CompSci 94, Fall 2013 Test 2 Solutions

1. A) There are four events:

   When the world starts

   While penguin distance to lemur > 0.9

   When lemur distance to penguin < 1

   When the mouse clicks on an object

   B) There are four event handlers with one having multiple parts:

   World.myFirstMethod

   All parts of the BDE: penguin turn to face lemur, penguin move forward .5 meters, and penguin say Hello

   World.something

   The mouse moving an object

   C) The penguin faces the lemur and repeatedly moves towards him until he is .5 meters from the lemur and he says hello. As the penguin reaches the lemur, the When event becomes true and the lemur turns to face the tortoise and moves close to it. The BDE is true again so the penguin moves over the the lemur and says hello. The When event is true again but the lemur is already close to and facing the tortoise.

   D) A – if the tortoise is moved to the well. Nothing else happens.

   B – if the lemur is moved to the well, then the penguin will move over to the lemur and say hello, the lemur will then move over to the tortoise and then the penguin will move over to the lemur's new position and say hello again.

   C – if the penguin is moved to the well, then the penguin will move over to the lemur and say hello.

2. turtle
   cat
   penguin
   tortoise
   lemur
   joey
3. A) Mystery returns a number

   B) temp is a local variable

C) creatures is a list of objects

D) something is a parameter

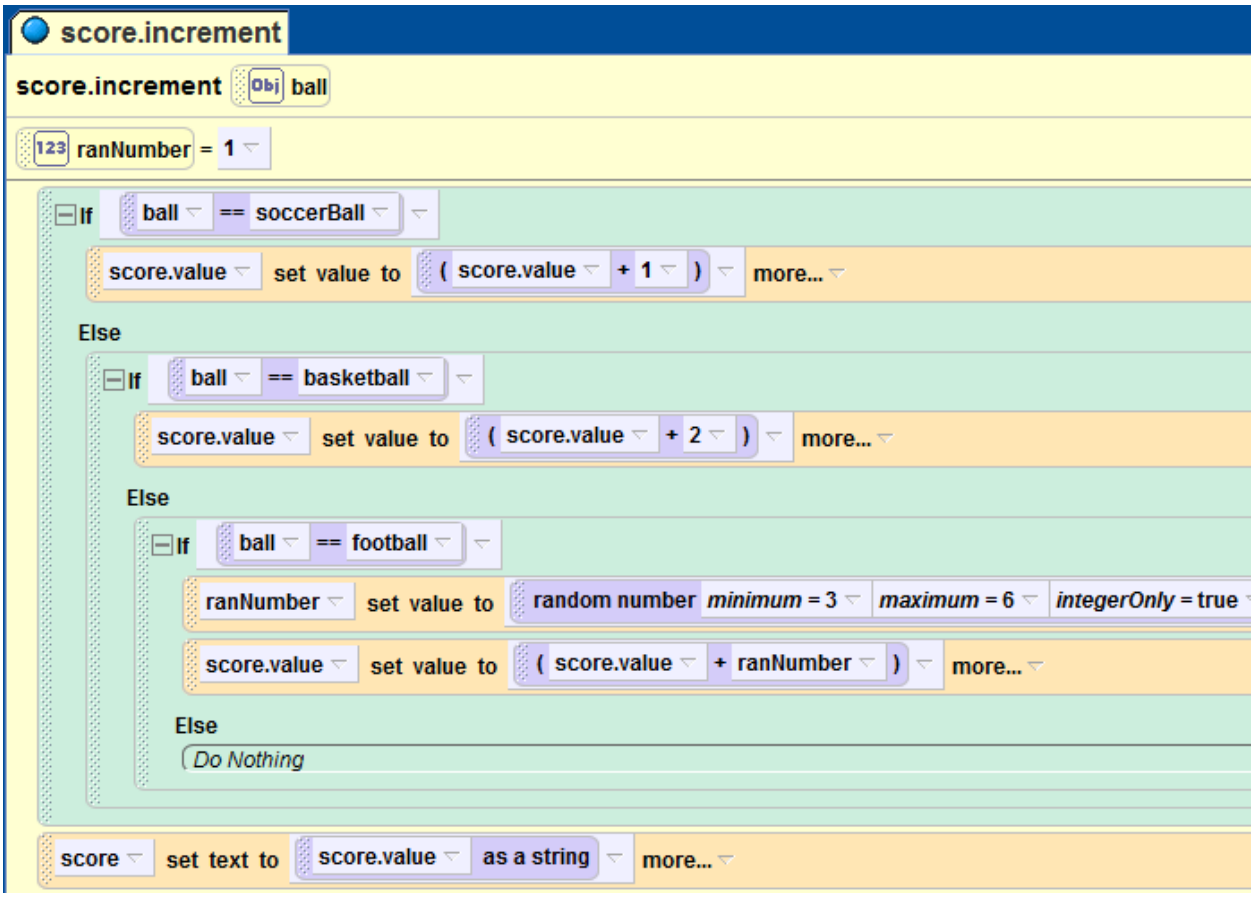
E) mystery returns the number of objects in the list creatures that are a distance less than 2 from the object something.

