CS335: Compiler Design

Programming Assignment

5 April 2021

1. Write a program to calculate FIRST(), FOLLOW() set, and the predictive
   parsing table from a given table. Validate your result for the following
   grammars (? is epsilon):

   Grammar 1:

   ```
   S -> ACB|Cbb|Ba
   A -> da|BC
   B-> g|?
   C-> h| ?
   ```

   Grammar 2:

   ```
   prog → stmt

   stmt → if expr then block | while expr do block | expr ;

   expr → term => id | isZero? term | not expr | ++ id | -- id

   term → id | const

   block → stmt | { stmts }

   stmts → stmt stmts | ?
   ```

   For Grammar 2, the predictive parsing table structure is as follows:

	if	while	id	const	isZero?	not	++	--	{	then	do	;	=>	}	$
prog															
stmt															
expr															
term															
block															
stmts															