Introduction to Programming
3rd Weekly Note (E17, Week 38)

Reading for Week 38

- **Obligatory:** Chapters 8–10 of "Think Python"

- *Supplementary:* Chapters 10,12, and 16 of "The Coder's Apprentice"

Lecture: Monday, September 18, 12-14 (U140)

There will be the project qualification assessment during this lecture.
Show up and bring your computer! Test: `http://lynx.imada.sdu.dk/`
First, we will learn how to work with strings by understanding them as sequences of characters.
Then we will perform the project qualification assessment.

Exercises: see detailed schedule on course home page

- **Obligatory:** Exercises 1 and 2 from Chapter 6. Exercise 1 from Chapter 7.

- *Supplementary:* Exercises 4 and 5 from Chapter 6. Exercises 2 and 3 from Chapter 7.

- Challenging:
  Read the definition of a Sierpinski carpet: `https://en.wikipedia.org/wiki/Sierpinski_carpet`
  Write a function that draws a Sierpinski carpet using the turtle module.
  Hint: A length of 729 should give reasonable results at iteration 4. Why?

Labs: see detailed schedule on course home page

- **Obligatory:** Exercises 1 and 2 from Chapter 8. Exercises 1 and 2 from Chapter 9.

- *Supplementary:* Exercises 3 and 4 from Chapter 8. Exercises 3–6 from Chapter 9.

- Challenging:
  Read the definition of a Menger sponge here: `https://en.wikipedia.org/wiki/Menger_sponge`
  Use a framework like GlowScript (`http://www.glowscript.org/`) or Panda3D (`https://www.panda3d.org/`) to visualize a Menger sponge of at least depth 3. How many cubes do you need for depth 3?
  How many for depth 4? Can you render other fractals in 3D? What about a Sierpinski tetrahedon?