The DECRYPT() algorithm works as follows:

I. Create a password counter
II. Load the current character from cipher_text, “each character is considered as two 4-bit unsigned binary numbers” (8-bits)
III. Check if the character is a NULL (=0)
    A. if NULL jump back to MAIN
IV. Check if the counter is past the last digit (counter=4)
    A. If it is reset counter to 0
    B. Reset starting password register back to the starting address of password
V. Check cipher character for even or odd, if both
    A. if both numbers are even or odd current password character “is also divided into 4-bit numbers”
    B. Then these two 4-bit password numbers, upper 4-bits and lower upper 4-bits, are swapped.
    C. Then bits 0 and 4 of the generated password is cleared to 0.”
    D. XOR the cipher_character and the password_character
    E. Store it to the corresponding index of generated_text
VI. Increment counter and move to the next cipher_character, password_character and index of the next generated_text
VII. Recall the DECRYPT function