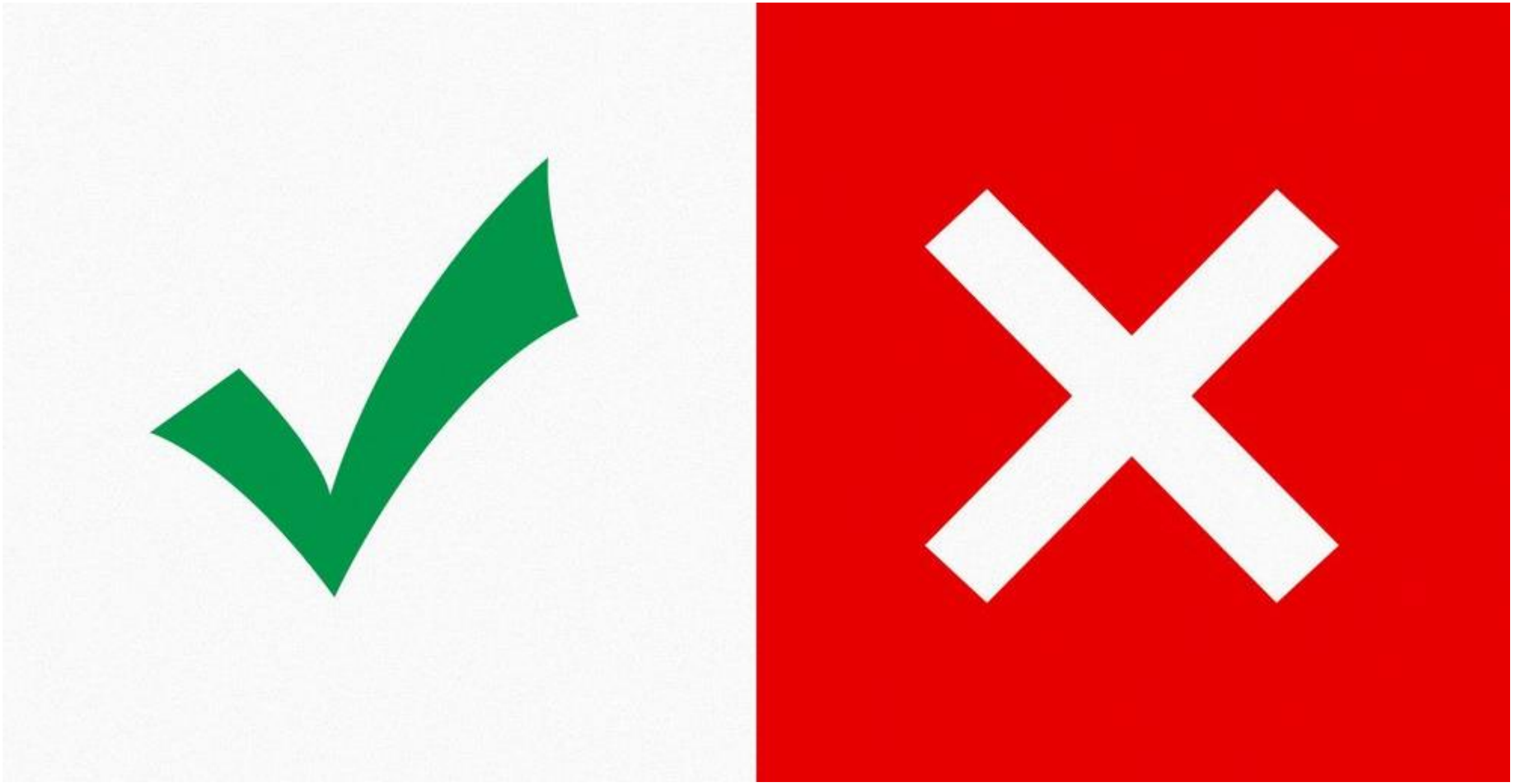
```
var t = 1
var r = 4

if(true){console.log(t,r)}
```

```
1 4
```

“When, as the program is parsed from left to right, the end of the input stream of tokens is encountered, then a semicolon is automatically inserted at the end of the input stream”

