Graphical User Interface Testing Procedures

Class: COP4331C (Summer 2017)

Group: G13

Project Name: LightMap

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Note: All subsequent tests after the first test are dependent on the first test's success.

1. Test if the graphical user interface (GUI) shows up when it is executed independently from the rest of the Python modules.
    1. From the command line, run "python Gui.py".
        1. The test was successful. A graphical user interface window has appeared on the screen.
2. Check to see if the window displayed is titled "LightMap".
    1. The test was successful. The word "LightMap" can be seen at the top-left of the window.
3. Look to see if the LightMap logo is displayed on the opened graphical user interface window.
    1. The test was successful. The logo can be seen on the LightMap window.
4. Check to see if the LightMap logo is the window icon that can be seen at the top-left of the Lightmap window.
    1. The test was successful. The LightMap logo can be seen as the window icon at the top-left of the window.
5. Check to see if the red-colored text "No File Selected" is displayed next to the "Open Image" button on the LightMap window. Also, check to see if the red-colored text "No Video File Name Set" is displayed above the "Record Video" checkbox on the LightMap window.
    1. Both visual inspections have passed.
6. On the LightMap window, check to see if there will be four options when the File menu is clicked on. Check if the arrow keys on the user's keyboard can be used to navigate these options.
    1. Both tests were successful.
7. Check the functionality of the "Open Image" option under the File menu.
    1. Check to see if the "Open Image" option under the File menu will open a file dialog when the option is clicked on, selected with the hotkey "CTRL+O", or selected with the enter key.
        1. The test was successful.
    2. If test 7.1 was successful, then check if the user can view JPEG, PNG, GIF, Bitmap, TIFF, and ICO files through the file dialog.
        1. The test was successful.
    3. If test 7.2 was successful for a certain file extension, then check if the user can open an image with the tested file extension. Test for all file extensions.
        1. The test was successful.
    4. If test 7.3 was successful, check if the LightMap window displays the file path of the selected image file.
        1. The visual inspection has passed.

5. If test 7.1 was successful, then check if the user can close the file dialog by clicking either the "X" button at the top-right or the "Cancel" button at the bottom-right. Also, check if the user can press the hotkey "ALT+F4" to close the file dialog.
    1. The test was successful.
6. If test 7.5 was successful, then check if the LightMap window notifies the user that an image file was not selected.
    1. The test was successful.

8. Check the functionality of the "Record Video" option under the File menu.
    1. Check to see if the "Record Video" option under the File menu will check the "Record Video" checkbox on the LightMap window when the option is clicked on or selected with the hotkey "CTRL+R".
        1. The test was successful.
    2. If test 8.1 was successful, then check if a file dialog will appear to allow the user to save their video recording file.
        1. The test was successful.
    3. If test 8.2 was successful, then check if the user can view AVI files through the file dialog.
        1. The test was successful.
    4. If test 8.3 was successful, then check if the user can give their video file a unique file name in a permissible directory. Also, check that the user does not have to manually type in ".avi" at the end of the file name to save their file as an AVI file. In other words, ensure that no matter which extension the user tries to save their file as, the program will always force the file to be an AVI file.
        1. Both tests were successful.
    5. If test 8.3 was successful, then check if a message box will show up when the user tries to give their video file a duplicate file name in a permissible directory containing the matching file name.
        1. The test was successful. A popup message box was seen.
    6. If test 8.5 was successful, check if the message box allows the user to overwrite the pre-existing file.
        1. The test was successful. The user was able to overwrite the pre-existing file.
    7. If test 8.5 was successful, check if the message box allows the user the choice to not overwrite the file and instead allows the user to manually rename their file.
        1. The test was successful. The user was able to rename their file if they wish.
    8. If test 8.2 was successful, check if the user is not permitted to save their video file in a non-permissible directory.
        1. The test was successful. On Windows 10, the user was not able to save their file in their C:\Program Files folder.
    9. If test 8.8 was successful, check if the user is automatically redirected to a permissible folder if the user chooses so.
        1. The test was successful. On Windows 10, the user was redirected to the Videos folder.
    10. If test 8.2 was successful, check if the user can choose to not save their video file and instead close the file dialog.
        1. The test was successful.

