[DRAFT] Structural Modeling Project General Modeling Software Application [DRAFT]
Strict Order – One Object Per Class [Manual]
11-15-2016

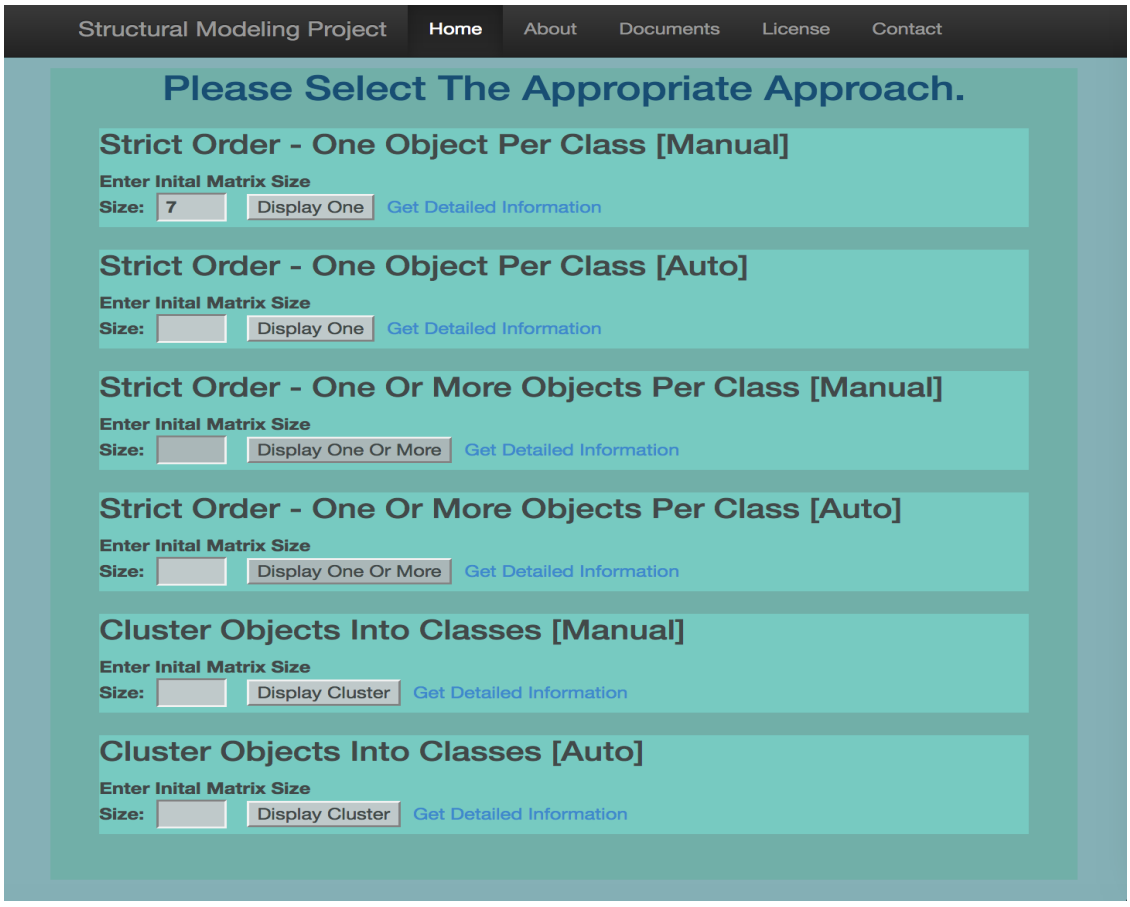
Introduction:
This document provides a quick introduction and complete overview of a simple system structuring problem. The selected structuring problem is taken from Appendix 2 of 'The Handbook of Interactive Management', section A2.2.1 of the Handbook of Interactive Management. A digital copy of the Handbook is located at:

http://demosophia.com/wp-content/uploads/2012/09/Handbook-of-Interactive-Management.pdf