– *the facts*

```
console.log(r)
```




This is where the fun begins.

```
var x =1;
var y =5;
var d = x + y
[1,2,3].foreach(e => console.log(e))
```

```
c:\Users\karol\Desktop\PB\JS\2019-2020\Demo\10)Syntax\1)Semicolons.js:16
[1,2,3].forEach(e => console.log(e));
^
TypeError: Cannot read property 'forEach' of undefined
```

```
var x =1
var y =5
var d = x + y
[1].forEach(e => console.log(e));
```

```
c:\Users\karol\Desktop\PB\JS\2019-2020\Demo\10)Syntax\1)Semicolons.js:21
[1].forEach(e => console.log(e));
^
TypeError: Cannot read property 'forEach' of undefined
```

```
var x =1;
var y =5;
var d = x + y
(function(){
console.log('call');
})();
```

```
c:\Users\karol\Desktop\PB\JS\2019-2020\Demo\10)Syntax\1)Semicolons.js:25
var d = x + y
^
TypeError: y is not a function
```

```
var x = [1,2,3]
var t = x
[1].toString()
console.log(t);
```

2

Continue, Break, return …

“When, [illegible] that is allowed by some production of the grammar, but the production is a restricted production and the token would be the first token of a restricted production and the restricted token is separated from the previous token by at least one LineTerminator, then a semicolon is automatically inserted before the restricted token”

– *the facts*

```
function semicolonTest()
{
    return
    {
        test: 1
    }
}

console.log(semicolonTest());
```

undefined

```
function example()
{
    var get = function()
    {
        console.log('get');
    }

    return
    {
        get: get
    }
}
console.log(example());
```

undefined

```
function example()
{
    var get = function()
    {
        console.log('get');
    }

    return{
        get: get
    }
}

console.log(example());
example().get();
```

Object {get: }
get

```
function example(){
    var get = function(){
        console.log('get');
    };

    return{
        get: get
    };
}

console.log(example());
example().get();
```

Object {get: }
get

jsHint

Exists?

```
var x;
if(x){
   console.log('X exists');
}
else{
   console.log('X does not exists');
}
```

X does not exists

```
var x=1;
if(x){
   console.log('X exists');
}
else{
   console.log('X does not exists');
}
```

X exists

```
var x=0;
if(x){
   console.log('X exists');
}
else{
   console.log('X does not exists');
}
```

X does not exists

```
if(x){
    console.log('X exists');
}
else{
    console.log('X does not exists');
}
```

```
c:\Users\karol\Desktop\PB\JS\2019-2020\Demo\10)Syntax\1)Semicolons.js:115
if(x){
^
ReferenceError: x is not defined
```

```
var x;
if(typeof x !== 'undefined’){
   console.log('X exists');
}
else{
   console.log('X does not exists');
}
```

X does not exists

```
var x=0;
if(typeof x !== 'undefined’){
   console.log('X exists');
}
else{
   console.log('X does not exists');
}
```

X exists

```
if(typeof x !== 'undefined’){
   console.log('X exists');
}
else{
   console.log('X does not exists');
}
```

X does not exists

```
var x;
if(typeof x !== undefined){
   console.log('X exists');
}
else{
   console.log('X does not exists');
}
console.log(typeof x);
console.log(typeof typeof x);
```

X exists
undefined
string

Variables

“A var statement declares variables that are scoped to the running execution context's VariableEnvironment. Var variables are created when their containing Lexical Environment is instantiated and are initialized to undefined when created.”

– *the facts*

```
console.log(r);
```

ReferenceError: r is not defined

```
console.log(r);
var r;
```

undefined

```
console.log(r);
var r=10;
console.log(r);
```

undefined

10

```
var myVar = 10;

function myfun(){
   myVar = 11;
}

console.log(myVar);
```

