**Problem 1**

Write a class definition line and a one line docstring for the class *Dog*. Write an *\_\_init\_\_* method for the class *Dog* that gives each dog its own *name* and *breed*. Test this on a successful creation of a *Dog* object.

>>> import dog >>> sugar = dog.Dog('Sugar', 'border collie') >>> sugar.name Sugar >>> sugar.breed border collie

**Problem 2**

Add a data attribute *tricks* of type *list* to each *Dog* instance and initialize it in *\_\_init\_\_* to the empty list. The user does not have to supply a list of tricks when constructing a *Dog* instance. Make sure that you test this successfully.

>>> sugar.tricks []

**Problem 3**

Write a method *teach* as part of the class *Dog*. The method *teach* should add a passed string parameter to tricks and print a message that the dog knows the trick.

>>> sugar.teach('frisbee') Sugar knows frisbee

**Problem 4**

Write a method *knows* as part of the class *Dog*. The method knows should check whether a passed string parameter is in the dog’s list of tricks, print an appropriate message and return *True* or *False*.

>>> sugar.knows('frisbee') Yes, Sugar knows frisbee True >>> sugar.knows('arithmetic') No, Sugar doesn't know arithmetic False

**Problem 5**

Create a class attribute *species* of type *str* to be shared by all instances of the class *Dog* and set its value to *'canis familiaris'*. The class attribute *species* should be defined within the class *Dog* but outside of any method.

>>> dog.Dog.species 'Canis familiaris' >>> sugar.species 'Canis familiaris'