

Define two classes, `widget` and `bargain_widget`, where `bargain_widget` inherits from `widget`. All values are integers, and the assumed unit is dollars. Class `widget` has an instance property `price` (how much is charged for a widget). It has the instance method `order()`, which is passed an integer representing the number of widgets ordered and prints out a statement

Your bill is \$*N*

where *N* is the charge for the number of set of widgets ordered. If a widget is printed, as in

```
print w1
```

a string of the following form is output

A \$*M* widget

where *M* is the value of the price property of the widget

Class `bargain_widget` inherits from `widget`. Besides the `price` instance variable, it has a `discount` instance variable, which is the proportion that is deducted from bargain orders. For example, if the discount value is 0.23, then the client pays only $1 - 0.23 = 0.77$ times the normal price. Class `bargain_widget` adds the method `bargain_order()`, which is like `order()` but applies the discount. One catch here is that the value returned should be an integer. Note that function `round()` takes a floating point number and returns a floating point number rounded to the nearest integer value; you must still convert this to an integer.

Note: It is an error to attempt to concatenate a string and an integer. You must first convert the integer to a string.

The following is an example run.

```
>>> import q2p1
>>> w1 = q2p1.widget(2)
>>> print w1
A $2 widget
>>> w1.order(3)
Your bill is $6
>>> w2 = q2p1.bargain_widget(3, 0.2)
>>> print w2
A $3 widget
>>> w2.order(4)
Your bill is $12
>>> w2.bargain_order(4)
Your bill is $10
```

Solution

```
class widget:
    def __init__(self, price):
        self.price = price
    def __str__(self):
        return "A $" + str(self.price) + " widget"
    def order(self, num):
        print "Your bill is $" + str(num * self.price)

class bargain_widget(widget):
    def __init__(self, price, discount):
        self.price = price
        self.discount = discount
    def bargain_order(self, num):
        print "Your bill is $" + \
            str(int(round((1-self.discount) * num * self.price)))
```