

# JS guild: Monorepos

Juho Härme 19.4.2024

```
git clone https://github.com/knowit-  
finland-javascript-guild/turborepo.git
```

```
|— non-mono  
|   |— back  
|   |— component-library  
|   |— front  
|   └— utility-library
```

```
cd back  
npm install  
cd ../component-library  
npm install  
cd ../front  
npm install  
  
# OR just  
  
cd non-mono/  
for pkg in */; do cd $pkg && npm install && cd ..;done
```

## Intro

- Mono? Poly? Monolith? Microservices? Packages?
- Starting with a monorepo vs converting something into a monorepo
  - a) converting a monolith into a monorepo
  - b) converting a bunch of microservices + packages into a monorepo

## Some of my monorepo story

- over 10 individual repositories
- common ui elements from 2 different packages
- general shared code from 2 different packages
- types from a separate package...

# The problem with packages in polyrepo

# Hands-on 1

Make a change to a component imported from an internal package

Please make the button hot pink 😊

Best wishes, UX team



C'mon, such a small change, it'll be up in a minute?



```
cd non-mono/front  
npm run dev
```

.....

```
|— component-library  
|   |— ...  
|   |— index.ts  
|— front  
|   |— ...  
|   |— src  
|       |— counter.ts  
|       |— main.ts
```

```
cd non-mono/component-library/
```

```
# make changes to button at index.ts
```

```
npm version patch
```

```
npm pack
```

```
cd ../front
```

```
npm install ../component-library/component-library-1.0.1.tg
```

**How could a  
monorepo make  
this easier?**

Prerequisites for the next hands-on exercise

```
cd mono
npm install
```

## Some important concepts

- workspace vs root

```
root
├─ package.json
├─ package-lock.json
├─ node_modules
├─ workspace 1
│   └─ package.json
├─ workspace 2
│   └─ package.json
```

- internal vs external
- published vs non-published
- versioning
- deploying an individual microservice?

# Hands-on 2

*using shared packages in a monorepo*

Just kidding, make it light blue instead! 🤔

Warmest wishes, UX





We might want to change this again in the future...



```
cd mono/apps/front  
npm run dev
```

.....

```
|— apps  
|   |— front  
|       |— src  
|       |   |— main.ts  
|— packages  
|   |— component-library  
|       |— index.ts
```

```
cd mono/packages/component-library  
  
# make changes to button at index.ts
```

# Working in monorepo

## Hands-on 3: Installing a new package

## Hands-on 4: Shared configs

- eslint
- prettier
- tsconfig

# Some important concepts

- What is actually happening? Symlinks
- hoisting packages
- When does a package reside in app/node\_modules? When in root/node\_modules?
- Needing to use something like vite/babel
- Adding new workspaces

# Things to consider

- how to install new external packages?
  - harmonizing
- editor support
- converting with git history retained

# Hands-on 5: Using additional tools

Making running tasks easier with tools like turborepo

## Resources