1 Lab 5

Goals

The goals for this lab are:

1. Practice using loops in your program
2. Practice using a parametric equation of a circle to create a composite shape (flower, etc.)
3. Practice writing a function to draw a composite shape (eg the flower, etc.)
4. Practice calling your function to draw more than one copy of your composite shape
5. Practice using a parametric equation of a line to create a composite shape (optional)

Modality

This is a pair-programming lab - please form teams of two people and trade off typing in commands and giving instructions to they-who-are-typing.

Details

Tasks: Design a night-time scene (think moons, stars, planets, space ships, etc.). Your scene must include at least one representational shape that is mostly circular, which is drawn using a parametric equation for a circle and a for loop. The code for your parametric shape must be encapsulated in a function, that you can call from your ‘draw’ function in order to draw more than one shape.
Your ‘sketch’ must:

- Be a night-time scene (use an appropriate color scheme to create a mood for your scene).
- Use a for loop to draw a circular or semi-circular shape using the parametric equation for a circle
- Encapsulate the drawing of your shape in a function
- Draw more than one of the shapes you designed (by calling the function you wrote).

**Demo:**

In order to receive credit for this lab, you and your partner must demo your sketch to your instructor along with handing in the image and sketch via handin. Ask your instructor for details.

## 2 Resources

some useful commands:

```cpp
//example of a loop
for (int i=0; i<5; i++) {
    println("Count" + i);
}

sin
cos
++
+=
```