

Advanced Programming

Exam 2018

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1 Question 1.1: Utility functions

The Code for this task is attached in the appendix A.1.

1.1 Version

2 Question 1.2: Parsing appm databases

I implemented the Parser for appm in parsec, mostly out of this reason:

- Better Error handling compared to ReadP
- I do have more experience with Parsec then ReadP

A Code Listing

A.1 Question 1.1: handout/appm/src/Utils.hs

```
1 module Utils where
2
3   -- Any auxiliary code to be shared by Parser, Solver, or tests
4   -- should be placed here.
5
6   import Defs
7
8   instance Ord Version where
9     (<=) (V[]) _ = False
10    (<=) (V(_:_)) (V []) = True
11    (<=) (V[VN v1int v1str]) (V[VN v2int v2str]) =
12      if checkVersion v1int v2int v1str v2str then True else False
13    (<=) (V(VN _ _ :xs)) (V(VN _ _ :ys)) = V(xs) <= V(ys)
14
15   checkVersion :: Int -> Int -> String -> String -> Bool
16   checkVersion a b c d = a <= b && (c <= d || length(c) <= length(d))
17
18   merge :: Constrs -> Constrs -> Maybe Constrs
19   merge [] [] = Just []
20   merge c1 [] = Just c1
21   merge [] c2 = Just c2
22   merge (c1) (c2) = Just (c1 ++ c2)
```
