

Matlab GUI Day 2

- Open Matlab and change to the directory where we were working on Day 1.
- Open picdemGUI.m in the editor, if it isn't already open
- type "guide picdemgui" in the command window
- Run your file and make sure that the Connect and Disconnect buttons still work. Close the window after you check this out.
- Find the function picdemGUI_OpeningFcn in the m-file. Within that function, just after the line that says "handles.output = hObject;," add the line
handles.user.connected = false;
- **Connect** pushbutton: Find the function pushbutton_connect_Callback in the m-file. Within that function, **delete** the line "fprintf('Pressed Connect Button\n');", and in its place add the statements:

```
if (handles.user.connected)
    fprintf('Already Connected\n');
else
    fprintf('Connecting to com Port');
    comPort = str2double( get ( handles.edit_comPort , 'String' ));
    handles.user.pic = openSerialWithHandles(comPort, handles);
    handles.user.connected = true;
    guidata(hObject,handles);
end
```

Run the m-file and check that the Connect button works correctly. Close the GUI window.

- **Disconnect** pushbutton: Find the function pushbutton_disconnect_Callback in the m-file. Within that function, **delete** the line "fprintf('Pressed Disconnect Button\n');", and in its place add the statements:

```
if (handles.user.connected)
    fclose(handles.user.pic);
    fprintf('Closed Connection\n');
    handles.user.connected = false;
    guidata(hObject,handles);
else
    fprintf('Nothing to close\n');
end
```

Run the m-file and check that the Disconnect button works correctly. Close the GUI window.

- **Start Buzzer** pushbutton: Find the function `pushbutton_startBuzzer_Callback` in the m-file. Within the function, add the statements

```

if (handles.user.connected)
    fprintf('Sent: V\n');
    fprintf(handles.user.pic, 'V');
else
    fprintf('No Connection – Sends :V \n');
end

```

Run the m-file and check that the Start Buzzer button works correctly. Close the GUI window.

- **Stop Buzzer** pushbutton: Find the function `pushbutton_stopBuzzer_Callback` in the m-file. Within the function, add the statements

```

if (handles.user.connected)
    fprintf('Sent: N\n');
    fprintf(handles.user.pic, 'N');
else
    fprintf('No Connection – Sends :N \n');
end

```

Run the m-file and check that the Stop Buzzer button works correctly. Close the GUI window.

- **Get RA0** pushbutton: Find the function `pushbutton_getRA0_Callback` in the m-file. Within the function, add the statements

```

if (handles.user.connected)
    fprintf('Sent: A\n');
    fprintf(handles.user.pic, 'A');
else
    fprintf('No Connection – Sends :A \n');
end

```

Run the m-file and check that the Get RA0 button works correctly. Close the GUI window.

- **Send Message** pushbutton: Find the function `pushbutton_sendMessage_Callback` in the m-file. Within the function, add the statements

```

messageToSend = get(handles.edit_sendMessage, 'String');
if (handles.user.connected)
    fprintf('Sent: %s\n', messageToSend);
    fprintf(handles.user.pic, messageToSend);
else

```

```
        fprintf('No Connection – Sends :%s \n', messageToSend);  
    end
```

Run the m-file and check that the Send Message button works correctly. Close the GUI window.