

PRACTICE ASSIGNMENT #1: CIPHER PROGRAM

Mr Patel is a Media Studies teacher and a keen film fan. He has set up a blog to get his GCSE students to watch more films and improve their understanding of different types of genre.

He has asked students to watch some film clips, spot a range of techniques and post a comment to explain where they are in each film. As he does not want students to be able to see his feedback comments until all students have completed the task, he wants to be able to post his comments using a simple encryption method.

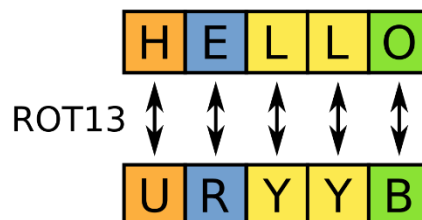
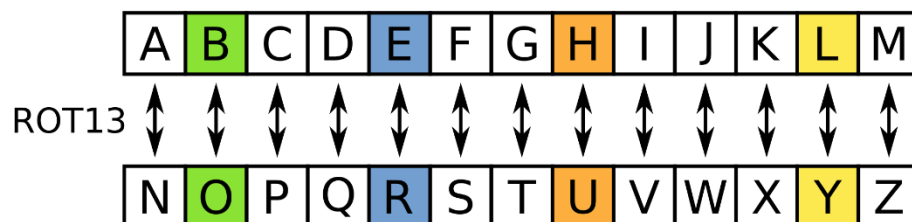
Mr Patel has decided that the ROT13 method commonly used on newsgroup sites will be suitable, but needs a quick method of encrypting his comments.

He has asked you to write an application that will:

- Display a menu option to encrypt/decrypt or quit
- Allow text input up to a maximum of 50 characters
- Find the value of each character in the message and calculate the encrypted character
- Display the encrypted text to the user
- Allow text input of encrypted messages up to a maximum of 50 characters
- Display the decrypted text to the user with the appropriate upper/lower-case characters

Explanation of ROT13

ROT13 is a simple Caesar Cipher which can be used to obscure text by substituting each letter in a message with a letter 13 places down the alphabet. ROT13 only handles lower- or upper-case letters and leaves other characters such as spaces and punctuation unchanged.



In the final solution, you should demonstrate the use of:

- Data validation
- Structured code
- Error handling routines