COSC 101: Spring 2018
Lecture 05: Turtles and for Loops

1) a) If the box below is the canvas, draw the result of the program shown on the left.

```python
import turtle
wn = turtle.Screen()
crush = turtle.Turtle()
crush.shape("turtle")
crush.fillcolor("Dark Green")
crush.pencolor("Light Green")
crush.right(45)
crush.forward(125)
crush.right(45)
crush.forward(125)
crush.right(45)
crush.forward(125)
crush.right(45)
crush.forward(125)
crush.right(45)
crush.forward(125)
crush.right(45)
crush.forward(125)
crush.right(45)
crush.forward(125)
wn.exitonclick()
```

b) What does the program flow chart for this program look like?
c) Let’s rewrite the turtle octagon program above using a loop.

d) What does the program flow chart for the modified program look like?
2. Code Review 1: Write a program that asks the user for the number of sides, the length of the side, the color, and the fill color of a regular polygon. The program should draw the polygon and then fill it in.

3. Loops aren’t used just for Turtles. Let’s write a program that greets students in a class.
4. Code Review 2: Write a program that prints out the following numbers and their squares: 12, 10, 32, 3, 66, 17, 42, 99, and 20.

5. Below is a canvas after a python program has been run:

![Canvas after Python program](image)

Using computational thinking break the problem into smaller parts using what you know about the goal.
Write a program that would generate the output above exactly.

What does the program flowchart for this program look like?