

Problem Sheet 5

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1 Context Free Grammars and Parse Trees

Recall the context free grammar:

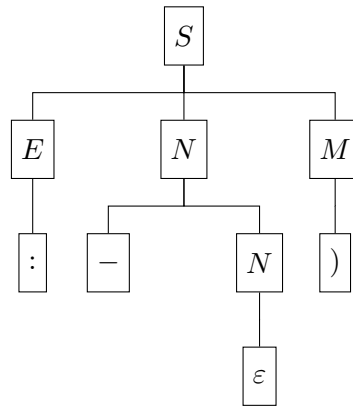
$$S \rightarrow ENM \mid MNE$$

$$E \rightarrow :|;$$

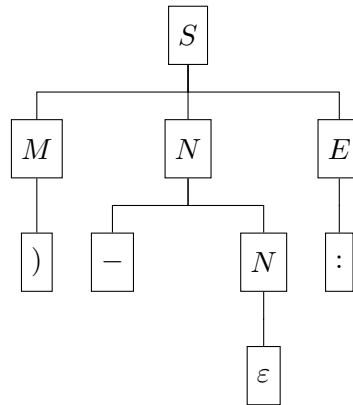
$$N \rightarrow \varepsilon \mid -N$$

$$M \rightarrow (|) \mid []$$

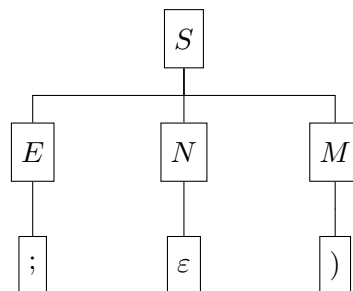
- Given the string $: -)$



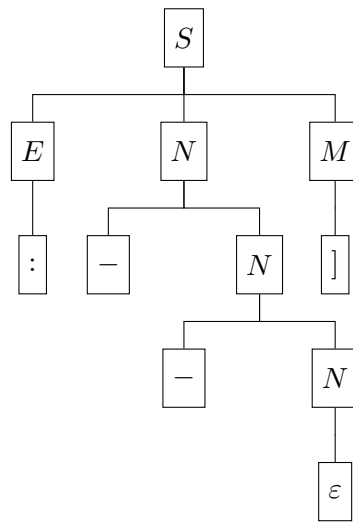
- Given the string $) - :$



- Given the string $;) :$



- Given the string $--]$



The Grammar is unambiguous. This is because there is only one possible parse tree for every string in the language.