



React Refactoring Workshop

February 13th 2026



What is Refactoring?

The process of restructuring code without changing its external behavior and improve readability.

The goal?

- To transfer knowledge in your head to the code
- To reduce duplication
- To remove unused code
- To extend the life of the project
- To increase speed of new features
- To make onboarding easier
- To increase satisfaction and optimism
- And countless more...



"Poorly designed code takes more lines to achieve less, obscuring its intent" – Martin Fowler



Clean the code

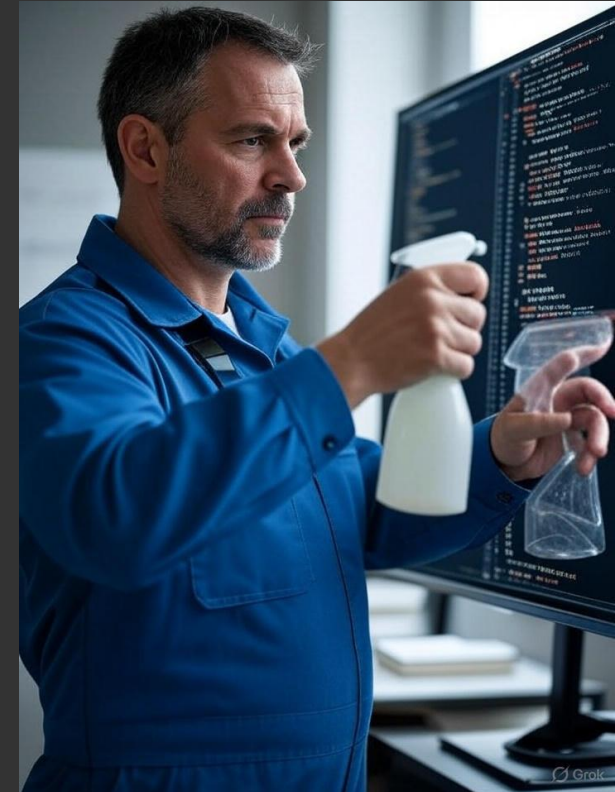
If you cannot refactor in big swoops, keep an eye out for litter code.
Try to leave components better than you found them

Identifying and eliminating unused code:

- Minimizes potential bugs from outdated logic
- Simplifies codebase for easier navigation
- Everything you see is guaranteed to do work

Tools for cleanup in React:

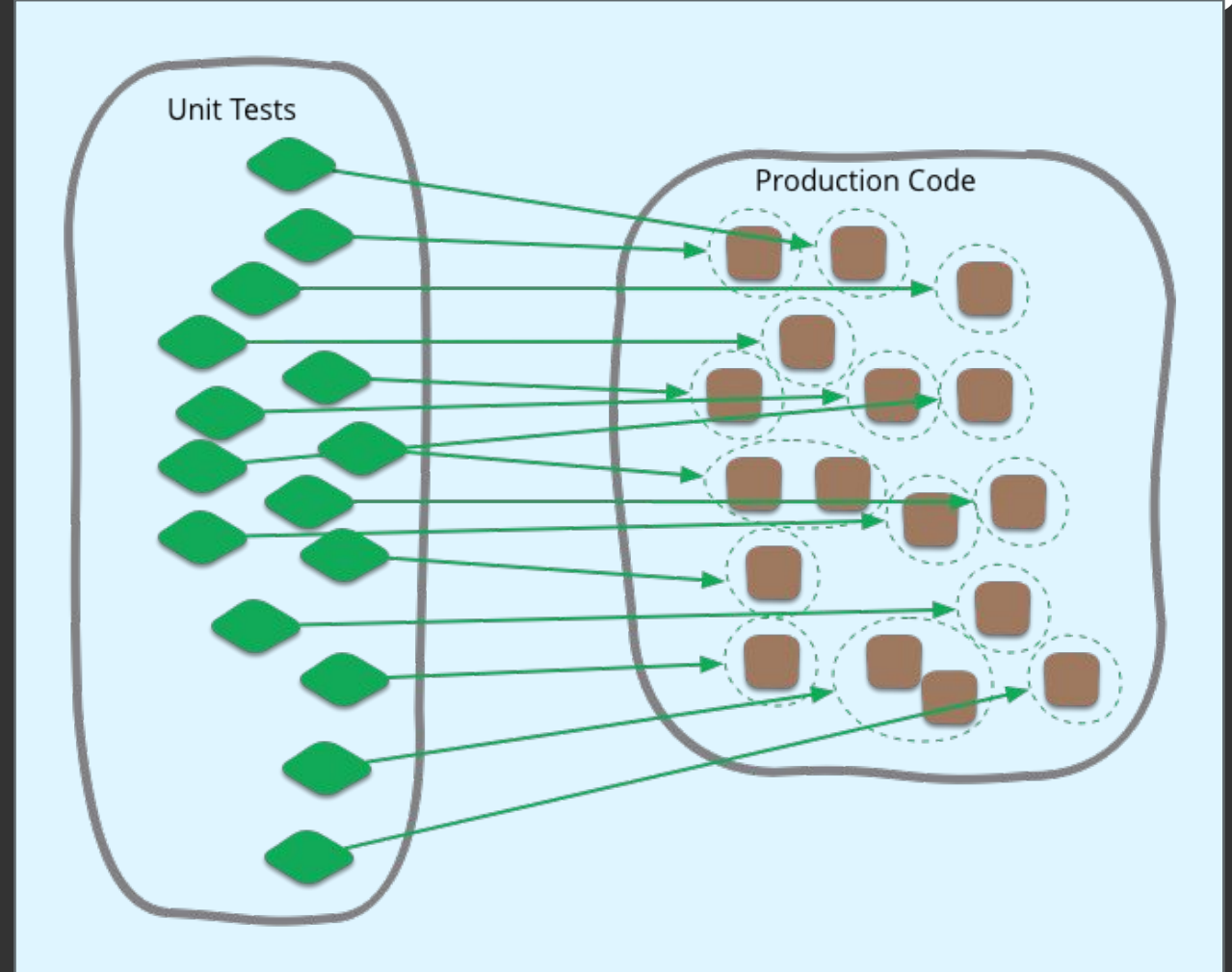
- ESLint + Prettier
- Biome?
- Code analysis tools: **Knip**
- IDE features: “**Find references**” in vscode



