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CS383

3 February 2015

Laboratory 1

There were a great number of difficulties for me during this lab. The implementation of the different goals for the program proved extremely difficult. I had trouble ensuring that I had inserted and deleted the appropriate lines in the right places. Another major challenge was having all the import statements. I worked with the professor to find many of the import statements in the Java API that were not included in the directions. This alone cleared up many of the errors I struggled with. The next major struggle was editing several of the bug methods. These were complicated to change, as the instructions were complicated in editing with insertions and deletions.

The creation of a long-term goal was complicated for me. I aimed for preservation of the food sources so I had the bug agents eat varying amounts depending on their size. I altered behavior using if-else statements in the grow() method in the Bug class to have bugs less than 70 units eat what was available in the cell, bugs between 70 and 100 would eat half the food available in the cell, and bugs over 100 units would not consume what was in the cell until they were able to.

This lab was set up with classes that governed the layout of the model, the grid cell layout which remained constant. There was also a Habitat class, which contains information about the state of the cells in the grid. Food production and growth was governed here. The Bug class controlled all the bugs’ actions including movement and growth.