MiscIfStack

Inherits From: MiscStack
Declared In: miskit/MiscIfStack.h

Class Description

A MiscIfStack is a specialized stack which may be used in a dynamic interpreter to implement if/then/else/endif constructs. The syntax is expected to have an ªendifº match every single ªifº token. The ªelseº token is optional. The ªifº, ªelseº, and ªendifº divide the interpreted code into blocks. The MiscIfStack can tell you whether or not the current block should be executed. This includes correct handling of nested ifs.

To use a MiscIfStack, first send a -**reset** message. Then, whenever an ªifº token is encountered in the parsing, send a -**startIf:** message to the MiscIfStack. If the conditional evaluated true, use YES as the argument. Us NO if it evaluated falsely. When (and if) an ªelseº token is encountered, send a -**startElse** message. Finally, when the ªendifº toekn is encountered, send a -**endIf** message.

To determine if the current block should be executed, simply query the MiscIfStack with a -**currentConditionalIsActive** message. If YES is returned, then the code should be executed.

Instance Variables

Method Types

Set up - reset

Handling statements	- startIf: - startElse - endIf - currentConditionalIsActive
Error notification	- endWithoutIfError - elseWithoutIfError - doubleElseIfError

Instance Methods

currentConditionalIsActive

- (BOOL)**currentConditionalIsActive**

Returns YES if the ªifº or ªelseº block on top of the stack evaluates true and should be executed. Returns NO otherwise.

doubleElseIfError

- (void)**doubleElseIfError**

Prints a diagnostic error message to the console if two ªelseº tokens are found in a row. This is syntactically the same as having an ªelseº without a matching ªifº.

elseWithoutIfError

- (void)**elseWithoutIfError**

Prints a diagnostic error message to the console if an ªelseº token is found that does not have a matching ªifº token.

endIf

- **endIf**

Ends an ªif-elseº block, returning the MiscIfStack to the status of the block before the ªifº to be cleared was encountered. Returns **self** if successful and **nil** if there was an error, such as an ªendifº without a matching ªifº.

endWithoutIfError

- (void)**endWithoutIfError**

Prints a diagnostic error message to the console if an ªendifº token is found that does not have a matching ªifº token.

reset

- **reset**

Clears the MiscIfStack. This should be called whenever a new program is started. Returns **self**.

startElse

- **startElse**

Begins an ªelseº block, changing the status to be the opposite of the ªifº block this is paired to. Returns **self** if successful and **nil** if an error occurs. Errors include two ªelseº tokens in a row or an ªelseº without an accompanying ªifº token.

startIf:

- **startIf:**(BOOL)*isActive*

Starts an ªifº block. If the ªifº evaluates to true, then *isActive* should be YES, NO otherwise. This will be used to determine the current status of the MiscIfStack. Returns **self**, or **nil** if an error occurs.