

Babel: Get Started

BASICS OF USING BABEL



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Overview

Understanding Babel

Installation and configuration

Module formatters

Understanding Babel

Comparisons

Comparison

Traceur

Experimental

Runtime dependency

Removes comments and whitespace

Missing some features

Babel

Production

Minimal inline helpers/optional polyfills

Readable maintains source formatting

Feature rich

Comparison

TypeScript

Language: Typed superset of JavaScript

Happens to have transpiler

More lenient, less spec compliant

Babel

Not a language

Transpiler

Spec compliant

Prerequisites & Environment

Basics of Using Babel



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Installation

Babel Packages

babel-core

babel-cli

babel-plugin-*

babel-preset-*

Installing Babel Globally

```
$ npm install -global babel #version 5
```

```
$ npm install -global babel-cli
```

```
$ babel --version
```

Global Packages Location

```
$ npm ls -g --depth 0
```

Mac :

`/Users/[username]/.npm-packages/lib/node_modules`

PC :

`%AppData%\npm\node_modules` (Windows 7)

`%USERPROFILE%\Application Data\npm\node_modules` (Windows XP)

Installing Babel Locally

```
$ npm init #creates package.json
```

```
$ npm install babel-cli --save-dev #saves in package.json
```

```
$ babel --version #fails because can't find package
```

```
$ node_modules/.bin/babel --version
```

Command Line Interface (CLI)

Configuration

Understanding Module Formatters

Module

A module is a piece of reusable JavaScript: it exports certain objects which are thus made available to dependent code.

ECMAScript Module

```
// lib/math.js
export function sum(x, y) {
  return x + y;
}
export var pi = 3.141593;
```

```
// app.js
import {sum, pi} from "lib/math";
alert("2π = " + sum(pi, pi));
```

Module Specifications

AMD

CommonJS

UMD

SystemJS

Module Formatter

A module formatter is a transformer that turns ES2015 module syntax (exports and imports) into their equivalent target module specification format.

ECMAScript
Modules



AMD
CommonJS
UMD
SystemJS

Specification Implementations

AMD

RequireJS

Dojo Toolkit

ScriptManJS

CommonJS

Node.js (on the server)

Browserify (in the browser)

Module Formatters Demo

Summary

Understanding Babel

- Compile to ES5
- Traceur and TypeScript

Installation and configuration

- npm
- .babelrc

Module formatters

- AMD, CommonJS