11. If test 8.10 was successful, check if the "Record Video" checkbox on the LightMap window has been unchecked.
    1. The visual inspection has passed.
12. If test 8.10 was successful, check if the LightMap windows notifies the user that the user did not choose a folder or file name.
    1. The visual inspection has passed.
13. If tests 8.4 and 8.6 were successful, then check if the LightMap window updates to properly reflect the user-chosen file path of the video file.
    1. The visual inspection has passed.
14. If test 8.1 was successful, then check if the "Record Video" option under the File menu has been changed to the "Stop Recording" option under the File menu. The hotkey should still be "CTRL+R".
    1. The test was successful.
15. If test 8.13 was successful, then check if the "Stop Recording" option under the File menu will uncheck the "Record Video" checkbox on the LightMap window when the option is clicked on or selected with the hotkey "CTRL+R".
    1. The test was successful.
16. If test 8.13 was successful, then check if the video file path displayed on the LightMap window has been changed to indicate that no file was selected.
    1. The visual inspection has passed.
9. Check the functionality of the "Open Image" button on the LightMap window.
    1. Check to see if a file dialog will open when the "Open Image" button on the LightMap window is clicked on.
        1. The test was successful.
    2. If test 9.1 was successful, then check if the user can view JPEG, PNG, GIF, Bitmap, TIFF, and ICO files through the file dialog.
        1. The test was successful.
    3. If test 9.2 was successful for a certain file extension, then check if the user can open an image with the tested file extension. Test for all file extensions.
        1. The test was successful.
    4. If test 9.3 was successful, check if the LightMap window displays the file path of the selected image file.
        1. The visual inspection has passed.
    5. If test 9.1 was successful, then check if the user can close the file dialog by clicking either the "X" button at the top-right or the "Cancel" button at the bottom-right.
        1. The test was successful.
    6. If test 9.5 was successful, then check if the LightMap window notifies the user that an image file was not selected.
        1. The test was successful.
10. If the file path of a chosen image is longer than 35 characters, the file path displayed on the LightMap window should be abbreviated to 35 characters. Otherwise, the file path should not be abbreviated. Check for these events.
    1. The test was conducted with the 35-character file path "C:\Users\Kevin\Pictures\567890a.png" and with the 36-character file path

"C:\Users\Kevin\Pictures\567890ab.png". The test was successful because the 35-character file path was not abbreviated when displayed on the LightMap window, but the 36-character file path was abbreviated to 42 characters when displayed on the LightMap window. The abbreviation looked like this: "C:/Users/Kevin/Pic…/567890ab.png".

11. Check for the case that the user clicks on a default image from the LightMap window.
    1. If a default image from the LightMap window is chosen, there should be a blue border encompassing the image. The image should also appear to be pressed inwards. Check for this visual effect.
        1. The test was successful.
    2. If a default image from the LightMap window is chosen, the name of the image file should be displayed on the LightMap window. Check for this.
        1. The test was successful.
    3. Check to see that only one default image from the LightMap window is highlighted at any given time unless the user chooses an image from their hard drive, in which case, none of the default images should be highlighted.
        1. Both tests were successful.

12. Check the functionality of the "Record Video" checkbox on the LightMap window.
    1. Check to see if the "Record Video" checkbox on the LightMap window will be checked when it is clicked on.
        1. The test was successful.
    2. If test 12.1 was successful, then check if a file dialog will appear to allow the user to save their video recording file.
        1. The test was successful.
    3. If test 12.2 was successful, then check if the user can view AVI files through the file dialog.
        1. The test was successful.
    4. If test 12.3 was successful, then check if the user can give their video file a unique file name in a permissible directory. Also, check that the user does not have to manually type in ".avi" at the end of the file name to save their file as an AVI file. In other words, ensure that no matter which extension the user tries to save their file as, the program will always force the file to be an AVI file.
        1. Both tests were successful.
    5. If test 21.3 was successful, then check if a message box will show up when the user tries to give their video file a duplicate file name in a permissible directory containing the matching file name.
        1. The test was successful. A popup message box was seen.
    6. If test 21.5 was successful, check if the message box allows the user to overwrite the pre-existing file.
        1. The test was successful. The user was able to overwrite the pre-existing file.
    7. If test 12.5 was successful, check if the message box allows the user the choice to not overwrite the file and instead allows the user to manually rename their file.
        1. The test was successful. The user was able to rename their file if they wish.

8. If test 12.2 was successful, check if the user is not permitted to save their video file in a non-permissible directory.
    1. The test was successful. On Windows 10, the user was not able to save their file in their C:\Program Files folder.
9. If test 12.8 was successful, check if the user is automatically redirected to a permissible folder if the user chooses so.
    1. The test was successful. On Windows 10, the user was redirected to the Videos folder.
10. If test 12.2 was successful, check if the user can choose to not save their video file and instead close the file dialog.
    1. The test was successful.
11. If test 12.10 was successful, check if the "Record Video" checkbox on the LightMap window has been unchecked.
    1. The visual inspection has passed.
12. If test 12.10 was successful, check if the LightMap windows notifies the user that the user did not choose a folder or file name.
    1. The visual inspection has passed.
13. If tests 12.4 and 12.6 were successful, then check if the LightMap window updates to properly reflect the user-chosen file path of the video file.
    1. The visual inspection has passed.
14. If test 12.1 was successful, then check if the "Record Video" option under the File menu has been changed to the "Stop Recording" option under the File menu. The hotkey should still be "CTRL+R".
    1. The test was successful.
15. If test 12.13 was successful, then check if the "Stop Recording" option under the File menu will uncheck the "Record Video" checkbox on the LightMap window when the option is clicked on or selected with the hotkey "CTRL+R".
    1. The test was successful.
16. If test 12.13 was successful, then check if the video file path displayed on the LightMap window has been changed to indicate that no file was selected.
    1. The visual inspection has passed.
13. If the file path of a chosen video file is longer than 44 characters, the file path displayed on the LightMap window should be abbreviated to 44 characters. Otherwise, the file path should not be abbreviated. Check for these events.
    1. The test was conducted with the 44-character file path "C:\Users\Kevin\Videos\235678901234567890.avi" and with the 45-character file path "C:\Users\Kevin\Videos\2356789012345678901.avi". The test was successful because the 44-character file path was not abbreviated when displayed on the LightMap window, but the 45-character file path was abbreviated to 44 characters when displayed on the LightMap window. The abbreviation looked like this: "C:/Users/Kevin/Videos/…789012345678901.avi".
14. Check for functionality of the status bar on the LightMap window.
    1. Check to see that there is a border towards the bottom of the LightMap window to set apart the status bar from the rest of the window.

