

1. What does a *context-free grammar* (CFG) describe?

A CFG describes a set of strings (a language) which can be derived from the start symbol.

2. Consider the sentence “John gave Mary ten dollars“. Mark the individual phrases (constituents) in the sentence. You can assume a flat structure, i.e. no nested phrases.

[NP John NP] [VP gave VP] [NP Mary NP] [NP ten dollars NP]

3. Identify the subject and the objects of the sentence in 2.

Subject = [NP John NP]

Objects = [NP Mary NP], [NP ten dollars NP]

4. Let us assume that in a particular NLP system run-time efficiency is of prime importance. Would you use a *shallow/partial parser* or a *full parser* in the system?

A partial parser.