

15-110 Hw3 Check-in - Written Portion

Name:

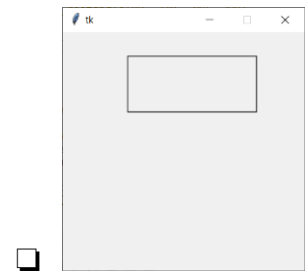
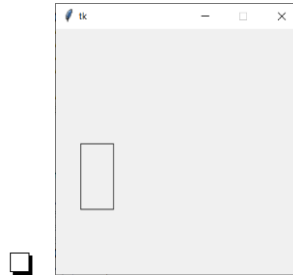
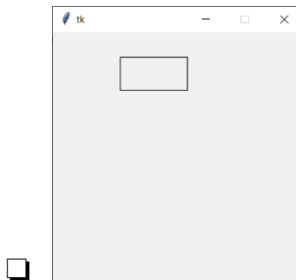
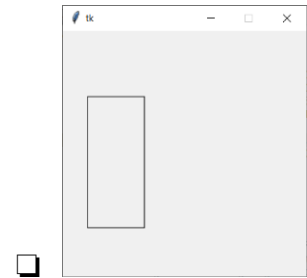
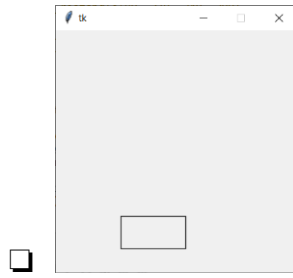
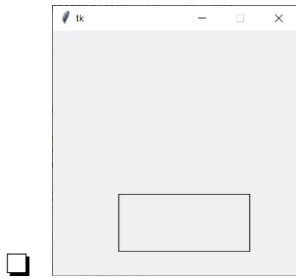
AndrewID:

#1 - Graphics Coordinates - 10pts

Given that a 300px x 300px Tkinter canvas has been set up properly, if the following line of code is run:

```
canvas.create_rectangle(80, 30, 160, 70)
```

which image shows the correct resulting output?



#2 - Graphics Parameters - 10pts

Which of these four options most accurately represents the four core parameters of the `canvas.create_rectangle` function?

- `canvas.create_rectangle(left, top, width, height)`
- `canvas.create_rectangle(left, width, top, height)`
- `canvas.create_rectangle(left, top, right, bottom)`
- `canvas.create_rectangle(left, right, top, bottom)`
- `canvas.create_rectangle(left, bottom, width, height)`
- `canvas.create_rectangle(left, width, bottom, height)`

#3 - Optional Parameters - 20pts

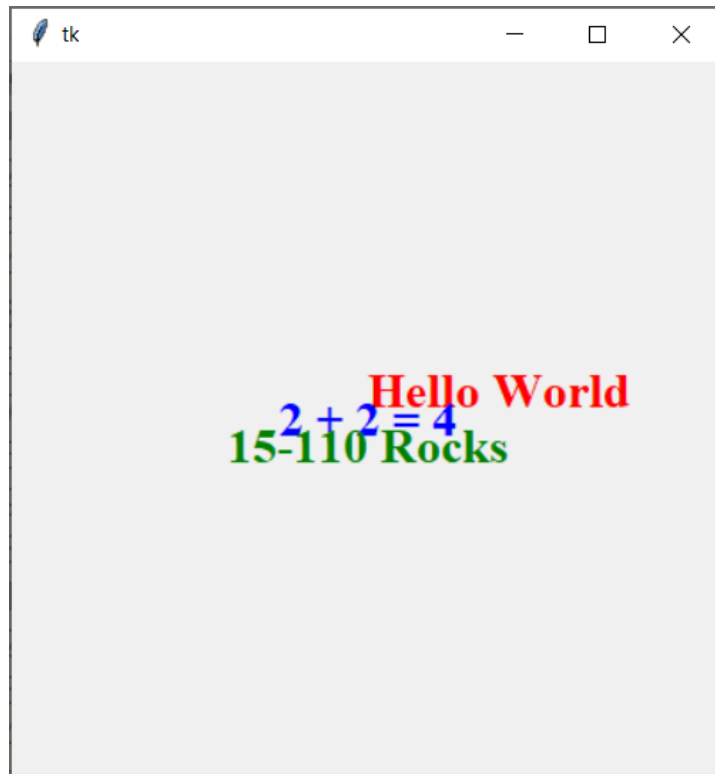
We discussed in class how optional parameters can be used to change the results of basic graphics calls. For each of the following two optional parameters, in twenty words or less, describe what effect the parameter has.

