Triple DES:

```
pi=100005
salt_const=b"$ez*}-d3](%d%$#*!)$#%s45le$*fhucdivyanshu75456dgfdrrrrfgfs^"
from Crypto.Cipher import DES
from Crypto.Hash import SHA256
from getpass import getpass
from Crypto.Protocol.KDF import PBKDF2
def encryptor(path):
    try:
        with open(path, 'rb') as imagefile:
            image=imagefile.read()
        while len(image)%8!=0:
            image+=b" "
    except:
        print("Error loading the file, make sure file is in same directory, spelled correctly and non-corrupted")
        exit()
    hash_of_original=SHA256.new(data=image)
    key_enc=getpass(prompt="                    Enter minimum 8 character long password:")
    while len(key_enc)<8:
        key_enc=getpass(prompt="                    Invalid password! Enter atleast 8 character password:")
    key_enc_confirm=getpass(prompt="                    Enter password again:")
    while key_enc!=key_enc_confirm:
        print("Key Mismatch.Try again.")
        key_enc=getpass(prompt="                    Enter 8 character long password:")
        while len(key_enc)<8:
            key_enc=getpass(prompt="            Invalid password! Enter atleast 8 character password:")
        key_enc_confirm=getpass(prompt="            Enter password again:")
    key_enc=PBKDF2(key_enc,salt_const,48,count=pi)
    print("                encrypting...")
    try:


        cipher1=DES.new(key_enc[0:8],DES.MODE_CBC,key_enc[24:32])
        ciphertext1=cipher1.encrypt(image)
        cipher2=DES.new(key_enc[8:16],DES.MODE_CBC,key_enc[32:40])
        ciphertext2=cipher2.decrypt(ciphertext1)
        cipher3=DES.new(key_enc[16:24],DES.MODE_CBC,key_enc[40:48])
        ciphertext3=cipher3.encrypt(ciphertext2)
        print("                !!!ENCRYPTION SUCCESSFUL!!!")
    except:
        print("                Encryption failed...Possible causes:Library not installed properly/low device memory/Incorrect padding or conversions")
        exit()
    ciphertext3+=hash_of_original.digest()
    try:
        dpath="encrypted_"+path
        with open(dpath, 'wb') as image_file:
            image_file.write(ciphertext3)
        print("                Encrypted Image Saved successfully as filename "+dpath)
    except:
        temp_path=input("                Saving file failed!. Enter alternate name without format to save the encrypted file. If it is still failing then check system memory")
        try:
            dpath=temp_path+path
            dpath="encrypted_"+path
            with open(dpath, 'wb') as image_file:
                image_file.write(ciphertext3)
            print("            Encrypted Image Saved successfully as filename 
"+dpath)
            exit()
        except:
            print("            Failed....Exiting...")
            exit()
#decrypting function
def decryptor(encrypted_image_path):
    try:
        with open(encrypted_image_path,'rb') as encrypted_file:
            encrypted_data_with_hash=encrypted_file.read()
    except:
        print("            Unable to read source cipher data. Make sure the file is in 
same directory...Exiting...")
        exit()




    key_dec=getpass(prompt="            Enter password:")
    extracted_hash=encrypted_data_with_hash[-32:]
    encrypted_data=encrypted_data_with_hash[:-32]
    key_dec=PBKDF2(key_dec,salt_const,48,count=pi)
    print("            Decrypting...")
    try:
        cipher1=DES.new(key_dec[16:24],DES.MODE_CBC,key_dec[40:48])
        plaintext1=cipher1.decrypt(encrypted_data)
        cipher2=DES.new(key_dec[8:16],DES.MODE_CBC,key_dec[32:40])
        plaintext2=cipher2.encrypt(plaintext1)
        cipher3=DES.new(key_dec[0:8],DES.MODE_CBC,key_dec[24:32])
        plaintext3=cipher3.decrypt(plaintext2)
    except:
        print("                    Decryption failed...Possible causes:Library not installed properly/low device memory/Incorrect padding or conversions")
    hash_of_decrypted=SHA256.new(data=plaintext3)
    if hash_of_decrypted.digest()==extracted_hash:
        print("Password Correct !!!")
        print("                    DECRYPTION SUCCESSFUL!!!")
    else:
        print("Incorrect Password!!!")
        exit()
    try:
        epath=encrypted_image_path
        if epath[:10]=="encrypted_":
            epath=epath[10:]
        epath="decrypted_"+epath
        with open(epath, 'wb') as image_file:
            image_file.write(plaintext3)
        print("                    Image saved successully with name " + epath)
        print("                    Note: If the decrypted image is appearing to be corrupted then password may be wrong or it may be file format error")
    except:
        temp_path=input("                    Saving file failed!. Enter alternate name without format to save the decrypted file. If it is still failing then check system memory")
        try:
            epath=temp_path+encrypted_image_path
            with open(epath, 'wb') as image_file:
                image_file.write(plaintext3)
            print("                    Image saved successully with name " + epath)
            print("                    Note: If the decrypted image is appearing to be corrupted then password may be wrong or it may be file format error")
        except:
            print("                    Failed! Exiting...")
            exit()
print("-------------------------------------------------------------------------------------------------------------------------------")
print("-----------------------------------------------IMAGE ENCRYPTOR DECRYPTOR TOOL triple-DES-----------------------------------------")
print("")
print("")
print("                    You need to provide atleast 8 character long password for secure ")
print("                    encryption.")
print("                    Choose a strong and non-repeating password for best security.")
try:
    choice=int(input("                    Press 1 for Encryption || 2 for Decryption: "))
    while choice!=1 and choice!=2:
        choice=int(input("                    Invalid Choice! Try Again:"))
except:
    print("Error, please provide valid Input")
    exit()
```

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if choice==1:
        path=input("          Enter image's name to be encypted:")
        encryptor(path)
else:
        encrypted_image_path=input("            Enter file name to decrypted:")
        decryptor(encrypted_image_path)


print("")
print("")
print("-----------------------------------------------------------------------------------------------------------------------
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print("-----------------------------------------------------------------------------------------------------------------------
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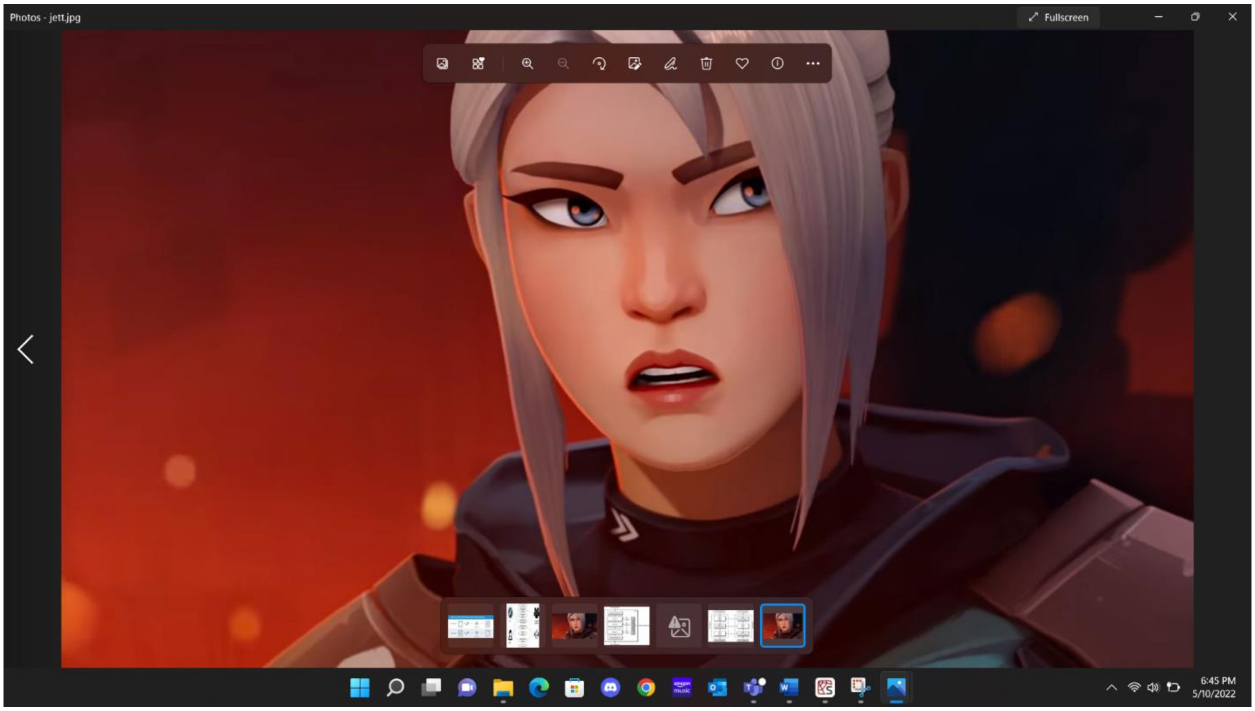
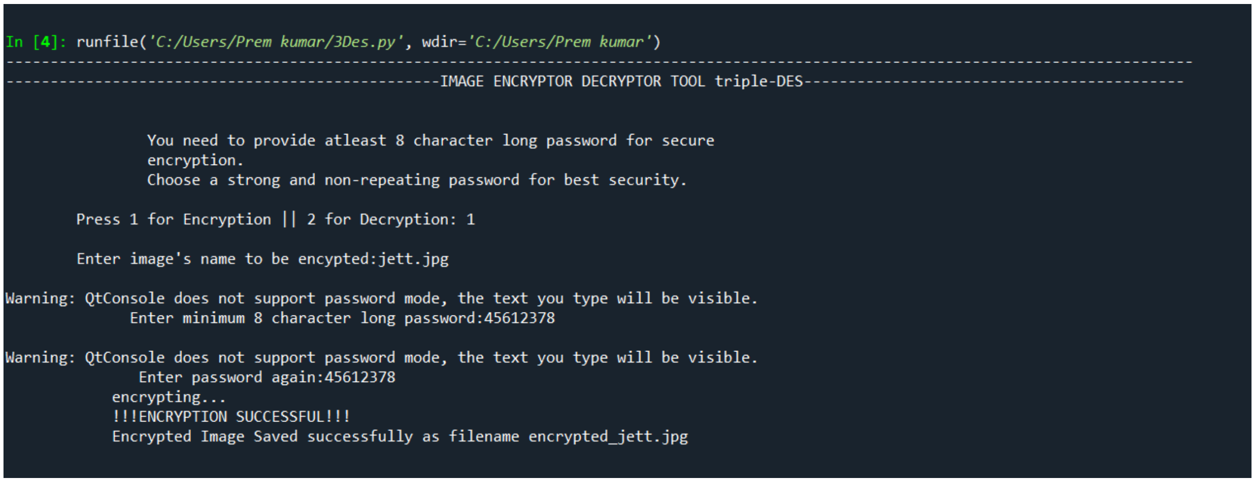
```

output:

original image (without encryption or decryption):



encryption:



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In [4]: runfile('C:/Users/Prem kumar/3Des.py', wdir='C:/Users/Prem kumar')
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-------------------------------------------------IMAGE ENCRYPTOR DECRYPTOR TOOL triple-DES-------------------------------------------

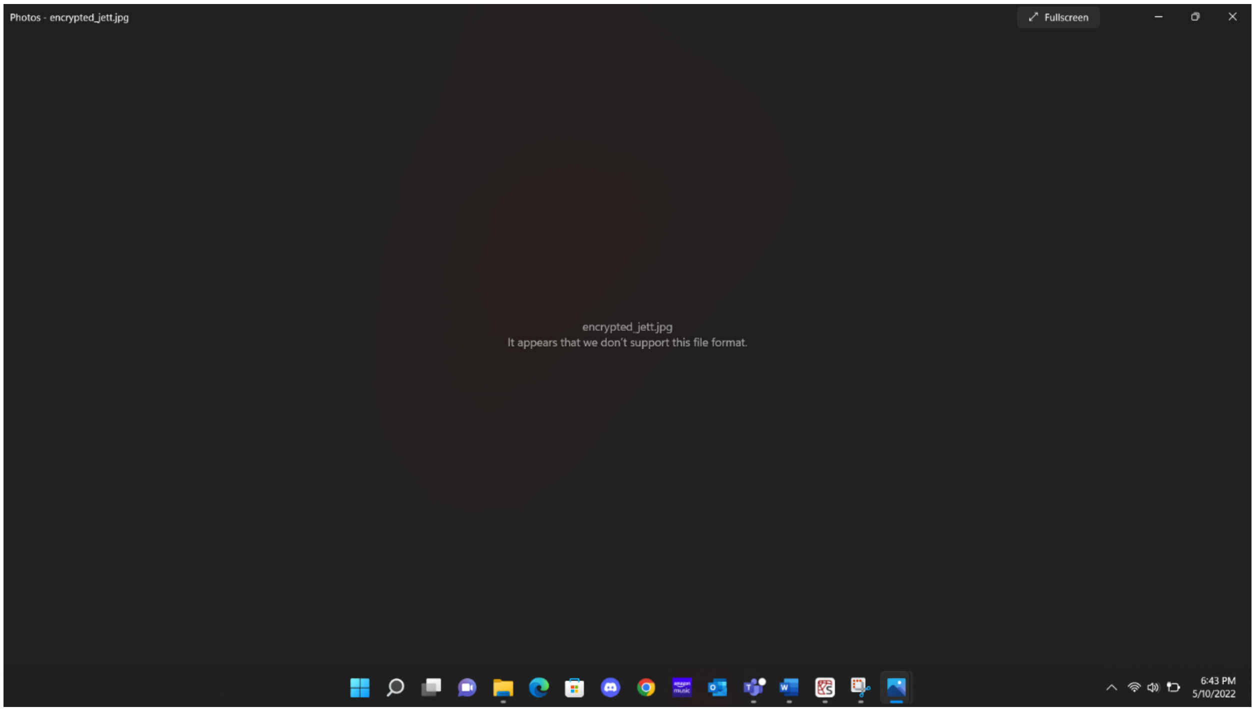

                You need to provide atleast 8 character long password for secure
                encryption.
                Choose a strong and non-repeating password for best security.

        Press 1 for Encryption || 2 for Decryption: 1

        Enter image's name to be encypted:jett.jpg

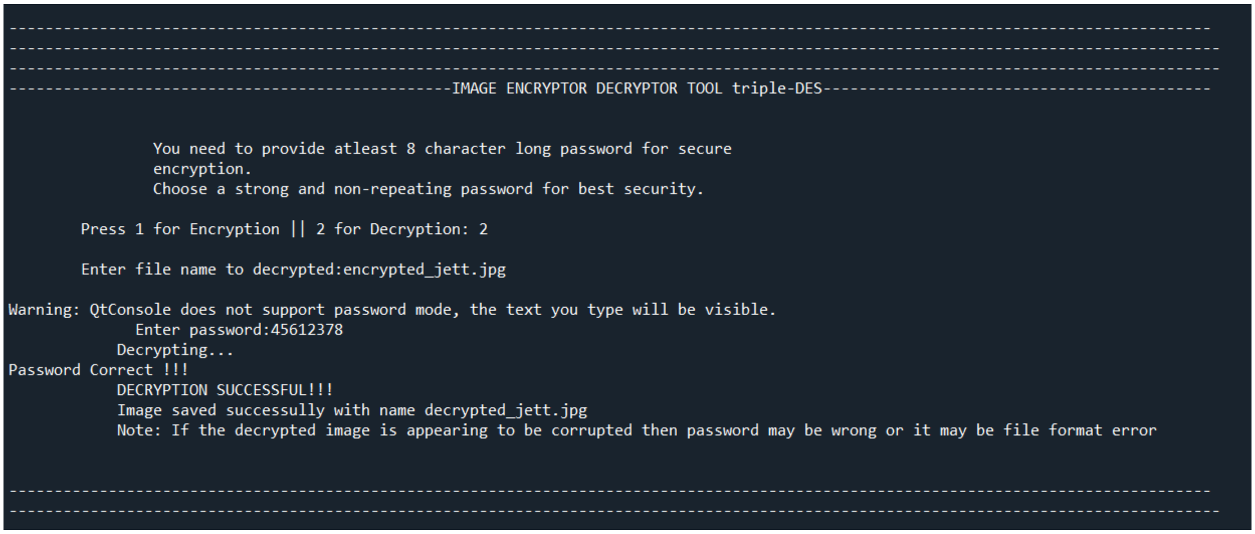
Warning: QtConsole does not support password mode, the text you type will be visible.
              Enter minimum 8 character long password:45612378

Warning: QtConsole does not support password mode, the text you type will be visible.
               Enter password again:45612378
            encrypting...
            !!!ENCRYPTION SUCCESSFUL!!!
            Encrypted Image Saved successfully as filename encrypted_jett.jpg
```



encrypted_jett.jpg
It appears that we don't support this file format.

Decryption:



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-------------------------------------------------IMAGE ENCRYPTOR DECRYPTOR TOOL triple-DES-------------------------------------------


                You need to provide atleast 8 character long password for secure
                encryption.
                Choose a strong and non-repeating password for best security.

        Press 1 for Encryption || 2 for Decryption: 2

        Enter file name to decrypted:encrypted_jett.jpg

Warning: QtConsole does not support password mode, the text you type will be visible.
              Enter password:45612378
            Decrypting...
Password Correct !!!
            DECRYPTION SUCCESSFUL!!!
            Image saved successully with name decrypted_jett.jpg
            Note: If the decrypted image is appearing to be corrupted then password may be wrong or it may be file format error


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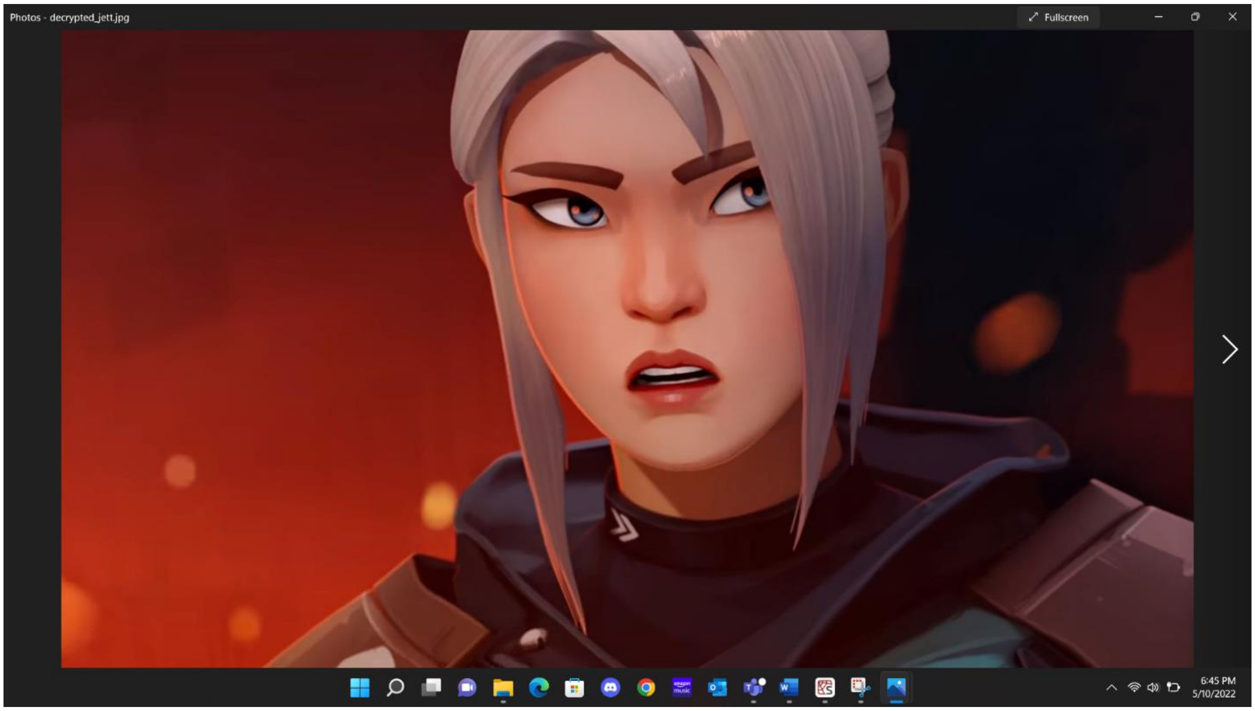
```


Photos - decrypted_jett.jpg
Fullscreen
6:45 PM
5/10/2022