

# CSE-3216 Software Design Patterns Lab

## Lab Task 2

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23 August, 2022

### Assumptions:

1. Random Sentence Generator (RSG):
  - a. Random selection may contain up to three repetitions of the same word
  - b. The picked words are ordered randomly
2. Sorted Sentence Generator (SSG):
  - a. Random selection may contain up to three repetitions of the same word
  - b. The picked words are ordered alphabetically
3. Ordered Sentence Generator (OSG)
  - a. Random selection may contain up to three repetitions of the same word
4. The input words are assumed to contain only English alphabets and it cannot contain white spaces

### Description:

The classes have been designed using Strategy Design Pattern. There are two strategies used here, implemented by two interfaces

1. Interface IWordAdder: Implemented by class WordAdderLower and WordAdderUpperReverse
2. Interface IWordGenerator: Implemented by classes WordGeneratorRandom, WordGeneratorSorted and WordGeneratorOrdered

The Generator class contains instances of the two interfaces (the two strategies). These interfaces can be specified at the time of creation of a Generator object. The Generator class executes its methods by calling the corresponding methods in the respective interfaces it contains.

There are three other classes named SentenceGenerator10, MenuHandler and Randomizer which are used for the UI and for randomization purposes.