

Using Python in TreeAge Pro

TreeAge Software, Inc.



Agenda

- Introduce the Python language
- User-defined Python functions
- Show how to integrate a Python function into a simple tree
- Show a more interesting example using a Markov model with complex Python function calls



The Python Language

- Python is a high-powered programming language with...
 - Data structures, arrays, etc.
 - Conditional statements: if/then/else
 - Looping
 - Etc.
- Publicly available Python modules handle many tasks including...
 - Complex mathematical functions
 - Others.



The Python Language

- TreeAge Pro 2007 ships with a Python runtime library (DLL)
- You can download the full Python libraries and documentation from www.python.org
- For more details:
 - <http://www.treeage.com/support/Python.html>
 - 2007 TreeAge Pro User's Manual



User-Defined Python Functions

- Use the high-powered Python language to extend the functionality of TreeAge Pro
- Enter a Python function directly into a variable definition (of same name)
- Functions can be written and tested in Python GUI software prior to pasting the function into TreeAge Pro



User-Defined Python Functions

- Python functions can access...
 - Tree variables
 - TreeAge Pro functions
 - The Global matrices
- Python functions can present debug info for testing



Simple Example

- Review sample tree and note...
 - Imported module `log10`
 - Imported modules extend Python functionality
 - Python functions defined as variables of the same name
 - Syntax for Python functions with and without arguments

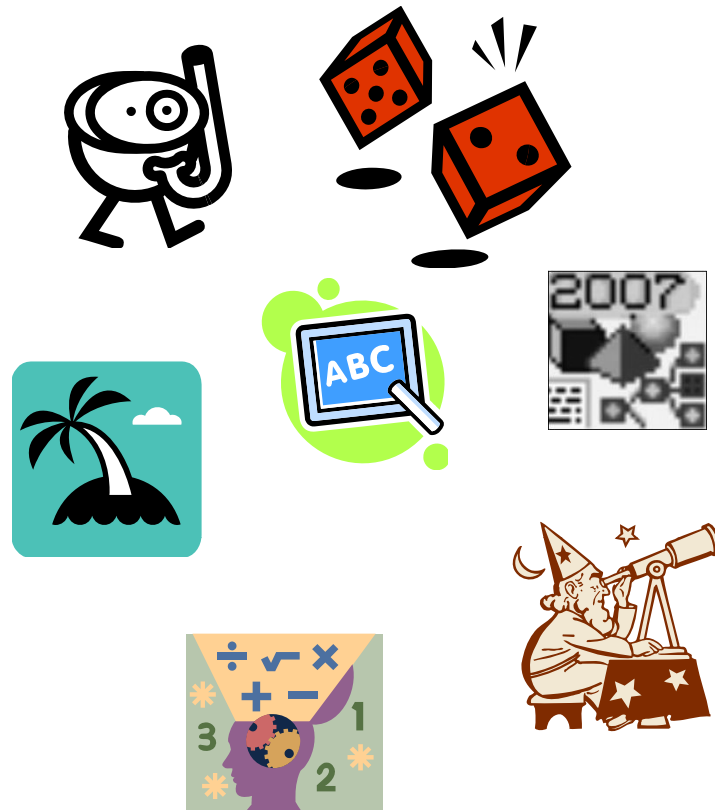


Complex Example

- Will not review the entire tree – too large
- Review portions of sample tree...
 - Entire syntax of Python function PickOne
 - Reference to PickOne as probability for node
“Pick me -- store global info ...”
 - Run simulation (trials)
 - Review text report and export to Excel
 - Show how trials with higher scores were treated

Summary

- Questions?



Webinar Series

- TreeAge Software will continue to host Webinars in the future
- Coming soon...
 - Discrete Event Simulation
- Please provide feedback
 - Via GoToMeeting survey
- Materials available by EOD at
 - [http://server.treeage.com/treeagepro/training/webinars](http://server.treeage.com/treeagepro/training/webinars.asp)
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