You have received worksheets entitled "Generic Processes I-III." Your assignment is to create three models of your choice exhibiting the behavior described in each part: I. linear growth or decay, with an external resource, II. exponential growth or decay, and III. convergent growth or decay. Your report should consist of printouts of your model diagram, graph, table, equations, and a paragraph or two explaining how your model works. All this should be put on one or two pages; it can even be done within Stella on the model page by copying the equations to a text box on the model page, pinning the graph and table in place on the model page, and printing all as one unit from the model page. (Be sure to check on page breaks in the Model Prefs dialog box.) The paragraph explaining your model can be another text box on the model page. Alternately, all of the above can be copied into MSWord.

The worksheet for Part I outlines what should be included in your paragraph, and provides an example of an appropriate summary paragraph for the "typewriter" model described therein as an example. I have attached a sample Stella printout to this assignment. You may not use either of the typewriter examples, but rather you should be original. (However, you may, if you must, use one of the suggestions in the worksheet.) **Think of time first!**

Grading Generic Processes

In grading the Generic Processes I-III, we give half the weight to the technical details of presenting a good model: satisfying the conditions of the assignment, diagram (neatly arranged), equations (with units and documentation), graph(s) (satisfying graph guidelines), and table.

Documenting your equations within Stella is something new, so make sure you know how to turn it on.

We give half the weight to the explanatory paragraph (or two). The explanation should address all of the following:

1. Tell what the starting values are for each component.
2. Tell how the model calculates its values for one or two time cycles, showing that you get the same numbers shown on the table. For example, starting with the stock value at time 3 explain how the computer calculated the value for time 4. Then indicate that you checked your calculation against the value on the table and it is as expected.
3. Explain that, by the end of the simulation, the stock value will end at value xxxx, assuming yyyy. Always consider the simplification of your model as compared to a real-world situation. Those are the assumptions you are making when you create and run your simulation.
4. ALWAYS explain what you did in your model that caused the stock value to grow (or decay) in the pattern you were trying to create. This is extremely important, and worth half the points for the summary.

5. Indicate if there is feedback in the model. Describe the feedback loop. Indicate if it is positive (reinforcing) feedback, or negative (balancing) feedback.

In order to fully address item 5 in GP II and III, calculating the change in the stock for two consecutive time cycles is desirable. Just a bare statement identifying where the feedback loop is and whether it is positive (reinforcing) or negative (balancing, counter-acting) is not enough.

Some small amount of ``extra credit'' may be given for creativity, offsetting minor errors above.

You may submit the *entire* assignment electronically or as a printout. You may email your model to us, as a Stella or an MSWord file. For email, please follow the procedure below:

1. Title your models GP1-3_yourname.
2. Attach your model(s) to an email with the subject Generic Processes Model 1-3. (Make sure each model 1-3 with all text will print well on one or two pages, if you use Stella format.)
3. Send your email with attachment to mayer@math.uab.edu.

The due date for Assignment 6 – Generic Processes – is February 20.