This problem, in Appendix 2, is associated with the DOMODEL command of the GSM ISM software. In the example presented here, the Strict Order – One Object Per Class web application approach will be used to demonstrate the problem solution. The 'is heaver than' (IHT) natural language system structuring relationship is used in this case. The weight of an object is determined by a gravity force field that interacts with the mass of each object. This is viewed as a global structuring relationship with the following logical properties:

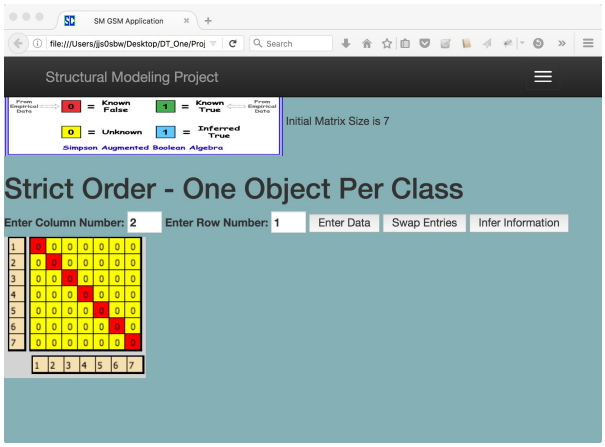
- irreflexive
- asymmetric
- transitive.

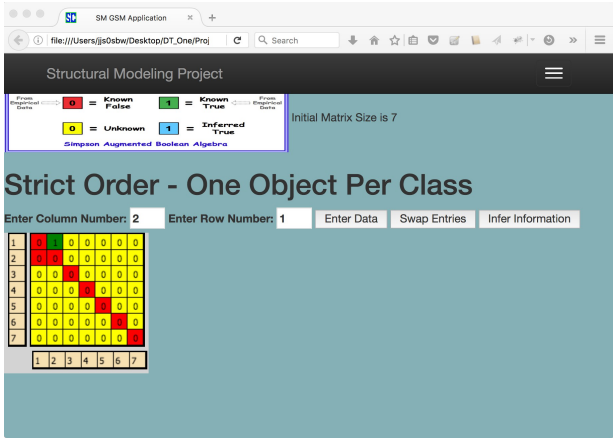
No two objects weight the same, so only one object in each weight class and one path through the system structure. There will be no clusters because there is only one element per class.



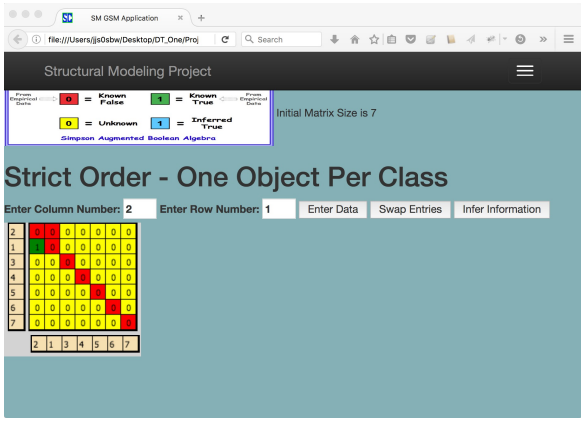
Step One:
Enter the number 7 into the size text box in the Strict Order – One Object Per Class section of the SM GSM Application.
Step Two:
Press the “Display One” button.

Step Three:
Begin to gather empirical information about the objects of interest. The empirical sampling proceeds in a structured fashion starting at the top with object one (1) and moving down through the objects of interest in a measured fashion. This is the manual algorithm approach.
Is 1 heaver than 2? No (Do not enter anything in the application interface.)
Is 2 heaver than 1? Yes
Step Four:
Enter the number 2 in the “Enter Column Number” text input box. Enter the number 1 in the “Enter Row Number” text input box.
Step Five:
Press the “Enter Data” button.

