



COMPUTER SCIENCE 312 (Winter Term 2021)  
**Programming Language Design**  
Prof. Levy

## Problem Set 5

Due on github 11:59 Tuesday 6 April

### 1 Reading Assignment: *Essentials of Programming Languages*, Chapter 5, Sections 5.1 - 5.4.1

### 2 Programming Assignment

As in the last assignment, get the code from the web page, next to whence you got this document.

**Exercise 5.8.1**, page 198. Just do part 1 of exercise 5.8. Figure 2.5 is on page 67. The idea is to write this code in the toy (defined) OOP language, with some test cases as part of the body of the program. Ignore the short functions (`queue_get ...`) at the bottom of the figure, and write the following methods in the toy OOP defined language: `initialize`, `empty-queue?`, `enqueue`, `dequeue`, `reset-queue`.

**Exercise 5.11**, page 199. Your `instanceof` implementation should go up the class hierarchy until it fails (reaches `object`), or succeeds by finding a class that is an ancestor of *class-name*.