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UACalc at the command line and in the cloud

by

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The Universal Algebra Calculator (UACalc) is a powerful software system for general algebra. It comes with a very useful and intuitive graphical user interface (gui) and can be easily run from any computer with a Java runtime environment. For certain tasks, however, it is inconvenient or impossible to use a gui, and we require a command line interface to the UACalc Java classes.

In this brief tutorial, we see how to setup and use a command line interface to the Universal Algebra Calculator. Specifically, we demonstrate the use of UACalc Java classes from the Jython command line interpreter on an ordinary Linux laptop. We will also see that we don't really need a powerful local machine, or any other real computing resources. All of it, including the computations, can be done for free in the cloud and controlled from an Android device.

Time permitting, we may also show how to setup and use the Jython REPL from within Emacs. This provides a nice environment for experimentation and conjecture testing, as it allows us to write short experimental code fragments that exploit the power and speed of existing UACalc classes and algorithms, without having to write complete Java programs.

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