

$\text{empty} : \rightarrow \text{Stack}$

$\text{cons} \_ \_ : \text{Nat}, \text{Stack} \rightarrow \text{Stack}$

$\text{reverse} \_ : \text{Stack} \rightarrow \text{Stack}$

$\text{getLast} \_ : \text{Stack} \rightarrow \text{Nat}$

$\text{removeLast} : \text{Stack} \rightarrow \text{Stack}$

$\text{concat} \_ \_ : \text{Stack}, \text{Stack} \rightarrow \text{Stack}$

$$\left( \begin{array}{l} \text{getLast}(\text{empty}) = 0 \\ \text{getLast}(\text{cons}(x, \text{empty})) = x \\ \text{getLast}(\text{cons}(x, s)) = \text{getLast}(s) \text{ if } s \neq \text{empty} \end{array} \right.$$

$$\left( \begin{array}{l} \text{removeLast}(\text{empty}) = \text{empty} \\ \text{removeLast}(\text{cons}(x, \text{empty})) = \text{empty} \\ \text{removeLast}(\text{cons}(x, s)) = \text{cons}(x, \text{removeLast}(s)) \text{ if } s \neq \text{empty} \end{array} \right.$$

$$\left( \begin{array}{l} \text{reverse}(\text{empty}) = \text{empty} \\ \text{reverse}(s) = \text{cons}(\text{getLast}(s), \text{reverse}(\text{removeLast}(s))) \end{array} \right.$$

$$\left( \begin{array}{l} \text{concat}(\text{empty}, s) = s \\ \text{concat}(\text{cons}(x, s_1), s_2) = \text{cons}(x, \text{concat}(s_1, s_2)) \end{array} \right.$$