Basics JavaScript

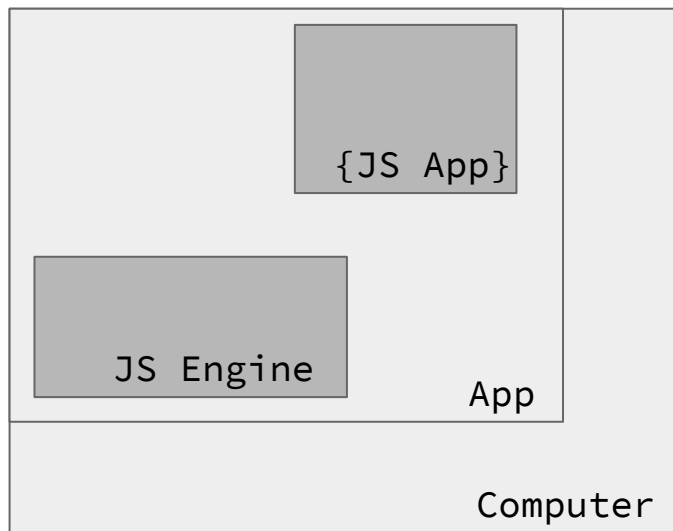# OBJECTIVES

- Review Basics JavaScript
- Review Basics JavaScript First Release

Definition

- **ECMA** is a standards organization for information and communication systems
- **ECMAScript** specification is an **ECMA** standardized specification of a scripting language
- **ECMAScript engine** is a computer program that executes **ECMAScript** code
- **JavaScript engine** is an **ECMAScript engine** that executes **JavaScript** code
- **JavaScript** is a programming language that conforms to the **ECMAScript** specification

Definition

Examples

{JS App}

SpiderMonkey
JS Engine

Apps

WebKit
JS Engine

Apps

V8
JS Engine

Apps

Overview 1997 - 2020

- 1997: First release ECMAScript language specification by Netscape (version 1)
- 1998: Editorial changes aligned with ISO/IEC 16262 international standard (version 2)
- 1999: regular expr., better string handling, try/catch excp handling (version 3)
- 2003: abandoned due to differences concerning language complexity (version 4)
- 2009: Adds "strict mode," to provide more thorough error checking (version 5)
- 2015: import *, for...of, let local declarations, arguments, promises (version 6)
- 2016: await, async keywords for asynchronous programming (version 7)
- 2017: functions for easy manipulation of Objects (version 8)
- 2018: Spread operator for easy copying of object properties let obj1 = {c: 3, ...obj2}
- 2019: Array.sort, Array.flat, Array.flatMap (version 10)
- 2020: BigInt primitive, const zipcode = person?.address?.zipcode (version 11)

Javascript First release

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Javascript First release (1997)

Scope

- **this**
- **var**
- **function**
- **with**

Data Type

- **String**
- **Number**
- **NaN**
- **Boolean**
- **Null**
- **Undefined**
- **Object, Array, Function Object**
- **Math, Number, Date Object**

Control Flow

- **while**
- **break**
- **for**
- **continue**
- **if**
- **else**
- **return**

Operators

- **= > < == <= >=**
- **!= , ! ~ ? :**
- **. && || ++ -- +**
- **% << >> >>> += -=**
- ***= /= &= |= ^= %=**
- **<<= >>= >>>=**

Misc

- **comments**
- **new**
- **in**
- **delete**
- **void**
- **typeof**

blank.org
ctrl+shift+i

Javascript First release - Calculator

- `add(x,y)`
- `addSet(x, set)`

References

- https://en.wikipedia.org/wiki/Ecma_International
- https://en.wikipedia.org/wiki/JavaScript_engine
- https://developer.mozilla.org/en-US/docs/Web/JavaScript
- https://en.wikipedia.org/wiki/ECMAScript
- https://www.ecma-international.org/publications/files/ECMA-ST-ARCH/ECMA-262,%201st%20edition,%20June%201997.pdf
- https://chromium.googlesource.com/v8/v8
- https://github.com/getify/You-Dont-Know-JS/blob/1st-ed/README.md
- https://code.visualstudio.com/