**BCPR301 – Advanced Programming**

**Assessment 3 Marking Sheet**

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# The compulsory (i.e., ZERO mark if not being provided)

1. You MUST submit a filled self-marking sheet to indicate how many marks you think you can get for each section in the marking guide provided below.

I think should have 39 marks

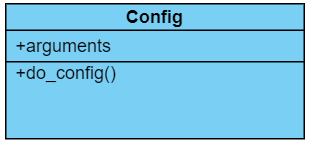
# Marking guide (20 \* N marks in total where N = 2)

1. The class diagram **before** your modification (4 marks)
2. **Template Method**

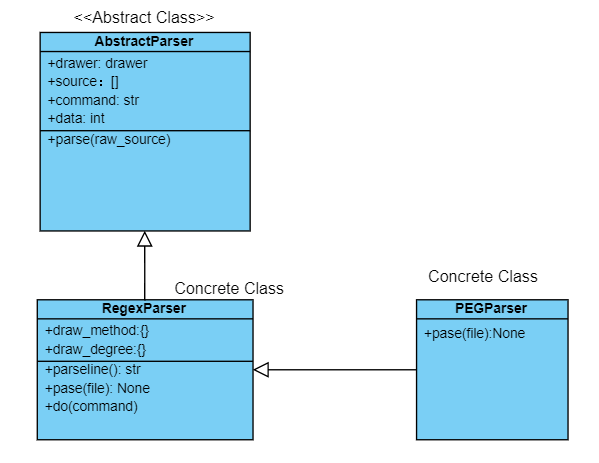
the before code wasn’t in a class, it’s a long method under if \_\_name\_\_ == “\_\_main\_\_” which used for identify and load config files



Before refactoring, I put this long algorithm in a class named Config which only has one method do\_config:



1. **Strategy Method**



1. The locations of code involved (i.e., code reference) **in your target assignment 1 or 2 solutions** (4marks)

I used my Assignment 1 as a code base for assignment 3’s further improvement.

1. **Template Method**

**Target**

Assignment 1

tigr.py/line28-60

**Solution**

Assignment 3

Client : tigr.py/line 30-49

Template class : tigr/config/templateConfig

Concrete class A: tigr/config/iniConfig

Concrete class B: tigr/config/ymlConfig

1. **Strategy Pattern**

**Target**

Assignment1

tigr/paser/regex\_parser.py/line 5-85

tigr/paser/peg\_parser.py/line 9-43

**Solution**

Assignment3

Abstract Class: tigr/paser/strategy\_parser.py/class StrategyParser/line 5-36

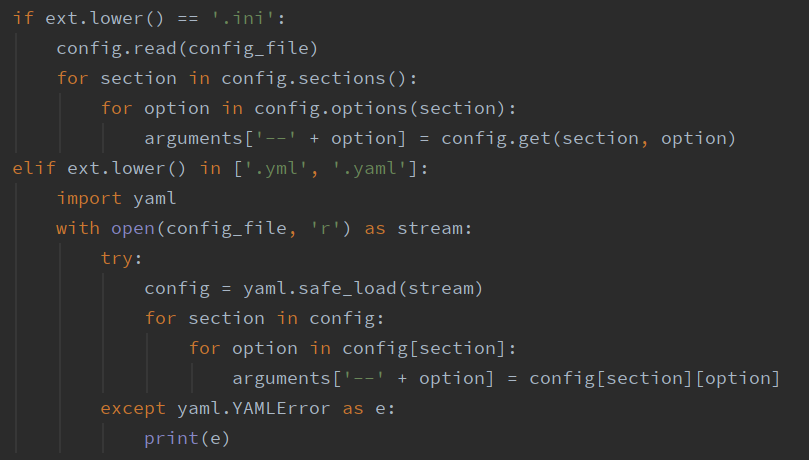
Concrete Class A : tigr/paser/ regex\_parser.py /class RegexParser/line 5-58

