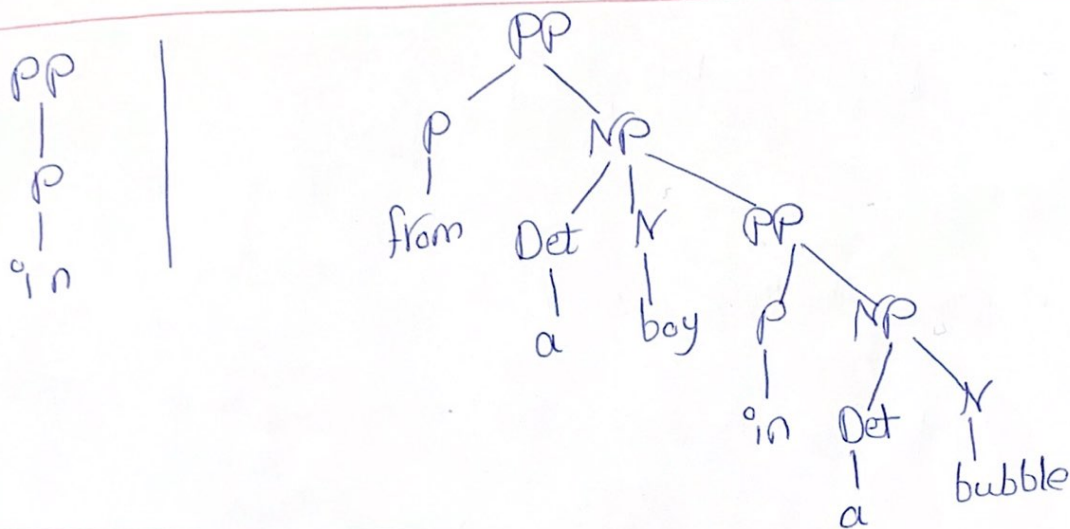
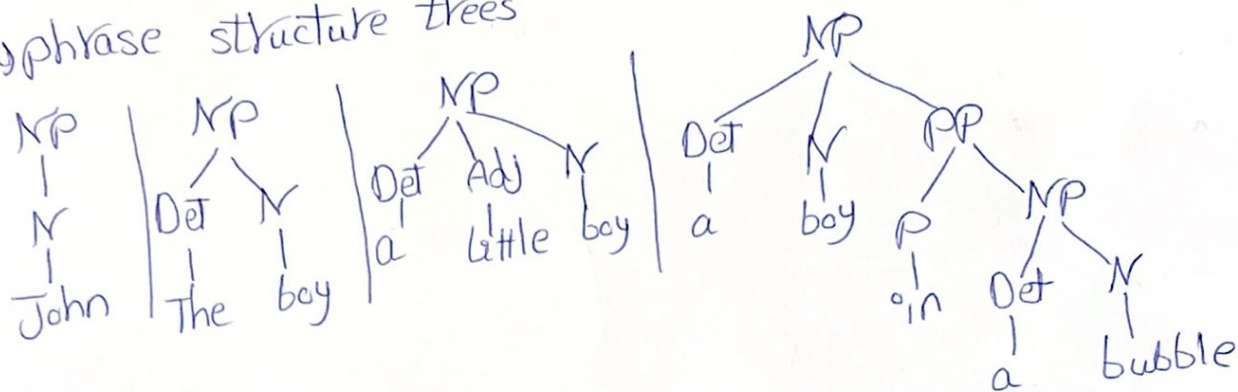


