Design Patterns

TL;DR

What is a design pattern?

Design patterns are `best practise strategies` to solve a `recurring problem`.

Whenever a problem arises, there are two options.

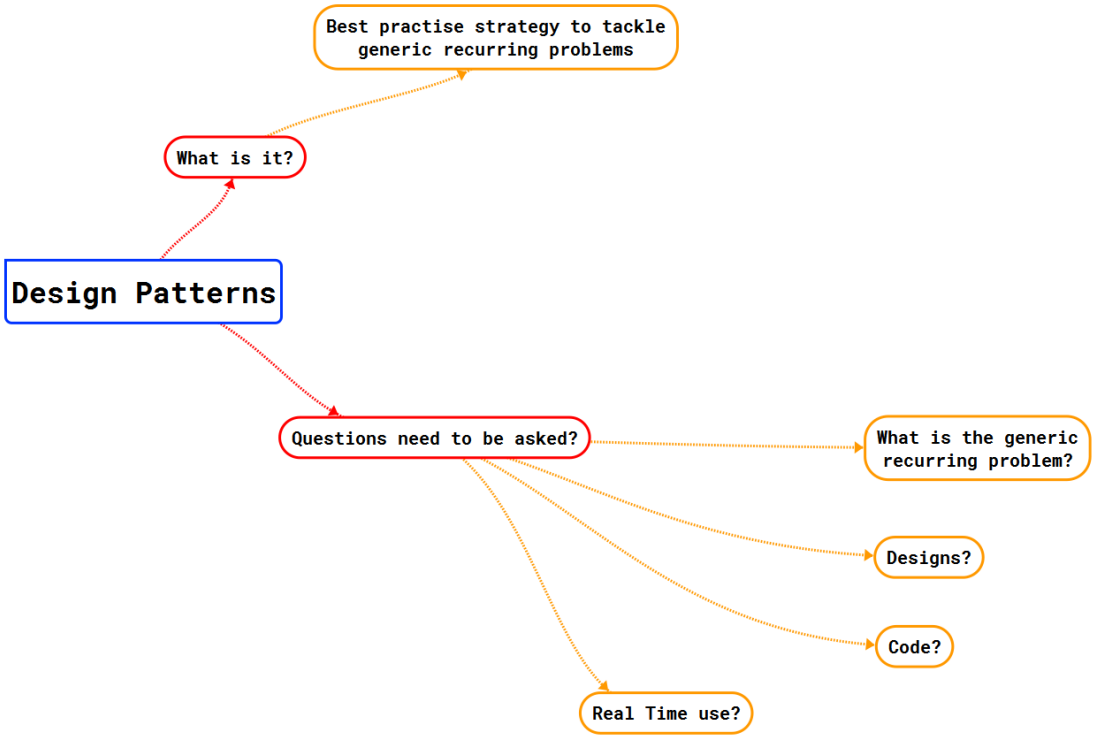

Figure 1: Design Patters

- If the problem is specific, invent a solution
- If the problem is generic and repeating, use design patterns

Questions to be asked when studying a design pattern

1. What is the common recurring problem?
2. What are the best strategies to solve them? (aka design)
3. Sample code
4. Real time use

Types of design patterns

There are 3 types of design patterns (CSB)

1. Creational design patterns Creational design patterns focus on controlling the object creation process

e.g: Constructor, Factory, Prototype, Singleton, Builder

2. Structural Design Patterns Structural design patterns focus on realizing relationships between different objects.

e.g: Decorator, facade, Flyweight, Adapter, Proxy

3. Behavioral design Patterns Behavioral design patterns focus on improving or streamlining communication between objects

e.g: Iterator, Mediator, Observer and mediator.

Interview Questions

1. Awesome Interview
2. InterviewBit