# Advance Programming Assessment 2 - Refactoring

## Smell Detection

Smell # 1:

Name: Large Class

Location: <package:refactoring> - <interpreter.py> - <class:Interpreter>

Reasons:

1. The class is doing multiple things at the same time
2. Reduced readability
3. Finding which feature was/is broken will take time the larger the class becomes

Strategies / Approaches:

1. Extract class
   1. Creating a <Loader> class
      1. Relocating the <read\_file> method from <Interpreter> to <Loader>

Smell # 2:

Name: Long Method

Location:

<package:refactoring> - <interpreter.py> - <class:Interpreter> <method:get\_details()>

<interpreter.py> - <class:Interpreter> <method:data\_parser()>

<class\_grabberr.py> - <class:ClassGrabber> <method:add\_under()>

Reasons:

The more functions are added to a method, the more complex it becomes, at the same time it also becomes larger.  
As the method grows, explaining what it does also becomes harder, as it does more than what was initially planned for the method to actually do.

As the method grows, aside from the **Long Method** bad smell, this also leads to another bad smell which is the **Large Class**.

Strategies / Approaches:

* Extract Method
  + Creating another method to break down the stated Long Methods.

Smell # 3:

Name: Duplication

Location:

<package:refactoring> - <class\_grabber.py> - <class:ClassGrabber> <method:get\_attrib/method()>

Reasons:

2 methods doing essentially the same thing, creating unnecessary lines of codes. That is, appending string values inside 2 different string arrays.

Strategies / Approaches:

* Extract Method:
  + Create a singular method based on the duplicating methods, adding another parameter for the array in which a input string will be appended to.

Smell # 4:

Name: Switch/If Statements

Location:

<package:refactoring> - <class\_grabber.py> - <class:ClassGrabber> < method:add\_under ()>

Line 44 - 55

<loader.py> - <class:Loader> <method:load\_file()>

Line 16 - 24

<interpreter.py> - <class:Interpreter> <method:data\_parser()>

Line 50 – 67

<interpreter.py> - <class:Interpreter> <method:get\_details()>

108 - 136

Reasons:

Hard coded conditions that only really help a couple of problems but requires multiple lines of codes.

Strategies / Approaches:

* Extract Method:
  + Create a singular method based on the duplicating methods, adding another parameter for the array in which a input string will be appended to.