

EMAIL APP-2

COMPUTER NETWORKING

Time: 60 mins

Introduction

In this class, the student/s will create the GUI of the email app.

New Commands Introduced

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|---|---|
| • <code>Frame()</code> | Creates a frame widget in which the widgets can be organized. |
| • <code>widget.grid(column=,row=,padx=,pady=)</code> | Places the widget in a grid at the specified column and row with specified horizontal and vertical spacing around the widget. |
| • <code>Text(window,width=,height=)</code> | Creates a text area on the window with the specified width and height. |
| • <code>widget_name.get("1.0", "end")</code> | Extracts the values from the text area widget. |
| • <code>messagebox.showinfo("Title", "message")</code> | Displays an information message box with the specified title and message. |
| • <code>messagebox.showerror("Title", "message")</code> | Displays an error message box with the specified title and message. |

Vocabulary

- **Message box** displays a modal dialog box that contains a system icon, a set of buttons, and a brief application-specific message.

Learning Objectives

Student/s should be able to:

- **Recall** how to create widgets and use multithreading.
- **Explain** how to organise widgets on the window using grid geometry manager.
- **Demonstrate** the creation of the graphical user interface for sending emails.

Activities

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

- Brief the student/s that they would create the GUI for sending emails.

2. Concept Introduction Activity: (4 mins)

- Let the student/s undertake the explore-activity to observe the game window of the ludo ladder game.
- Using the slides, explain that the student/s will learn:
 - to create the GUI
 - to send the email
 - to display the message box

3. Activity 1: Create the GUI (16 mins)

Teacher Activity: (8 mins)

- Explain how widgets are arranged using grid geometric manager.
- Introduce the student/s to the widget placement using rows and columns.
- Explain the concept of padding and creation of text area widget
- Demonstrate how to arrange the widgets on the frame using the grid geometric manager.

Student Activity: (8 mins)

- Guide the student/s to create the text area widgets and place the widgets using rows and columns.
- Encourage the student/s to experiment with the row and column numbers to analyze the outcome.

4. Activity 2: Send the Email (10 mins)

- Recall how to fetch the values from the widgets
- Introduce how the values from the text area is extracted.

Student Activity: (10 mins)

- Guide the student/s to fetch the credentials and send the mail when the “Send Mail” button is clicked.

5. Activity 3: Display the Message Box (12 mins)

Teacher Activity: (6 mins)

- Introduce the student/s to the messages box and two types of message that are to be displayed.

- Recall multithreading and how to create a thread.
- Demonstrate how to display the message box.

Student Activity: (6 mins)

- Guide the students to display the messages using the message box and send emails using multithreading.

6. Introduce the Post Class Project: (2 min)

- Create the graphical user interface for the secret santa app.

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 add the feature of sending the email to multiple addresses.
- Encourage the student/s to add the feature of sending CC of the mail to an address.

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

- In the next class, student/s will send emails with files as attachment.

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-2	https://s3-whjr-curriculum-uploads.whjr.online/6b64061e-7d86-4dc2-80dc-9c1619401ab6.html
Explore Activity	Email App-2	https://github.com/Tynker-Computer-Networks/TNK-M15-C119-SAS-BP
Teacher Activity 1	Create the GUI	https://github.com/Tynker-Computer-Networks/TNK-M15-C119-TAS-BP
Teacher Reference: Teacher Activity 1 Solution	Create the GUI	https://github.com/Tynker-Computer-Networks/TNK-M15-C119-TAS

Student Activity 1	Create the GUI	<a href="https://github.com/Tynker-Computer-Ne
tworks/TNK-M15-C119-SAS-BP">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-SAS-BP
Teacher Reference: Student Activity 1 Solution	Create the GUI	<a href="https://github.com/Tynker-Computer-Ne
tworks/TNK-M15-C119-SAS">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-SAS
Student Activity 2	Send the Email	<a href="https://github.com/Tynker-Computer-Ne
tworks/TNK-M15-C119-SAS-BP">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-SAS-BP
Teacher Reference: Student Activity 2 Solution	Send the Email	<a href="https://github.com/Tynker-Computer-Ne
tworks/TNK-M15-C119-SAS">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-SAS
Teacher Activity 3	Display the Message	<a href="https://github.com/Tynker-Computer-Ne
tworks/TNK-M15-C119-TAS-BP">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-TAS-BP
Teacher Reference: Teacher Activity 3 Solution	Display the Message	<a href="https://github.com/Tynker-Computer-Ne
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tworks/TNK-M15-C119-SAS">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-SAS
Student's Additional Activity 1	Send Email to Multiple Addresses	<a href="https://github.com/Tynker-Computer-Ne
tworks/TNK-M15-C119-SAS-BP">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-SAS-BP
Teacher Reference: Student's Additional Activity 1 Solution	Send Email to Multiple Addresses	<a href="https://github.com/Tynker-Computer-Ne
tworks/TNK-M15-C119-SAS">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-SAS
Student's Additional Activity 2	Send a CC of the Email	<a href="https://github.com/Tynker-Computer-Ne
tworks/TNK-M15-C119-SAS-BP">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-SAS-BP
Teacher Reference: Student's Additional Activity 2 Solution	Send a CC of the Email	<a href="https://github.com/Tynker-Computer-Ne
tworks/TNK-M15-C119-SAS">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-SAS
Post Class Project	Secret Santa-2	<a href="https://github.com/Tynker-Computer-Ne
tworks/TNK-M15-C119-PCP-BP">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-PCP-BP
Teacher Reference: Post Class Project Solution	Secret Santa-2	<a href="https://github.com/Tynker-Computer-Ne
tworks/TNK-M15-C119-PCP">https://github.com/Tynker-Computer-Ne tworks/TNK-M15-C119-PCP