

EEOS 472 – Programming for GIScience Applications – Spring 2011

Exercise 9A

Additional Instructions/Notes

1. For all exercises in this course, you will want to make a copy of the exercise .mxd to your H:\ space and open that, rather than using the one in the course data directory on S:\ because the exercises almost always involve customizing the project document, which you cannot do to the one on S:\, since you do not have write access there.

Question 9A-1 (2 marks)

How do you make a property for a class? For example, supposing we are building a Car class, and want to make a Model property that is a string; what is the line of code that would do this? Use correct ArcGIS VBA syntax.

Question 9A-2 (1 mark)

How do you make a method for a class? Again, using our Car class example, what would the code look like to create a Honk method (assume we have a sound file called “horn.wav”)? Use correct ArcGIS VBA syntax.

Exercise 9B

Additional Instructions/Notes

1. For all exercises in this course, you will want to make a copy of the exercise .mxd to your H:\ space and open that, rather than using the one in the course data directory on S:\ because the exercises almost always involve customizing the project document, which you cannot do to the one on S:\, since you do not have write access there.
14. Because your project document is not located on the same drive as the .wav file, you will not hear the sound if you opened ex09b.mxd rather than working from your modified ex09a.mxd. If you really want to hear the sound (and the computer you are working on has speakers), in the Visual Basic Editor you must find the appropriate place to change the location of the sound file appropriately.

Question 9B-1 (3 marks)

Suppose that you are provided with an ArcGIS project that contains a Car class, which has a Manufacturer property (string), a Model property (string), a Year property (integer), a Doors property (integer), a Start method, and a Honk method. Write the lines of code that would make a 4-door 2009 Toyota Camry Hybrid, setting its properties accordingly, and then starting it and honking the horn. Use correct ArcGIS VBA syntax.

Question 9B-2 (1 mark)

While the examples shown in the exercise and above seem trivial, using classes can be a powerful way to manage information in ArcGIS. Use your imagination, and come up with an example in the environmental science realm where creating a class would help to simplify or manage data.

Exercise 10A

Additional Instructions/Notes

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Question 10A-1 (2 marks)

The Map class has more than one interface. Why is this important to know? Suppose we wanted to get the MapScale property of a given Map, how would we do this (you may describe this using prose or a few lines of code)?

Exercise 10B

Additional Instructions/Notes

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Question 10B-1 (2 marks)

The idea of having multiple interfaces can be a little confusing, but it's important that you understand it. Read pages 159-161 in the textbook carefully to make sure you've got it. Now, suppose we have an instance of a Map that we are accessing using the iMap interface:

```
Dim ourMap As iMap  
Set ourMap = NewMap  
ourMap.Name = "Our Map"
```

and we now need to use the iActiveView interface for the same Map. Write the lines of code required to do this. Use correct ArcGIS VBA syntax.