**Implementation of Encryption and Decryption**

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III-ECE-B

21BEC118

1.Shift Cipher:

word = input("Enter the word: ")

key = int(input("Enter the key value: "))

encrypted\_word = ""

for char in word:

if char.isalpha():

shift = (ord(char.lower()) - ord('a') + key) % 26

encrypted\_char = chr(ord('a') + shift) if char.islower() else chr(ord('A') + shift)

encrypted\_word += encrypted\_char

else:

encrypted\_word += char

decrypted\_word = ""

for char in encrypted\_word:

if char.isalpha():

shift = (ord(char.lower()) - ord('a') - key) % 26

decrypted\_char = chr(ord('a') + shift) if char.islower() else chr(ord('A') + shift)

decrypted\_word += decrypted\_char

else:

decrypted\_word += char

print("Encrypted word:", encrypted\_word)

print("Decrypted word:", decrypted\_word)

**Output:**

Enter the word: hello

Enter the key value: 3

Encrypted word: khoor

Decrypted word: hello

=== Code Execution Successful ===

**2.Random Cipher**

**import random**

def randomcaesarcipher(text):

shift = random.randint(1, 25)

encryptedtext = ""

for char in text:

if char.isalpha():

shifted = ord(char) + shift

if char.islower():

if shifted > ord('z'):

shifted -= 26

elif char.isupper():

if shifted > ord('Z'):

shifted -= 26

encryptedtext += chr(shifted)

else:

encryptedtext += char

return encryptedtext, shift

plaintext = input("Enter the text to be encrypted: ")

ciphertext, shift = randomcaesarcipher(plaintext)

print("Original:", plaintext)

print("Encrypted:", ciphertext)

decryptedtext = ""

for char in ciphertext:

if char.isalpha():

shifted = ord(char) - shift

if char.islower():

if shifted < ord('a'):

shifted += 26

elif char.isupper():

if shifted < ord('A'):

shifted += 26

decryptedtext += chr(shifted)

else:

decryptedtext += char

print("Decrypted:", decryptedtext)

**Output:**

Enter the text to be encrypted: tinesh

Original: tinesh

Encrypted: etypds

Decrypted: tinesh

**3.Rotational Cipher**

name = input("Enter word: ")

shift = int(input("Enter the shift value: "))

shifted\_name = name[-shift:] + name[:-shift]

print("Encrypted name:", shifted\_name)

encrypted\_name = shifted\_name

decrypted\_name = encrypted\_name[shift:] + encrypted\_name[:shift]

print("Decrypted name:", decrypted\_name)

Output:

Enter word: rotational

Enter the shift value: 3

Encrypted name: nalrotatio

Decrypted name: rotational