

# GridWorld

# Assignment #1

## ASSIGNMENT: INTRODUCTION TO GRIDWORLD

### Summary:

1. You will complete exercises 1-4 on pages 13-15 of the GridWorld: Case Study Student Manual. Download: [http://mchs-cs.com/apcsa/ap07\\_gridworld\\_studmanual\\_appends\\_v3.pdf](http://mchs-cs.com/apcsa/ap07_gridworld_studmanual_appends_v3.pdf)
2. You will create your assigned letter bug with the following constraints:
  - a. If your letter is A, then your Letterbug object is ABug, Z would be ZBug.
  - b. Your bug should draw a letter that is approximately 6 squares wide and 8 squares high.
  - c. You must have two constructors:
    - i. **XBug(int size)**
      1. The size is a multiplier, so a size of 2 results in a letter 12 squares wide and 16 squares high.
    - ii. **XBug(Location origin)**
      1. The origin specifies the lower-left hand corner where the letter should begin drawing from.
    - iii. **XBug(Location origin, int size)**
      1. This version of the constructor allows for a location and size to be set.
  - d. Your Act() method should cause your bug to take one step in drawing the letter. If the size is 1, then it should only move one square. A larger size may allow for multiple steps to be taken in the process of drawing the letter.
  - e. When the letter has been completely drawn, the bug should start drawing it again when the Act() method is called again.

### Due Dates:

Exercises 1-4 (2 points each) must be completed by the start of class on Friday and the **XBug.java** file must be emailed to [mchs.cs.java@gmail.com](mailto:mchs.cs.java@gmail.com) by the end of class on Friday (22 points).