CS 101
Fall 2016
Program Assignment 1

Assignment : 2 files: Upload to Blackboard no later than **Sunday night, Sept. 4th**. Upload both files to blackboard in one assignment submission.

Part 1 - Writing a program.
The first program of the semester is very simple. We're keeping the problem simple so you can focus on learning the mechanics of writing a program, saving your program file, etc., and not have to spend much time on the problem-solving part. The first program is basically a demonstration that you can get some input from the user into your program, do something with it, and print a result.

Ada's Drones makes Drones for resellers. Each may require motors, blades, batteries and feet of wire. They want to know how much of each item to order, given how many of their products are expected to sell.

Products

Basic Drone	4 Rotors 2 motors 0 Cameras 4.2 feet of wire
Good Drone	4 Rotors 4 motors 1 Cameras 9 feet of wire
Ridiculous Drone	8 Rotors 12 motors 5 Cameras 22.4 feet of wire

You've been asked to write them a Python program that takes the amount they expect to sell and then returns how many of each ingredient need to be ordered. Make sure you test your program thoroughly.

Sample Program

```
>>> ================================ RESTART ================================
>>>
Welcome to Ada's Drones
```

```
How many Basic Drones? => 2
How many Good Drones? => 3
How many Ridiculous Drones? => 5


You will need to order
60 rotors
76 motors
28 cameras
147.4 feet_of_wire
```

Specification

- You can assume the user will enter only valid numeric values. You do not have to worry about incorrect or malicious input in this program. Remember to document your code with comments and a header.
- Make sure you submit a working program not lines from the shell copied into a document. It must run as a Python program file.

Deliverables

- Be sure to test your input values well before turning it in. Don't lose points for silly mistakes. Program is worth 30 points of this assignment. Make sure you comment the top of your program with your name, class and program #, as well as the creation date and the date due. **30 points**

Part 2 : How many things can go wrong?

For part 2 of the assignment, open an interpreter window and a text file (or Word or OpenOffice document). As we saw in class, when you type something at the interpreter >>> prompt that isn't valid Python, you get an error message (which IDLE displays in red). It starts with 'Traceback (most recent call last):' and ends with a one-line summary describing the type of error (Syntax error, TypeError, etc).

Your assignment is to come up with code snippets (a line or two of code) that produce 10 different types of errors(10 different labels on the last line). For each, report: The line or 2 of code that produces the error, the type of error it produces, and (based on looking at the code and reading the error message) a brief statement of why this caused an error. To get you started, here's your first one:

Code:
>>> a
Produces: NameError

Because: No variable called 'a' has been declared/defined, so the interpreter doesn't know what

that is.

Deliverable:

Your text file or office document with 10 different errors in the above format. This part of the assignment is worth **30 points**(3 points for each of 10 errors)... And yes, you can use the above example for an easy points. (Don't say I never give students a break!)

Upload this file along with the other part of the assignment by Sunday, Sept 4th