

Mini Quiz 8

github.com/6035/sp22

Name: _____

Kerberos username (omit @mit.edu): _____

Consider the following Grammar and Parse Table:

Start \rightarrow Expr (1)
Expr \rightarrow Num (2)
Expr \rightarrow Expr Op Expr (3)
Expr \rightarrow $-$ Expr (4)
Expr \rightarrow (Expr) (5)
Op \rightarrow $+$ (6)
Op \rightarrow $-$ (7)

Using a shift reduce parser, parse $-(\text{Num} + \text{Num})$. Write the symbol on the top of the stack and the operation (shift, reduce, or accept) you will use for each step.

For example, parsing string (Num), the answer would be:

$\langle \epsilon, \text{shift} \rangle \rightarrow \langle (, \text{shift} \rangle \rightarrow \langle \text{Num}, \text{reduce 2} \rangle \rightarrow \langle \text{Expr}, \text{shift} \rangle \rightarrow$
 $\langle \rangle, \text{reduce 5} \rangle \rightarrow \langle \text{Expr}, \text{accept} \rangle$