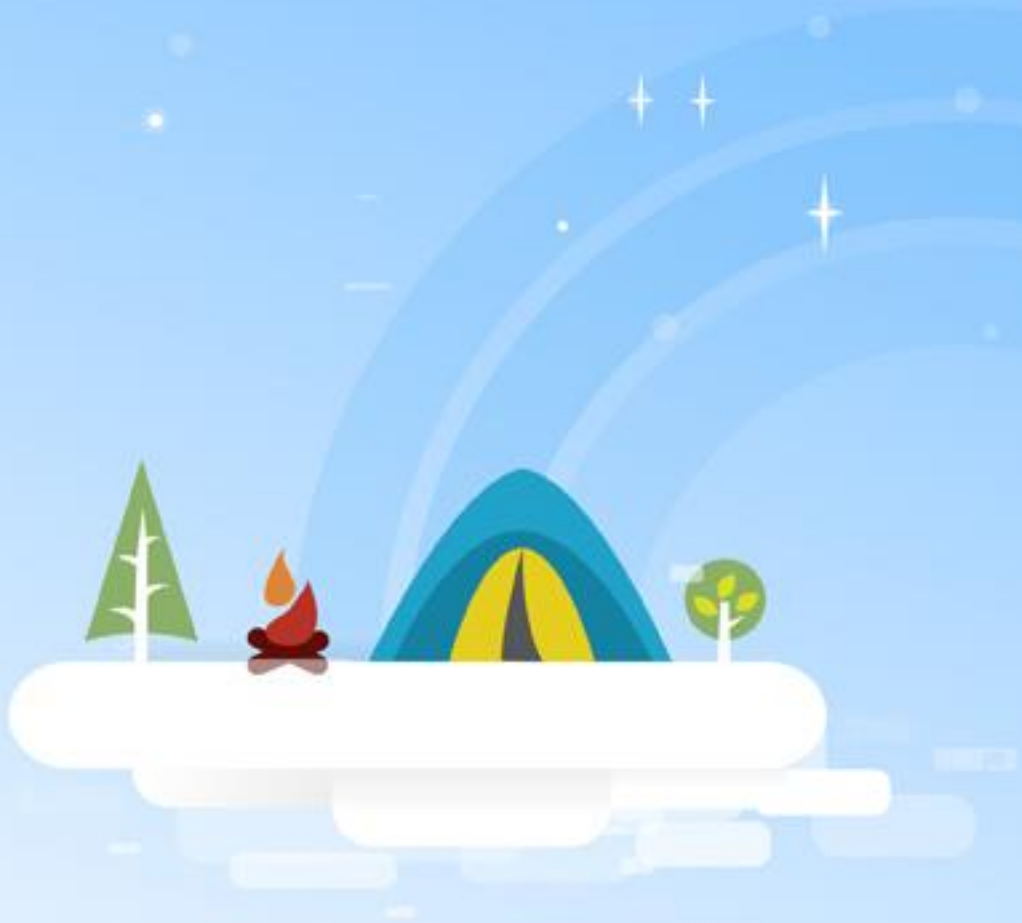

Refactoring

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Agenda

- What is Refactoring?
- How to implement Refactoring
- How to do Refactoring in Visual Studio?

What is Refactoring

What is Refactoring

- A change made to the internal structure of software to make it easier to understand and cheaper to modify without changing its observable behavior

Refactoring Happens

In larger systems (frameworks), code will be read and modified more frequently than it will be written

