1 Subsumption and unification

Define (in pseudocode or implemented) a subsumption algorithm for (typed) feature structures. Assume the function subsumes(type0, type1) to be given.
Optional: adapt it for (destructive or non-destructive) unification.

2 Parsing

Modify a chart parsing algorithm to deal with unification-based grammars (without subsumption packing) and discuss points of inefficiency. Try to present a solution (in pseudo-code or implemented form) for at least one of them.

References

(Carpenter, 1992) Bob Carpenter. *The logic of typed feature structures: With applications to unification grammars, logic programs and constraint resolution.* Number 32 in Cambridge Tracts in Computer Science. Cambridge–New York–Melbourne, 1992.

(Davey and Priestley, 2002) B. A. Davey and H. A. Priestley. *Introduction to lattices and order.* Cambridge, second edition, 2002.

(Pereira and Shieber, 1987) Fernando C. N. Pereira and Stuart M. Shieber. *Prolog and natural language analysis.* Number 10 in CSLI Lecture Notes. Stanford, California, 1987.

(Shieber, 1986) Stuart M. Shieber. *An introduction to unification-based approaches to grammar.* Number 5 in CSLI Lecture Notes. Stanford, California, January 1986.