⌄ Secure Authentication With OTP Verification via E-mail

- I created an OTP Verification System in Python to help secure email logins.

- It quickly generates a 6-digit OTP and sends it to the user's email.

- Users just enter the code/OTP to get access.

- The system verifies if the entered OTP matches the generated one and grants access accordingly.

- Key features include OTP generation, email sending, OTP verification, error handling

```python
import random          #This module helps to generate random numbers accordingly
import smtplib         #The library is intact to send the Emails and have lot of methods which are predefined


otp = str(random.randint(100000, 999999))    #By creating a OTP variable I have choosen to randomly pic the int using the random module by giv
smtp_server = 'smtp.gmail.com'               #This is the address of the server which is responsible to send the mails
smtp_port = 587                              #The port is used for communication with the server SMTP
sender_email = 'harshitha3920@gmail.com'


user_email =input( "Enter your E-Mail ID : " )
smtp_connection = smtplib.SMTP( smtp_server, smtp_port )
smtp_connection.starttls( )                              #for secure purpose


login_credentials= smtp_connection.login( sender_email, 'nhil vvxw uszh eywa' )   #This is the another method used for getting loggedin succes

if login_credentials[0] ==235:
    message = f'Subject: OTP Verification\n\nYour OTP is: {otp}'
    smtp_connection.sendmail(sender_email, user_email, message)    #The method used to convey the message to send
    print( "OTP has been sent to your email." )

else:
    print( "Error occurred while sending OTP. Authentication failed." )

max_attempts = 3
attempt = 1

while attempt <= max_attempts:
    user_input = input( "Enter the OTP received in your email: " )

    if user_input == otp:
        print( "Access Granted Successfully!" )
        break

    else:

        print("Access Denied. Incorrect OTP.")

        if attempt < max_attempts:
            print(  f"Remaining attempts: { max_attempts - attempt }" )
            attempt += 1

        else:
            print( "Maximum attempts reached. Please try again later." )
            break
smtp_connection.quit( )
```

```
⇥  Enter your E-Mail ID : harshithadampanaboina@gmail.com
    OTP has been sent to your email.
    Enter the OTP received in your email: 556385
    Access Granted Successfully!
    (221,
     b'2.0.0 closing connection y6-20020a1f7d06000000b004d86ae6954dsm576375vkc.29 - gsmtp')
```