Learning Objectives

Upon completion of this lab, the student shall be able to:

- Utilize geometric principles to ensure program correctness
- Implement turtle programs accurately

Due Date & Extra Help

- Some students will be able to complete this lab during the lab session.
- If you do not complete the lab during the session, you must complete the work on your own time based on the due date and time.
- **Note**: As this is an extra credit assignment, you must not receive any help on it, including help from me. All work must be your own.

Evaluation

There are three parts to this lab. You will submit a **single** python file containing all of your code. You will be evaluated based on these criteria:

1. Does your program produce the image (see below) **exactly**?
2. Does your program have a function using a loop to draw the 8-pointed red stars with yellow dots in the center (see below)
3. Does your program use a loop to create the four 8-pointed red stars with yellow dots surrounding the central 8-pointed red star with yellow dots?
4. Every submission is worth 0.5 points.
5. Perfectly correct submissions worth 2.5 points
6. There are no other grading points possible.

Description

Complete the steps to this lab and follow the submission instructions below.

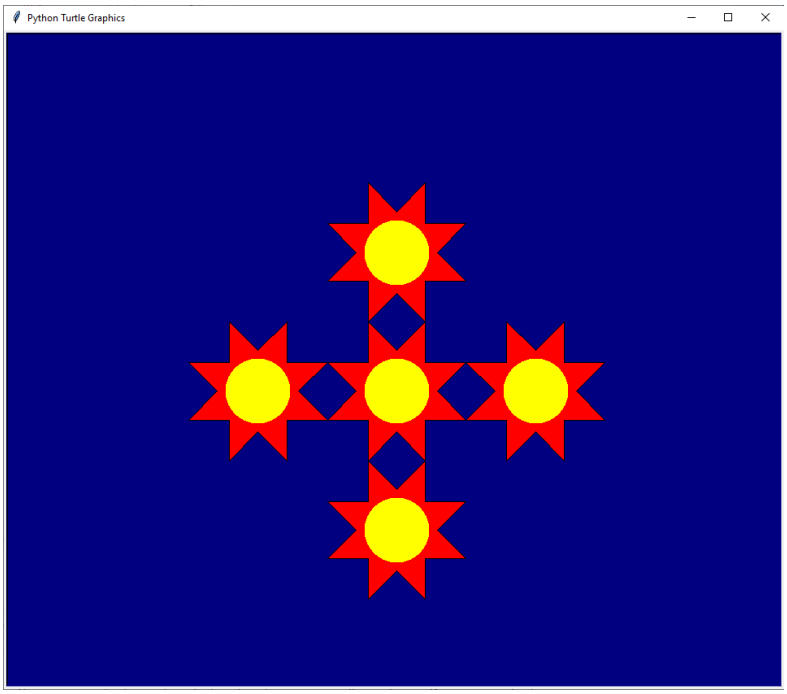

Figure 1: image with 5 repeated stars: one centered, one left, right, top and bottom; the stars have eight points and have a large yellow circle. All shapes are solid. The background is navy blue.

1. Details: red stars: each side length is 50, angles alternate between left and right, 45 and 90 degrees respectively.
2. Yellow dots have a radius of 40.
3. Red star points touch other red star points
4. Feel free to change colors as long as each element's color is distinct.
5. Put all work in a single python file.
6. Write a python program that draws the image above exactly. Be sure your program conforms to the standards specified in the *Evaluation* section of this lab.

What to Submit for this Lab

7. Click the ***Start Assignment*** button for Challenge 01.
8. You will Upload your submission.
9. Submit your ***single*** python file which includes your answers for steps 1-2 above.
10. Click the ***Submit Assignment*** button for Challenge 01.