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Program library

Namespace

Initialize struct Stack
  set int array[15];
  set int top
  Start constructor with no argument
    top equal to -1;
    Start For loop int i from 0 to 14
      array at i index to null
    End For loop
  End constructor
End struct stack

set function push parameter reference of stack
set function pop parameter reference of stack
set function top parameter reference of stack
set function print parameter reference of stack
set function validation for integer
set function validation for char

Start main function
  initialize option variable to char
  while option is not E
    opt equal 1
    instantiate stack
    invoke print function
    While option is less than D
      print menu string "Menu\n A: Push\n B: Pop\n C: Top\n D:
Purge\n E: Exit\n"
      invoke validation parameter reference of opt
       Switch option
        case A push
          invoke push function parameter reference of stack
          end case
        case B pop
          invoke pop function parameter reference of stack
          end case
        case C top
          invoke top function reference of  stack
          end case
        case D purge
          print string "Purge stack"
          end case
      End Switch
    End while loop
  End while loop
End main

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50. Start push function argument reference of stack
51.   if the top is less than 14;
52.     print string "Enter a number between 0 and 99 to push to the
stack"
53.     invoke validation function save return value
54.     increment top by one
55.     save to returned value from validation into stack at top index
56.     invoke print function
57.   else print "Error overflow, stack is full" end line
58. End push function
59.
60. Start pop function argument reference of stack
61.   if top is bigger than -1
62.     print stack at top is popped.
63.     decrement top by one
64.     invoke print function
65.   else print "Error underflow, stack is Empty" end line
66. End pop function
67.
68. Start top function
69.   if top is bigger than -1
70.      print "----\n|" + ternery operation if value is greater than
9 the value to string or concat "0" to value converted to string than
print  "|\n----" end line
71.   else print "there is no element in stack
72. End pop function
73.
74. Start print function argment reference of stack
75.   print ----
76.   for loop from i = 0 to i is less than top increment by one
77.     print "|" + ternery operation if value is greater than 9 the
value to string or concat "0" to value converted to string then print
"|"
78.   End for loop
79.   print ---- end line;
80. End print function
81.
82. Start validation function no argument
83.   while loop until break;
84.     initialize int variable value;
85.     cin value from a user
86.     if cin fails
87.       clear cin
88.       ignore cin max value from possible numeric size of stream I/
O operation and '\n'
89.       print string "Wrong input try again\nEnter a number between
0 and 99 to push to the stack: ";
90.     else if value is greater than -1 and less than 100 return
value
91.     else print "Wrong input try again\nEnter a number between 0
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and 99 to push to the stack: ";
92.   End while loop
93. End validation function
94.
95. Start validation function argument char opt reference
96.   while loop until break
97.     cin user input to opt
98.     if cin fails
99.        clear cin
100.       ignore cin max value from possible numeric size of stream
I/O operation and '\n'
101.     else if opt is less than 70 and greater than 64 break while
loop
102.    if opt is less than 101 and greater than 96
103.      opt equal opt - 32
104.      break while loop
105.    print "Wrong input try again" end line
106.  End while loop
107.End validation function

github link https://github.com/tk-0311/BCC
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