EMAIL APP-3

COMPUTER NETWORKING

Time: 60 mins

Introduction

In this class, the student/s will add file attachments and recurring email functionality to the email app.

New Commands Introduced

- from tkinter import filedialog   Imports module to load and save different files

- filedialog.askopenfilename()   Returns the file name for the selected file

- BooleanVar()   Accepts a Boolean varied value either of "True" or "False"

- self.recurring_email_checkbox.grid()   Positions the check box button

- import time   Returns the number of seconds passed since epoch

Vocabulary

- An attachment can be an image file, a Word document, or one of many other supported file types.
- Recurring emails allow you to send consistent messages on a regular basis as per the intervals set.

Learning Objectives

Student/s should be able to:
- **_Recall_** how to use grid and Tkinter widget to add attachments to an email.
- **_Explain_** how to attach files using the filedialog module.
- **_Demonstrate_** the sending of recurring mails and setting the timer.

Activities

1. **Class Narrative:** *(3 mins)*

   - Brief the student/s that they did a fantastic job on email template and now Sarah wants to share festival banners on email.

2. **Concept Introduction Activity:** *(4 mins)*

- Let the student/s undertake the explore-activity to observe how files can be attached to an email and recurring emails can be sent at specific time intervals.

- Using the slides, explain that the student/s will learn:

    - to attach the files

    - to add recurring email label and checkbox

    - to timer for recurring emails

3. **Activity 1: Attach the Files** *(16 mins)*

    Teacher Activity: *(8 mins)*

- Explain about the tkinter filedialog module which can be used to load or save files.

- Demonstrate how files can be attached to an email using the methods from the filedialog module, creating a button, adding label and configuring the widgets.

    Student Activity: *(8 mins)*

- Guide the student/s to add multiple files to an email.

4. **Activity 2: Add Recurring Email Label and Checkbox** *(10 mins)*

- Introduce the BooleanVar() which can be used to either assign True or False to the CheckButton widget.
- Explain setting the value for the checkbox and showing the marking on the app.

    Student Activity: *(10 mins)*

- Guide the student/s to add a recurring email label and a check button to the email app.

5. **Activity 3: Add Timer for Recurring Emails** *(12 mins)*

- Introduce to the student/s that selecting the checkbutton will keep sending mail continuously and hence mails can be sent at intervals.

- Explain how a timer can be added by importing the time library, accept time difference from the input by the user and send recurring mails accordingly.

    Student Activity: *(6 mins)*

- Guide the students to add a timer for recurring mails.

6. **Introduce the Post class project:** *(2 min)*

- Schedule the recurring emails.

7. **Test and Summarize the class learnings:** *(5 mins)*

   - Check for understanding through quizzes and summarize learning after respective activities.

   - Summarize the overall class learning towards the end of the class.

8. **Additional activities:**

   - Encourage the student/s to schedule the recurring emails three times.

   - Encourage the student/s to limit the recurring emails to five emails.

9. **State the Next Class Objective:** *(1 min)*

   - In the next class, student/s will learn ethical hacking to ensure cyber security.

U.S. Standards:

CSTA: 2-AP-11, 2-AP-12, 2-AP-13, 2-AP-14, 2-AP-19

Links Table		
Activity	**Activity Name**	**Link**
Class Presentation	Email App-3	https://s3-whjr-curriculum-uploads.whjr.online/26584205-f710-44f4-8ecc-73e0d21ec8f0.html
Explore Activity	Email App-3	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-SAS-BP
Teacher Activity 1	Attach the Files	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-TAS-BP
Teacher Reference: Teacher Activity 1 Solution	Attach the Files	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-TAS
Student Activity 1	Attach the Files	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-SAS-BP
Teacher Reference: Student Activity 1 Solution	Attach the Files	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-SAS
Student Activity 2	Add Recurring Email Label and Checkbox	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-SAS-BP
Teacher Reference: Student Activity 2 Solution	Add Recurring Email Label and Checkbox	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-SAS

Student Activity 3	Add Timer for Recurring Emails	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-SAS-BP
Teacher Reference: Student Activity 3 Solution	Add Timer for Recurring Emails	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-SAS
Student's Additional Activity 1	Schedule the Recurring Emails	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-SAS-BP
Teacher Reference: Student's Additional Activity 1 Solution	Schedule the Recurring Emails	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-SAS
Student's Additional Activity 2	Limit the Recurring Emails	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-SAS-BP
Teacher Reference: Student's Additional Activity 2 Solution	Limit the Recurring Emails	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-SAS
Post Class Project	Schedule the Emails	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-PCP-BP
Teacher Reference: Post Class Project Solution	Schedule the Emails	https://github.com/Tynker-Computer-Networks/TNK-M15-C120-PCP