Assignment #2
Due: 2:00 PM, Tuesday, October 13

You must complete this assignment by yourself. You cannot work with anyone else in the class or with someone outside of the class. You may not copy solutions from the world wide web.

Submission

i. Choose either (a) handwriting or (b) typing:

a) Write out your answers "neatly" (credit cannot be given for illegible answers) on paper, take photo(s) of your handwritten work, copy and paste the photo(s) into a MS Word document named **A2.docx**.
b) Type your answers in a MS Word document named **A2.docx**

ii. Add a header below (after replacing **<*Your Full Name*>** with your full name) to the file you submit.

On my honor, **<*Your Full Name*>**, this assignment is my own work and I have not shared my solution with anyone.

iii. Submit **A2.docx** using D2L.

(1) (10 points) Consider an unambiguous grammar below.

```
<assign> → <id> = <expr>
<id> → A | B | C
<expr> → <expr> + <term> | <term>
<term> → <term> * <factor> | <factor>
<factor> → ( <expr> ) | <id>
```

Show a parse tree and a leftmost derivation for the following statement.

```
A = B * (C * (A + B))
```

(2) (10 points) Show a trace of the recursive descent parser given in lecture slides "(4) Syntax.pdf" for the strings below.

(i) (5 points) `a + b * c`

(ii) (5 points) `a * (b + c)`