



EXPERIMENT 2

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AIM: Study and Implement Vigenere Cipher.

CODE:

```
def generateKey(string, key):
    key = list(key)
    if len(string) == len(key):
        return(key)
    else:
        for i in range(len(string) -
                        len(key)):
            key.append(key[i % len(key)])
    return("".join(key))

def cipherText(string, key):
    cipher_text = []
    for i in range(len(string)):
        x = (ord(string[i]) +
             ord(key[i])) % 26
        x += ord('A')
        cipher_text.append(chr(x))
    return("".join(cipher_text))

def originalText(cipher_text, key):
    orig_text = []
    for i in range(len(cipher_text)):
        x = (ord(cipher_text[i]) -
             ord(key[i]) + 26) % 26
        x += ord('A')
        orig_text.append(chr(x))
    return("".join(orig_text))

if __name__ == "__main__":
    string = input("Enter your message: ")
    keyword = input("Enter key: ")
    key = generateKey(string, keyword)
    cipher_text = cipherText(string, key)
```



```
print("Ciphertext :", cipher_text)
print("Original/Decrypted Text :",
      originalText(cipher_text, key))
```

OUTPUT:

```
/BTech/Docs/6th Sem/IS/Code/Exp2/Vigenere.py"
Enter your message: HITHISIS
Enter key: VIGENERE
Ciphertext : CQZLVWZW
Original/Decrypted Text : HITHISIS
```