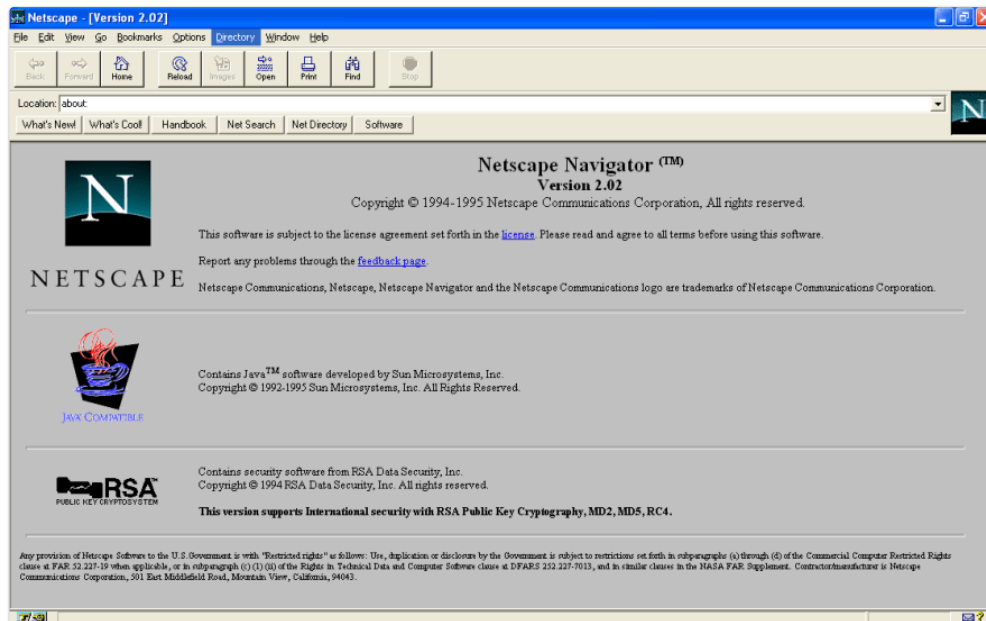


6-dars

6-dars. JSga kirish, o'zgaruvchilarning tiplari

JavaScript was invented by Brendan Eich in 1995.



After its release, JavaScript was named...

M → **LS** → **JS**
Mocha → LiveScript → JavaScript

→ twitter.com/dboatengg

EcmaScript Editions

After the browser war...

- ES 1 → 1997
- ES 2 → 1998
- ES 3 → 1999
- ES 4 → Abandoned (Never released)
- ES 5 → 2009
- ES 6 → 2015

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Timeline

1993 Mosaic, first web browser with GUI was released

1994 Netscape corporation founded by the lead developers of Mosaic, and they released NetScape Navigator (Most used browser of that time)

1995 Due to static web pages, Netscape decided to add scripting language to Navigator. Collaborated with Sun Microsystems and hired Brendan Eich who invented LiveScript (later renamed to JavaScript)

1996 Microsoft launched IE in 1995 and this led to browser war with Netscape. Microsoft launched Jscript. This caused compatibility issues for developers due to differences in JScript and JavaScript implementations.

1997 Nov. 1996 Netscape submitted JS to ECMA. 1st ECMA Spec. launched in June, 1997.

2000 ECMA 2, 1998, ECMA3 in 1999. Started work on ECMA4 in 2000

2005 Mozilla joined ECMA. Many open source development were going on side by side. Jesse James released a white paper about Ajax. This led to rebirth of JS. Many new libraries like JQuery were created.

2008 Google launched Chrome with V8 engine. Key innovation was JIT.

2009 Conference in Oslo led to an agreement to combine all work and finally ES5 release in Dec 2009. NodeJS released by Ryan Dahl in the same year which sparked usage of JS outside of web browsers.

2015 ES6 was released in 2015

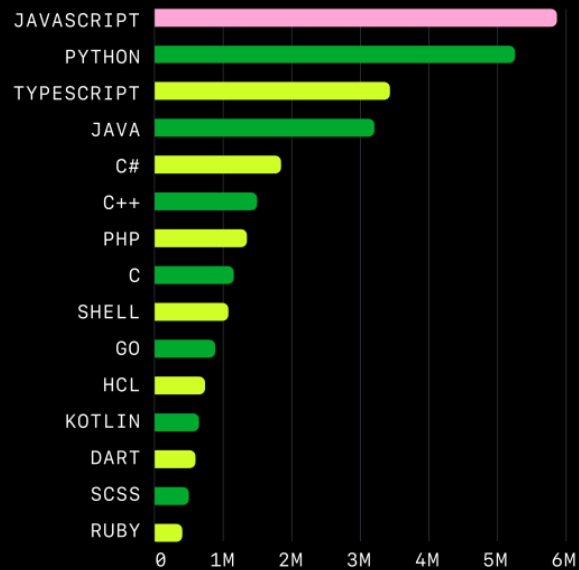
.... Since 2016, versions are named by year. (ECMAScript 2016, 2017...) New release once a year now.

