

deno



# Who is Deno?

- Deno is a simple, modern and secure runtime for JavaScript and TypeScript that uses V8 and is built in Rust.
- Release date : 2018-05



# Who is Deno?



**Deno** @deno\_land · 2020년 5월 19일

`"node".split("").sort().join("")`

💬 106

↺↻ 1.6천

❤️ 9천

# Who made it?

- Ryan Dahl



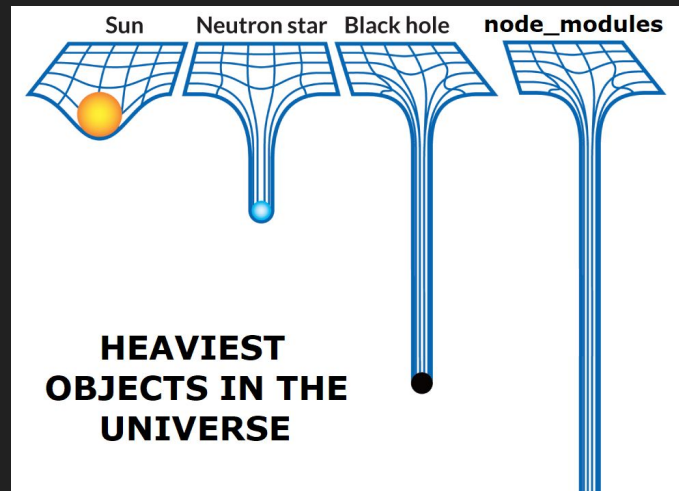
# Who is Ryan Dahl?

- Node.js original author

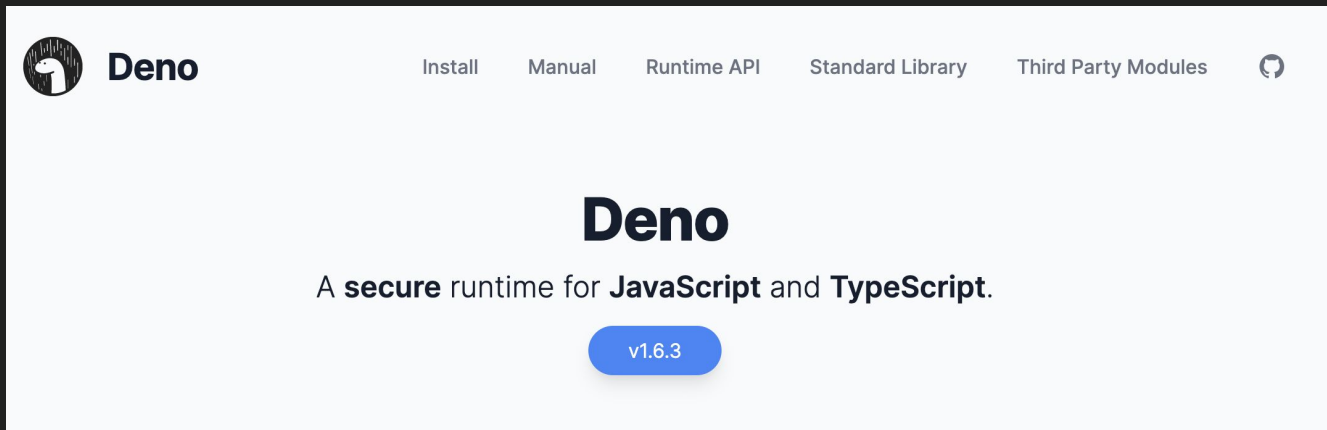


# What's different from Node.js?

- Secure
- Module system
  - NPM, package.json, node\_modules
- Browser compatibility
- Built-In tools
  - TS, Test, Linter,



# Let's run Deno!



```
$ brew install deno
```

# Let's run Deno!

Plugins

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JavaScript 203.5981.152 12월 02, 2020

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Support for [Deno](#) projects.

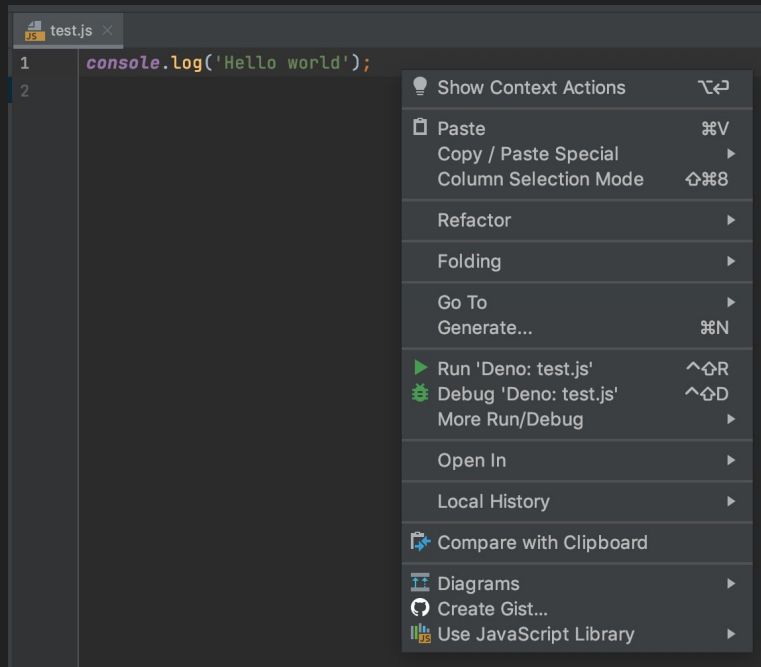
- Coding assistance for Deno APIs and imports
- Run files with Deno and debug them using the built-in visual debugger

Enable Deno support for the current project in *Preferences* / *Languages* | *& Frameworks* | *Deno*.

