Post-Mortem

CS135 Fall 2022, Assignment 02

October 3, 2022

We normally publish the post-mortem for an assignment after it has been marked and released. However, in light of the midterm today, we will release the A02 post-mortem before the assignment feedback is released. Here is a list of common errors provided by the graders for assignment 2.

Q2, Q4, and Q5 were hand-marked for design recipe. Please take special note of the common style errors found in these questions. Please review the posted solutions and style guide to help resolve any questions you may have. If that is insufficient, please raise your questions in 1-1 consulting hours.

General Style Errors

- Many students did not include the parameters inside the purpose header. The function header in a purpose should be identical to the header in the function’s definition.
- Many students included unnecessary details in their purpose. For example, mentioning that median-of-3-simple was a “simplified version” of median-of-3 in Q2. Your purpose should only explain what the function does, not how it works.
- Contract formatting errors such as missing colon, missing capitalization, and using Symbol instead of Sym.

Question 2 (median)

Correctness

- Many students used (< a b c) instead of (<= a b c). These students failed test-cases where two or more of the numbers are equal.

Style and Complexity

- Many students used more than 8 comparisons in their function. The most common mistake is not shortening the last cond question to an else.
- Many students used questions that were not in the simplest form. For example, (and (<= a b) (<= a c)) can be simplified to (<= a b c).

Question 4 (blood)

Correctness

- Many students did not use the exact case specified. Using ’a+ instead of ’A+ will lose marks.
• Many students did not use an `else` as the last question in the `cond` to cover all cases.

• There were many instances of typos that mixed up `+` and `−`, and some students used the number ‘0’ instead of the capital letter ‘O’. Please make sure you double check for typos before you submit.

**Style and Complexity**

• Many students used `Str` instead of `Sym` in their contract.

• Many students did not simplify the function by finding patterns. For example, checking if the donor and recipient have the same blood type first can simplify many cases. Other checks such as “is the donor’s blood type ‘O-?’” and “is the recipient’s blood type ‘AB+?’” will also simplify your code.

**Question 5 (box-office)**

**Correctness**

• Many students gave the movie studio ”DC” a bonus instead of a penalty.

• Many students used the wrong inequality comparisons in their code. For example, movie names with less than 10 characters received a bonus, so using `<=` is incorrect.

• Many students ran into errors with substring on tests where movie titles are shorter than 3 characters.

• Incorrectly interpreting the check for “The” as a word instead of the first 3 characters of the movie name.

**Style and Complexity**

• Many students used `Num` instead of `Nat` or `Int` in their contract.

• Many students did not use helper functions to break up large, nested conditionals in the main function.