Alexander Cleveland

Class: Driver

Class: Simple Parser

Create operations

Create operands

Initialize UNSIGNED\_INT to a pattern 0 through 9

Initialize CHARACTER to a pattern containing - + \* /

Initialize PLUS to +

Initialize MINUS to -

Initialize DIVIDE to /

Initialize MULTIPLY to \*

Expression

Set

Set

Prefix (entered)

Initialize input to new scanner

While input has a next value

Initialize next to next input

Initialize obj to Find Type of next

If obj is a Character

Operations push Character obj

Else if obj is an Integer

Operands push Inter obj

If Operands size is greater than or equal to 2

Initialize result to Evaluate

Operands push result

Output Operands pop

Close input

Evaluate

Initialize operator operations pop

Initialize right op to operands pop

Initialize left op to operands pop

Initialize result to 0

Switch operator

PLUS

Set result equal to left op plus right op

MINUS

Set result equal to left op minus right op

MULTIPLY

Set result equal to left op times right op

DIVIDE

Set result equal to left op divided by right op

Default

Set result equal to 0

Return result

Find Type (next)

Initialize tmp to new scanner

Initialize object to null

If tmp has UNSIGNED INT

Set obj to new Integer

Else set obj to new Character

Close tmp

Return obj

Class: Array stack <T>

Create count

Create stack

Create size

Stack (size)

Set size to size

Set stack to object of size

Set count to 0

Push (T number)

If count is greater than or equal to size

Throw new stack over flow error

Set stack count to number

Increase count

T pop

If empty

Throw new empty stack exception

Return stack with decrease count

T peek

If empty

Throw new empty stack exception

Return stack count – 1

Is Empty

Return count compared to 0

To String