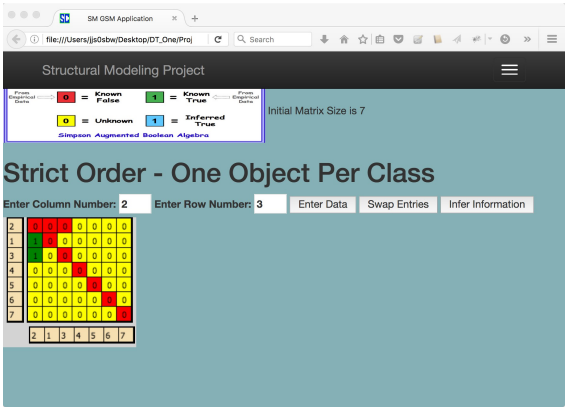




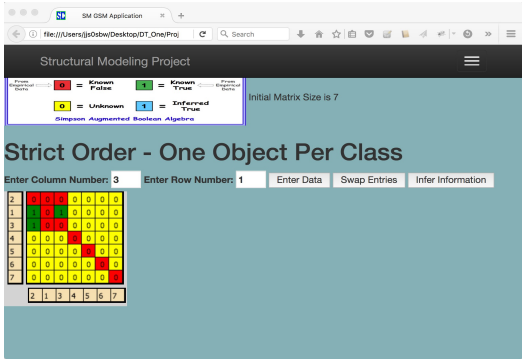
Step Six:
Press the “Swap Entries” button.



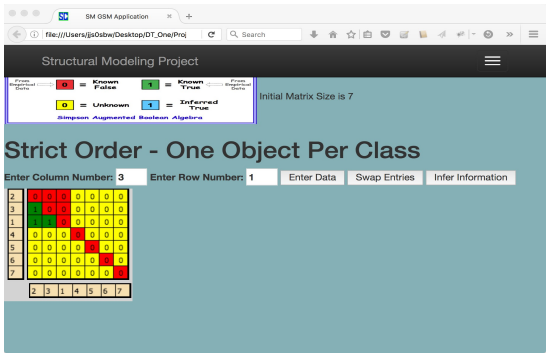
Step Seven:
Is 2 heaver than 3? Yes
Step Eight:
Enter the number 2 in the “Enter Column Number” text input box. Enter the number 3 in the “Enter Row Number” text input box.
Step Nine:
Press the “Enter Data” button.



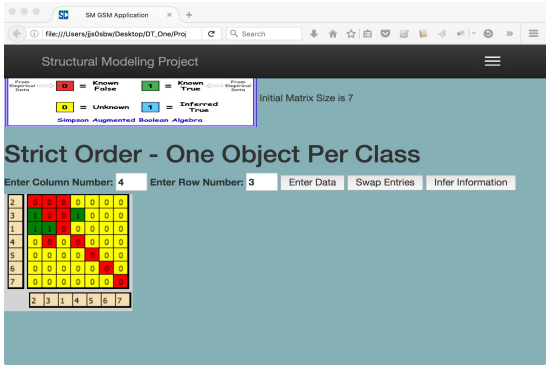
Step Ten:
Is 1 heaver than 3? No (Do not enter anything in the application interface.)
Is 3 heaver than 1? Yes
Step Eleven:
Enter the number 3 in the “Enter Column Number” text input box. Enter the number 1 in the “Enter Row Number” text input box.
Step Twelve:
Press the “Enter Data” button.



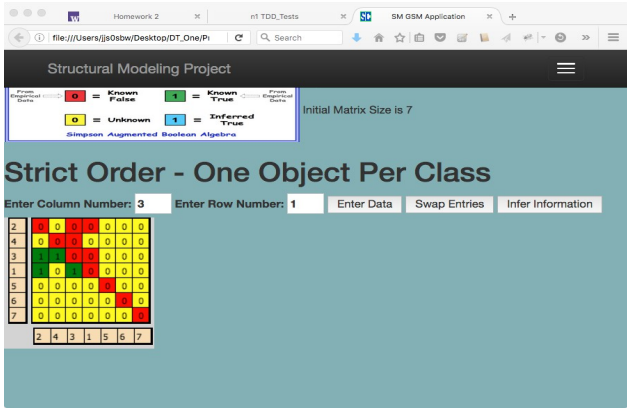
Step Thirteen:
Press the “Swap Entries” button.



