

ENGI 9874

Software Design and Specification

[Assignment 2 Rubric]
November 10th, 2018

Question 1: Observer and Command Patterns [50 marks]

- a) Interface should allow run the required operations on data structure [7]
- b) Observable Interface implementation [14]
- c) Some Junit Tests that describe the proper working of your pattern [8]
- d) Use of command pattern, Undo and Redo capabilities [14]
- e) Some Junit Tests that describe the proper working of your pattern [7]

Question 2: Expressions - Composite and Abstract Factory Patterns [30 marks]

- 1. Implement the immutable class [5]
- 2. Use abstract class and abstract method [5]
- 3. Required expression representation in class [5]
- 4. Implement value(double) and toString() methods [5]
- 5. Use of ExpressionFactory [5]
- 6. Write appropriate JUnit Tests [5]

Question 3: Graphing [20 marks]

- 1. Create class with required methods [4]
- 2. Apply the invariance on mutation of fields [4]
- 3. Technique of respecting the invariant (precondition) [4]
- 4. Making assertions on the preconditions [4]
- 5. Writing the appropriate tests for your solutions [4]