

INTRODUCTION TO COMPUTER SCIENCE I

Fall 2014

LAB 5

Printing pretty 2-dimensional patterns

We have, on other problems, stumbled into situations where we need to use one loop inside another. However, here, we make it explicit and reveal the kinds of 2-dimensional patterns that such *nested loops* provide.

1 Three patterns

Create a new module (I recommend a name like `patterns.py`) that contains the following:

- A function `printSquare(n)` that prints a pattern like the following one (using, as an example, $n = 5$):

```
+++++
+++++
+++++
+++++
+++++
```

- A function `printTriangle(n)` that prints a pattern like the following one (again, $n = 5$ as an example):

```
+++++
++++
+++
++
+
```

- A function `printTree(n)` that prints the following patterns (e.g., $n = 5$):

```
  +
  +++
  +++++
  ++++++
  +++++++
  ++++++++
  |
```

- A function `main()` that obtains a value for n and then calls each of these three functions with that value.
- A call to `main()` to begin the sequence of function calls that make up this program.

2 Submitting your work

Go to the CS submission system to submit your code.

This assignment is due on Monday, Oct-27, 11:59 pm