

Java Developer (Tasks)

Coding Question1:

Write me a function that receives three integer inputs for the lengths of the sides of a triangle and returns one of four values to determine the triangle type (1=scalene, 2=isosceles, 3=equilateral, 4=error).

Answer:

main method: `execute class coding.question.one.classifiers.TriangleClassifier`

jUnit test: `execute class coding.question.one.tests`

Coding Question 2:

Read a text file with English text and list the top 10 words, sorted by occurrence

- For simplicity, words are considered to consist of the characters a-z lower and upper and all digits
- Words are separated by any other character
- Bonus question: Can this be done without reading in the entire text file into memory?

(done, see method `TextAnalyzer.readMemoryMapped()`)

- Bonus question: Handle UTF-8 and non-English alphabets (done)
- Bonus question: Word delimiters. Hyphen, word-breaks, non-breaking spaces (done)
- Bonus question: Is it possible to use an algorithm that allows us to handle very large data sets?

(done, see method `TextAnalyzer.readLargeData()`)

Answer:

(suggested) main method: `execute class coding.question.two.filecounter.TextAnalyzer`

(see method `TextAnalyzer.readUTF8()`)

jUnit test: `execute class coding.question.two.test.TestTextAnalyzer`

Coding Question 3:

Implement a generic "bag" container that follows guidelines from the Java Collections library

- Bag is here understood as a data structure that differs from a set in that it allows several copies of equal elements
- It is not required to store each object separately, but can freely choose to consider equal objects identical
- It is not necessary to add the whole range of operations
- Implement with generics

Answer:

main method: execute class `coding.question.three.collections.Bag`

jUnit test: execute class `coding.question.three.test.TestBag`