Refactoring typically involves

Removing duplicated or dead code

Simplifying complex code

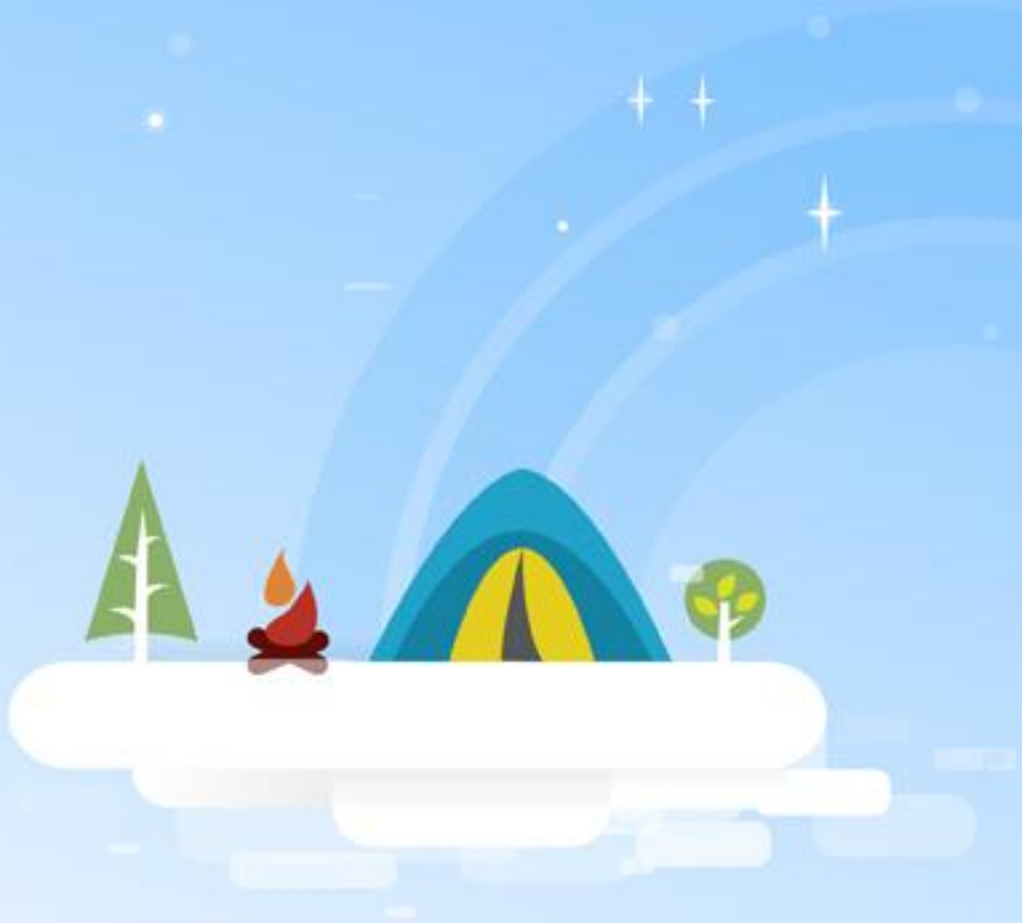
Clarifying unclear code

It turns out that removing code can actually be a good thing: your system has fewer lines of code

Easier to develop, maintain, and change

Refactoring can be risky, unless you do it in small steps and have automated tests that can be run anytime

