# CptS 243 Project 9 Assignment

**(NOTE: This is an assignment that was originally targeted for C++. Your task is to convert it into an equivalent JACK program)**

In this assignment, you will build a program that will encrypt a text file using a technique known as "Caesar cipher." From Wikipedia:

[Caesar cipher] is a type of [substitution cipher](http://en.wikipedia.org/wiki/Substitution_cipher) in which each letter in the [plaintext](http://en.wikipedia.org/wiki/Plaintext) is replaced by a letter some fixed number of positions down the [alphabet](http://en.wikipedia.org/wiki/Alphabet). For example, with a shift of 3, A would be replaced by D, B would become E, and so on. The method is named after [Julius Caesar](http://en.wikipedia.org/wiki/Julius_Caesar), who used it to communicate with his generals.

## Program Structure

Given the basic outline in the previous section, develop a program that implements a Caesar cipher. Your application should begin by prompting the user for text and the desired offset. Using the functions described in detail below, encrypt each line of the file using the provided offset and write it to the output file specified by the user.

## Required Functions

Your program should define and use the following functions:

* encode\_character(char character, int offset)
  + Encodes the supplied single character using the provided offset. Note that non alphabetical characters (spaces, question marks, commas, numbers, etc.) should not be encoded. When attempting to encode a non alphabetical character, simply **return** character unmodified. Furthermore, be sure to have your encoder "wrap" around the alphabet. For example, encoding the letter "Z" by 1 should return "A".
* encode(string text, int offset)
  + Encodes the provided text. Note that encode() should call encode\_character() for each character of the supplied text.
* main()
  + Prompts the user for an input and output file. Calls encode() to encrypt the text found in the input file and writes the resulting encoded text to the output file.

## Sample Output

Here is an example of the program's prompts:

|  |
| --- |
| Enter some text: Who is it in the press that calls on me?  Enter an encoder offset: 3  Result: Zkr lv lw lq wkh suhvv wkdw fdoov rq ph? |