**EXPERIMENT NO-5**

**OBJECTIVE :** Write a program in to implement Autokey Cipher.

• Plaintext should be in lowercase.

• Ciphertext should be uppercase.

• Brute force attack.

**SOURCE CODE-**

**dict1 = {'A': 0, 'B': 1, 'C': 2, 'D': 3, 'E': 4,**

**'F': 5, 'G': 6, 'H': 7, 'I': 8, 'J': 9,**

**'K': 10, 'L': 11, 'M': 12, 'N': 13, 'O': 14,**

**'P': 15, 'Q': 16, 'R': 17, 'S': 18, 'T': 19,**

**'U': 20, 'V': 21, 'W': 22, 'X': 23, 'Y': 24, 'Z': 25}**

**dict2 = {0: 'A', 1: 'B', 2: 'C', 3: 'D', 4: 'E',**

**5: 'F', 6: 'G', 7: 'H', 8: 'I', 9: 'J',**

**10: 'K', 11: 'L', 12: 'M', 13: 'N', 14: 'O',**

**15: 'P', 16: 'Q', 17: 'R', 18: 'S', 19: 'T',**

**20: 'U', 21: 'V', 22: 'W', 23: 'X', 24: 'Y', 25: 'Z'}**

**# This function generates the key**

**def generate\_key(message, key):**

**i = 0**

**while True:**

**if len(key) == len(message):**

**break**

**if message[i] == ' ':**

**i += 1**

**else:**

**key += message[i]**

**i += 1**

**return key**

**# This function returns the encrypted text**

**# generated with the help of the key**

**def cipherText(message, key\_new):**

**cipher\_text = ''**

**i = 0**

**for letter in message:**

**if letter == ' ':**

**cipher\_text += ' '**

**else:**

**x = (dict1[letter]+dict1[key\_new[i]]) % 26**

**i += 1**

**cipher\_text += dict2[x]**

**return cipher\_text**

**# This function decrypts the encrypted text**

**# and returns the original text**

**def originalText(cipher\_text, key\_new):**

**or\_txt = ''**

**i = 0**

**for letter in cipher\_text:**

**if letter == ' ':**

**or\_txt += ' '**

**else:**

**x = (dict1[letter]-dict1[key\_new[i]]+26) % 26**

**i += 1**

**or\_txt += dict2[x]**

**return or\_txt**

**def main():**

**message = 'ATTACK IS TODAY'**

**key = 'SECRET'**

**key\_new = generate\_key(message, key)**

**cipher\_text = cipherText(message, key\_new)**

**original\_text = originalText(cipher\_text, key\_new)**

**print("Encrypted Text =", cipher\_text)**

**print("Original Text =", original\_text)**

**# Executes the main function**

**if \_\_name\_\_ == '\_\_main\_\_':**

**main()**

**OUTPUT-**

Encrypted Text = SXVRGD IL MOFKG

Original Text = ATTACK IS TODAY

**DEVELOPED BY**

Abhishek Pandey