* **20 Points - A brief (1 - 2 page) summary of the problem you are trying to solve, including any background material. This should culminate in a specific problem statement for your project.**I'll be taking our previous project on projectile motion and expanding it. Instead of a sudden stop when the projectile hits the ground it will instead bounce until it runs out of force making it stop. It will include a version that has air drag and a version that doesn’t have drag to compare the two.
* **20 Points - A description of your top-down design process, including all elements you've learned in top-down design, the pseudo-code you developed, and a flow chart (if appropriate).**
* Projectile Motion Bouncing Ball
  + Set Initial Values
    - Get Height (y)
    - Get Velocity
    - Get the position (x)
  + Calculate Results of the Projectile
    - Calculate the initial projectile motion until hits ground
    - Calculate the bounce of the projectile
    - Calculate until projectile comes to stop
  + Animate the Result of the Projectile
    - Set up the initial animation objects
    - Update the objects with the new positions (x,y) and Velocity
    - Display the animation of the projectile
* Pseudo-Code

*# while ball y velocity >= 0*

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*# Set the new velocity of the ball and update the position*

*#*

*# Get the x value when y = 0 of the projectile*

*#*

*# if ball y <= 0*

*# update ball y velocity with reverse y velocity*

*# Update ball position with new velocity*

* **20 Points - The code itself, along with detailed documentation on how to run it, what the inputs and outputs are, etc.**
* **20 Points - The results. What are they? Did they answer your question? Do you have any followup work you would like to do?**
* **20 Points - Overall quality and attention to detail. If you really pull together a quality project, you can put it in your portfolio, leverage it into a research project, or use it as a basis for curriculum in your classroom. Your goal should be to dazzle me and anyone else who views your work.**
* make ball bounce