

110-1 Assignment #2 (7%)

Class, Objects, Instance/Static Methods, Encapsulation

Requirements:

- Implement a class **TextFeature**. For the purpose of this exercise an **TextFeature** has an **ARI**, **numWord**, **numSentence**, **numCharacter**, **numVowel**.
- You are required to implement a tester class **TextFeatureTester**.

Instance fields (i.e., attributes):

Attribute name	Attribute type	Description
<code>docID</code>	int	The document ID, starts from 000.
<code>ARI</code>	int	Automated Readability Index: $GL = 0.37 (\text{words/sentence}) + 5.84 (\text{characters/word}) - 26.01$
<code>numWord</code>	int	Number of word
<code>numSentence</code>	int	Number of sentence
<code>numCharacters</code>	int	Number of character
<code>numVowel</code>	int	Number of vowel (i.e. a, e, i, o, u)

Public interface:

Provide a constructor to set these default values.

```
public TextFeature ( )
```

Write a static method

```
setDocID(int)
```

that increment the static variable *docID* by 1.

The following modifier(mutator) methods should be provided to set the attributes:

```
public setARI(int)
```

```
public setNumWord(int)
```

```
public setNumSentence(int)
```

```
public setNumCharacter(int)
```

```
public setNumVowel(int)
```

The following accessor methods should be provided to get the attributes:

```
public getARI(int)
```

```
public getNumWord(int)
```

```
public getNumSentence(int)
```

```
public getNumCharacter(int)
```

```
public getNumVowel(int)
```

The following method must be defined:

```
public toString(): String
```

The *toString* method should return a string of an "TextFeature" object in the following format:

```
\n\nThe document ID is: \t001\n
```

```
\n\nThe ARI readability of the document is: \tGL11\n
```

```
\n\nThe number of word is: \t392\n
```

```
\n\nThe number of sentence is: \t45\n
```

```
\n\nThe number of character is: \t1192\n
```

```
\n\nThe number of vowel is: \t674\n
```

Extra point (1%):

Modify your HW1, provide a method *getARI* from the *ReadabilityScore* class that you can use in this assignment to get the real ARI from the dataset.

Submission: Your Java project is named yourStudentID_HW2. Put all files in a folder and compressed it. Submit your assignment on eCourse2 under HW2. No other submissions will be graded and points will be deducted for late submission.

Academic dishonesty: You may not do work for another student nor may any student copy or plagiarize someone else's work. Severe penalties will be imposed on all parties involved.

Deadline: Thursday, November 25, 2018. (end of the day)