CSC 4101 – Shift Reduce Parsers
Optional Project II

Introduction:

- This is an optional project. It can be used to replace the Final exam.
- To get the project grade, you must attend and successfully pass a rigorous code review held at the instructor's office.
- Failure to submit the project by the deadline will lead to no grade.

Instructions:

- Implement a JavaScript graphical user interface for the Shift Reduce Parser described below.
- You are free to decide on the GUI. As long as the implementation is clear and it shows the individual parsing steps.
- You do not have to implement the table generation algorithm. You can hard-code the table for this assignment, but your program should be able to parse any input expression based on the grammar.
- You will get 5 bonus points on the final exam for implementing the table generation algorithm.

Submission Instructions:

- Use any development environment (IDE) you like.
- Host your webpage online under your GitHub repository.

The Shift Reduce Parser table and the input grammar:

1. $E \rightarrow E + T$
2. $E \rightarrow T$
3. $T \rightarrow T * F$
4. $T \rightarrow F$
5. $F \rightarrow (E)$
6. $F \rightarrow id$

	Action						Goto		
State	id	+	*	(	)	$	E	T	F
0	S5			S4			1	2	3
1		S6				accept			
2		R2	S7		R2	R2			
3		R4	R4		R4	R4			
4	S5			S4			8	2	3
5		R6	R6		R6	R6			
6	S5			S4				9	3
7	S5			S4					10
8		S6			S11				
9		R1	S7		R1	R1			
10		R3	R3		R3	R3			
11		R5	R5		R5	R5			