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## LING 20 Homework 6

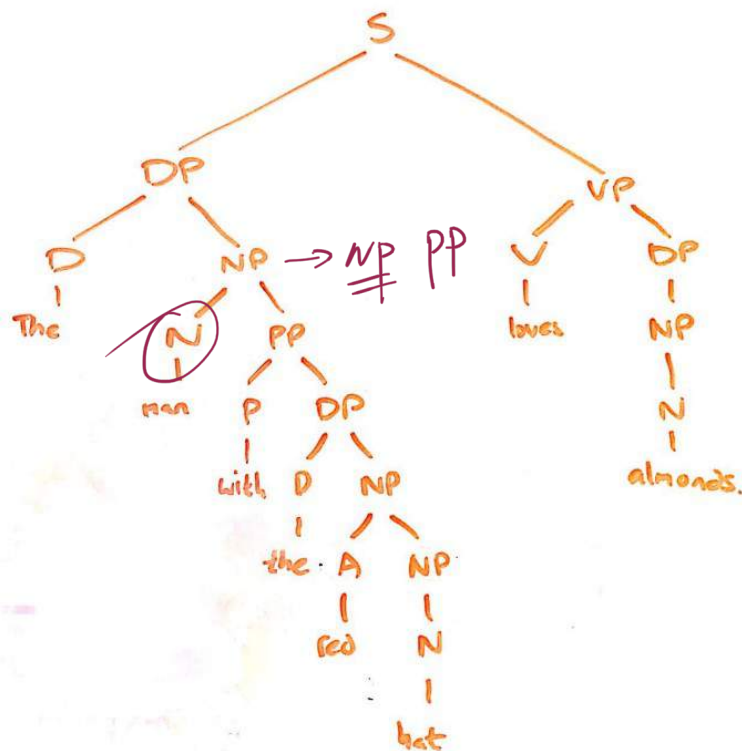
Charles Zhang  
Collaborated with: Victoria Delk

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### Problem 1

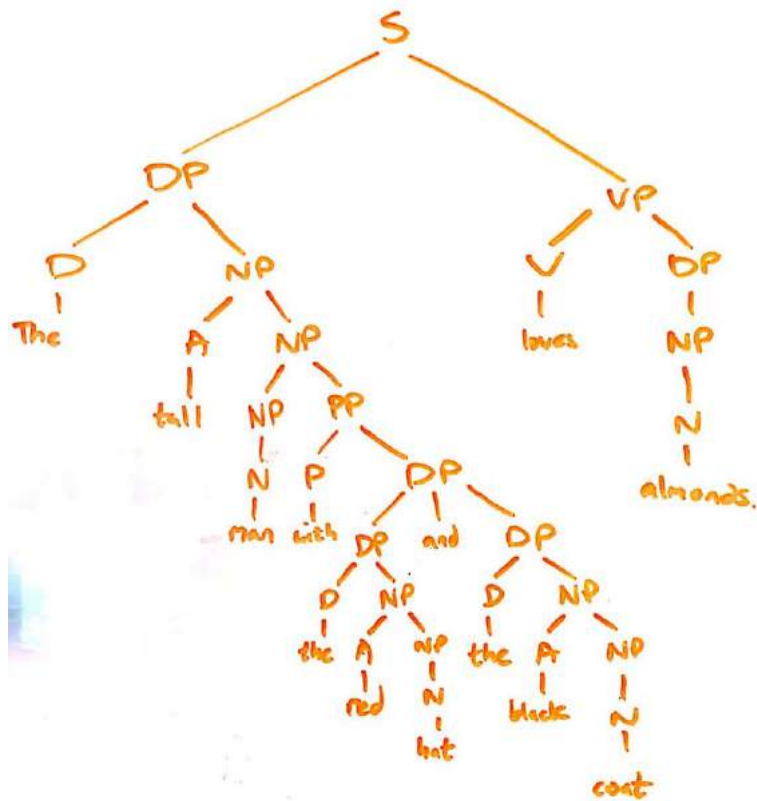
Using our final set of phrase-structure rules, provide the syntactic trees for each of the following sentences.

a) The man with the red hat loves almonds.

