LING5702: Problem Set 4
Due via Carmen dropbox at 11:59 PM 3/6.

1. Consult the lecture notes (#10) on hierarchical sequential prediction. According to the model in those notes, assume the following complex event (a sentence) is being recognized:

![Diagram of sentence structure]

and the following event fragments have already been constructed:

(a) [6 pts.] Draw the events and event fragments that would exist after one terminal decision. (HINT: As in lecture notes 10.4, draw just one rectangle with a word inside, no tree lines.)

(b) [2 pts.] Which result (match or no-match) is used in this decision?

(c) [2 pts.] How many distinct (disjoint) events or event fragments exist in memory now?

2. Now assume the following complex event (a sentence) is being recognized:

![Diagram of sentence structure]

(a) [6 pts.] Draw the events and event fragments that would exist after one terminal decision.

(b) [2 pts.] Which result (match or no-match) is used in this decision?

(c) [2 pts.] How many distinct (disjoint) events or event fragments exist in memory now?
and the following event fragments have already been constructed:

(a) [6 pts.] Draw the events and event fragments that would exist after one terminal decision.
   (HINT: As in lecture notes 10.4, draw just one rectangle with a word inside, no tree lines.)
(b) [2 pts.] Which result (match or no-match) is used in this decision?
(c) [2 pts.] How many distinct (disjoint) events or event fragments exist in memory now?

3. Now assume the following complex event (a noun phrase) is being recognized:

and the following events and event fragments have already been constructed:

(a) [6 pts.] Draw the events and event fragments that would exist after one nonterminal decision.
   (HINT: As in lecture notes 10.4, draw just one rectangle with a pair of tree lines inside it.)
(b) [2 pts.] Which result (match or no-match) is used in this decision?

(c) [2 pts.] How many distinct (disjoint) events or event fragments exist in memory now?

4. Now assume the following complex event (a noun phrase) is being recognized:

```
noun-phrase
    
    noun-phrase
    |   
    |   
        |   
        |   
    determiner      noun

relative-clause
```

and the following events and event fragments have already been constructed:

```
noun-phrase
    
    noun-phrase
    |   
    |   
        |   
        |   
    determiner      noun

relative-clause
```

(a) [6 pts.] Draw the events and event fragments that would exist after one nonterminal decision.
   (HINT: As in lecture notes 10.4, draw just one rectangle with a pair of tree lines inside it.)

(b) [2 pts.] Which result (match or no-match) is used in this decision?

(c) [2 pts.] How many distinct (disjoint) events or event fragments exist in memory now?