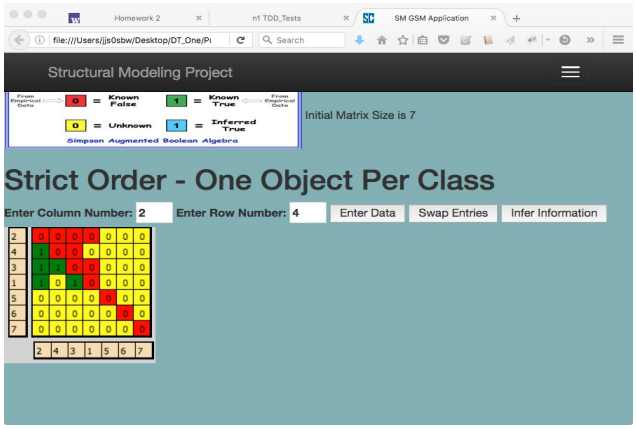
Step Fourteen:
Is 3 heaver than 4? No (Do not enter anything in the application interface.)
Is 4 heaver than 3? Yes
Step Fifteen:
Enter the number 4 in the “Enter Column Number” text input box. Enter the number 3 in the “Enter Row Number” text input box.
Step Sixteen:
Press the “Enter Data” button.



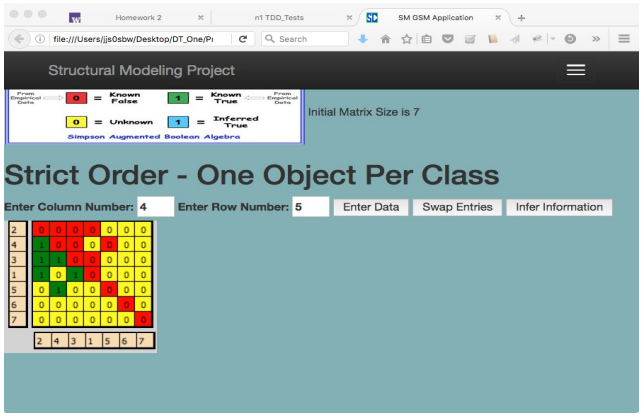
Step Seventeen:
Press the “Swap Entries” button.
Step Eighteen:
Enter the number 3 in the “Enter Column Number” text input box. Enter the number 1 in the “Enter Row Number” text input box.
Step Nineteen:
Press the “Swap Entries” button.



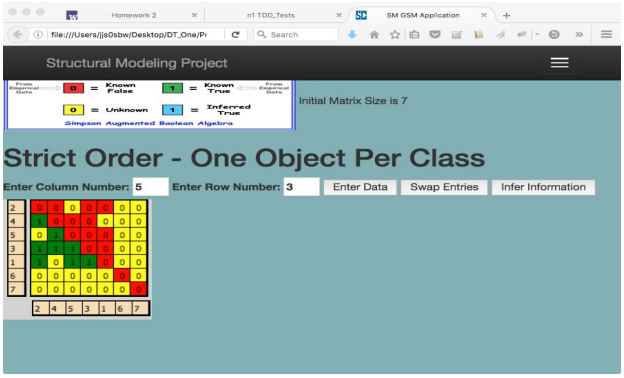
Step Twenty:
Is 2 heaver than 4? Yes
Step Twenty One:
Enter the number 2 in the “Enter Column Number” text input box. Enter the number 4 in the “Enter Row Number” text input box.
Step Twenty Two:
Press the “Enter Data” button.



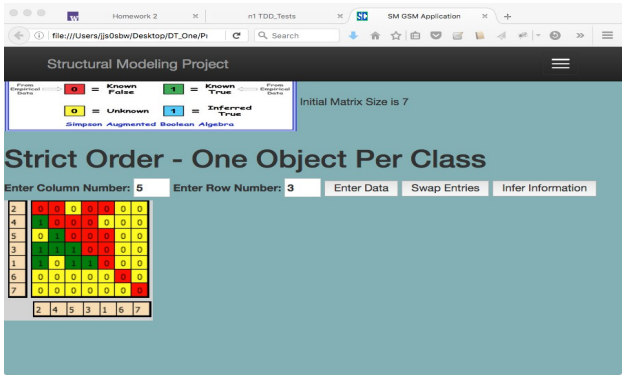
Step Twenty Three:
Is 4 heaver than 5? Yes
Step Twenty Four:
Enter the number 4 in the “Enter Column Number” text input box. Enter the number 5 in the “Enter Row Number” text input box.
Step Twenty Six:
Press the “Enter Data” button.



