UNLOCKING LOCKFILES

A DEVELOPERS GUID PACKAGE MANAGEM

Another *CodingWithCallum* ses

WHAT ARE W
COVERING?

WHAT ARE W COVERING?

- History

WHAT ARE W
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- History
- *Fun*damentals

HISTORY LESSON

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NEED (>201

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- include libraries via `<script>`

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- copypasta code from stackover

HISTORY LESSON

NEED (>201

an extremely embarrassing exa

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- npm is created

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- Nested `node_modules`

HISTORY LESSON

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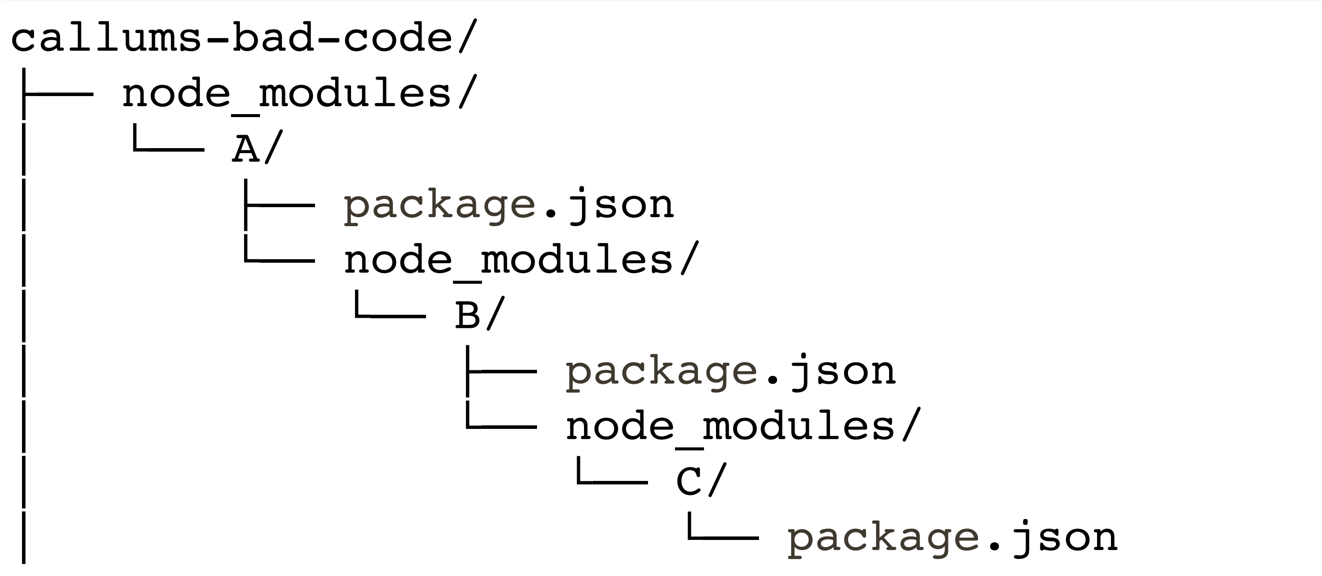

```
callums-bad-code/
├── node_modules/
│   └── A/
│       ├── package.json
│       └── node_modules/
│           └── B/
│               ├── package.json
│               └── node_modules/
│                   └── C/
│                       └── package.json
│
```

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- Poor windows

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RISE (2012-20

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- `npm` creates `package-lock.`
- flat dependency to avoid dupli

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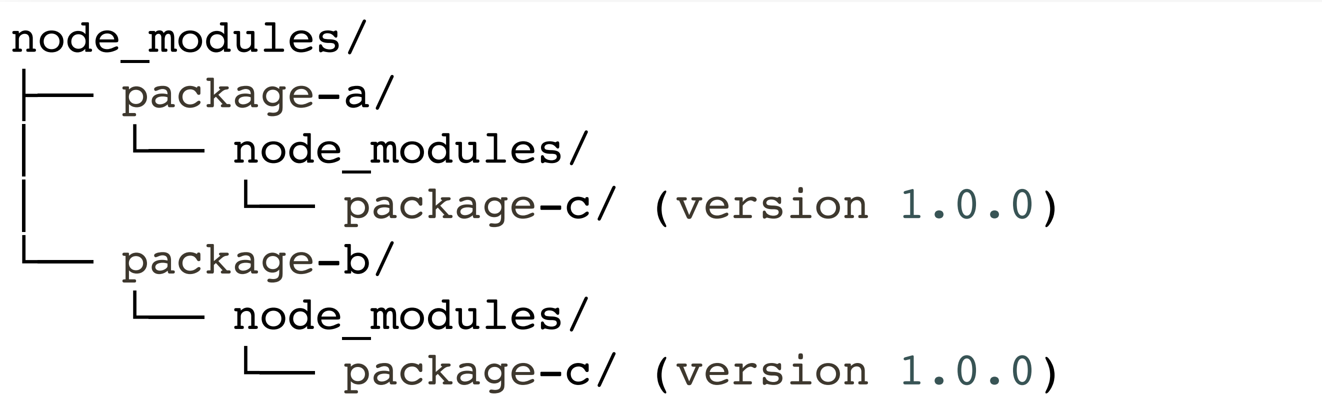

```
node_modules/
├── package-a/
│   └── node_modules/
│       └── package-c/ (version 1.0.0)
└── package-b/
    └── node_modules/
        └── package-c/ (version 1.0.0)
```

