

MMBasic - Create/Manipulate Stack, Queue or List

[stack_queue_list_utilities.zip](#)

Stack, Queue and List Routines for Strings and Numeric values

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Code is included in the zipped attachment

String Operations

S.STACK.CREATE string\$,width

Create a string as a holder for multiple substrings of width characters long for use as a Last

In, First Out (LIFO) stack. Maximum number of substrings is width x number of substrings =< 250.

Eg. max 25 of 10 character long strings. Strings of less than width are right justified and padded with spaces.

Routine returns with string\$ set up as the holder with the width in character positions

1 and 2 (maximum 99) and a pointer to the bottom of the stack + 1 in positions 3, 4 and 5.

S.STACK.PUSH string\$,data\$

Push data\$ onto stack string\$. If data\$ is shorter than width, data\$ is right justified and padded with spaces.

S.STACK.POP\$(string\$)

Function to pop the top substring off the stack string\$.

All string stack operations are checked for overflow, underflow or substrings too wide.

Queue Operations

S.QUEUE.CREATE string\$,width

Create a string as a holder for multiple substrings of width characters long for use as a

First In, First Out (FIFO) queue. Maximum number of substrings is width x

number of substrings =< 250. Eg. max 25 of 10 character long strings. Strings of less than width are right justified and padded with spaces.

Routine returns with string\$ set up as the holder with the width in character positions 1 and 2 (maximum 99) and a pointer to the bottom of the stack + 1 in positions 3, 4 and 5.

S.QUEUE.PUSH string\$,data\$

Push data\$ onto queue string\$. If data\$ is shorter than width, data\$ is right justified and padded with spaces.

S.QUEUE.PULL\$(string\$)

Function to pop the bottom (first) substring off the queue string\$. All string queue operations are checked for overflow, underflow or substrings too wide.

List Operations

S.LIST.CREATE string\$,width

Create a string as a holder for multiple substrings of width characters long for use as a random access list. Maximum number of substrings is width x number of substrings =< 250. Eg. max 25 of 10 character long strings. Strings of less than width are right justified and padded with spaces.

Routine returns with string\$ set up as the holder with the width in character positions 1 and 2 (maximum 99) and a pointer to the bottom of the list + 1 in positions 3, 4 and 5.

S.LIST.ADD string\$,data\$

Add data\$ onto list string\$ at the bottom. If data\$ is shorter than width, data\$ is right justified and padded with spaces.

S.LIST.FILL string\$,file\$

Add data\$ onto list string\$ at the bottom from text file file\$. Text file file\$ must have each entry of length width or less and terminated with CRLF. CRLF is stripped prior to data\$ being added to list. If data\$ is shorter than width, data\$ is right justified and padded with spaces.

S.LIST.GET\$(string\$,index)

Function to return the list entry pointed to by index. The list is not modified.

All string list operations are checked for overflow or substrings too wide.

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Commands for numeric manipulation in a stack.

Numeric Operations

N.STACK.CREATE string\$,width

Create a string as a holder for multiple substrings of numeric variables for use as a Last In, First Out (LIFO) stack. Maximum number of numeric values pushed onto the stack is 62.

Routine returns with string\$ set up as the holder with the width in character positions

1 and 2 (always 4) and a pointer to the bottom of the stack + 1 in positions 3, 4 and 5.

N.STACK.PUSH string\$,data

Push numeric data onto stack string\$.

N.STACK.POP(string\$)

Function to pop the top numeric value off the stack string\$.

N.STACK.AVERAGE(string\$)

Function to return the average of all the numerical values on the stack. All operations are checked for overflow, underflow or substrings too wide.

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Last update: **2024/01/19 09:30**