Step Twenty Seven:
Is 3 heaver than 5? No (Do not enter anything in the application interface.)
Is 5 heaver than 1? Yes
Step Twenty Eight:
Enter the number 5 in the “Enter Column Number” text input box. Enter the number 1 in the “Enter Row Number” text input box.
Step Twenty Nine:
Press the “Enter Data” button.
Step Thirty:
Press the “Swap Entries” button.

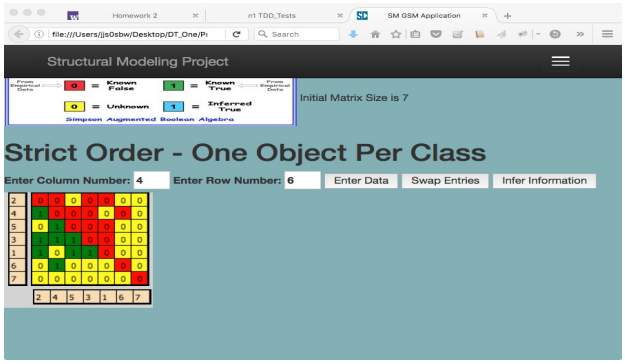


Step Thirty One:
Is 5 heaver than 3? Yes
Step Thirty Two:
Enter the number 5 in the “Enter Column Number” text input box. Enter the number 3 in the “Enter Row Number” text input box.
Step Thirty Three:
Press the “Enter Data” button.
Step Thirty Four:
Press the “Swap Entries” button.

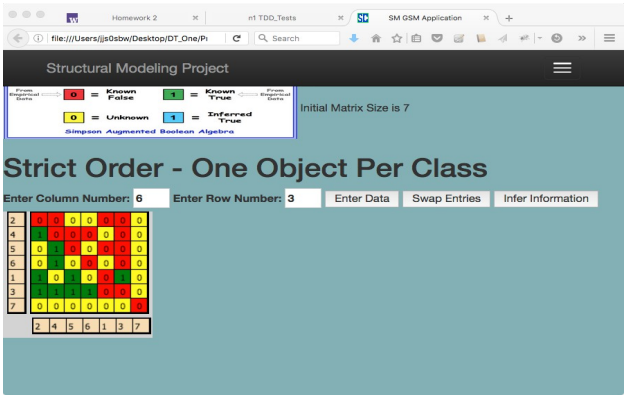


Step Thirty Five:
Is 4 heaver than 6? Yes
Step Thirty Six:
Enter the number 4 in the “Enter Column Number” text input box. Enter the number 6 in the “Enter Row Number” text input box.

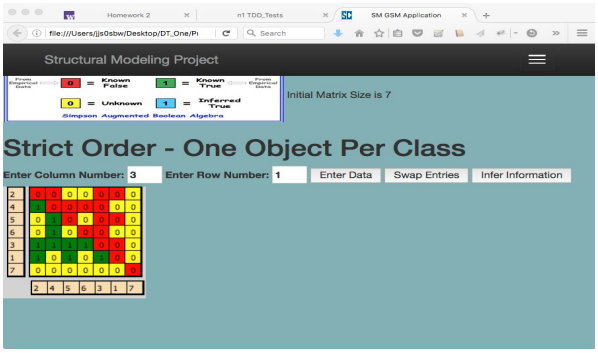
Step Thirty Seven:
Press the “Enter Data” button.



