

CSCI 190: HW2

Due on **Wednesday, February 23 at 8:00am** (before the start of class.)

I. (60pts) Write a **patch-setup** procedure (and any additional useful procedures) that will create a terrain in which each patch has an **altitude**. Any patch with **altitude < 0** is considered below sea-level, and should be colored a shade of **blue** (as water). Any patch of altitude 0 or above should be colored a shade of **green** (as land). In particular:

1. The transitions from patch to patch should be relatively smooth.

3. The lowest patch should have altitude **altitude=-500** and the highest patch should have altitude **altitude=499**.

4a. Altitudes below 0 should have a **pcolor** using shades of blue, with the lower the altitude the darker the shade.

4b. Altitudes greater than or equal to 0 should have a **pcolor** using shades of green, with the lower the altitude the darker the shade.

II. (20pts) Create two alternate procedures to set up patches: **Lakes-On-The-Land** and **Islands-In-The-Sea** that create a world with the same four rules as above, except in the first case most of the world is land, with some small number of lakes (1-3) or most of the world is water with some small number (1-3) of shoals or islands.

III. (20pts)

1. Create a **button** for each of the three setup procedures.

2. Your program should be **well-structured** (making good use of procedure), and **well-commented**.

3. Your program MUST be named as follows: **YourName-HW2.nlogo**.

Submission instructions will follow.

NOTE: Your solutions only needs to make use of NetLogo commands that have already been introduced in class on or before Day 6, including the *ifelse* command introduced on Day 6 plus other commands introduced by Day 5. It is based on the in-class lab assignment from Day 5.