4. A) The troll says yikes 10 times.

   B) The troll's club turns 150 times.

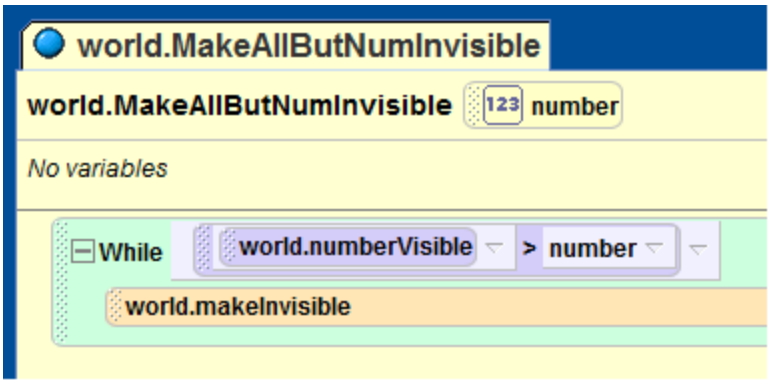
   C) The dukePrince turns 50 times.

5. A. Score.increment

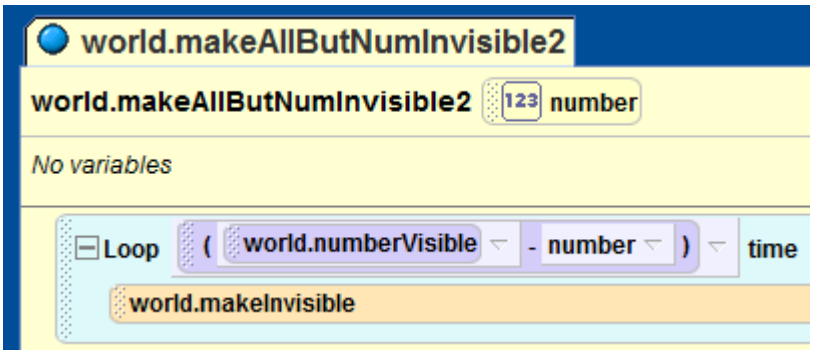


B) The score increase for the soccerBall and football are the same, the score is increased by 1 point for the soccerBall and a random integer 3, 4, or 5 for the football. The score is increased by four points for the basketball. By adding an additional event for the basketball, both events add 2 to the score when the basketball is clicked on.

