

JavaScript



JS

JavaScript, often abbreviated as JS, is a programming language that conforms to the ECMAScript specification. JavaScript is high-level, multi-paradigm language.

JS also support object-oriented, imperative, and functional styles.

The main architectural features are dynamic typing, weak typing, automatic memory management, prototype programming



Designed by Brendan Eich of Netscape initially



Talking about popularity of JS, according to TIOBE Index, based on data from Google, MSN, Yahoo!, Wikipedia and YouTube, JavaScript was in 6th place in April 2015.

JavaScript is the most popular programming language used to develop web applications.



Language

features

JavaScript is an object-oriented language, but the language uses prototyping.

Despite the syntax similar to C, JavaScript has fundamental differences:

objects with the possibility of introspection;

- functions as first class objects
- automatic type conversion
- automatic garbage collection
- anonymous functions

Semantics and syntax

The syntax of the JavaScript language in many ways resembles the syntax of C and Java.

In JavaScript:

- all identifiers are case-sensitive
- letters, underscores, dollar symbols, Arabic numerals can be used invariable names
- variable names cannot start with a digit
- // is used for single-line comments, multiline and inline comments start with /* and end with */.

```
gulpfile.js
var gulp = require('gulp');
var sass = require('gulp-sass');
var browserSync = require('browser-sync');
var autoprefixer = require('gulp-autoprefixer');

gulp.task('sass', function() {
  return gulp.src('scss/**/*.scss')
    .pipe(sass())
    .pipe(autoprefixer({
      browsers: ['last 2 versions']
    }))
    .pipe(gulp.dest('css'))
    .pipe(browserSync.reload({
      stream: true
    }));
});

gulp.task('browserSync', function() {
  browserSync({
    server: {
      baseDir: './'
    },
    open: true,
    notify: false,
    ghostMode: false
  });
});

gulp.task('default', ['browserSync', 'sass'], function() {
  gulp.watch('scss/**/*.scss', ['sass']);
  gulp.watch(['*.html', 'js/**/*.js'], browserSync.reload);
});
```

Scope of application

Web applications

Browser-based operating systems

Bookmarklets - creating programs for the browser

Custom scripts in the browser

Server applications

Mobile applications

Widgets

Office applications(ex. Excel)

