1. True/False

T/F: A stack is a FIFO type structure.

Answer: False, it is a LIFO type structure. (Page 196)

1. Multiple Choice

Which of the following are viable uses of a stack?

1. Bracket and parenthesis matching.
2. Performing arithmetic.
3. Using backtracking methods in order to (possibly) exhaustively search for a solution.
4. As part of an iterative solution to replace recursion.
5. All of the above.

Answer: E. All of these are viable uses of a stack. (Pages 201 - 217)

1. Fill in the Blank

When we add an item to a stack, this is commonly known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; Removing an item from a stack is typically known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Answer: pushing; popping. (Page 199)

1. Short Answer or Code

Write a pop() function for a stack that contains integers. Throw a logic error if removal is attempted on an empty stack.

Answer:

int pop()

{

Node\* oldTop = NULL;

int data;

if( !isEmpty() )

{

oldTop = top;

data = top->data

top = top->next;

delete oldTop;

}

else

{

Throw logic\_error( “Stack is empty” );

}

return data;

}

bool isEmpty()

{

return ( top == NULL );

}

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