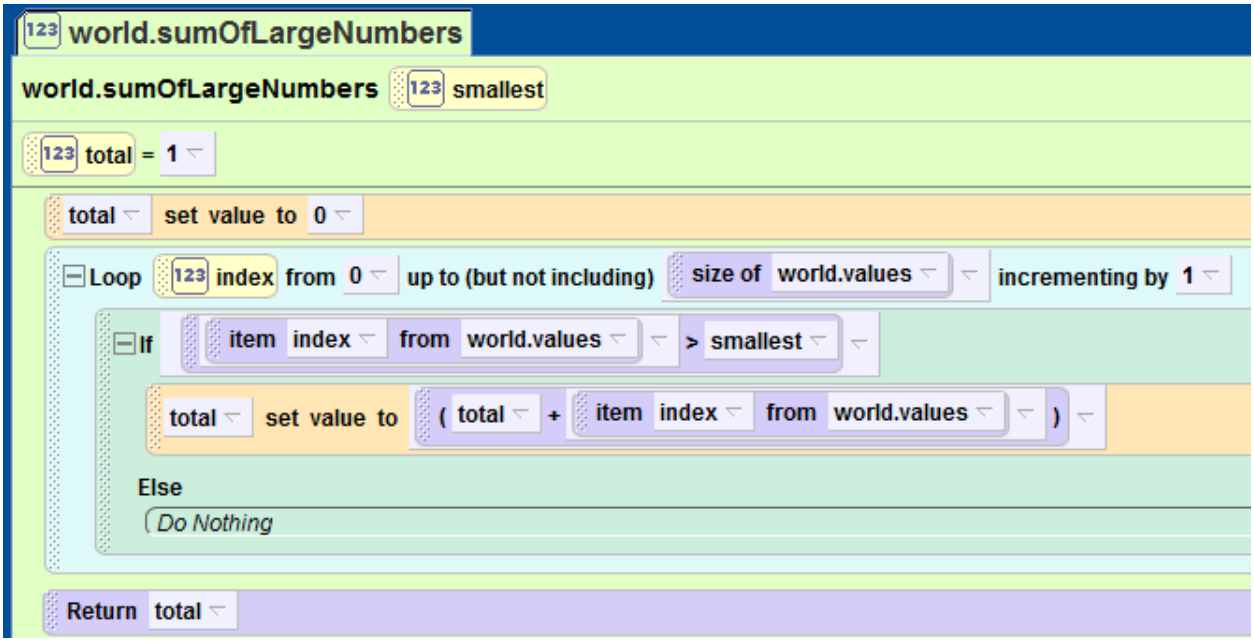
6. Code is:



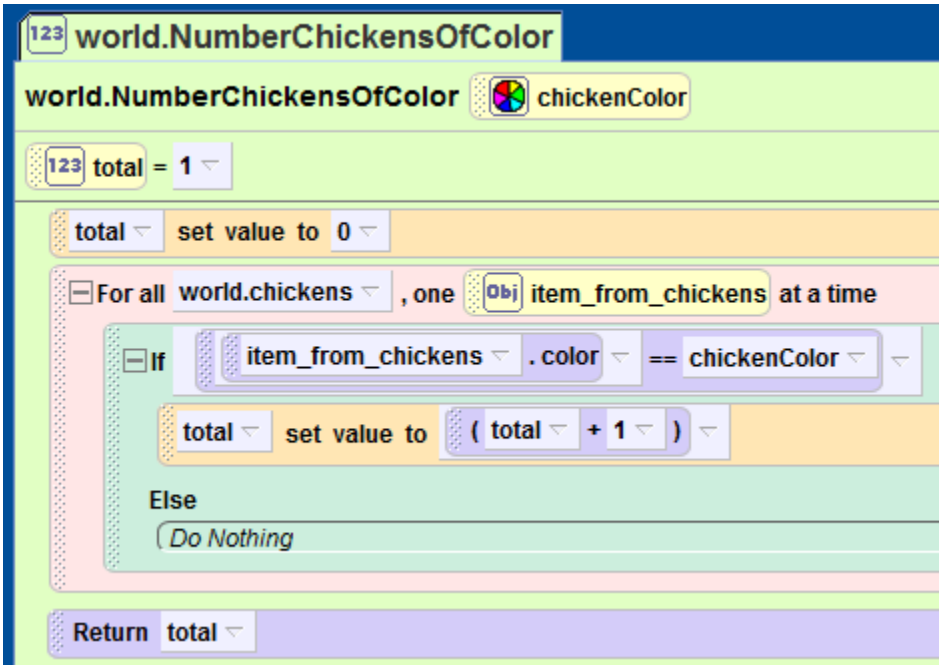
Alternate code is:



