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:

```
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`

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...

6.189 A Gentle Introduction to Programming

January IAP 2011