Reversing Data Using a Stack

```
def reverse_file(filename):
    S = ArrayStack()
    original = open(filename)
    for line in original:
        S.push(line.rstrip('/n'))          // re-insert newlines
    original.close()
    // new overwrite with contents in LIFO
    output = open(filename, 'w')            // reopening overwrites file
    while not S.is_empty():
        output.write(S.pop() + '/n')        // re-insert newline
    output.close()
```

Matching Parentheses & Tags

→ algorithm for matching delimiters

```
def is_matched(expr):
    lefty = '({['
    righty = ')}]'
    S = ArrayStack()
    for c in expr:
        if c in lefty:
            S.push(c)                              // push left delimiter on stack
        elif c in righty:
            if S.is_empty()
                return False                       // nothing to match with
            if righty.index(c) != lefty.index(S.pop()):
                return False.                      // mismatched
    return S.is_empty()                            // were all matched ?
```