Strategy Design Pattern

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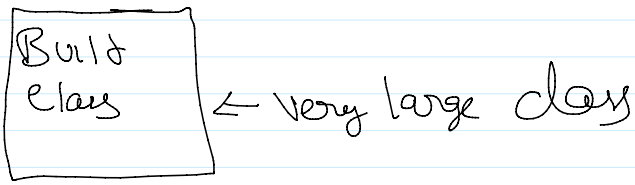
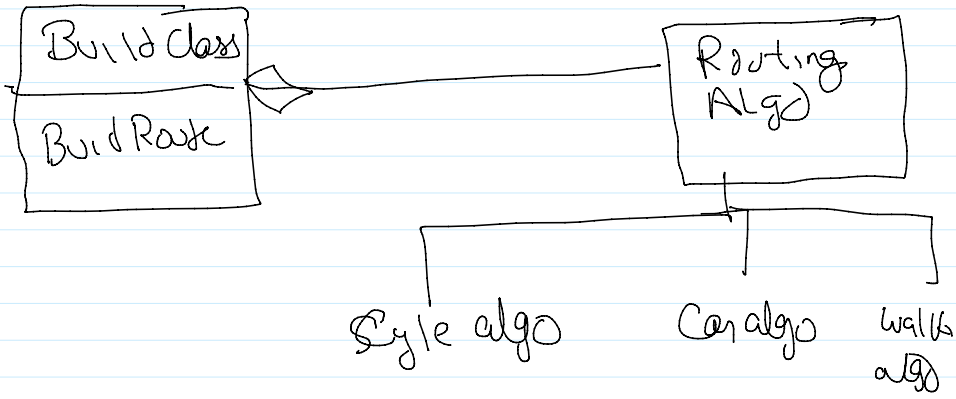
Intent – Define a family of algorithms, encapsulate each one & make them interchangable

Example – We have a class called Build route which focus on creating routes especially for car. Now we add logic for walking, cycling in that class. The class becomes complex. 😵



So using Strategy patter we separate the algorithm for Car, cycle, walking and use the class using composition

So



Client will do

new Build class (new Cycle)

Applicability

- Many Related class only differ only in their behaviors
- Need Many different algorithms

Participants

1. Strategy (Routing algo) – Declares an interface common to all supported algorithms.

2 Concrete Strategy - (CycleAlgo, WalkAlgo) — Implements the algo using Strategy interface

3 Context (Build class) - Maintains a reference with a concrete Strategy.

- Can create child of Context like Factory and these child than uses concrete Strategy. But this makes it unnatural
- Strategy Eliminate Conditional Statements
- Client have to be aware of the algo.