**An Algorithm for Vigenère Cipher**

1. **Declaring a function for encryption part and give it one parameter**
2. **In encryption function we set a size for the original message and for the key their type is char**
3. **Make a for loop to store and extract a repeated key form key**
4. **For loop to change every letter to its corresponding one in encryption using the given equation in task**
5. **then we must check if it is a non-alphabetic character if it is we print it normally if not we encrypt the letter**
6. **Then we print the original message and the encrypted message**
7. **We make another function called decryption to decrypt the encrypted message with one parameter like encryption function**
8. **In decryption function we set a size for the encrypted message and for the key their type is char**
9. **Make a for loop to store and extract a repeated key form key**
10. **For loop to decrypt every letter to its corresponding one in decryption**
11. **then we must check if it is a non-alphabetic character if it is we print it normally if not we decrypt the letter**
12. **Then we print the encrypted message and the decrypted message**
13. **In ( int main() ) we make the user choose from a given output to encrypt, decrypt or end the program**
14. **We must check if he enters a valid input and ranged from 1 to 3 in order to continue the process**
15. **If input is valid, we call every function to do the specific task**
16. **Then we end the program.**

**THANK YOU**