

NodeCalculator 2 cheat sheet

This chart shows class inheritance (underneath each class-type is a short description what the class is and what makes this class necessary). At the bottom are common forms of accessing instances; their behavior or return types.

int, float, list, tuple, ...		object			
Builtin types		Bultin type			
NcValue		NcBaseClass			
Base class for all different types of NcValues		Overloaded operators cause instances to be calculated with Maya nodes			
Nc[value-type]Value		NcBaseNode			
		Provides basic functionality that is callable from NcNode & NcAttrs instance, such as node & attrs property. NcNode and NcAttrs are inherently linked together! Each NcNode instance holds an optional NcAttrs instance, whereas each NcAttrs instance holds a link to its NcNode instance!			
		NcList	NcNode	NcAttrs	Op
Common data types (int, list, float, ..) with the option to store metadata on instances		List of NcNode , NcAttrs , NcValue , int, string etc. Different types inside one instance possible!	Represents Maya node (stored as Mobject), has optional attributes (stored as NcAttrs instance)	List of strings that represent attrs on NcNode instance it belongs to (has reference to NcNode)	Singleton OperatorMetaClass instance, holds additional math operations (beyond + - * / etc.)
direct access	A * 2	return value (type defined by given value)	return NcList items	return NcNode, which is linked to an NcAttrs instance that holds attributes.	When invoked: return NcNode-instance with resulting Maya node and output attributes
getattr	A.tx	<undefined>	<undefined>	return NcAttrs-instance (mobj + attr)	<undefined>
setattr	A.tx =	<undefined>	set attr on each NcList item to value	set/connect (mobj + attr)	<undefined>
getitem	A[1]	<undefined>	return NcList item at index 1	return NcNode-instance (mobj + NcAttrs[1])	<undefined>
setitem	A[1] =	<undefined>	set NcList item at index 1 to value	set/connect (mobj + NcAttrs[1])	<undefined>

Keywords

Keywords are special properties on your NodeCalculator Nodes. Use them like any other attribute on an NcList/NcNode/NcAttrs-instance:

nc_node = noca.Node("pCube1")
nc_node.node

node	<unavailable>	<unavailable>	string : Name of Maya node	string : Name of Maya node	<unavailable>
nodes	<unavailable>	list of strings : Maya nodes inside this NcList	list of string : Name of Maya node	list of string : Name of Maya node	<unavailable>
attrs	<unavailable>	<unavailable>	NcAttrs : Instance connected to this NcNode	NcAttrs : self	<unavailable>
attrs_list	<unavailable>	<unavailable>	list of strings : Stored attrs	list of strings : Stored attrs	<unavailable>
plugs	<unavailable>	<unavailable>	list of strings : Stored plugs	list of strings : Stored plugs	<unavailable>

Glossary

Word	Description	Examples
node	Name of Maya node (dagPath if not unique).	pCube1, groupA pSphere1, namespace1:pTorus1
attr/attribute	Attribute on a Maya node in the scene.	tx, translateX, v, visibility, input3D[0].input3Dx
plug	Combination of node and attribute; node.attr	pCube1.tx, groupA pSphere1.visibility
array plug	A plug that allows any number of connections.	"input3D" is the array plug of the plugs "input3D[i]".
array plug element	A specific plug of an array plug.	"input3D[7]" is an array plug element of "input3D".
parent plug	A plug that can be split into child plugs.	"translate" is the parent plug of ["tx", "ty", "tz"].
child plug	A plug that makes up part of a parent plug.	"translateX" is a child plug of "translate".