Size: 208.09 KB



# Let's run Deno!



# Let's run Deno!

```
app.js x
1  import { serve } from "https://deno.land/std@0.83.0/http/server.ts";
2  const s = serve({ port: 8000 });
3  console.log("http://localhost:8000/");
4  for await (const req of s) {
5    req.respond({ body: "Hello World\n" });
6  }
7

Terminal: Local x +
penginui-MacBookPro:deno-toy penguin$ deno run app.js
error: Uncaught PermissionDenied: network access to "0.0.0.0:8000", run again with the --allow-net flag
    at processResponse (deno:core/core.js:223:11)
    at Object.jsonOpSync (deno:core/core.js:246:12)
    at opListen (deno:cli/rt/30_net.js:32:17)
    at Object.listen (deno:cli/rt/30_net.js:207:17)
    at serve (server.ts:306:25)
    at file:///Users/pengin/workspace/deno-toy/app.js:2:11
penginui-MacBookPro:deno-toy penguin$
```

# Let's run Deno!

Need permission option!

```
penguini-MacBookPro:deno-toy penguin$ deno run --allow-net app.js  
http://localhost:8000/
```

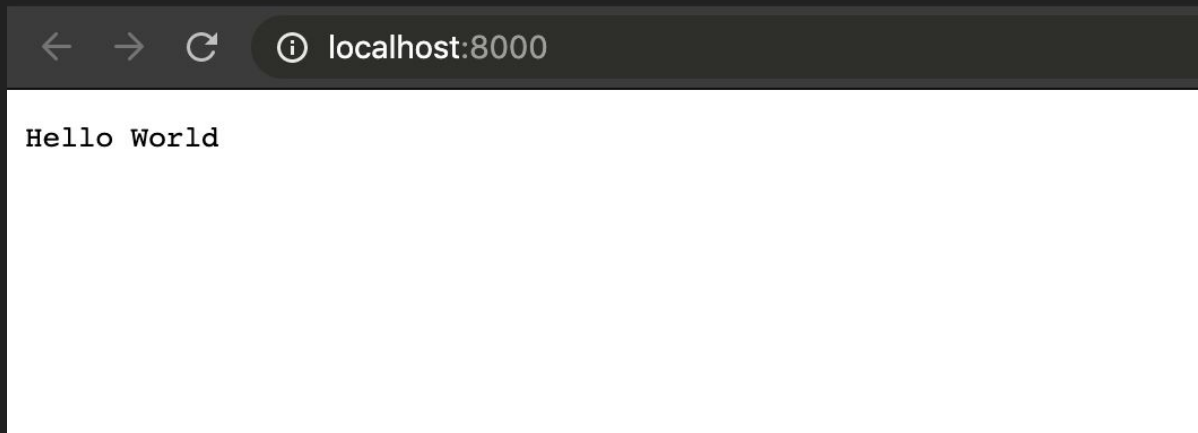
# Let's run Deno!

## Permissions list

The following permissions are available:

- **-A, --allow-all** Allow all permissions. This disables all security.
- **--allow-env** Allow environment access for things like getting and setting of environment variables.
- **--allow-hrtime** Allow high-resolution time measurement. High-resolution time can be used in timing attacks and fingerprinting.
- **--allow-net=<allow-net>** Allow network access. You can specify an optional, comma-separated list of domains to provide an allow-list of allowed domains.
- **--allow-plugin** Allow loading plugins. Please note that --allow-plugin is an unstable feature.
- **--allow-read=<allow-read>** Allow file system read access. You can specify an optional, comma-separated list of directories or files to provide a allow-list of allowed file system access.
- **--allow-run** Allow running subprocesses. Be aware that subprocesses are not run in a sandbox and therefore do not have the same security restrictions as the deno process. Therefore, use with caution.
- **--allow-write=<allow-write>** Allow file system write access. You can specify an optional, comma-separated list of directories or files to provide a allow-list of allowed file system access.

# Let's run Deno!



Can Deno use npm packages?

No, but you can.

# Compatible conditions

- No dependencies with Node.js
  - CommonJS
  - Built-In packages (global, fs, path, ...)

# Alternative

## CommonJS Module Loading

`createRequire(...)` is provided to create a `require` function for loading CJS modules. It also sets supported globals.

```
import { createRequire } from "https://deno.land/std@$STD_VERSION/node/module.ts";

const require = createRequire(import.meta.url);
// Loads native module polyfill.
const path = require("path");
// Loads extensionless module.
const cjsModule = require("./my_mod");
// Visits node_modules.
const leftPad = require("left-pad");
```



# Opine

- Fast, minimalist web framework for Deno ported from ExpressJS.



# Conclusion

- Too early to use (v1.6.3)
- Continuous development
- Cute...





Star

71,045

A white dinosaur, resembling a Spinosaurus, stands on a small, dark, rocky island. The island is surrounded by water and has some green plants and a small pond. The background is a dark, stormy sky with heavy rain falling. A bright, colorful rainbow is visible behind the dinosaur, creating a dramatic and hopeful scene. The overall mood is one of resilience and hope.

Thank you