Top 10 programming languages on GitHub

The chart illustrates the changing popularity of programming languages on GitHub over a decade. JavaScript maintains its position as the most popular language, while Objective C and Ruby show a decline in popularity over time.

Year	JavaScript	Python	TypeScript	Java	C#	C++	PHP	C	Shell	Go	Objective C	Ruby
2014	1	2	4	3	5	6	7	8	9	10	10	10
2015	1	3	4	2	5	6	8	7	9	10	10	10
2016	1	3	4	2	5	6	8	7	9	10	10	10
2017	1	3	4	2	5	6	7	8	9	10	10	10
2018	1	3	4	2	5	6	8	7	9	10	10	10
2019	1	2	3	4	5	6	8	7	9	10	10	10
2020	1	2	3	4	5	6	8	7	9	10	10	10
2021	1	2	3	4	5	6	8	7	9	10	10	10
2022	1	2	3	4	5	6	8	7	9	10	10	10
2023	1	2	3	4	5	6	8	7	9	10	10	10

The top languages in 2023 by usage



Javascript.

- What?
- Why?
- Where?
- How?

JavaScript is a **case-sensitive** language

Required

- WHILE
- while
- While
- online, Online, OnLine, and ONLINE

Comments

1.

```
// let name = "John"
```

2.

```
/*  
  let name = "john"  
  
  let skills = ['javascript', ...]  
*/
```

Literals

```
12 // The number twelve  
1.2 // The number one point two  
"hello world" // A string of text
```

```
'Hi' // Another string
`Hello world!`
true // A Boolean value
false // The other Boolean value
null // Absence of an object
```

Identifiers and Reserved Words

- An identifier is simply a name.

```
i
my_variable_name
v13
_dummy
$str
firstName
first_name
firstname
FirstName
```

Reserved Words

- JavaScript keywords

```
if, while, let, const, var, for
```

```
- JavaScript Class, Object, Function properties
  ``js
  from, of, get, and set
```

- All Keywords

```
as const export get null target
void
async continue extends if of this
while
await debugger false import return throw
with
break default finally in set true
yield
case delete for instanceof static try
catch do from let super typeof
class else function new switch var
```

- future versions keywords

```
enum implements interface package private protected public
```

Optional Semicolons

- `;` - semicolon

```
let a = 10;
```

- Optional (Ihtiyoriy)

```
let a = 3  
let b = 4
```

- Required (Yozish shart)

```
let a = 3; let b = 4
```

- code ?

```
let a  
a  
=  
3  
console.log(a) //=? Natija qanday chiqadi deb o'ylaysiz?
```

```
let y = a + b  
(a+b).toString()
```

Best practice

```
let a;  
a = 3;  
console.log(a);
```

JavaScript types

- **Primitive types**
 - Numbers, booleans, symbols, null, and undefined are **immutable**

1. Number $-2^{53} \leq x \leq 2^{53}$

```
let age = 100;
```

2. String

```
``js
```

```
let job = "Web developer";  
let language = 'Javascript';  
let description = `I made something`;
```

3. Boolean

```
let isMerriad = false;  
let isSingle = true;
```

4. Null

```
let x = null;
```

5. Undefined

```
let x;
```

- Object types

6. Object

```
let book = {  
  topic: "JavaScript",  
  edition: 7,  
  value: 7  
};  
book.topic /≠> 'JavaScript'  
book["edition"] /≠> 7  
book.author = "Flanagan";  
book.contents = {};
```

7. Array

```
let primes = [2, 3, 5, 7];  
primes[0] /≠> 2  
primes.length /≠> 4  
primes[primes.length-1] /≠> 7  
primes[4] = 9; /≠> [2, 3, 5, 7, 9]  
primes[4] = 11; /≠> [2, 3, 5, 7, 11]  
  
let empty = [];  
empty.length /≠> 0
```

"Array va Object" larni bir birining ichiga joylash mumkin.

Object in Array

```
let points = [  
  {x: 0, y: 0},  
  {x: 1, y: 1}  
];
```

Array in Object

```
let data = {  
  trial1: [[1,2], [3,4]],
```

```
trial2: [[2,3], [4,5]]  
}
```