Concrete Class B: tigr/paser/peg\_parser.py/class PEGPaser/line 10 - 44

1. The name of the design pattern applied (4 marks)
2. **Template Method**
3. **Strategy Pattern**
4. The reasons why applying this design pattern is suitable; the reasons **MUST be specified** for the particular situation you try to apply, i.e., **do not just give general reasons** why using that design pattern is good. (3 marks)
5. **Template Method**

The before code was a long if else statement chain and wasn’t in class, which would be difficult for code reusing and adding new features and against the principle of single responsibility

Assignment code can implement 2 types of configure files which are ini and yaml:

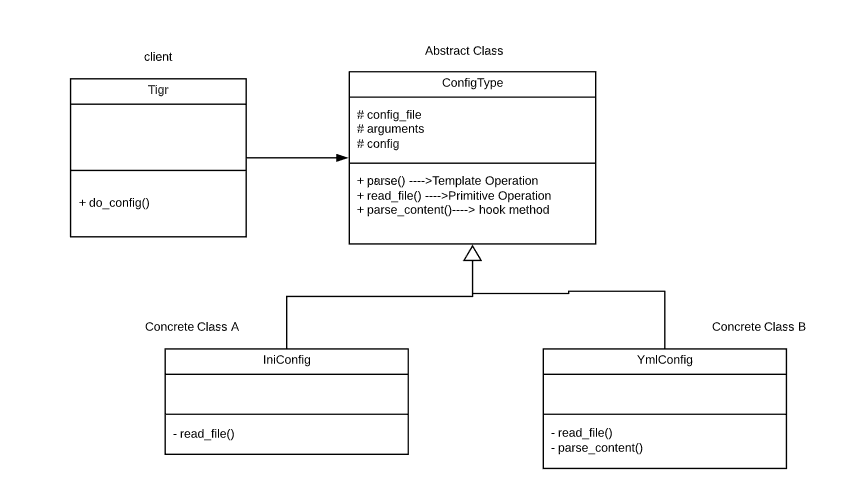


In the future, we may need to implement more types of configure file, applying Template Method helps to encapsulate algorithm of loading different configure files and open for code extensions.

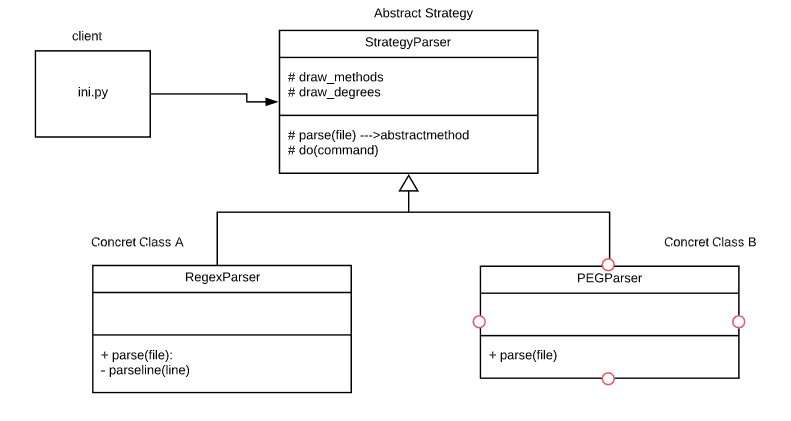
1. **Strategy Pattern**

Before applying StrategyPattern, class PEGParser was a subclass of RegexParser, which result in tight coupling between these two classes, it would be hard to modified RegexParser without affecting on PEGParser. Applying StrategyPattern can resolve this problem, by creating common superclass for concrete classes to depend on. And later we can extend functionality by subclass another concrete class of the abstract class.

1. The class diagram after your modification; all the components in the design pattern class diagram provided in our textbook should be **explicitly labelled** in your class diagram. (2 \* N marks)
2. **Template Pattern**



1. **Strategy Pattern**



1. Applying the design pattern proposed. Your assignment 3 solution needs to pass PEP8 check (10 \* N marks)

The assignment 3 solutions passed PEP8 check attached code for your reference