**Assignment A**

**MIST 4600 Spring 2014**

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**Due Wednesday January 22, 2014, 11:00 p.m.**

**Part A.** Download the zipped LastnameFirstname-AssignmentA BlueJ folder (originally, the “Visitor” project). Do your work in class Picture. At the top of the Picture code, type in your name, and when you finish, a comment about how well your code works or does not work. I have already added the shell of an “eveningVisitor” method at the bottom of class Picture. You have to complete it. As a first step, in the eveningVisitor method, recreate the sunset that we wrote in class. Just make the sun move slowly down (300 clicks is good enough) and then change everything to black and white. Test that to make sure it works. You’ll have “compile” it (See the compile button at the top left of the “Code Window”, or on the left of the BlueJ workbench.). When you compile something, you may get an error message. See below for things to check if you do get a compile error. If it compiles correctly then at the bottom of the code window you will see: “Class Compiled – no syntax errors”. Once it compiles correctly you can test it by right clicking the Picture icon, and ask for a “new Picture()”. Then right click the red picture object at the bottom of the BlueJ workbench to see the available methods, and click on “Draw()”, then click on “eveningVisitor()”. You should see the sunset we created in class. (Note that the testing class TestAssignmentB does precisely that. Try it.

**Part B.** Now add a “Person” object called “visitor” to your eveningVisitor() method. Look at the Draw method to see how to create a new Person object called “visitor”. Here is how the Draw method created a new circle object called “sun”:

sun = new Circle();

This will put your new person object (your “visitor”) almost directly behind the house. (Not good!) So before you make the “visitor” visible, move it to the right with a “moveHorizontal” of about 300 clicks. Then make the visitor visible. (See the draw method for a guide on how to make an object visible.) The visitor will still be off the screen. Then move it *slowly* to the left about 275 clicks. It should end up right in front of the house. Then have the light go on in the house. I leave it to you to figure out how to make the light go on, but it involves the window. You’ll have to compile everything again, and then test it to make sure it works. Refine it as you see fit. Once you have it as you like it, click on the BlueJ Workbench “project” menu tab, and choose “save as”. Save it as “LastnameFirstname-AssignmentA”, using your own “Lastname” and “Firstname”.

**Part C.** Zip up your program and submit it on the eLC. Go into Windows Explorer and find your folder labeled “LastnameFirstname-AssignmentA” and right click it. [DO NOT go into that folder to where you see all the components of the folder. Stay at the higher level.] After you right click, choose “Send To” and choose “compressed file”. This will give you a zipped file with the name of “LastnameFirstname-AssignmentA”. Then go into eLC to Assignments, and find Assignment A. Upload and Submit your zipped file to Assignment A. And you’re done!

**Things to check if you do get an error when you compile your program.**

1. Java is very particular about capitalization and spelling. Make sure every method and every object you use is capitalized and spelled exactly as it was in the earlier method for draw(). Java allows no spaces in names. For class names, the convention we use is to capitalize every new word. For field (attribute) names and method names, do not capitalize the first word, but capitalize the rest of the words. Everything else is lower case.

2. Make sure you put parentheses at the end of each method. Such as:

sun.changeSize(80);

sun.makeVisible();

3. Every Java statement ends in a semi-colon.

4. You have to get the curly brackets {} right – an opening bracket just after the initial line naming the method, and another that ends the method, after the last statement. See “SetBlackAndWhite()” as an example. Always enter these in pairs. Then do your work between them. Do the same for parentheses (), and square brackets []. This will save a lot of debugging time.

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