**SYSTEM SECURITY**

**LAB 4**

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**Experiment:**

1. Write C/C++/Python/JAVA program to implement One Time Pad Encipher for string input. Use the following steps to implement.
2. Write C/C++/Python/JAVA program to implement One Time Pad Encipher for binary input.

**Code:**

**1:**

PlainText = input("Please enter the plain text: ")

Key = 'XMCKL'

Key\_Ascii\_array = [0 for i in range (len(PlainText))]

for i in range(len(Key)):

Key\_Ascii\_array[i] = ord(Key[i])

PlainText\_Ascii\_array = [ 0 for i in range (len(PlainText))]

for i in range(len(PlainText)):

PlainText\_Ascii\_array[i] = ord(PlainText[i])

#PlainText\_Ascii\_array[i] = bin(ord(PlainText)).replace("0b","")

PlainText\_Ascii\_array

Key\_Ascii\_array

#Encription

Cipher\_Text\_array= [0 for i in range (len(PlainText))]

for i in range(len(PlainText)):

Cipher\_Text\_array[i] = chr(PlainText\_Ascii\_array[i] ^ Key\_Ascii\_array[i])

Cipher\_Text\_array

Decript\_Text\_Array = [0 for i in range (len(PlainText))]

for i in range(len(PlainText)):

Decript\_Text\_Array[i] = chr(ord(Cipher\_Text\_array[i]) ^ Key\_Ascii\_array[i]);

Decript\_Text\_Array

**2:**

PlainText = str(input("Please enter plain text: "))

Key = str(input("Please enter the Key: "))

#Encription

Encript\_Text = [0 for i in range(len(PlainText))]

for i in range(len(PlainText)):

Encript\_Text[i] = int(PlainText[i]) ^ int(Key[i])

#Encript\_Text = bin(int(PlainText^Key)).replace("0b","")

Encript\_Text

#Decript

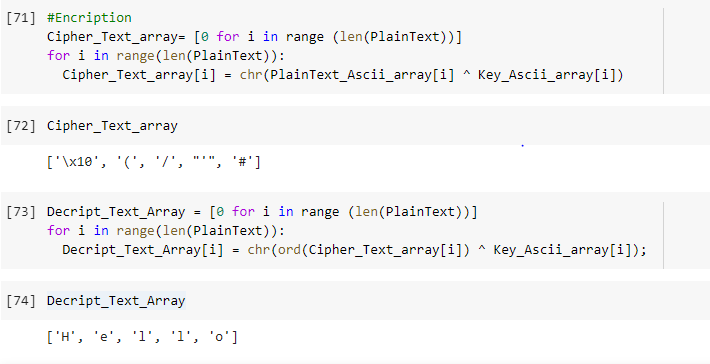
Decript\_text = [0 for i in range(len(PlainText))]

for i in range(len(PlainText)):

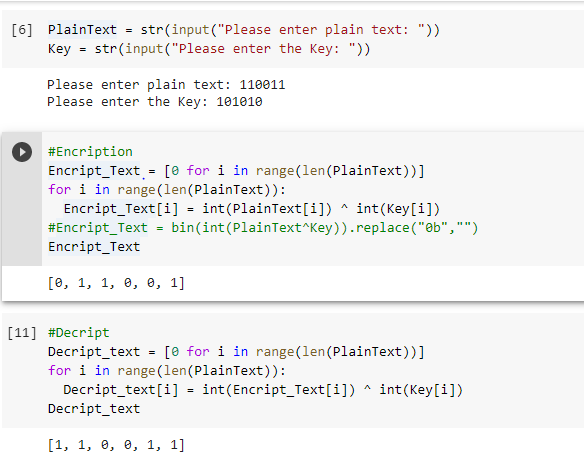
Decript\_text[i] = int(Encript\_Text[i]) ^ int(Key[i])

Decript\_text

**Results:**

**1**

**2**

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**Conclusion:**

Successfully implemented One Time Pad.