

## CS427 Homework Assignment 2

**Due date:** \_\_\_\_\_

**General info:** Turn in all problems by paper and by email (to [dbahr@regis.edu](mailto:dbahr@regis.edu) with “CS427 Homework” in the subject line).

**Problem #1 (0 points):** Watch at least two episodes of the Simpsons on TV.

(Nothing to turn in, but no points either.)

**Problem #2 (10 points):** Based on what you saw in problem #1, create a `CartoonPerson` class. Your class should contain a minimum of four instance variables. These instance variables should relate to the important features of cartoon characters (e.g., think about the Simpson characters). In other words, you should be able to distinguish each character based on the instance variables. Please include one instance variable that is an array of three (or more) quotes.

**Problem #3 (10 points):** Add at least two constructors to your `CartoonPerson` class. One of them should be a default constructor that references the other constructor using the “this” keyword.

**Problem #4 (10 points):** Create another class with a main method. Using your `CartoonPerson` class, create objects representing “Bart”, “Lisa”, “Homer”, and “Marge”.

**Problem #5 (10 points):** Add a “talkTo” method to your `CartoonPerson` class. This method should take a `CartoonPerson` as a parameter (let’s call the parameter “p”). The method should (1) print a randomly selected quote, and then (2) call the “talkTo” method of the parameter “p”.

e.g., “`homer.talkTo(bart)`” would (1) print “Homer says: Why you little...” and then (2) would call `p.talkTo(homer)`.

But here’s the tricky part. Your method can’t actually say “`p.talkTo(homer)`”. Why not? Because the `CartoonPerson` class is a blueprint, so it doesn’t know what its object name will be before it is instantiated. In other words, the “homer”

variable can't be known ahead of time. So you'll need to correctly use the "this" keyword instead.

By the way, problem #5 will create an infinite loop. Can you see why? I'll give +2 extra credit if (1) your code prevents this infinite loop, and (2) you have comments that explain how it stops the loop.

**Problem #6 (10 points):** Now let's do some messaging. In your main method have your "Homer" object talk to "Bart" using the "talkTo" method.