

Questions & Answers

Functional Programming 2019/20

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Format of the exam

Similar to the previous exams in the web

- ▶ The exam is on **paper**
 - ▶ Some places (wrongly) state that it is digital
- ▶ Two types of questions
 - ▶ Open (+/- 85%): explain something or write some code
 - ▶ Multiple choice (+/- 15%): choose one answer
- ▶ There is a maximum amount of space per question
 - ▶ Only the things you write there count
 - ▶ Don't worry! There's way more space that you need!
- ▶ You **cannot** bring any notes to the exam
- ▶ You have to answer in English or Dutch



Contents of the exam

Everything until today

- ▶ Basic types: lists, tuples, numbers
- ▶ User-defined data types
- ▶ Define functions by pattern matching
- ▶ Recursion on lists and other data types
- ▶ Write functions using accumulators
- ▶ Define and use higher-order functions
- ▶ Write classes and instances
- ▶ Infer and check the type of an expression



Contents of the exam

Do I need to know all the types by heart?

Writing and understanding type signatures is something you need to learn, and we need to test

- ▶ You have to know or deduce the type of simple functions such as `(++)`, `max`, `(==)`, and so forth
- ▶ Some higher-order functions are *very* important
 - ▶ `map` `:: (a -> b) -> [a] -> [b]`
 - ▶ `filter` `:: (a -> Bool) -> [a] -> [a]`
 - ▶ `foldr` `:: (a -> b -> b) -> b -> [a] -> b`

In most cases you can deduce their type if you know what they do



Outcome of the exam

- ▶ You should expect your grades in about two weeks
- ▶ What happens if I fail the exam?
 - ▶ *Nothing*, your grade is the average with the final one
 - ▶ Remember, $T = 0.3 \times \text{midterm} + 0.7 \times \text{final}$
 - ▶ *Reflect* on your mistakes and *act* to fix them



Q&A session



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