

Functionality:

1. This application represents all 13 books of Euclid's *The Elements*. Each proposition is rendered visually as a circular node with arrows pointing into or out of it. For example, Book 1, Proposition 47 (The Pythagorean Theorem) appears as a yellow circle with "1.47" in black text inside of it.
Arrows pointing into a node originate at a node which is used to prove the proposition.
Arrows originating at node 1.47 point to propositions which cite it.
When started this application opens two windows.
2. The smaller narrow one on the left is a list of buttons labeled "Axioms," and "Book 1" through "Book 13."
Left clicking on any of these opens another list window from which a particular proposition can be selected for display.
3. Nodes are displayed as follows:
Yellow: Propositions
Blue: Axioms
Purple: Common Notions
Green: Definitions
4. The larger window on the right is the display area. The nodes corresponding to propositions of *The Elements* are displayed here with arrow indicating the dependency structure of the propositions.

Mouse interactions in the display area

1. Double-click a note to see that text
2. Right-click for pull-down menu
Root display graph level one up (all nodes referenced in the proof of the current node)
Branch display graph level one down (all nodes whose proof references the current node)
Display node display that node along with its root and branch in display area; all other nodes will disappear
Delete Deletes the node, it's root, and it's branch will disappear
Highlight/Unhighlight all arrows in and out of the node change from black to red or vice versa

Mouse interactions in the book list area

1. Left click a book to display a Proposition list, a list of Propositions and Definitions in that book
2. List click on a prop or def to display that prep or def along with its root and branch in display area; Proposition list will disappear

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