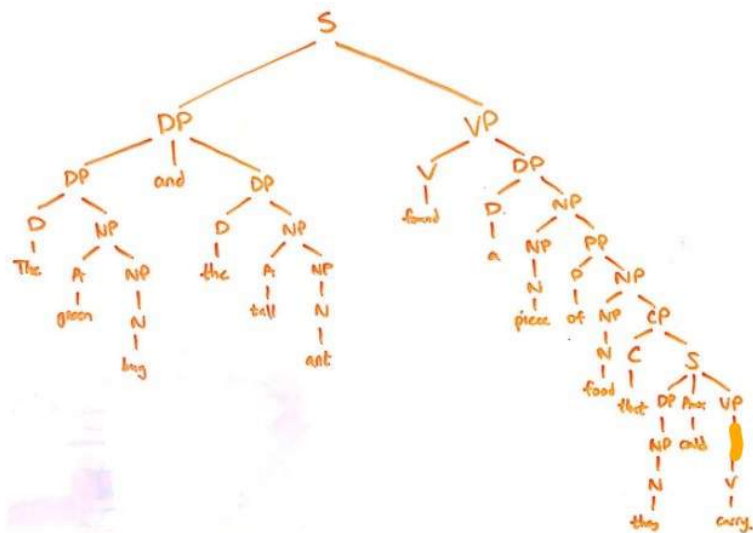


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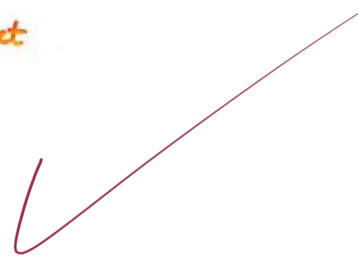
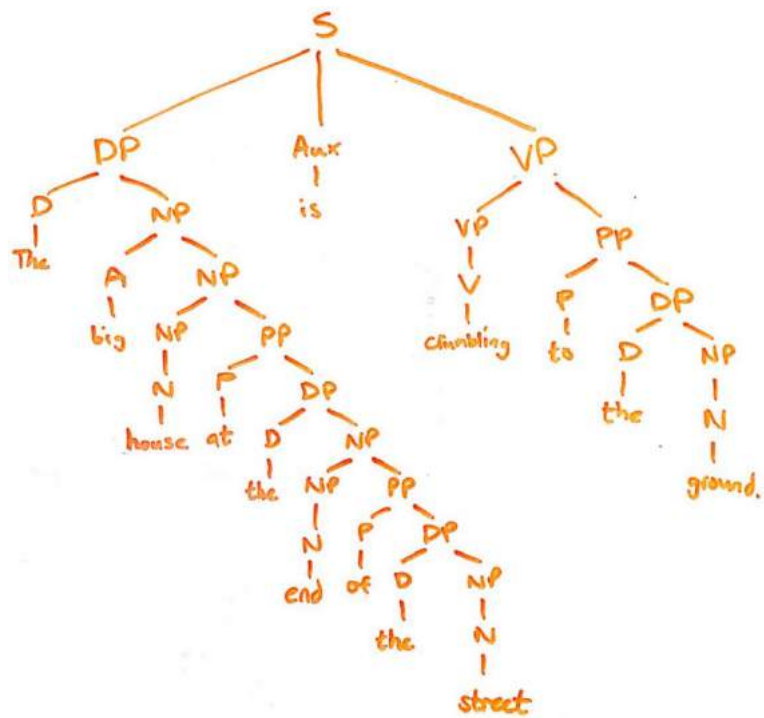
b) The tall man with the red hat and the black coat loves almonds.



c) The green bug and the tall ant found a piece of food that they could carry.



d) The big house at the end of the street is crumbling to the ground.



## Problem 2

As we discussed in lecture, a syntactic derivation can be modelled as a sequence of rewrite steps, as illustrated below:

(1)	S	<i>by</i> $S \rightarrow DP (Aux) VP$
	DP VP	<i>by</i> $DP \rightarrow (D) NP$
	NP VP	<i>by</i> $NP \rightarrow N$
	N VP	<i>by the lexicon</i>
	Dorothy VP	<i>by</i> $VP \rightarrow V (DP) (CP)$
	Dorothy V	<i>by the lexicon</i>
	Dorothy sleeps	

Please show the syntactic derivation of the sentence in (2) as a sequence of rewrite steps. Indicate the phrase-structure rule or “by the lexicon” used at each step. Whenever there is a “choice” in the derivation about which symbol to rewrite, rewrite the leftmost (nonterminal) symbol; that is, do a leftmost derivation.

(2) Lila and Sara made a sandcastle.

S	<i>by</i> $S \rightarrow DP (Aux) VP$
DP VP	<i>by</i> $DP \rightarrow (D) NP$
NP VP	<i>by</i> $NP \rightarrow N$
N VP	<i>by</i> $\alpha \rightarrow \alpha \text{ and } \alpha$
N and N VP	<i>by the lexicon</i>
Lila and N VP	<i>by the lexicon</i>
Lila and Sara VP	$VP \rightarrow V (DP) (CP)$
Lila and Sara V DP	<i>by the lexicon</i>
Lila and Sara made DP	<i>by</i> $DP \rightarrow (D) NP$
Lila and Sara made D NP	<i>by the lexicon</i>
Lila and Sara made a NP	<i>by</i> $NP \rightarrow N$
Lila and Sara made a N	<i>by the lexicon</i>
Lila and Sara made a sandcastle.	

