Homework assignment 02

Complete the following program for this week’s homework.

Programming assignment

l pdgh d flskhu ( 100 points)

- No, you’re not going crazy, the name of this assignment is a *coded message* using a Caesar, or substitution, cipher (https://en.wikipedia.org/wiki/Caesar_cipher). Basically, each letter of the message is shifted a set number of places.
- For this assignment, I’d like you to make a program that does the following:
  - Asks the user whether they would like to encode or decode a message.
  - If they choose to encode, ask the user to enter a message and print out the encoded message to the console
  - If they choose to decode, ask the user for the *encoded* message and print out the *decoded* message to the console

NOTE:

- Your cipher needs to shift a minimum of 3 letters.
- You’re only required to shift lowercase letters. If a character is entered that’s not a lowercase letter, it should just be displayed as-is (for example, a ‘ ’ space would be preserved)

Grading

Does the program compile? If it doesn’t, you will get 0 points for that problem.

*Is the program properly documented?* (worth ~20% of the problem)

Proper documentation includes:

- preamble with the name of the author, date of creation and brief description of the program.
- comments inside the code describing what the code does, especially for sections that may be unclear.
- appropriate formatting, indentation and use of white space to make the code readable.
• variables names are properly chosen and descriptive.

Remember that the code is read by humans and it should be easy to read for people who were not involved in its development.

**Is the program well written?** *(worth ~30% of the problem)*
Programs should be written as clearly and simply as possible to perform the necessary tasks. Variables should be well named and use the appropriate types. User prompts should have easy-to-follow instructions.

**Is the program correct?** *(worth ~50% of the problem)*, Make sure that your program produces results as specified above.

**How to submit**

Homework should be submitted through NYU Classes. It should be submitted by 11:55pm on the day listed on the course website or it will marked as late.

To submit homework, upload the .java file to the NYU Classes site.