14.03 Assignment Instructions

Instructions: Write a program to encode or decode a message using a Caesar Shift.

Part 1: Encryption

1. Be sure you have read the 14.03 Virtual Lecture Notes -to understand the Caesar Shift algorithm.
2. Create a new project called 14.03 Caesar Shift Cipher in the Mod14 Assignments folder.
3. Create two new classes called CaesarShiftEncryption and CaesarShiftTester in the newly created project.
4. Provide a menu to allow the user to choose between encryption and decryption. Allow the user to continue entering messages for processing until he/she decides to quit.
5. Ask the user to input a shift key value (0–25) and the plaintext message.
6. The Alphabet needs to be a class constant. Need to figure out which class to put it in.
7. Write a static method to generate the cipher alphabet based on the key and print the new alphabet to the screen.
8. Write a static method to encrypt the plaintext message and print the result.

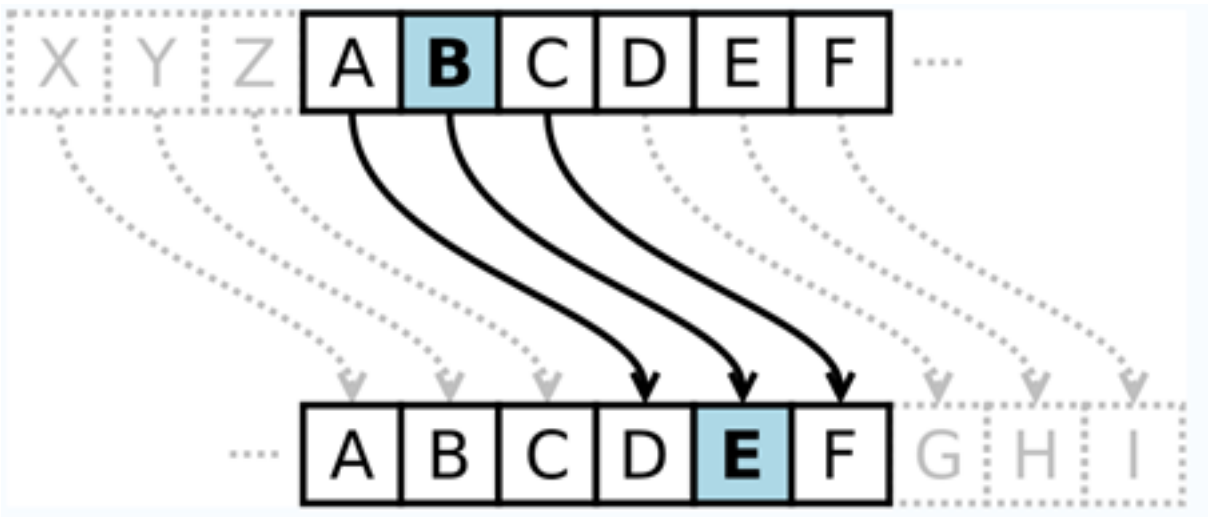
Part 2: Decryption

1. Write a new class called CaesarShiftDecryption in the current project.
2. Allow the user to input a shift key value (0–25) and a ciphertext message. Assign the key to a constant. You may reuse any previously created methods or variables.
3. Generate the cipher alphabet based on the key and print the alphabet to the screen.
4. Write a static method to decrypt the plaintext message and print the result.

Grading: Your assignment will be graded according to the following rubric.

Grading Rubric	
Menu provided to choose encryption, decryption, or quit.	2
User prompted to enter a shift key.	1
Shift key declared as a constant.	1
Static method used to generate cipher alphabet.	3
User prompted to enter a plaintext message.	4
Static method used to encrypt plaintext message.	4
User prompted to enter an encrypted message.	1
Static method used to decrypt encrypted message.	4
Output is correct.	2
No compiler or runtime errors.	2
Thoughtful PMR included.	1
Total	25

S**ubmission:** Submit all Java classes for this project as Assignment 14.03 for a grade.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