How Implement Refactoring



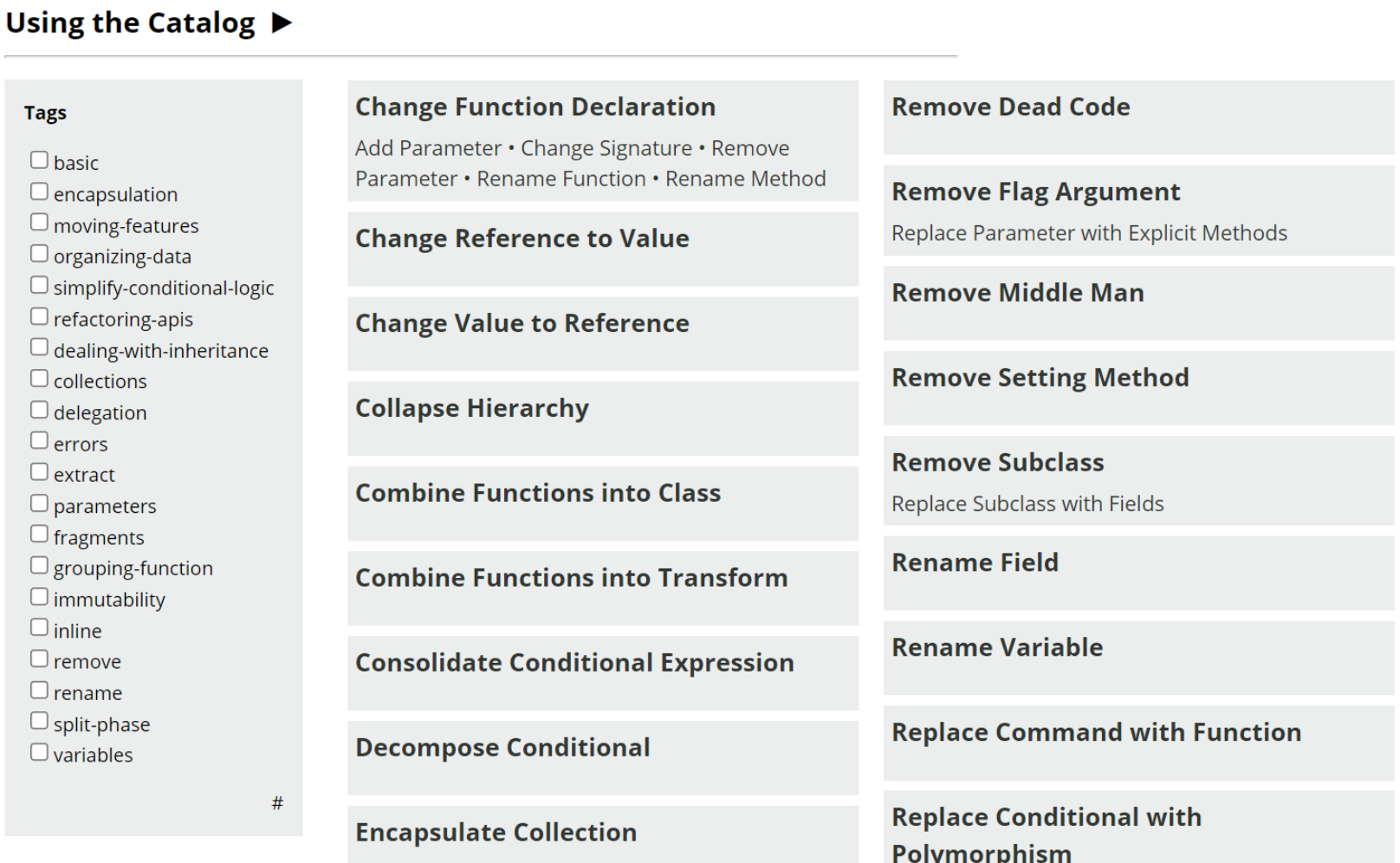
Refactoring Methods

- Encapsulate Field (do this virtually always)
  - add getters and/or setters to access a field
- Rename Method (often)
- Extract SuperClass (recall Shape and Fruit)
  - You have two classes with similar features
  - Create a superclass and move common features to the superclass
- Compose Method
  - A variety of refactorings can happen at the method level

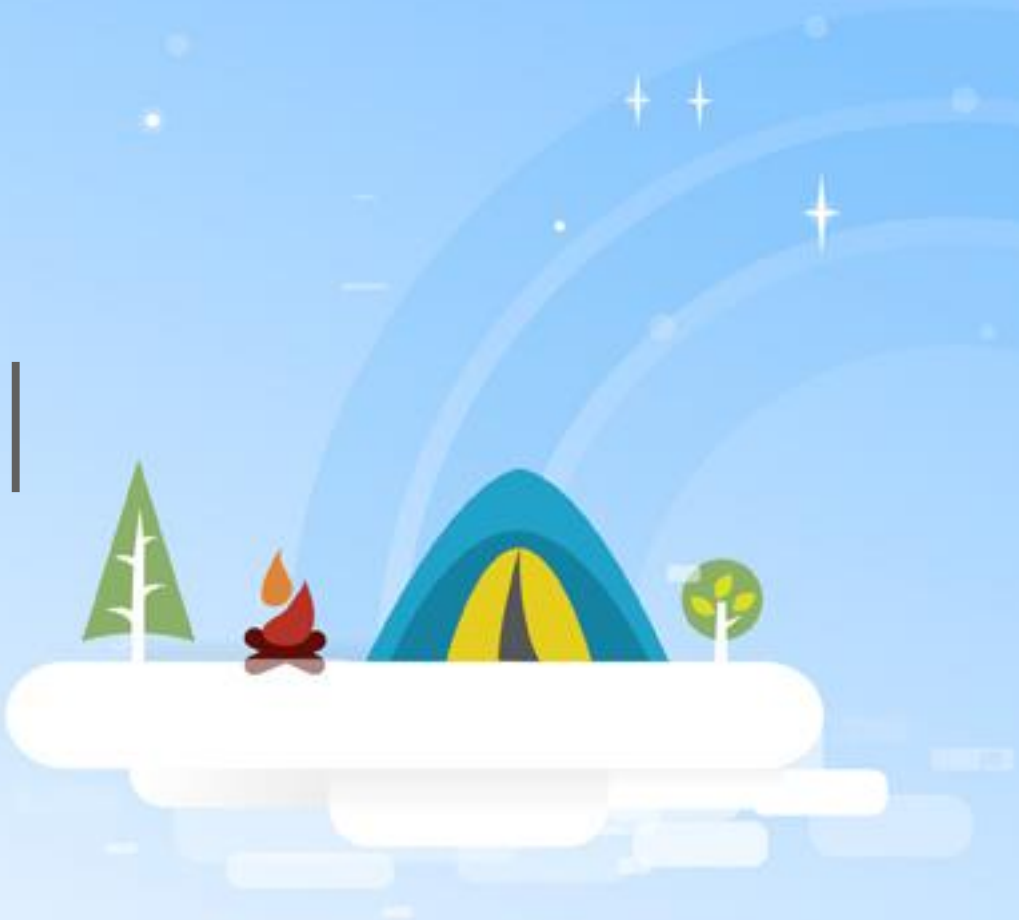
Catalog

Catalog

https://www.refactoring.com/catalog/



Refactoring in Visual Studio



Demo

Refactoring di Visual Studio 2019