Software Design I (CS 120)
Quiz 10: Monday, 30 April 2018

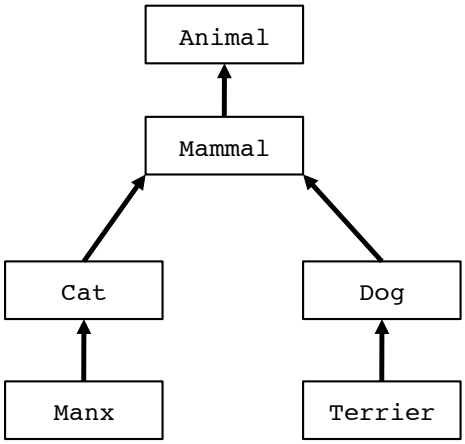
NAME _____

(1) (5 pts.) Suppose we have a parent class, with a method as follows that returns the maximum value of its two inputs:

```
public int getMax( int x, int y )
{
   if ( x > y ) {
      return x;
   }
   else {
      return y;
   }
}
```

Now, suppose you are writing a child class of the one that contains the above method. You want to over-ride that method so that the new version also returns the maximum value of its inputs ***unless*** they are ***both*** negative, in which case it will return `0`. For example, on inputs `(3, -4)`, the method would return `3`, but on inputs `(-3, -5)` it would return `0`.

Write the new version of the method below. ***For full points***: your method should use the `super` keyword, and use the original (parent) version of the method to do some of the work.



(2) (**3 pts.**) For each class given below, list *all other classes* to which it **conforms** in the above hierarchy. For example, if `Cat` conforms to `Manx`, you would write `Manx` next to `Cat`. Note that if a class conforms to no others in the hierarchy shown, you can simply write `None`.

(a) `Animal` _____

(b) `Cat` _____

(c) `Terrier` _____

(3) (**2 pts.**) Suppose we write a method as follows (the actual code in the method is unimportant, but you can assume it runs properly).

```
public void feed( Cat c ) { ... }
```

Now, suppose we write the following lines of code in another part of the class containing the above method. If we do so, then **only one** of the method calls (on the last two lines of code) will properly compile. (Assume all other code shown is correct, and that the classes used are all from the hierarchy shown at the top of the page.)

Circle the method call that will compile properly.

```
Mammal mammal = new Mammal();
Manx manx = new Manx();

feed( mammal );

feed( manx );
```