HISTORY LESSON

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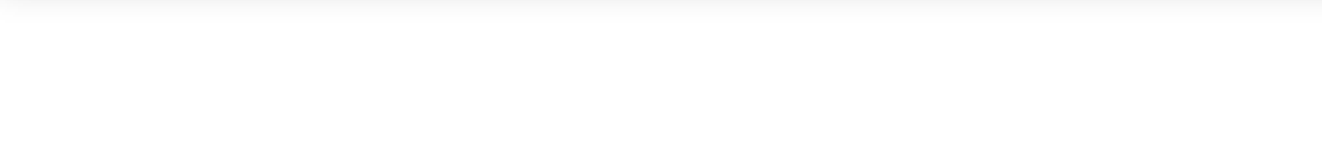

```
node_modules/
├── package-a/
├── package-b/
└── package-c/ (version 1.0.0, shared by both pa
```

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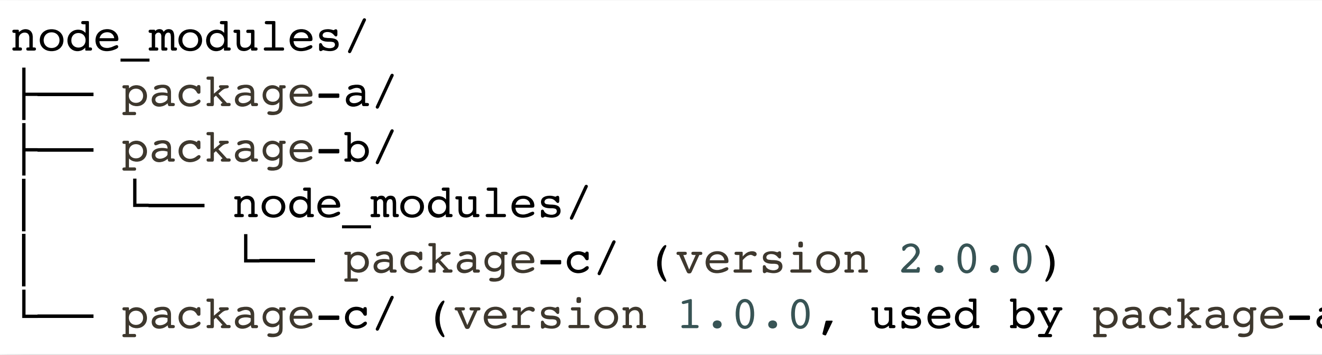

```
node_modules/
├── package-a/
├── package-b/
│   └── node_modules/
│       └── package-c/ (version 2.0.0)
└── package-c/ (version 1.0.0, used by package-a
```

HISTORY LESSON

FLAT (2016

yarn's new security mode

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- checksums

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- auditing

HISTORY LESSON

FLAT (2016

Phantom dependencies (I ain't afraid of

(Using things not listed in package

```
Your package.json: { "dependencies": { "package-
Package A's package.json: { "dependencies": { "p
```

```
node_modules/
├── package-a/
└── package-b/  (hoisted from package-a/node_mod
```

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MODERN (201

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- Deno switches to URL import

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- Global store in `~/.pnpm-stor`
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- Hash-based addressing
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- Immutable

