

Surviving the JavaScript package managers jungle

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 fharper





```
> npx create-next-app@latest jungle-talk
```

NEXT.js

To get started, edit the
page.tsx file.

Looking for a starting point or more instructions?
Head over to [Templates](#) or the [Learning](#) center.

▲ [Deploy Now](#)

[Documentation](#)

N



```
> npx create-next-app@latest jungle-talk
```

```
...
```

```
added 355 packages, and audited 356 packages in 29s
```

```
> fd package.json node_modules | wc -l
```

```
639 packages
```

```
> du -hs
```

```
453M
```

355 packages

639 packages

453M



① Ausgangspunkt
- Die Struktur des Textes verstehen & den Inhalt erschließen
- Zielsetzung
- Die Struktur des Textes verstehen & den Inhalt erschließen
②
- Lesestrategie
- Wiederholungsfrage
- Selbstüberprüfung
③
④ Frage / Aufgabenstellung
- Frage beantworten
- Kontextualisierung
- weitere Hilfe

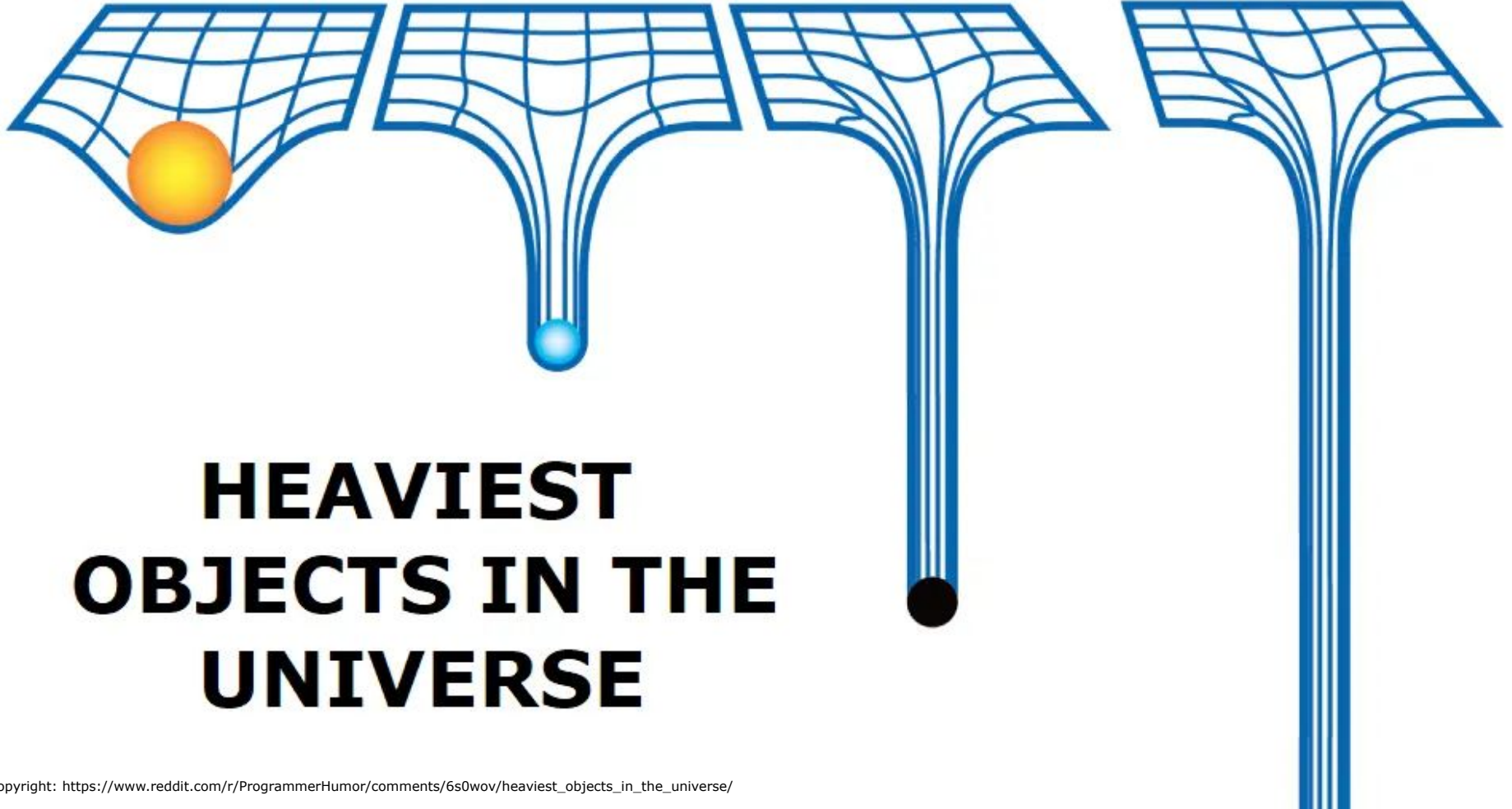
SQ3R Method
Re
Read
Question
Survey
+
Elaboration & Elaboration
Wiederholungsfrage
universell anwendbar

Sun

Neutron star

Black hole

node_modules



**HEAVIEST
OBJECTS IN THE
UNIVERSE**

the jungle

npm



npn



- Ship with Node.js so there's zero setup.
- Use a flat/hoisted layout: all packages & dependencies are pulled up to the top level of node_modules.
- Hoisting enables phantom dependencies: your code can import a package you never declared, and it works until a dependency tree change removes it.





