Name & Recitation Section:

Due **Friday, Jan 7 at 3 PM in 32-044**. Please print out your code files (homework_2.py, nims.py, strings_and_lists.py, and any code you wrote for optional problems), and staple them to the back of these exercises before turning them in.

**Warm up – Recollections**

Recall that a string is *immutable*, while a list is *mutable*. What does this mean?

**Exercise 2.11 – String Operations**

String operators might be a little less intuitive than those on numbers. This exercise will give you a chance to practice those. Given the following variables:

```python
look = 'Look at me!'
now = 'NOW'
```

What are the values of the following expressions? Try to guess on your own before using your interpreter (but feel free to use your interpreter once you get stuck).

1. `look[:4]`
2. `look[-1]`
3. `look*2`
4. `look[:-1] + now + look[-1]`
5. `now[1]`
6. `now[4]`
7. `look*2 + look[:-1] + now + look[-1]`

For more on strings, see: [http://docs.python.org/release/2.6.6/library/stdtypes.html#string-methods](http://docs.python.org/release/2.6.6/library/stdtypes.html#string-methods)
2.12 – List Operations

For the following, write the line(s) of code that will emit the given Output. For each problem there may be more than one correct answer; just give one. More on lists: http://docs.python.org/release/2.6.6/tutorial/datastructures.html

1. >>> a_list = [3, 5, 6, 12]
   >>> YOUR CODE HERE
   3

2. >>> a_list = [3, 5, 6, 12]
   >>> YOUR CODE HERE
   12

3. >>> a_list = [3, 5, 6, 12]
   >>> YOUR CODE HERE
   [5, 6, 12]

4. >>> a_list = [3, 5, 6, 12]
   >>> YOUR CODE HERE
   3
   5
   6
   12

5. >>> a_list = [3, 5, 6, 12]
   >>> YOUR CODE HERE
   [12, 6, 5, 3]

6. >>> a_list = [3, 5, 6, 12]
   >>> YOUR CODE HERE
   [9, 15, 18, 36]

7. >>> a_list = [3, 5, 6, 12]
   >>> YOUR CODE HERE
   [False, False, True, True]

Hint: Stuck on 6 or 7? Try doing Exercise 2.10 first...