



Nonmonotonic Reasoning

Winter Semester 2017/18

Exercise Sheet 3

3rd November 2017

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Exercise 3.1 (a) Devise a default theory $T = (W, D)$ that has three extensions.

(b) Devise a set of additional defaults D' such that $T' = (W, D \cup D')$ has less extensions than T .

(c) Devise a set of additional facts W' such that $T'' = (W \cup W', D)$ has less extensions than T .

Exercise 3.2 Theorem 3.13 states: "A default theory $T = (W, D)$ has an inconsistent extension iff W is inconsistent." Prove it.

Exercise 3.3 Prove or refute the following claim: Let E be an extension of the default theory $T = (W, D)$. Then E is also an extension of $T' = (W \cup W', D)$ for every subset W' of E .