Ciphers Lab

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Here are the classes, structs, unions and interfaces with brief descriptions:

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2.1 Cipher Class Reference

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2.1.1 Detailed Description

This lab requires you to use Java's `String` methods, together with the “remainder" function, written `ab`, which returns the remainder of `a` divided by `b`. In addition, the methods, `encipher(String plainText)` and `decipher( String cipherText )` must use either the `StringBuilder` or the `StringBuffer` class in order to construct their return values, which are encrypted or decrypted `String`s, respectively.

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2.1.2 Constructor & Destructor Documentation

2.1.2.1 Cipher (int *key*)

The only public constructor: requires an integer that will be remembered (as a private property) and used the "key" to encipher and decipher text. Note: you should create your own Cipher object, with your own key, to effectively use this class.

2.1.3 Member Function Documentation

2.1.3.1 String decipher (String *cipherText*)

This method (function) takes cipher Text (Strings) to plain Text (Strings) by reconstructing the cipherText, character by character, into the plain Text. It does this by using the key, along with some modular arithmetic, to transform each character in the cipher Text.

Note: your method should use the StringBuilder (or StringBuffer) class to hold the return value. Teaching assistants will be scanning your implementation to ensure that your code uses the StringBuilder or StringBuffer class appropriately.

Parameters

cipherText	

Returns

2.1.3.2 String encipher (String *plainText*)

This method (function) takes plain Text (Strings) to cipher Text (Strings) by reconstructing the plainText, character by character, into cipher Text. It does this by using the "key" to transform each character.

Note: this method should use the StringBuilder (or StringBuffer) class to hold the return value. Teaching assistants will be scanning your implementation to ensure that your code uses the String Builder or String Buffer class.

Parameters

plainText	

Returns

The documentation for this class was generated from the following file:

- /Users/tomreinhardt/Dropbox/CMSC131/Labs/Lab-Ciphers-Canonical/src/Cipher.java

2.2 PublicTests Class Reference

Public Member Functions

- void **testCipher** ()

- void **testEncipher_Decipher_3** ()
- void **testEncipher_Decipher_11** ()
- void **testEncipher_Decipher_66** ()

The documentation for this class was generated from the following file:

- /Users/tomreinhardt/Dropbox/CMSC131/Labs/Lab-Ciphers-Canonical/src/PublicTests.java

2.3 StudentTests Class Reference

Public Member Functions

- void **testCipher** ()
- void **testEncipher** ()
- void **testDecipher** ()

The documentation for this class was generated from the following file:

- /Users/tomreinhardt/Dropbox/CMSC131/Labs/Lab-Ciphers-Canonical/src/StudentTests.java

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