Program:

import cv2

import string

import os

d={}

c={}

for i in range(255):

    d[chr(i)]=i

    c[i]=chr(i)

x=cv2.imread(r"D:\college\Semester 7\ism\download.jpeg")

i=x.shape[0]

j=x.shape[1]

print(i,j)

key=input("Enter key to edit(Security Key) : ")

text=input("Enter text to hide : ")

kl=0

tln=len(text)

z=0

n=0

m=0

l=len(text)

for i in range(l):

    x[n,m,z]=d[text[i]]^d[key[kl]]

    n=n+1

    m=m+1

    m=(m+1)%3

    kl=(kl+1)%len(key)

cv2.imwrite("encrypted\_img.jpg",x)

os.startfile("encrypted\_img.jpg")

print("Data Hiding in Image completed successfully.")

kl=0

tln=len(text)

z=0

n=0

m=0

ch = int(input("\nEnter 1 to extract data from Image : "))

if ch == 1:

    key1=input("\n\nRe enter key to extract text : ")

    decrypt=""

    if key == key1 :

        for i in range(l):

            decrypt+=c[x[n,m,z]^d[key[kl]]]

            n=n+1

            m=m+1

            m=(m+1)%3

            kl=(kl+1)%len(key)

        print("Encrypted text was : ",decrypt)

    else:

        print("Key doesn't matched.")

else:

    print("Thank you. EXITING.")

Output:

PS D:\college\Semester 7\ism> py .\exp8.py

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Enter key to edit(Security Key) : key

Enter text to hide : hello secret

Data Hiding in Image completed successfully.

Enter 1 to extract data from Image : 1

Re enter key to extract text : key

Encrypted text was : hello secret

Original Image:



Encrypted Image:



We can notice small vertical green strip from top left corner.