

In this lab task, you will build a very simple app using App Designer. This app will act as an image viewer that will allow you scroll through the images from a single directory. Here are what to do in this lab:

- GUI objects:
 - ♦ An axes, for displaying an image.
 - ♦ A list box for listing all the image file names.
 - ♦ A push button to bring up the dialog box for path selection.
 - ♦ A label for displaying the selected path.
 - ♦ A label for displaying information about the selected image file.
- Properties to add:
 - ♦ **folder**: selected folder (complete path)
 - ♦ **im0**: selected image
- Helper functions to add:
 - ♦ **select_file**: Display the image of the selected file.
 - Query the **Value** property of the list box to get the file name. Combine it with the **folder** property to get the full file path.
 - Use **imread** to load the image.
 - Call **image** to display the image in the axes. The axes object is the first input argument.
 - Display the image size in the label for image information.
- Callbacks to add:
 - ♦ **Button-Pushed** event for the push button:
 - Call **uigetdir** function to bring up a dialog box, which allows the user to select a folder. The return value is the selected path. (A return value of zero means that the user exits the dialog box without a selection. Skip the operations below in this case.)
 - Set the returned path to the **folder** property.
 - Set the **Text** property of the path label to the selected path.
 - Call **dir** to retrieve the names of JPEG files. Put the image names into a cell array of character vectors, then assign the cell array to the **Items** property of the list box object.
 - Call **select_file** to display the first image, as the first item in the list box is selected initially.
 - ♦ **Value-Changed** event for the list box (when the user selects a different item):
 - Call **select_file**.
- Some notes:
 - ♦ To remove the axis labels/ticks of the axes, you can set these properties to empty from the component browser, or from within the program.
 - ♦ To call a method, you can use **app.methodName (...)**, where **app** does not need to be passed, or **methodName (app, ...)**.
 - ♦ To access a property (including GUI objects) in the app, always remember to use the form **app.propertyName**. Otherwise it will be treated simply as a local variable.