Jeffrey Lansford
Chapter 4

1.)

    a)

        A -> aB | b | cBB
        FIRST(aB) = a
        FIRST(b) = b
        FIRST(cBB) = c
        They do not intersect, pass

    b)

        B -> aB | bA | aBb
        FIRST(aB) = a
        FIRST(bA) = b
        FIRST(aBb) = a
        They interect, does not pass

    c)

        C -> aaA | b | caB
        FIRST(aaA) = a
        FIRST(b) = b
        FIRST(caB) = c
        They do not intersect, pass

3.)

    a + b * c

    Next IDENT is 'a'
    Enter <expr>
    Enter <term>
    Enter <factor>
    Next ADD_OP is '+'
    Exit <factor>
    Exit <term>
    Next IDENT is 'b'
    Enter <term>
    Enter <factor>
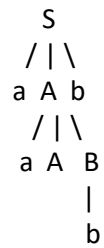   Next MULT_OP is '*'
    Exit <factor>
    Next IDENT is 'c'
    Enter <factor>
    Next -1 is EOF
    Exit <factor>
    Exit <term>
    Exit <expr>

5.)   S -> aAb | bBA A->ab | aAB B-> aB | b

a) aaAbb

```
        S
      / | \
     a  A  b
       / | \
      a  A   B
             |
             b
```

Phrase: aaAbb, aAb, b
Simple Phrases: b
Handle: b

b) bBab

```
       S
     / | \
    b  B  A
          /\
         a  b
```
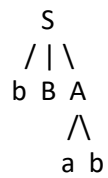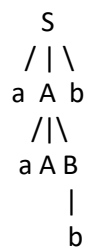
Phrases: bBab, ab
Simple Phrases: ab
Handles: ab

c) aaAbBb

```
       S
     / | \
    a  A  b
      /|\
     a A B
         |
         b
```
Does not complile