Grading Requirements

Student is expected to perform the tasks provided below for either two color images, or two grayscale images if color is not implemented. Please note that it is not acceptable for execution to stop, or for an exception to be thrown in any task. If a task throws an exception, the TA may assign it a zero score.

Required Tasks

Task 1: Loading the Images [10 pts]

- Run the Application.
  → Verify: Slider, text box and the "Blend" button are disabled.
- Load `"Start1"` (no priors), then re-load `"Start2` (with priors).
  → Verify: An image is shown in the starting view, then overridden with another image.
- Repeat previous action with ending view using `"End1"` and `"End2"`.
  → Verify: An image is shown in the ending view, then overridden with another image.
- Load a start image and an end image.
  → Verify: Slider, text box and the "Blend" button are enabled.
- Moving the slider left and right.
  → Verify: Slider value is being updated in the text box with an increment of 0.05.

Note: Images displayed must not be deformed, and must be contained within the view.

Task 2: Point Selection & Correction [20 pts]

- Load `"Start1"` and `"End1"`. Click on ending image multiple times.
  → Verify: No dots are being drawn at all.
- Click on starting image multiple times.
  → Verify: Only one "Green" dot is shown at the location of the first click, and the rest are ignored.
- Click on starting image (if no dot is shown), press on backspace, then click on a different location.
  → Verify: A "Green" dot is shown at the first location, erased, then shown again at the second location.
- Continue, and repeat previous task on the ending image.
  → Verify: A "Green" dot is shown at the first location, erased, then shown again at the second location.

Task 3: Point Selection & Persistence [25 pts]

Note: Remove text files for `"Start1"` and `"End1"`, if they exist.

- **[5 pts]** Load `"Start1"` and `"End1"`. Click once on each image, then click on window away from the views.
  → Verify: Two "Green" dots are shown, then they become "Blue".
- **[5 pts]** Click once on each image, then click again on starting image.
  → Verify: Two "Green" dots are shown, they become "Blue", then another "Green" dot is shown on start image.
- **[10 pts]** Repeat the tests of **Task 2**.
  → Verify: Behavior only affects new points, and no change to persisted points.
- **[5 pts]** Select and persist five pairs or more. Restart the application, and choose the same images.
  → Verify: Images show the right number of selected pairs, as "Red" dots.

Task 4: Point Selection & Triangulation [25 pts]
Note: Remove text files for `"Start1"` and `"End1"`, if they exist.

- Load `"Start1"` and `"End1"`. Persist three pairs (must not be co-linear,) then check the check box.
  → Verify: One triangle is shown.
- Uncheck the check box, then check it again.
  → Verify: The triangle is erased then shown again.
- With the check box checked, click and persist another pair via clicking on the window.
  → Verify: As soon as pair is persisted, triangulation is changed to include that pair.
- Repeat the previous test, but persist via clicking on the start image.
  → Verify: Only the persisted pair is included, and not the starting "Green" dot.
- Restart the application, load the same images, and persist a pair as in previous task.
  → Verify: Triangulation include "Red" and "Blue" dots, but not the "Green" one.

Task 5: Blending [20 pts]

- Load `"Start2"` and `"End2"`. Choose $\alpha = 0.25$, then press on "Blend".
  → Verify: A blended version weighted towards the start image is shown in the target view.
- Add some pairs, choose $\alpha = 0.75$, then press on "Blend".
  → Verify: A blended version weighted towards the end image is shown in the target view.

Optional Tasks

Selection History [10 pts]

- Load `"Start2"` and `"End2"`. Persist one pair, and one point in the starting image. Press (CTRL + Z + ...), where the "Z" is pressed five times.
  → Verify: Only the three points are removed, and the "Red" dots are not affected.
- Press (CTRL + Y + ...), where the "Y" is pressed five times. Click on the start image.
  → Verify: The three dots are shown as two "Blue" and one "Green" and the clicking produces nothing.
- Restart the application. Add three pairs, and press (CTRL + Z + ...), where the "Z" is pressed three times, then (CTRL + Y).
  → Verify: One pair is shown as "Blue" and another pair as "Green".
- Restart the application. Add three pairs, and press (CTRL + Z + ...), where the "Z" is pressed three times. Click on the ending image, then (CTRL + Y ...), where "Y" is pressed 3 times.
  → Verify: One pair is shown as "Blue" and another pair as "Green", and the redo has no effect.

Form Resizing [5 pts]

- Load `"Start2"` and `"End2"`. Add some point pairs, click on "Blend", then expand the form.
  → Verify: Views and their content are resized properly. Slider is resized, and other widgets maintain relative location.
- With form expanded, load `"Start2"` and `"End2"`, add some point pairs, click on "Blend", then reduce the form size.
  → Verify: Views and their content are resized properly. Slider is resized, and other widgets maintain relative location.

Sequence Generation [5 pts]

- Load `"Start3"` and `"End3"`. Set $\alpha = 1.0$, then click on "Blend" and wait for display.
  → Verify: Verify initial display of ending image.
- Slide the slider to the left and back again.
  → Verify: Different blending results are shown as the slider changes its value.