

(Inter) face-off Lab

Purpose

The purpose of this lab is to design and implement an Interface hierarchy. The interface should be able to share common behavior with its subclasses regardless of the specific nature of them. Below are some ideas:

- Animals: Birds, Frog, Mouse
- Sports: Volleyball, Soccer, Tennis
- Library: Books, Magazines, Videos

OR BE BRAVE and create your own Interface with subclasses.

Requirements

1. Must create and use an Interface with at least 2 subclasses
2. The Interface class needs at least 2 methods inside (add mutator and accessor methods that make sense to your Interface (example: `getSpeed()` for Vehicle)
3. Must use `toString` in each subclass
4. You must draw out a UML diagram
5. Your client class (the one with main) must print the object and call at least one accessor method inside a subclass that will get some stored data and print it

EXTRA:

6. Write an `equal` method in each subclass
7. In the client, use a for-loop that will go through an array of objects (subclasses)

Steps

1. First draw out the UML diagram
2. Using eclipse, create the Interface class. This is done the same way in Eclipse as you create a class but select "Interface" in "File->New". Remember, this class just defines the methods but doesn't implement them.
3. Create a subclass that uses the 'implements' keyword. This is done by creating a new class but this time in "File->New->Class", Click "Add" and type in the Interface name you just created.
4. Add some class variables that store data
5. Add the Constructor, `toString` method, and interface methods to your subclass.
6. Repeat steps 3-6 for another subclass
7. Create a client class that creates a new instance of a subclass, prints the object and calls a method that prints some data.

Turn in your client class only