"Litter-pickup refactoring: Clear away the clutter you stumble upon to keep the codebase clean." – Martin Fowler

Unittesting

- Should we write unit tests?
- Enables refactoring to be possible
- Keep them small
- Mock if you have to, speed is important
- A couple of hundred unit tests should take seconds
- Test common utility functions!



<https://martinfowler.com/bliki/UnitTest.html>



Unittesting

- Colocation
- Colocation
- Colocation
- Colocation
- Multiple studies show it will have a higher chance of being maintained

Tools to use?

Vitest + React Testing Library

```
src/  
  components/  
    Button/  
      Button.tsx  
      Button.test.tsx  
    Header/  
      Header.tsx  
      Header.test.tsx
```

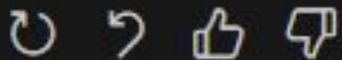


Copilot and refactoring?

Good when you know React and the codebase

- Bad instructions produce buggy code
- Have an idea of the work to be done
- Then you can write a better prompt
- Provide stacktraces and enough context with the prompt

Thank you for providing me with the stacktrace! I'll analyze the error information to help you resolve the issue.



The workshop

Reduce the lines of code!

- Google Keep clone
- Gamified refactoring
- Gold medal solution located here:
refactor/notes-app-solution
- Pause the metrics server if your pc starts struggling
- It runs all 107 tests and counting lines continuously

The screenshot displays the 'Notes App' interface. At the top, there's a search bar and a 'Refactoring progress' overlay. The overlay shows the current medal is 'Gold' (1500 lines) and lists metrics: 1500 Total Lines, 10 TSX Files, 6 TS Files, 6 CSS Files, and 107/107 Tests Passing. Below the overlay, the app shows a 'Pinned' section with 'Shopping List' and 'Vacation ideas' notes. The 'Shopping List' note has a checklist: 1000 liters of Milk, 1 Kamelásá (checked), 3 Spig snigel, and 2kg butter. The 'Vacation ideas' note has a color picker and a list of ideas. Below the pinned notes is an 'Others' section with 'Meeting Notes', 'Ideas for Weekend', and 'Book Recommendations'. The 'Meeting Notes' note has a list of tasks: Discuss project timeline, Assign tasks, and Set next meeting. The 'Ideas for Weekend' note has a list of ideas: Visit the park, Try new restaurant, and Watch a movie. The 'Book Recommendations' note has a list of books: The Alchemist by Paulo Coelho, Atomic Habits by James Clear, Project Hail Mary by Andy Weir. Below the others is an 'Archived' section with 'Workout Plan' and 'Life Goals'. The 'Workout Plan' note has a list of goals: 10 000 squats of 100kg every single day. The 'Life Goals' note has a checklist: Eat pizza (checked), Eat 1 Kamelásá (checked), Watch 3 Spig snigel grow, and Eat 2kg butter.