- **Replace `node_modules` with a single `.pnp.cjs` file (Plug'n'Play / PnP) that maps every import directly to a zipped package in a cache.**
- **The cache *can* be committed to git (global cache by default since v4), enabling zero-installs when cloning a project.**
- **PnP refuses undeclared imports, but it requires your editor, bundler, and tooling to understand PnP, which is the adoption cost.**



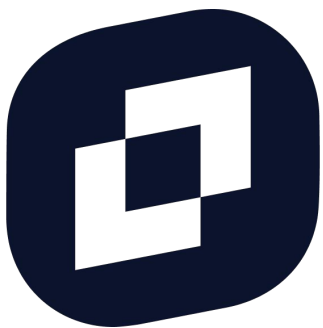


- **Packages are downloaded once into a single global content-addressable store on your machine.**
- **Only your declared dependencies appear at the top of `node_modules` as symlinks; everything else lives as hard links in a hidden `node_modules/.pnpm/` directory.**
- **Strict layout: no phantom dependencies.**





- **Not just a package manager but a full runtime, bundler & test runner.**
- **Fast: Global cache and aggressive use of system calls and parallelism.**
- **Uses a flat/hoisted `node_modules` layout: same per-project duplication (copy-on-write clones) & phantom-dependency tradeoffs like npm.**
- **Adopting the install only is low-risk: using it as your runtime is a bigger decision.**



&



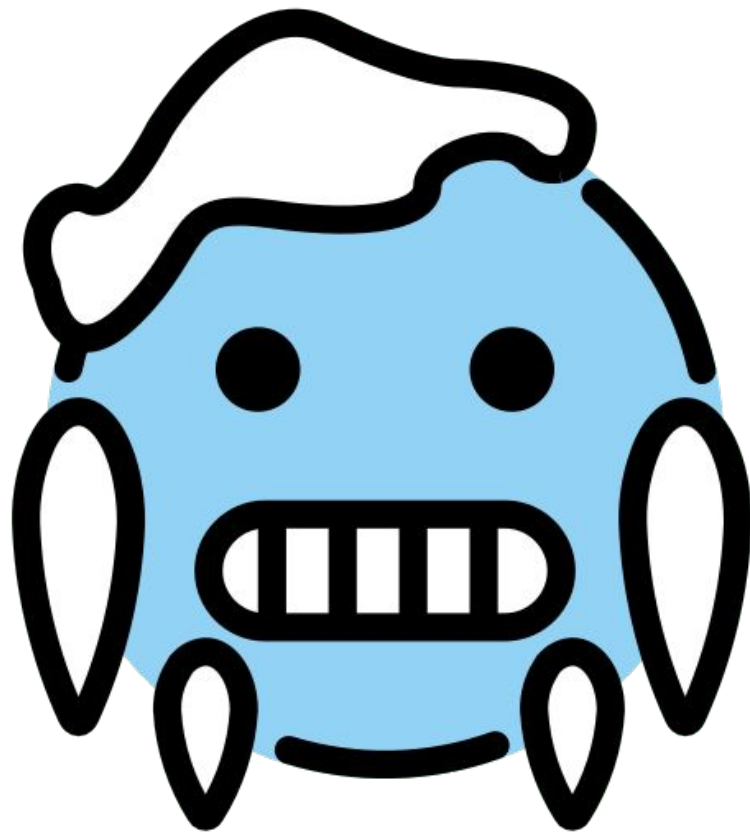
so what?







let's see them in action
demo





Install time	44.49s	12.64s	12.11s	7.85s
Declared deps	10	10	10	10
Total dependencies	1228	1251	1228	1228
Duplicated	83	90	83	83
node_modules size	319M	-	~0M	~0M
Top-level folders	776	none	6	776
Other store/cache	-	241M cache	321M store	316M cache





Install time	23.89s	3.0s	3.28s	7.5s
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Total dependencies	1228	1251	1228	1228
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node_modules size	319M	-	~0M	~0M
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Install time



23.89s



3.0s



3.28s



7.5s

in the end

Latest version



11.16.0



4.16.0



11.5.3



1.3.14



Latest version

11.16.0

4.16.0

11.5.3

1.3.14

Cold install speed

Slow

Fast

Fast

Fastest



Latest version

11.16.0

4.16.0

11.5.3

1.3.14

Cold install speed

Slow

Fast

Fast

Fastest

Disk efficiency

Low

Highest

High

Moderate



Latest version

11.16.0

4.16.0

11.5.3

1.3.14

Cold install speed

Slow

Fast

Fast

Fastest

Disk efficiency

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Highest

High

Moderate

node_modules strategy

Flat/hoisted

PnP
(no node_modules)

Symlinked /
hard

Flat/hoisted



Universal, good enough, ships with Node

the safe default you probably don't need to leave



The most opinionated option

PnP is powerful but demands team commitment



The upgrade most developers should make

Solves real problems, low migration cost



The future arriving early

Use it for new projects; treat it as a runtime decision







Photo by Jon Tyson on Unsplash



Photo by Jon Tyson on Unsplash

APP





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