fill

width

#4 - Text Anchoring - 15pts

The anchor optional parameter is used to modify how the text generated by `create_text` is placed on the screen. The following image shows three pieces of text that have all been drawn with the coordinate (200, 200) [the center of the screen], but with different anchors. Choose the three anchors that were used to place these texts.



N

W

SE

S

NE

SW

E

NW

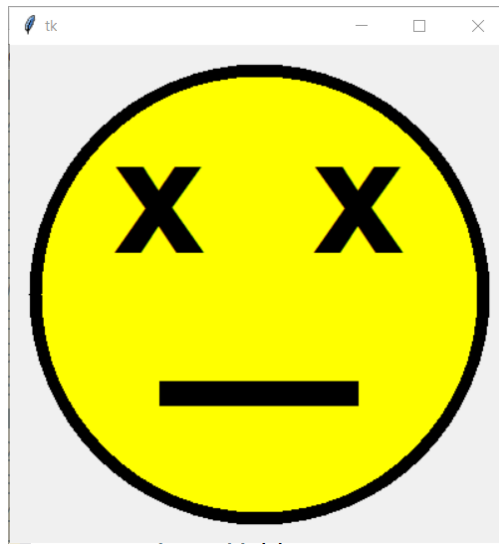
CENTER

Programming Problems

Each of these problems should be solved in the starter file available on the course website. They should be submitted to the Gradescope assignments Hw3 Check-In 1 (Programming) to be manually graded.

#5 - Smiley Face - 20pts

In a 400px x 400px Tkinter canvas window, draw the following smiley face:



Your canvas does not need to be a pixel-perfect match for ours, but should contain all the relevant components in approximately the right location and size.

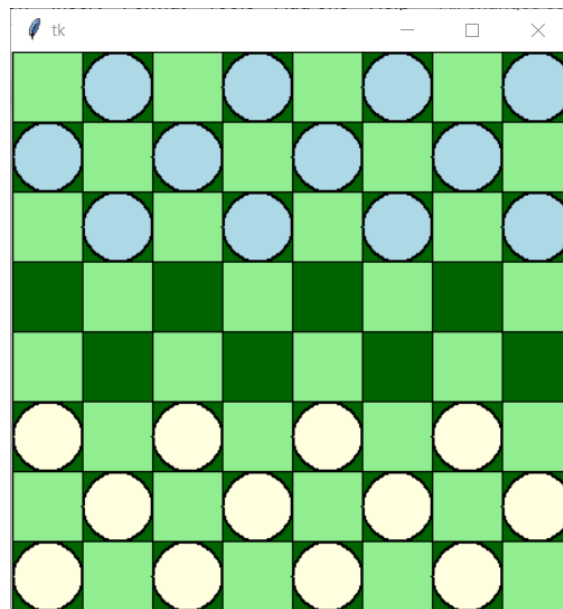
Hint: to make the eyes, consider using text instead of lines...

#6 - Checkerboard - 25pts

In a 400px x 400px Tkinter window, draw a checkerboard with checkers in the starting positions. A checkerboard alternates light and dark spaces in an 8x8 grid. Pieces are placed on the dark spaces, with pieces of one color in the top three rows and pieces of a different color in the bottom three rows.

Examples of checkerboards and checkers can be found here:

<https://en.wikipedia.org/wiki/Draughts> . Our solution is shown below, though your colors don't need to match ours:



To get full credit, you can't have more than 10 `create_rectangle` or `create_oval` calls. You must use loops instead!