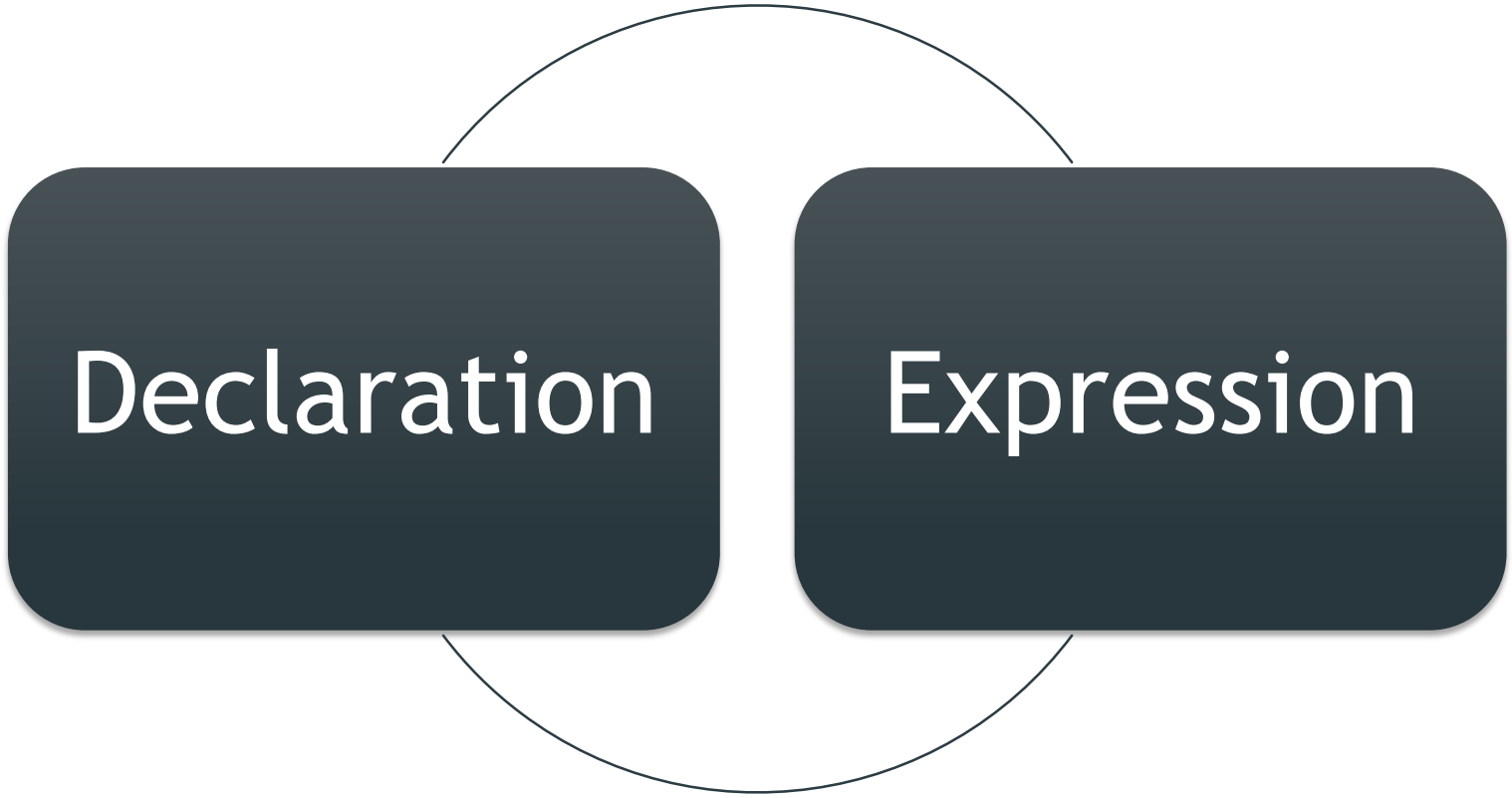
10

```
var myVar = 10;

function myfun(){
   myVar = 11;
}

myfun();

console.log(myVar);
```

11

```
var myVar = 10;

function myfun(){
    myVar = 11;
    var myVar;
}

myfun();

console.log(myVar);
```

Functions



Functions

```
function declarationFunc(){
   console.log('declarationFunc');
}

declarationFunc();
```

declarationFunc

```
declarationFunc();

function declarationFunc(){
    console.log('declarationFunc');
}
```

declarationFunc

```
var expresionFunc = function(){
   console.log('expresionFunc');
};

expresionFunc();
```

expresionFunc

```
expresionFunc();

var expresionFunc = function(){
   console.log('expresionFunc');
};
```

```
expresionFunc();
^
TypeError: expresionFunc is not a function
```

```
var outName = function inName(){
   // ..
};
```

```
var outName = function inName() {
   console.log(inName);
};

outName();

console.log(inName);
```

function inName() { … }

ReferenceError: inName is not defined

```
var outName = function inName() {
   inName = 42;
   console.log(inName);
};

outName();
```

function inName() { … }

```
askQuestion();
let studentName = "Suzy";
function askQuestion() {
   console.log(`${ studentName }, what do you think?`);
}
```