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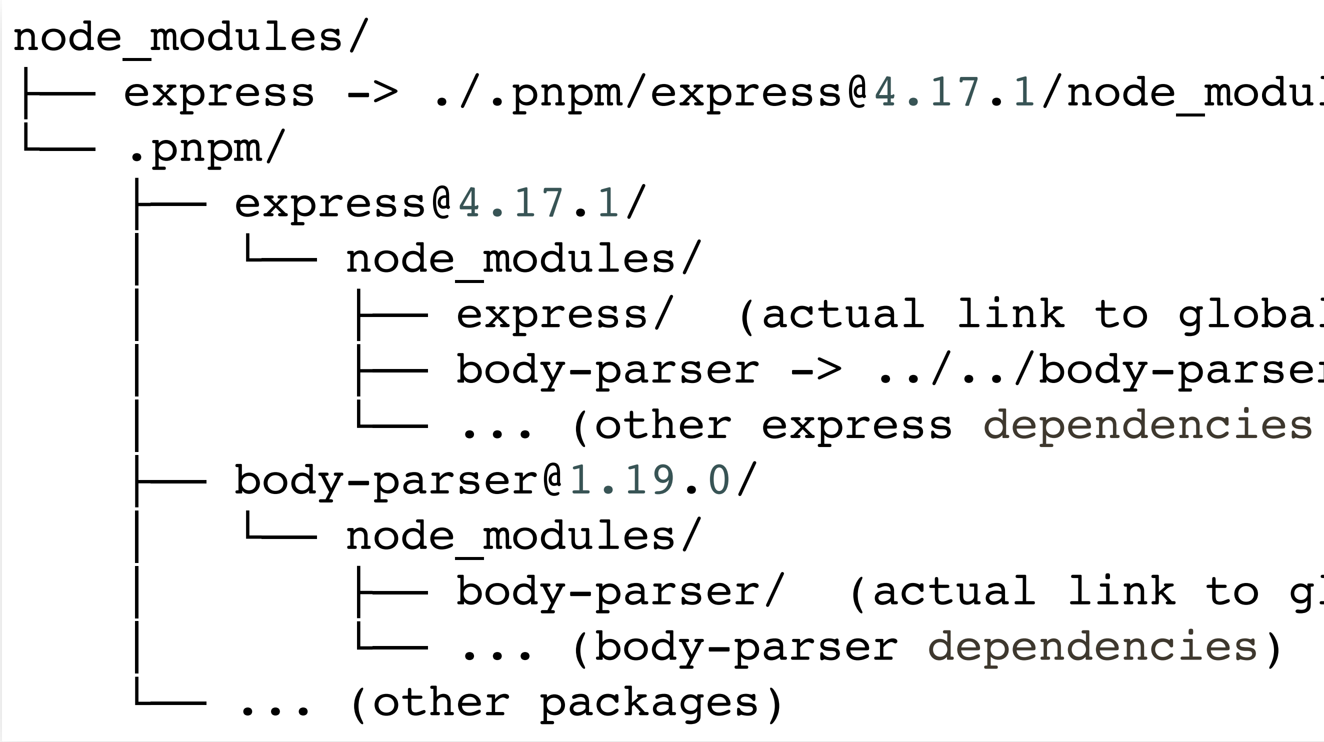

```
node_modules/
├── express -> ./.pnpm/express@4.17.1/node_modul
└── .pnpm/
    ├── express@4.17.1/
    │   └── node_modules/
    │       ├── express/  (actual link to global
    │       ├── body-parser -> ../../body-parser
    │       └── ... (other express dependencies
    ├── body-parser@1.19.0/
    │   └── node_modules/
    │       ├── body-parser/  (actual link to gl
    │       └── ... (body-parser dependencies)
    └── ... (other packages)
```

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yarn (v2 berry) Plug'n'play

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- Peer dependency issues

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- Solves the same problems I jus
- Peer dependency issues
- Zero install

HISTORY LESSON

TODAY (2024

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- Monorepo management
- The rise of bun

*FUN*DAMENTALS

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SEMVER

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- Basic format: `MAJOR.MINOR.PATC`
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- **PATCH:** Bug fixes, no new features o
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RANGES

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- **Wildcard (*)**: `"react": "17.*.*` `"react": "17.*"`
    - Any version starting with 17

UN-COMMO

VERSION RANG

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UN-COMMO
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- **Greater than (>):** `"react": ">17`
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UN-COMMO
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- Stop drift of dependencies between

*FUN*DAMENTALS

UPDATING T
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*FUN*DAMENTALS

UPDATING TH LOCKFILE

- Install dependencies within defin

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  - `"react": "^18.3.1"`

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    - `"react": "^18.3.1"`
        - registry has `react@18

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- Install dependencies within defin
    - `"react": "^18.3.1"`
        - registry has `react@18`
- Update lockfile to point to `reac`

*FUN*DAMENTALS

UPDATING T
LOCKFILE

- Install dependencies within defin
  - `"react": "^18.3.1"`
    - registry has `react@18`
- Update lockfile to point to `reac`
- `package.json` stays the same

*FUN*DAMENTALS

RENOVATE

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- Update the `package.js`

*FUN*DAMENTALS

RENOVATE

- Update the `package.js`
  - Within defined range

*FUN*DAMENTALS

RENOVATE

- Update the `package.js`
  - Within defined range
- Update lockfile

PHEW

we made it

QUESTIONS

- How does `pnpm` handle `workspac` resolution?
- You didn't go into peer dependencie them?
- How is your beard not grey by now?