CS 115 Exam 2, Fall 2012

Your name: _____

Rules

- You may use one handwritten 8.5 x 11" cheat sheet (front and back). This is the only resource you may consult during this exam.

- Explain/show work if you want to receive partial credit for wrong answers.

- As long as your code is correct, you will get full credit. No points for style.

- When you write code, be sure that the indentation level of each statement is clear.

Grade (instructor use only)

	Your Score	Max Score
Problem 1		40
Problem 2		30
Problem 3		30
Total		100

Problem 1: 40 points.

What will print to the screen when each of the following snippets of code is executed in IDLE?

Be very clear with spacing, line breaks, etc.

Note: the parts of this problem are *independent*.

(a)
```python
for i in range(3):
    for j in range(2):
        print(3 * i + j)
```

(b)
```python
x = 15
while x % 4 != 0:
    x += 1
print(x)
```

(c)
```python
a = "4"
b = "56"
print(a + b)
```

(d)
```python
for s in "Sonoma":
    print(s)
```

(e)
```
ss = "Sonoma State"
print(ss[3])
```

(f)
```
ss = "Sonoma State University"
x = ss.split()
print(x[1])
print(x[2][2])
```

(g)
```
ss = "Sonoma State"
x = ss.lower()
```

(h)
```
ss = "Sonoma State"
print(ss[2:5])
```

Problem 2: 30 points.

Write snippets of code to do the following. Your code should only print the requested output. You will lose points for printing additional output.

You can assume that all your snippets are enclosed within a main function and that any necessary libraries have been imported. You only need to write the specific lines of code that accomplish each task.

Do not use sys.exit() in your solutions to this problem.

(a) Ask the user to type a line of text. Print the user's text in lowercase, with the vowels ("a", "e", "i", "o", and "u") omitted. For example:

```
Enter a line of text: San Francisco Giants
sn frncsc gnts
```

(b) Ask the user to enter the price of an item.
- If the user does not enter a valid, non-negative number, print an error message.
- Otherwise, compute and print the sales tax on that item (8.5% in Rohnert Park).

(c) Ask the user to guess your favorite number. You can assume the user enters valid integers.

- If the user correctly guesses your favorite number (use any integer you want), print a congratulatory message and do not prompt them anymore.
- If the user guesses a number that is lower than your favorite number, tell them to guess a higher number, and repeat these actions.
- If the user guesses a number that is higher than your favorite number, tell them to guess a lower number, and repeat these actions.

Problem 3: 30 points.

For this problem, you must write a **complete program**. That includes a docstring, a `def main()`, any necessary library imports, etc.

Read the instructions carefully before you start coding! If you get stuck, try to maximize your partial credit.

Your program will print a list of names in the format **LAST, FIRST MIDDLE.**

1. Ask the user to enter the number of names. Keep prompting the user until you get a valid, non-negative number. Print an error message every time the user enters a non-integer or negative input. Here is an example, with sample user input _underlined and italicized._

   ```
   How many names will you enter? zero
   Error: not a valid number.
   How many names will you enter? -5
   Error: please enter a non-negative number.
   How many names will you enter? 500
   ```

2. Prompt the user to enter the number of names specified in the previous step. Reprint each name with the last name first, then a comma, then the first and middle name(s). For example:

   ```
   Enter a name: George Herbert Walker Bush
   Bush, George Herbert Walker
   Enter a name: William Jefferson Clinton
   Clinton, William Jefferson
   ```

   If the person only has one name, just repeat that name without inserting a comma:
   ```
   Enter a name: Rihanna
   Rihanna
   ```

   If the user enters a blank line, print an error message:
   ```
   Enter a name:
   Error: no input entered.
   ```

3. Print the number of the user's entries that had one or more middle names (that is, more than just a first and last name).

[WRITE YOUR PROBLEM 3 CODE HERE]