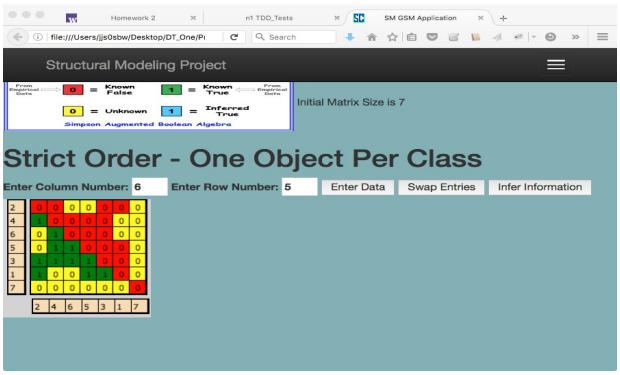
Step Thirty Eight:
Is 3 heaver than 6? No (Do not enter anything in the application interface.)
Is 6 heaver than 3? Yes
Step Thirty Nine:
Enter the number 6 in the “Enter Column Number” text input box. Enter the number 3 in the “Enter Row Number” text input box.
Step Forty:
Press the “Enter Data” button.
Step Forty One:
Press the “Swap Entries” button.



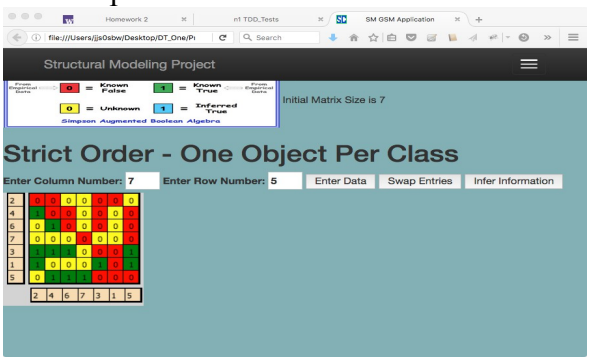
Step Forty Two:
Enter the number 3 in the “Enter Column Number” text input box. Enter the number 1 in the “Enter Row Number” text input box.
Step Forty Three:
Press the “Swap Entries” button.



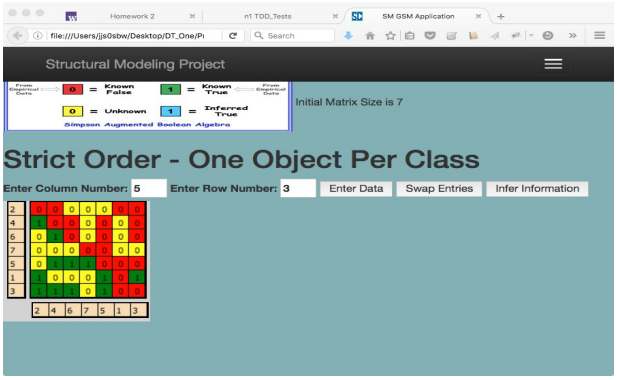
Step Forty Four:
Is 5 heaver than 6? No (Do not enter anything in the application interface.)
Is 6 heaver than 5? Yes
Step Forty Five:
Enter the number 6 in the “Enter Column Number” text input box. Enter the number 5 in the “Enter Row Number” text input box.
Step Forty Six:
Press the “Enter Data” button.
Step Forty Seven:
Press the “Swap Entries” button.



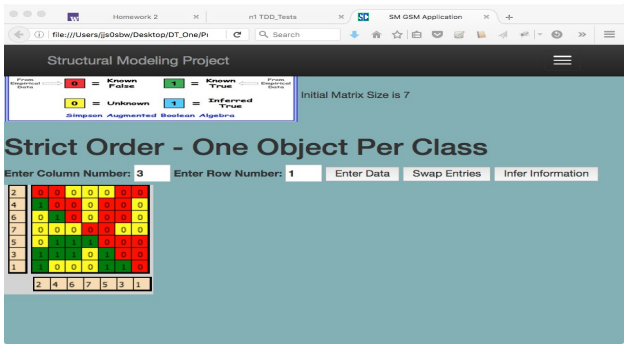
Step Forty Eight:
Is 6 heaver than 7? No (Do not enter anything in the application interface.)
Is 7 heaver than 5? Yes
Step Forty Nine:
Enter the number 7 in the "Enter Column Number" text input box. Enter the number 5 in the "Enter Row Number" text input box.
Step Fifty:
Press the "Enter Data" button.
Step Fifty One:
Press the "Swap Entries" button.



