Class ClassData

java.lang.Object
    ClassData

```
public class ClassData
extends Object
```

Represents the training data for a specific class in the Naive Bayes Classifier.

Constructor Summary

Constructors

Constructor	Description
`ClassData(String directory)`	Constructs a ClassData object with the specified directory.

Method Summary

All Methods Instance Methods Concrete Methods

Modifier and Type	Method	Description
void	`addDocuments(String document)`	Adds a document to the ClassData object for training purposes.
double	`calculateProbability(String document)`	Calculates the probability of a document, based of the words in the documents and the training data.
double	`calculateWordProbability(String word)`	Calculates the probability of a word based on the training data using Laplace smoothing.
String	`getDirectory()`	Gets the directory of this class.
int	`getTrainingDocumentCounter()`	Gets the number of training documents for this class.
Map <String ,Integer >	`getWordCount()`	Gets the word count map for this class.

Methods inherited from class java.lang.Object

clone , equals , finalize , getClass , hashCode , notify , notifyAll , toString , wait , wait , wait

Constructor Details

ClassData

```
public ClassData(String  directory)
```

Constructs a ClassData object with the specified directory.

Parameters:

`directory` - The directory representing the class.

Method Details

addDocuments

```
public void addDocuments(String  document)
```

Adds a document to the ClassData object for training purposes. Replaces every non-letter with a whitespace.

Parameters:

`document` - The document to be added.

calculateProbability

```
public double calculateProbability(String  document)
```

Calculates the probability of a document, based of the words in the documents and the training data.

Parameters:

`document` - The document for which the probability is calculated.

Returns:

The probability of the document belonging to this class.

calculateWordProbability

```
public double calculateWordProbability(String  word)
```

Calculates the probability of a word based on the training data using Laplace smoothing. Laplace smoothing is applied to avoid zero probabilities for unseen words.

Parameters:

`word` - The word for which the probability is calculated.

Returns:

The probability of the word based on the training data.

getDirectory

```
public String  getDirectory()
```

Gets the directory of this class.

Returns:

The directory representing the class.

getTrainingDocumentCounter

```
public int getTrainingDocumentCounter()
```

Gets the number of training documents for this class.

Returns:

The number of training documents.

getWordCount

```
public Map <String ,Integer > getWordCount()
```

Gets the word count map for this class.

Returns:

The word count map.