Notes App

Search notes...

Refactoring progress

Active medal: Gold 🏆

Metrics running

No medal >1700

Bronze 1700

Silver 1600

Gold 1500

Diamond 1450

1500 Total Lines

10 TSX Files

6 TS Files

6 CSS Files

107/107 Tests Passing

Pinned

Shopping List

- ☐ 1000 liters of Milk
- ☒ 1 Kamelásá
- ☐ 3 Spig snigel
- ☐ 2kg butter

Vacation ideas

Visit the beach. Explore the mountains. City

Color picker

Updated: 09:54 - 21.08.2025

Others

Meeting Notes

Discuss project timeline Assign tasks Set next meeting

Ideas for Weekend

Visit the park Try new restaurant Watch a movie

Book Recommendations

The Alchemist by Paulo Coelho Atomic Habits by James Clear Project Hail Mary by Andy Weir

Archived

Workout Plan

10 000 squats of 100kg every single day

Life Goals

- ☒ Eat pizza
- ☒ Eat 1 Kamelásá
- ☐ Watch 3 Spig snigel grow
- ☐ Eat 2kg butter



Where?

<https://github.com/DanielTaranger/refactor>

- Follow the readme and ask questions



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Hva er refaktorering?

Prosessen med å restrukturere kode uten å endre dens oppførsel og for å øke lesbarhet

Målet?

- Å flytte kunnskapen fra hodet til koden
- Å unngå duplisering
- Å fjerne ubrukt kode
- Å øke levetiden til prosjektet
- Å øke farten til nye saker
- Å gjøre onboarding lettere
- Å skape tilfredshet og optimismisme
- Og mye mer...



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Rydd opp I koden

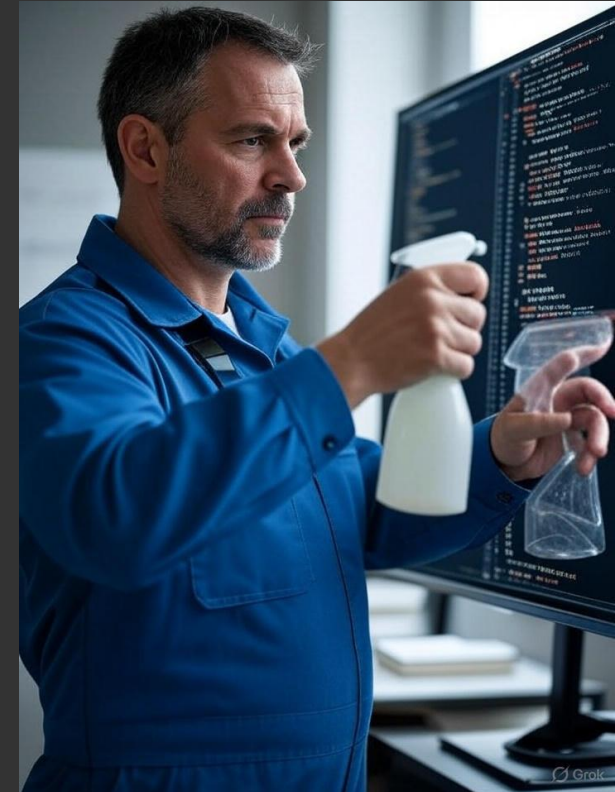
Hvis du ikke kan refaktorere i store omganger, pass på å se etter småting. Prøv å la komponentene være bedre enn du fant dem

Identifiser og eliminer ubrukt kode:

- Minimerer potensielle feil fra utdatert logikk
- Forenkle kodebasen for enklere navigering
- Alt du ser er garantert å gjøre arbeid

Verktøy for opprydding i React:

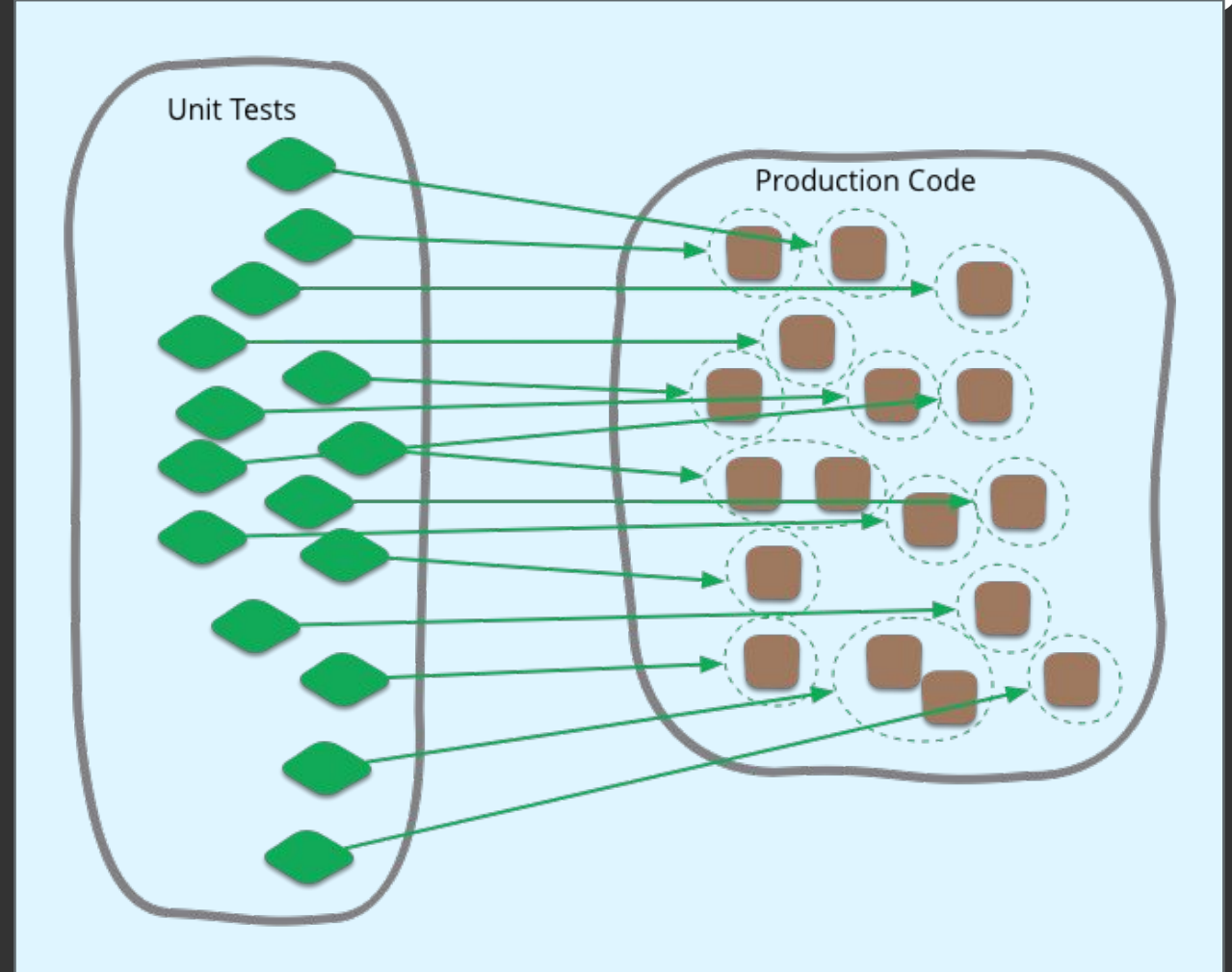
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Unittesting

- Bør vi skrive unittester?
- Gjør refaktorering mye lettere
- Hold testene små
- Mock hvis du må
- Et par hundre unittester burde ta sekunder
- Test common utility funksjoner



<https://martinfowler.com/bliki/UnitTest.html>



Unittesting

- Kollokasjon
- Kollokasjon
- Kollokasjon
- Kollokasjon
- Flere studier viser at kode vil ha høyere sjanse for å bli vedlikeholdt

Verktøy

Vitest + React Testing Library

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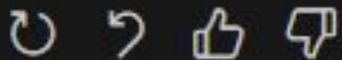