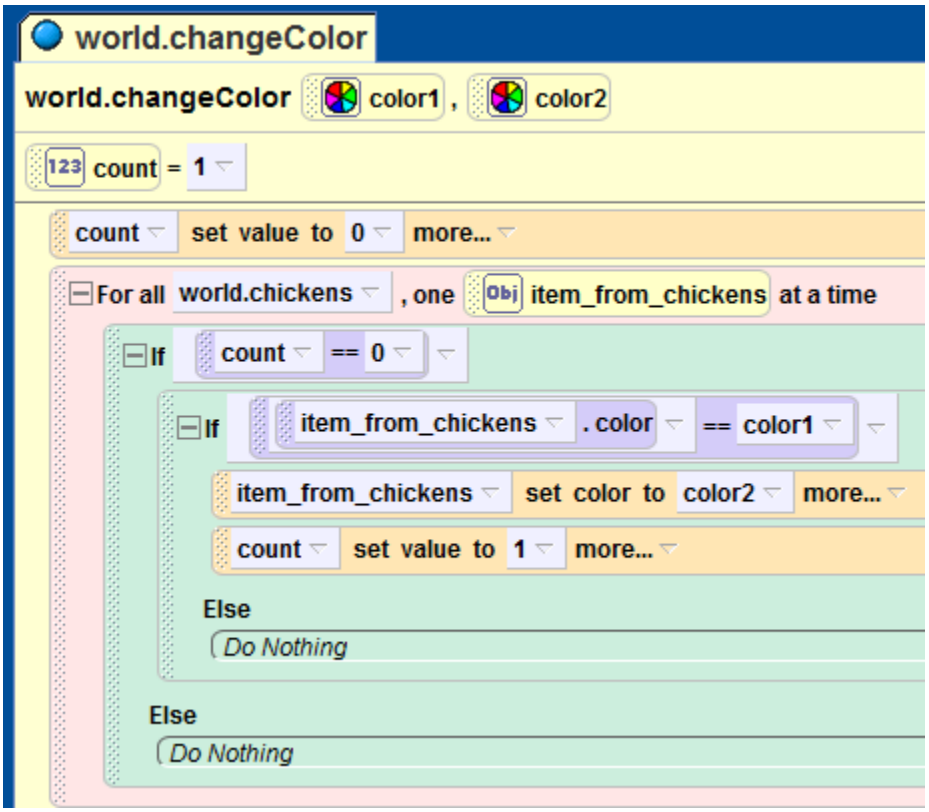
7. Code is:



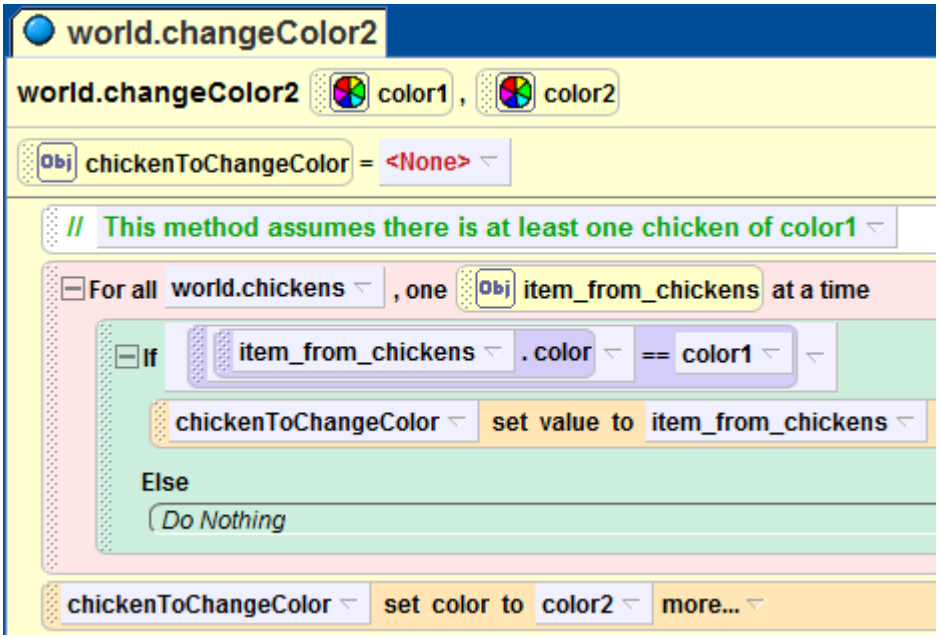
8. A) Code is:



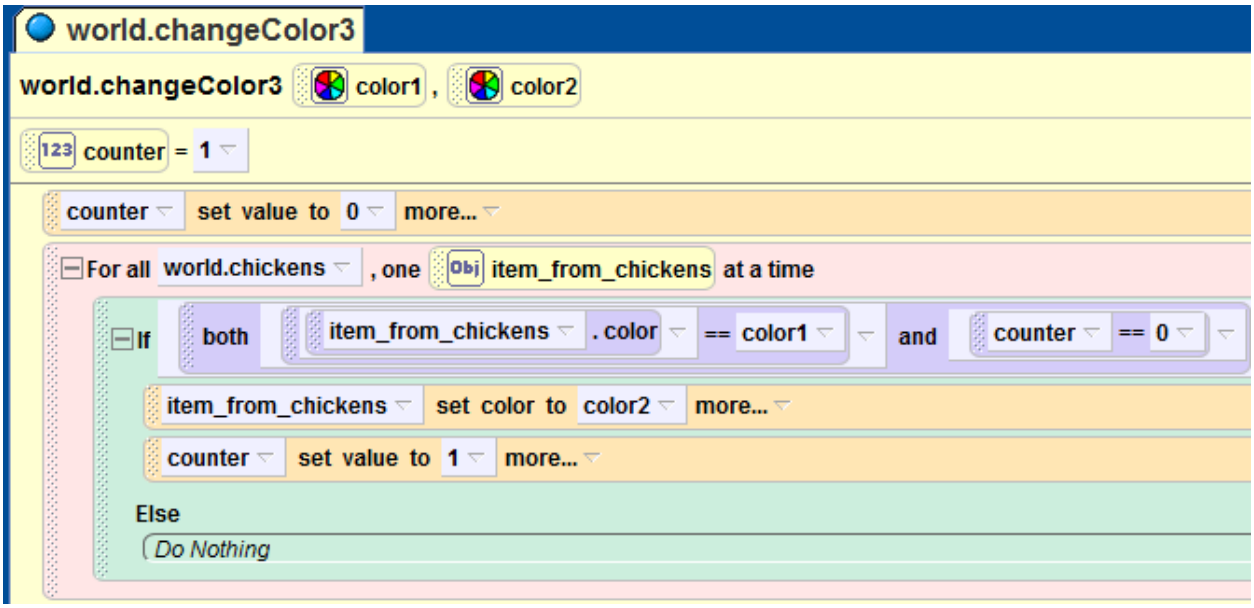
B) Code is:



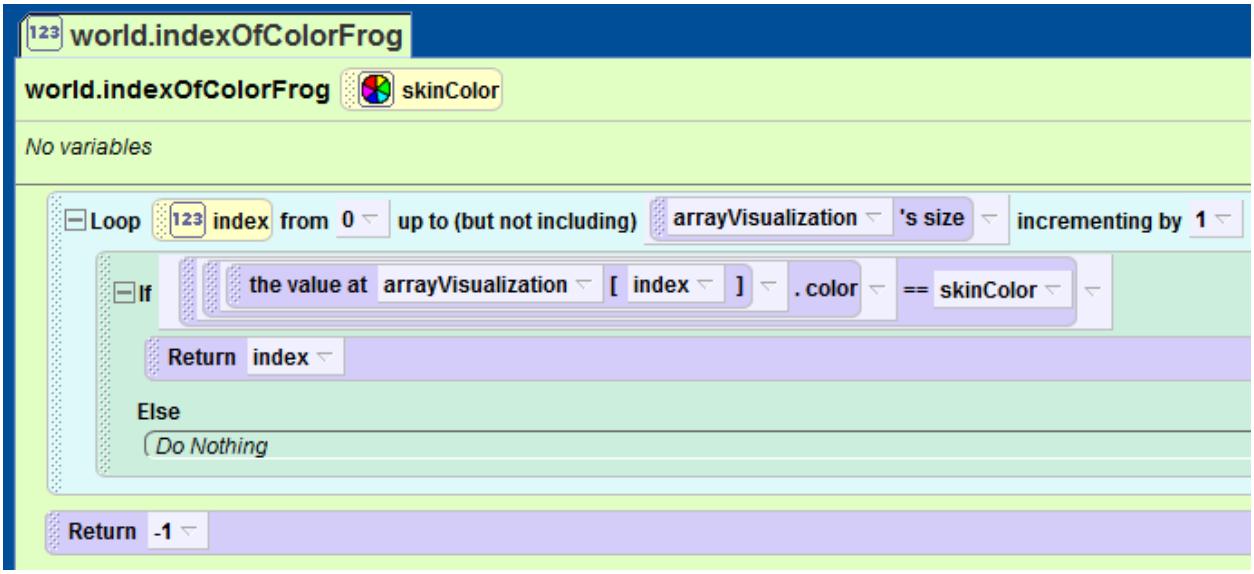
Alternate Solution:



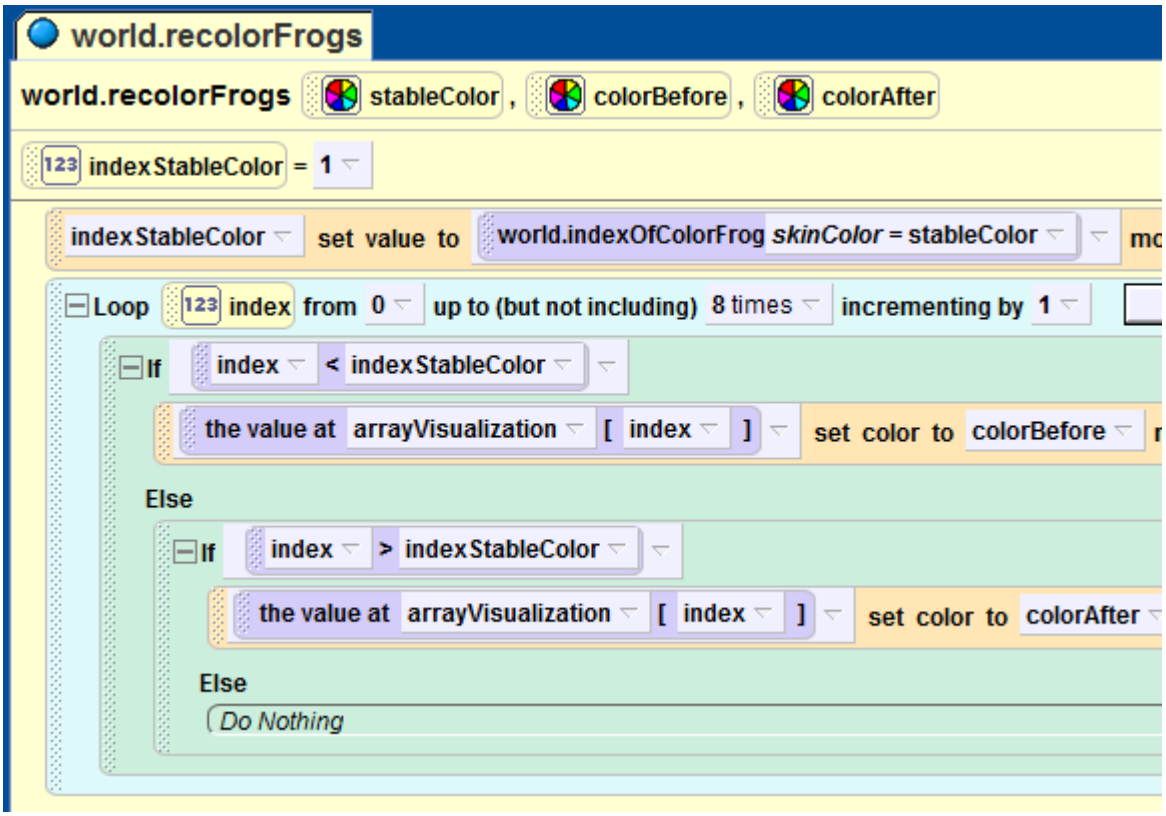
Alternate Solution:



9. A) code is:



B) Code is:



Alternate Solution