Today’s Agenda:

1. SMTP
2. Workflow of project
3. Demo

**SMTP**

**SMTP (Simple Mail Transfer Protocol)** is a protocol used for sending emails across the Internet. It is a text-based protocol, where one or more recipients of a message are specified, and then the message text is transferred. SMTP is a part of the application layer of the TCP/IP protocol suite, using port 25 by default for communication. Secure versions of SMTP, such as SMTPS, use ports 465 or 587 and incorporate encryption methods like TLS (Transport Layer Security).

**How SMTP is Used in Python**

In Python, the **smtplib** module provides a convenient way to send emails using the SMTP protocol. Here's a brief overview of how to use **smtplib** to send an email:

1. **Set Up the SMTP Server**: Connect to an SMTP server.
2. **Start TLS for Security**: Upgrade the connection to a secure encrypted SSL/TLS connection.
3. **Login to the Server**: Authenticate using a valid email address and password.
4. **Compose the Email**: Create the email message, specifying sender, recipient, subject, and body.
5. **Send the Email**: Use the server to send the message.
6. **Close the Connection**: Terminate the session with the SMTP server.

**WORKFLOW**

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| Start |

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| Generate OTP |

| - Initialize `otp` |

| - Loop 6 times |

| - Append random |

| digit to `otp` |

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| SMTP Setup |

| - Connect to SMTP |

| server |

| - Start TLS |

| - Login with email |

| and password |

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| Read HTML Template |

| - Open HTML file |

| - Read contents |

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| Insert OTP into |

| HTML Content |

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| Create Email |

| - Set subject |

| - Set sender |

| - Set recipient |

| - Set content as |

| HTML |

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| Send Email |

| - Send message |

| - Quit SMTP server |

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| Print "Email Sent" |

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| End |

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**Description of Each Step**

1. **Start**: Begin the process.
2. **Generate OTP**: Create a 6-digit OTP by looping 6 times and appending a random digit (0-9) to a string.
3. **SMTP Setup**: Connect to the Gmail SMTP server, start TLS for security, and log in with the specified email and password.
4. **Read HTML Template**: Open the specified HTML file that serves as the email template and read its contents.
5. **Insert OTP into HTML Content**: Format the read HTML content to include the generated OTP.
6. **Create Email**: Construct the email by setting the subject, sender, recipient, and content (with HTML formatting).
7. **Send Email**: Send the formatted email message through the SMTP server and then quit the server.
8. **Print "Email Sent"**: Output a confirmation message indicating the email has been sent.
9. **End**: End the process.