Week 7 — Sheet 6

Algorithms and Data Structures

06.11.2023 — Georg Hasebe

Debriefing of Submissions

Induction

- Hypothesis:
  - Assume for any $k \in \mathbb{N}$…
  - Assume for all $k \in \mathbb{N}$…

Induction

- Hypothesis:
  - ~~Assume for any $k \in \mathbb{N}$…~~
  - ~~Assume for all $k \in \mathbb{N}$…~~
  - Assume there exists/for some $k \in \mathbb{N}$

Decision Tree

- Root is depth 0 (smallest root)
- Description of the decision tree

Wordiness

Wordiness

In all seriousness…

- Sometimes less is more
- Try to reduce it to the most important/essential parts
- Being able to write good solutions takes time and practice

On the other hand: Too short/informal

- Too short/informal? What is the grader going to think?
  - Either it was super easy/trivial for you
  - Or you weren’t totally confident in your solution and had to leave out some details

Structure

$$
\begin{aligned}
a + x = b + x = c + x \\
b + x = c + x \\
b + x = c + x \\
b + x = c + x
\end{aligned}
$$

(don’t recommend)

Structure

$$
\begin{aligned}
a + x = b + x &= c + x \\
&= c + x \\
&= c + x \\
&= c + x \,.
\end{aligned}
$$

$$
\begin{aligned}
b + x &= c + x \\
\Leftrightarrow\ b + x &= c + x \\
\Leftrightarrow\ b + x &= c + x \\
\Leftrightarrow\ b + x &= c + x
\end{aligned}
$$

(or $\Rightarrow \ldots$)

Exercise Sheet 6

Debriefing of Exercise Sheet 6