

ANJUMAN-1-ISLAM'S KALSEKAR TECHNICAL CAMPUS School of Engineering & Technology

Affiliated to: University of Mumbai, Recognised by: DTE (Maharashtra) & Approved by: AICTE (New Delhi)

Course Code : CSL604 Course Name : System Security Lab

Class: TE-CO Batch: Computer Engineering

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Experiment: 01

Aim: Design and Implementation of a product cipher using Substitution and Transposition ciphers

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Code:
import string
k=int(input("ENTER A KEY VALUE:"))
d=str(input("ENTER A STRING: "))
ct = \Pi
alphabets = string.ascii_uppercase
for j in d:
       b=j.upper()
       if b in alphabets and j.islower():
              e=(alphabets.index(b)+k)%26
              ct.append(alphabets[e].lower())
       elif b in alphabets and j.isupper():
              a=(alphabets.index(b)+k)%26
              ct.append(alphabets[a].upper())
       else:
              ct.append(" ")
matrix = [[False for i in range(len(ct))]
for j in range(k)]
print("Cipher Text: ",*ct)
i=0
for i in range(len(ct)):
  matrix[j][i]=ct[i]
  if j == k - 1:
    flag = False
  elif j == 0:
    flag = True
  if flag == True:
    j = j + 1
  else:
    j = j - 1
answer=[]
for key in range(k):
  for text in range(len(ct)):
    if matrix[key][text]!=False:
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answer.append(matrix[key][text])

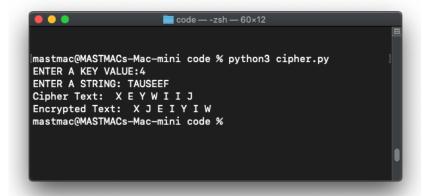


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print("Encrypted Text: ", *answer)

Output:



Conclusion:

A **product cipher** combines two or more transformations in a manner intending that the resulting cipher is more secure than the individual components to make it resistant to cryptanalysis. Implemented product cipher using Substitution and Transposition ciphers