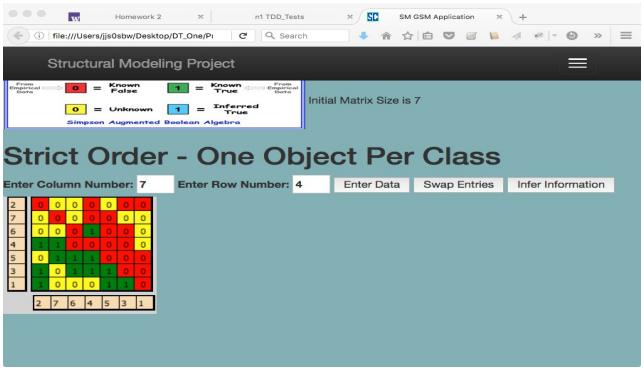
Step Fifty Two:
Enter the number 5 in the "Enter Column Number" text input box. Enter the number 3 in the "Enter Row Number" text input box.
Step Fifty Three:
Press the "Swap Entries" button.



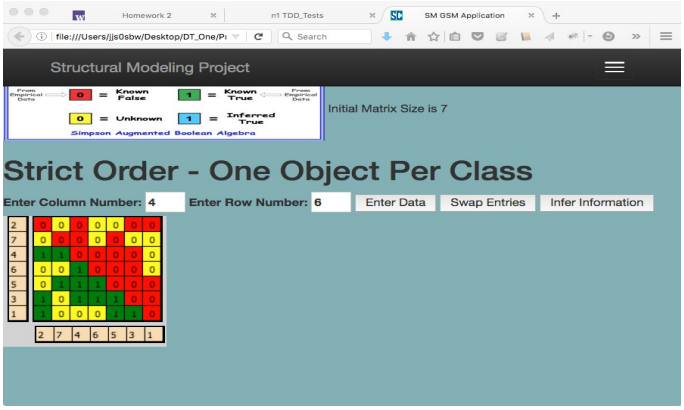
Step Fifty Four:
Enter the number 3 in the "Enter Column Number" text input box. Enter the number 1 in the "Enter Row Number" text input box.
Step Fifty Five:
Press the "Swap Entries" button.



Step Fifty Six:
Is 7 heaver than 4? Yes
Step Fifty Seven:
Enter the number 7 in the "Enter Column Number" text input box. Enter the number 4 in the "Enter Row Number" text input box.
Step Fifty Eight:
Press the "Enter Data" button.
Step Fifty Nine:
Press the "Swap Entries" button.



Step Sixty:
Enter the number 4 in the "Enter Column Number" text input box. Enter the number 6 in the "Enter Row Number" text input box.
Step Sixty One:
Press the "Swap Entries" button.



Step Sixty Two:
Is 2 heaver than 7? No (Do not enter anything in the application interface.)

Is 7 heaver than 2? Yes

Step Sixty Three:

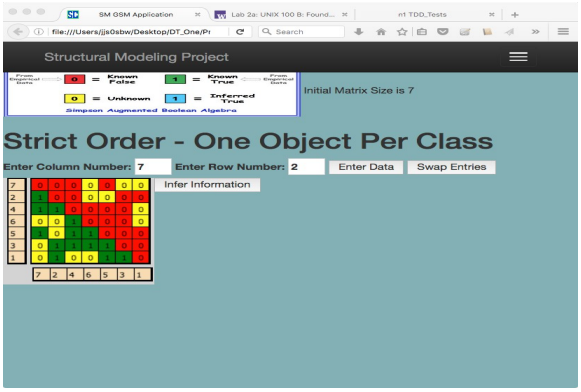
Enter the number 7 in the “Enter Column Number” text input box. Enter the number 2 in the “Enter Row Number” text input box.

Step Sixty Four:

Press the “Enter Data” button.

Step Sixty Five:

Press the “Swap Entries” button.



Process Complete.