# phrase structure trees

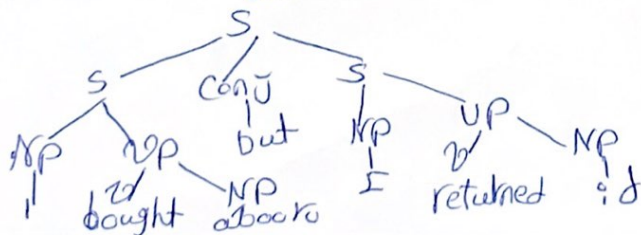
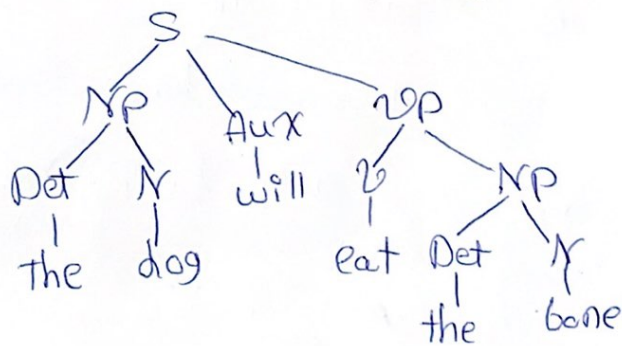


$VP \rightarrow V (NP) (PP) (Adv)$

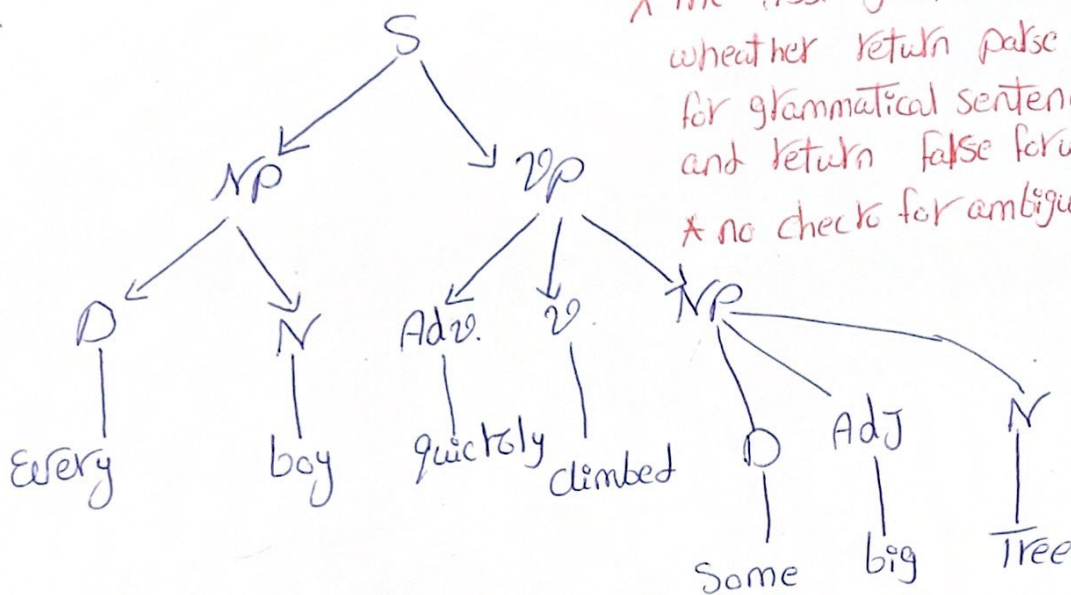


$S \rightarrow NP(Aux)VP$   
(auxiliary verb)

$S \rightarrow S (conj) S$   
by conjoined but and



Eg.



\*the Ass. just check whether return parse tree for grammatical sentences and return false for ungrammatical  
\*no check for ambiguous

Determiner ~ every, some, the, a, an --

Noun ~ boy, girl, Tree, --

Adv. ~ used to describe the verb "جدا"

Adj. ~ " " " " " noun "صفة"

PP ~ prepositional phrase PP → P(NP)  
e.g. in, on, after in a bubble

S(NP(D, N), VP(Adv, V, NP(D, Adj, N)))

\*Ambiguity means the meaning is make sense  
msh yenfz als btha f  
f.tetlehm betheza  
Tania

recursion

$S \rightarrow NP, VP$

$NP \rightarrow D, N$

$NP \rightarrow D, Adj, N$

$VP \rightarrow Adv, V, NP$

~ lexical categories forms heads of phrases

~ NP (Noun phrase)  $NP \rightarrow (Det)(Adj)N(PP)$   
1) ~ optional

e.g. John ~ N

the boy ~ Det N

a little boy ~ Det Adj N

a boy in a bubble ~ Det N PP