# Bun JS runtime and toolkit

## CONCEPTS

Bun is one binary: runtime, package manager, test runner and bundler. It runs TypeScript and JSX directly, no build step.

Put Bun flags right after bun: 'bun --watch run dev'. After the script name they go to the script.

Dependency lifecycle scripts (postinstall) are blocked unless the package is in trustedDependencies.

## INSTALL AND ADD

`bun install`
Install all dependencies

`bun add <pkg>`
Add a dependency

`bun add <pkg>@<version>`
Add a specific version or tag

`bun add -d <pkg>`
Add a dev dependency

`bun add -g <pkg>`
Install a CLI tool globally

`bun install --frozen-lockfile`
Fail if lockfile is out of date

`bun ci`
Same as install --frozen-lockfile

`bun install --production`
Skip devDependencies

## REMOVE AND UPDATE

`bun remove <pkg>`
Remove a dependency

`bun update`
Update within package.json ranges

`bun update --latest`
Ignore ranges, take latest

`bun update -i`
Pick updates interactively

## REMOVE AND UPDATE (cont.)

`bun outdated`
Show packages with newer versions

`bun audit`
Check for known vulnerabilities

## RUN AND WATCH

`bun <file>`
Run a TS, JS or JSX file

`bun run <script>`
Run a package.json script

`bun --watch <file>`
Restart on file change

`bunx <pkg>`
Run a package binary without installing

## TEST

`bun test`
Run all tests

`bun test <path>`
Run files matching a path filter

`bun test -t '<regex>'`
Run tests by name pattern

`bun test --watch`
Re-run on file change

`bun test --coverage`
Print a coverage report

## BUILD AND SCAFFOLD

`bun init -y`
Scaffold with default answers

`bun build <entry> --outdir <dir>`
Bundle to a directory

`bun build <entry> --target <env>`
Target browser, bun or node

## WORKSPACES AND PACKAGES

`bun run --filter '<pattern>' <script>`
Run a script in matching workspaces