Copilot og refaktorering

Bra når du kjenner React og kodebasen

- Dårlige instruksjoner gir (ofte) dårlig kode
- Ha en ide om hva copilot skal gjøre
- Så kan du lettere skrive en god prompt
- Gi den feilmeldinger og nok kontekst sammen med prompten

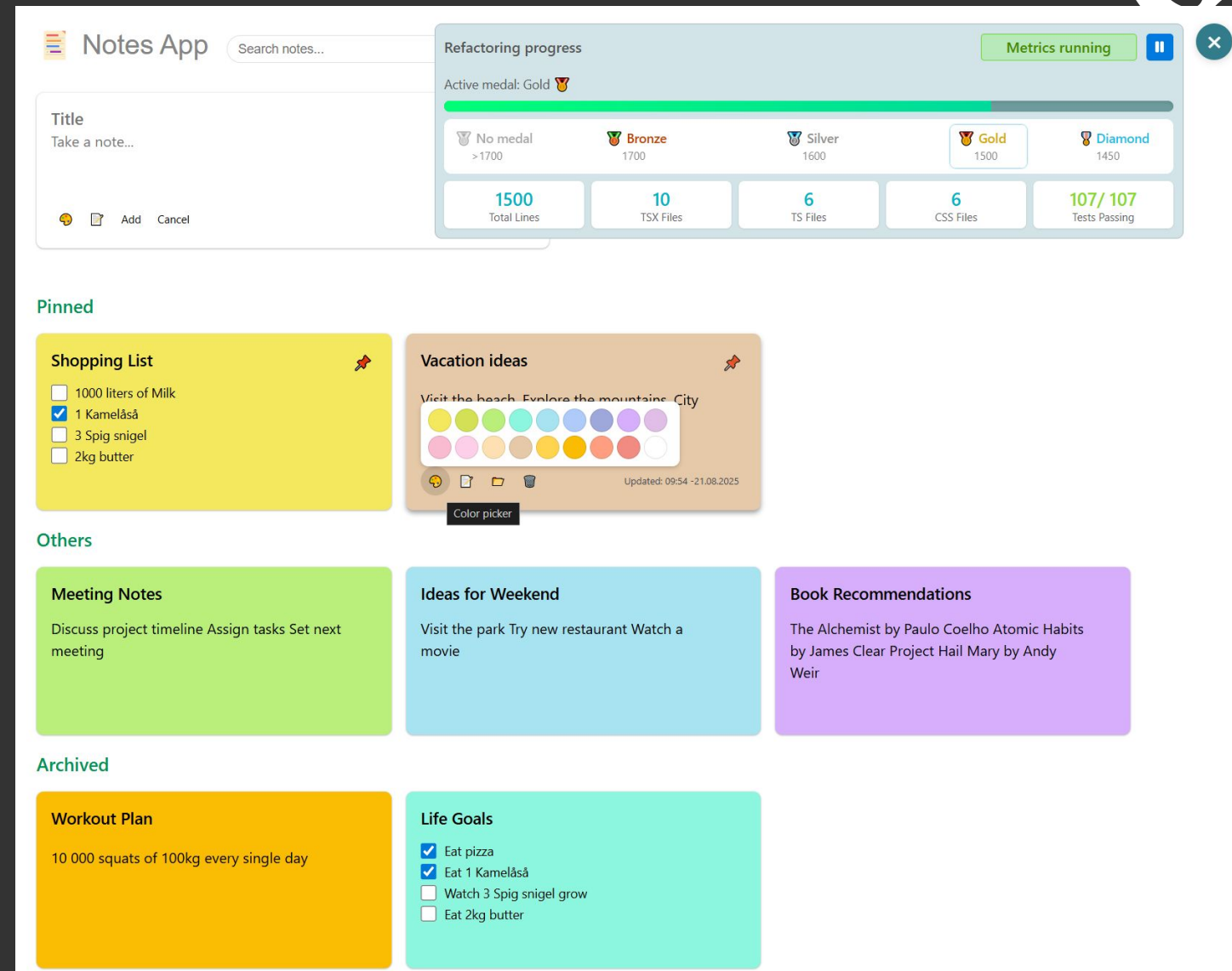
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Workshop

Reduser antall linjer med kode!

- Google Keep klone
- Gamified refaktorering
- Gull medalje løsning ligger i denne mappen: refactor/notes-app-solution
- Pause metrics serveren hvis pcen din sliter
- Den kjører 107 tester kontinuerlig og teller kode





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