1. The visual inspection has passed.
2. The following are not requirements, but check to see if the status bar is colored slightly differently. Furthermore, check if the status bar appears inset. Finally, check if there is right scalene triangle comprised of six dots on the right-end of the status bar.
    1. The visual inspection has passed.
3. Check to see if hovering the cursor over the "Open Image" button on the main window makes the status bar display "Open Image".
    1. The test was successful.
4. Check to see if hovering the cursor over the top-left default image on the main window makes the status bar display "Earth".
    1. The test was successful.
5. Check to see if hovering the cursor over the top-right default image on the main window makes the status bar display "Moon".
    1. The test was successful.
6. Check to see if hovering the cursor over the bottom-left default image on the main window makes the status bar display "Smiley Face".
    1. The test was successful.
7. Check to see if hovering the cursor over the bottom-right default image on the main window makes the status bar display "Mystery Man".
    1. The test was successful.
8. Check to see if hovering the cursor over anywhere else on the window or screen will not make the status bar display any text.
    1. The test was successful.
9. Verify that there should not be any text displayed on the status bar when the file dialog is open.
    1. The test was successful.
15. Check the functionality of the "Start Mapping" option under the File menu.
    1. When the user presses the hotkey "F5" or clicks on the "Start Mapping" option under the File menu, check to see if a message box will be displayed telling the user to select a valid image if an image has not been selected yet.
        1. The test was successful.
    2. When the user presses the hotkey "F5" or clicks on the "Start Mapping" option under the File menu, and if an image file has been, then check to see if the "Start Mapping" option under the File menu will open up the Pygame window.
        1. The test was successful.
16. Check the functionality of the "Start Mapping" button on the LightMap window.
    1. When the user presses the hotkey "F5" or clicks on the "Start Mapping" button on the LightMap window, check to see if message box will be displayed telling the user to select a valid image if an image has not been selected yet.
        1. The test was successful.
    2. When the user presses the hotkey "F5" or clicks on the "Start Mapping" option under the File menu, and if an image file has been, then check to see if the "Start Mapping" option under the File menu will open up the Pygame window.
        1. The test was successful.

17. On the LightMap window, check to see if there will be an option called "Preferences" when the Settings menu is clicked on. Check if the arrow keys on the user's keyboard can be used to navigate to this option once the Settings menu has been opened.
    1. Both tests were successful.
18. On the LightMap window, check to see if there will be two options when the Help menu is clicked on. Check if the arrow keys on the user's keyboard can be used to navigate these options.
    1. Both tests were successful.
19. Check to see that the LightMap window cannot be resized.
    1. The test was successful.
20. Check to see that the LightMap window cannot be maximized.
    1. The test was successful.
21. Check to see that the user can move the LightMap window around their screen by clicking and holding the title bar of LightMap window.
    1. The test was successful.
22. When the user presses the "—" button at the top-right of the LightMap window, check to see if the LightMap window will minimize.
    1. The test was successful.
23. When the user presses the "X" button at the top-right of the LightMap window or presses the hotkey "ALT+F4", check to see if the LightMap window will close.
    1. Both tests were successful.
24. Check to see that the user can "right-click", or more formally "secondary click", the title bar of the LightMap window to move, minimize, or close the LightMap window.
    1. The test was successful.
25. When the user presses the hotkey "CTRL+Q" or selects the "Quit" option under the File menu by either clicking on the option or pressing the enter key once the option has been highlighted, check to see if the "Quit" option under the File menu will close the LightMap window and all child windows. Alternatively, when the user presses the "X" button at the top-right of the LightMap window or presses the hotkey "ALT+F4", check to see if the LightMap window will close as well as all child windows.
    1. The LightMap window closes, but the child windows do not close. The test was only partially successful.