King Saud University
College of Computer and Information Sciences
Computer Science Department

CSC 340: Programming Language and Compilation
Homework #3: LR Parsing
Due Date: Mar. 18th before 1:00 PM through LMS

1- **Exercise 4.6.2 (*)**
   Construct the SLR sets of items for the (augmented) grammar S→SS+|SS*|a
   Show the parsing table for this grammar. Is the grammar SLR?

2- **Exercise 4.6.3 (*)**
   Show the actions of your parsing table from Exercise 4.6.2 on the input aa*a+

3- **Example 4.45 (*)**
   Consider the following expression grammar:

   E→E+T|T
   T→T*F|F
   F→ (E)|id

   i. Construct SLR(1) parsing table for the grammar.
   ii. Illustrate the action of the shift-reduce parser on the input id*id using SLR(1) parsing table.

4- **Example 4.54 (*)**
   Construct the parsing table using LR(1) for the following grammar:

   S→ CC
   C→ cC | d

(*) **Book:** "Compilers Principles, techniques, & tools", Alfred V. Aho, Monica S. Lam, Ravi Sethi, Jeffry D. Ullman