Alexandria Higher Institute for Engineering and Technology
Computer Department – First Grade
Project: **Caesar Cipher Encryption and Decryption**
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Caesar's Code

In cryptography, a Caesar Cipher, also known as Caesar's Code is one of the simplest and most widely known encryption techniques.
For example, with a shift of 1, A would be replaced by B, be would become C, and so on. The method is named after Julius Caesar, who used it in his private correspondence.

Write a code that accepts a sentence, encrypt and decrypt it using **Caesar Cipher** then print the sentence after encryption and decryption.

Check the following link for more details:
http://en.wikipedia.org/wiki/Caesar_cipher

CAESAR CIPHER

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```
import java.util.Scanner;
public class CaesarCipherEncryption {
	public static void main(String[] args) {
			startup();
	}
	/**
	 *startup of program asking whether user wants encryption or
	 *decryption,informing him if he enters an incorrect answer
	 */
	private static void startup() {
		Scanner getInput = new Scanner(System.in);
		System.out.print("Choose 1=Encryption 2=Decryption: ");
			switch (getInput.nextInt()) {
			case 1:
				encryption();
				break;
			case 2:
				decryption();
				break;
			default:
				System.err.println("Enter a valid number.");
				startup();
				break;
			}
	}
	/**
	 *A method to ask the user if he wants to encrypt or decrypt
	 *another message
	 */
	private static void continous(Scanner getInput) {
		System.err.print("Do you want to continue? (Y/N)");
		switch (getInput.next().toUpperCase()) {
			case "Y":
				startup();
				break;
			case "N":
				System.exit(0);
				break;
			default:
				System.err.println("Re-enter your answer.");
				continous(getInput);
				break;
		}
	}
```

```
//Encryption method
 private static void encryption() {
      Scanner getInput = new Scanner(System.in);
      System.out.print("Enter your message for encryption: ");
      String forEncryption = getInput.nextLine();
      forEncryption = forEncryption.toUpperCase();
      String encryptedText = "";

      for (int i=0 ; i < forEncryption.length() ; i++) {
           char temp = (char) ('A' + (forEncryption.charAt(i)
           - 'A' + 3) % 26);
           encryptedText += temp;
      }
      System.out.println("Encrypted Text: " + encryptedText);
      continous(getInput);
 }

//Decryption method
 private static void decryption() {
      Scanner getInput = new Scanner(System.in);
      System.out.print("Enter your message for decryption: ");
      String forDecryption = getInput.nextLine();
      forDecryption = forDecryption.toUpperCase();
      String decryptedText = "";

      for (int i=0 ; i < forDecryption.length() ; i++) {
      char temp = (char) ('Z' + (forDecryption.charAt(i)
       - 'Z' - 3) % 26);
      decryptedText += temp;
      }
      System.out.println("Encrypted Text: " + decryptedText);
      continous(getInput);
 }
}
```