Assignment 2: Caesar Cipher

Data Structures and Algorithms

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Instructions:

ASSIGNMENT 2:

Write a program that can perform the Caesar cipher for English messages that include both upper- and lowercase characters.

To know more about the Caesar cipher, view the video from the link below.

https://youtu.be/sMOZf4GN3oc

Work to be presented live. Schedule to be announced.
Code may also be possibly used for the M2 exam.

Code:

CaeserCipher.java

```
/* author: @dan-arnaiz
 *
 *
 */


public class CaesarCipher {
   public static String caesarCipher(String text, int shift) {
      StringBuilder result = new StringBuilder();
      char ch;
      for (int i = 0; i < text.length(); i++) {
         if (Character.isUpperCase(text.charAt(i))) {
            ch = (char)(((int)text.charAt(i) + shift - 65) % 26 + 65);
         } else {
            ch = (char)(((int)text.charAt(i) + shift - 97) % 26 + 97);
         }
         result.append(ch);
      }
      return result.toString();
   }

   public static void main(String[] args) {
      String text = "HelloWorld";
      int shift = 3;
      System.out.println("Text  : " + text);
      System.out.println("Shift : " + shift);
      System.out.println("Cipher: " + caesarCipher(text, shift));
   }
}
```

Testing:

```java
/*author: @dan-arnaiz
 *
 *
 */


public class CaesarCipher {
    public static String caesarCipher(String text, int shift) {
        StringBuilder result = new StringBuilder();
        char ch;
        for (int i = 0; i < text.length(); i++) {
            if (Character.isUpperCase(text.charAt(i))) {
                ch = (char)(((int)text.charAt(i) + shift - 65) % 26 + 65);
            } else {
                ch = (char)(((int)text.charAt(i) + shift - 97) % 26 + 97);
            }
            result.append(ch);
        }
        return result.toString();
    }

    public static void main(String[] args) {
        String text = "HelloWorld";
        int shift = 3;
        System.out.println("Text  : " + text);
        System.out.println("Shift : " + shift);
        System.out.println("Cipher: " + caesarCipher(text, shift));
    }
}
```

Result: