

# An Introduction to the Lab Environment

Field

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## A little bit about me

- Name: Haoye Lu (but please call me **Field** :-) )
- E-mail: `fieldteaching+ITI1120@gmail.com`
- Office Hour: Thursday, 11:00am - 12:30pm, STE0109
- Received my B.Sc, double major in Mathematics and Computer Science, uOttawa.

## How to get full points in lab

Come to the lab and try to complete all the tasks/exercises. After you finish all the tasks, you can sign on the attendance sheet and be free to go. You are very welcome to help your friends too!

## 1 Objectives today

1. ☐ Getting familiar with the lab environment
  - (a) ☐ logging in and logging out your computer **NOTE:** The files you created will be deleted once you log out. So you need a USB stick or upload it to a network drive (e.g. dropbox, onedrive, etc.)
  - (b) ☐ accessing your uOttawa email. Please send me an email containing *your name* and *student id*.
  - (c) ☐ accessing Brightspace
  - (d) ☐ enrol in two Coursera courses (See *EnrollCoursera.pdf* for details) SIGN UP BEFORE THE END OF THE LAB)
2. ☐ Writing your first Python program – HelloWorld.py
3. ☐ Submit Assignment 0 on Brightspace (sec 2).
4. ☐ Two exercises (sec 3)
5. ☐ Blocky exercises (sec 4)

## 2 Submit Assignment 0

Please see *SubAss0.pdf* for details. Note that at the beginning of each program in your future assignments, you have to provide the following information:

```
# Course: ITI 1120
# Assignment number
# Family name, Given name
# Student number
```

### 3 Exercises (Python)

You will use Turtle class to finish the following two exercises. Please see *usefulMethod.png* for the descriptions of some useful methods. Besides, I wrote some sample codes (check *sampleCode* folder) for your reference.

#### 3.1 Exercise 1

Main goal: draw Fig 1. If you think it is hard, then please follow the following procedure:

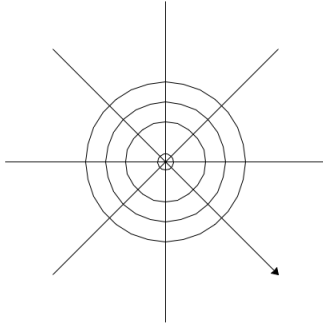


Figure 1: Main goal

1. Draw circles
  - (a) Draw a single circle
  - (b) Draw another circle outside the circle
  - (c) Repeat the previous step
2. Draw radial lines
3. Combine first and second step together.

**Hint:** You can treat the arrow as your car and think about how to drive it. If you want to leave track on the ground, consider *t.pendown()*. If you do not want to, consider *t.penup()*. If you want to change the direction of the car, consider *t.left(ANGLE)* and *t.right(ANGLE)*

#### 3.2 Exercise 2

Main goal: draw Fig 2.

If you think it is hard, then please follow the following procedure (check *sampleCode/face.py* if you need some inspirations):

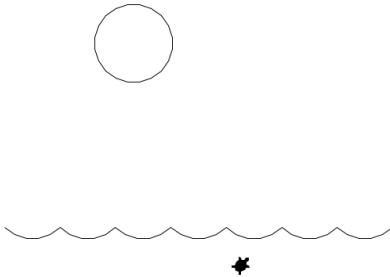


Figure 2: Main goal

1. Draw a circle
2. Draw waves
  - (a) draw one wave
  - (b) how to make the waves in a unique direction?
3. how to move the turtle without tracks
4. Combine previous three steps together.

### 4 Final Exercises (Blockly)

Blockly is a visual programming language developed by Google (to help students learn programming)

The following two exercises can help you to get some preliminary ideas about loop and if-else statement. (To get an idea on how to solve them (i.e. how to program in Blockly, you may need to solve a few earlier levels))

<https://blockly-games.appspot.com/maze?lang=en&level=9&skin=0>

<https://blockly-games.appspot.com/maze?lang=en&level=10&skin=0>