SCS 2204 - Functional Programming

Scala Practical – 08

1. The Caesar cipher is one of the earliest known and simplest ciphers. It is a type of substitution cipher in which each letter in the plaintext is 'shifted' a certain number of places down the alphabet. For example, with a shift of 1, A would be replaced by B, B would become C, and so on. The method is named after Julius Caesar, who apparently used it to communicate with his generals.

    a. Implement Encryption and Decryption functions of Caesar cipher.

    b. Then implement a Cipher function which takes Encryption and Decryption functions to process the data.

2. Write a Scala program that takes an integer input from the command line. Based on the input, use pattern matching to categorize the number and print the corresponding message. Implement the following logic using lambda functions:

    - If the input is a multiple of 3, print "Multiple of Three".
    - If the input is a multiple of 5, print "Multiple of Five".
    - If the input is a multiple of both 3 and 5, print "Multiple of Both Three and Five".
    - If the input is none of the above, print "Not a Multiple of Three or Five".