Followup to Introductory Python/VPython Exercises

By the end of class today I think that most of you had a simulation of a red ball traveling at constant speed in a path perpendicular to two blue plates, and most of you had the ball bouncing off of at least one of the plates. (If you feel like you're behind, stop by my office so that you get you caught up.) Now that you have a minimal program working, I would like make a few additional points:

- You can add comments to your program; in fact, you *should* add comments to any program that you ever plan to use again, or any program that you hand in. Any material that comes after a `#` sign on a line of a Python program is ignored when the program is run. You can append a comment to program lines:

  ```
  v = 2.3  # This is the speed of the ball
  dt = 0.1 # Time step
  ```
  or you can write longer comments that introduce sections of code:
  ```
  #In the following loop the position of the ball is updated
  #The ball is assumed to move at constant speed v
  #The position of the ball is checked by the if statement;
  #If the horizontal position of the ball is to the right of wall2
  #the direction of the speed is reversed.
  #
  while 1:
          ...
  ```

- In the examples I gave there were two kinds of conditions in the `while` statements. The first one, `while i<11:`, is probably obvious. The value of the variable `i` is checked, and if it is less than 11 the indented statements in the loop are evaluated. The second one, `while 1:` may not be so obvious. This is really just a way to make an infinite loop — I'll leave the details of why this works for independent investigation by those who are interested.

- I strongly encourage you to do all of your programming of your input lines in the IDLE editor, and let the `Python Shell` window be for outputs only.

- I didn't discuss the line `rate(100)`. This command limits the execution rate of the loop — it ensures that the loop will execute a maximum of 100 times per second, even if the computer can perform the calculations faster. This can make the animation look nicer; experiment with `rate` command to explore its effect.

- You should be able to add other objects to your animation by using the Help pages.

- There are lots of nice examples that come with VPython. When you start IDLE you are automatically in the Folder with the examples and you can open them. I encourage you to look at some of them.

- As I said in class today, this is the first time I've used Python in a class. I can't anticipate all the bugs and problems we will encounter, so please let me know if something doesn't work.