

Capstone Project Python

Functions included in python script

- **Generate otp():** This function generates 6 digit OTP randomly. It initializes an empty string OTP which will eventually hold the generated OTP. It relies on the random module, which must be imported at the beginning of the script.
- **Send otp():** This function is responsible for generating and sending a One-Time Password (OTP) to a recipient's email address. It starts by defining the sender's email address and password and retrieving the recipient's email address from a user input field. It then validates the recipient's email and the subject field, showing an error message if either is missing. Upon successful validation, the function generates an OTP using the ***generate_otp()*** function and prepares an email message containing the OTP. The function sets up an SMTP server connection to Gmail, logs in using the sender's credentials, and sends the email containing the OTP to the recipient. If the email is sent successfully, it shows a success message, disables the send button, and displays the OTP entry and verify button. If there is an SMTP authentication error or any other exception, it shows an appropriate error message. The function also updates a global variable ***otp_sent*** to indicate that the OTP has been sent.
- **Verify otp():** The ***verify_otp()*** function is designed to verify a user-entered One-Time Password (OTP). It retrieves the OTP entered by the user from an input field. The function then compares this user input with the previously generated OTP stored in the global variable OTP. If the entered OTP matches the generated OTP, a success message is displayed, and the application window (win) is closed. If the OTPs do not match, an error message is shown, prompting the user to check the OTP again. This function ensures that only the correct OTP grants access or completes the verification process.
- **Resend otp():** This function facilitates the process of sending a new One-Time Password (OTP) to the recipient's email address by invoking the ***send_otp*** function. When called, it triggers the ***send_otp*** function to generate a new OTP and send it to the recipient, effectively allowing the user to request a fresh OTP if needed. This function is useful in scenarios where the initial OTP may have been lost, expired, or not received, ensuring the user can still complete the verification process.