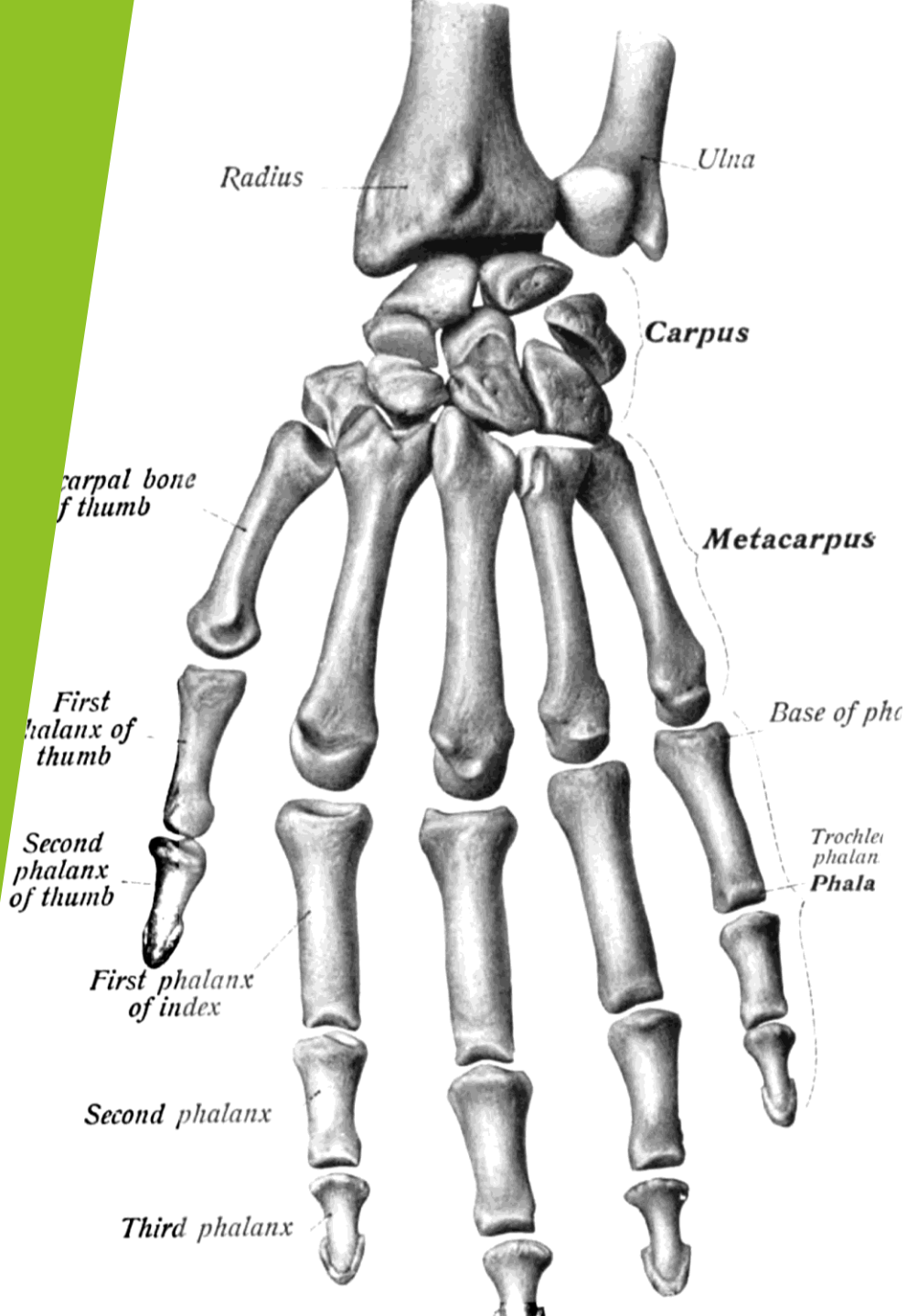
```
console.log(`${ studentName }, what do you think?`);
^
ReferenceError: studentName is not defined
```

```
askQuestion();
var studentName = "Suzy";
function askQuestion() {
   console.log(`${ studentName }, what do you think?`);
}
```

undefined, what do you think?

```
let studentName = "Suzy";
askQuestion();
function askQuestion() {
   console.log(`${ studentName }, what do you think?`);
}
```

Suzy, what do you think?



Rule of Thumb

- Variables
- Functions
- Code

Good guy