

Chapter 17 – Extra Practice

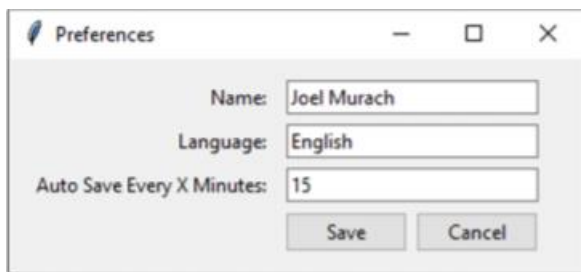
Extra Practice

Extra practice is for those who would like to do some extra practice projects to further hone their skills learned in each assignment. There are no additional points to be gained by completing these projects.

Preferences

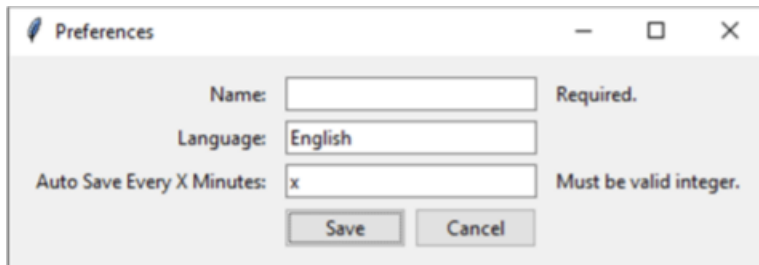
Create a GUI program that stores a user's preferences for a program.

GUI with valid Data



A screenshot of a 'Preferences' dialog box. It contains three text input fields: 'Name' with the value 'Joel Murach', 'Language' with the value 'English', and 'Auto Save Every X Minutes' with the value '15'. Below the fields are two buttons: 'Save' and 'Cancel'.

GUI with invalid data after clicking the Save button



A screenshot of a 'Preferences' dialog box showing validation errors. The 'Name' field is empty and has a red border with the text 'Required.' to its right. The 'Language' field contains 'English'. The 'Auto Save Every X Minutes' field contains 'x' and has a red border with the text 'Must be valid integer.' to its right. Below the fields are two buttons: 'Save' and 'Cancel'.

Specifications

- When the program starts, it should read the preferences from a file and display them in the GUI. If the program can't find the preferences file, it should display a blank name and standard default values of your choosing for language and auto save minutes.
- If the user enters valid data and clicks the Save button, the program should write the preferences to a file and close the GUI.
- If the user enters invalid data and clicks the Save button, the program should not save the data or close the GUI. Instead, it should display an appropriate message to the right of the text field as shown above.
- The Name and Language fields are required.
- The Auto Save field is required and must be a valid int value.
- If the user clicks the Cancel button, the program should close the GUI without saving.

Note

- To display the validation messages, you can add a label to the third column after each text entry field. Then, you can use the same technique for setting text in this label as you do for text entry fields, and you can set the text to an empty string if there's no message for the field..