Inf2-SEPP 2020-21

Coursework 3

Software implementation of an events app during the COVID-19 pandemic

SAMPLE SOLUTION FOR SE TASKS

1 Tasks 1-3

Here, no reporting needed done unless the students:

- Have identified ambiguities in the requirements, and needed to make assumptions for their implementation. In this case, the ambiguities and assumptions should be included for the right task.

- Have identified things that could not work with the current Javadoc and class diagram, and needed to offer justifications for changing their solution. In this case, the changes and justifications should be included for the right task.

2 Task 4

No reporting needed done here, as this task was optional and to be performed and submitted separately during the lab.

3 Task 5: Quality attributes

- Security OR privacy: Here, any reasonable attacks (at least 2) are accepted (see Lecture 24) as long they are justified, and at least one solution for each is provided. Security attacks were mainly expected, but using the name 'privacy attacks' for

security attacks which impact privacy also accepted. It is acceptable to have thought of attacks given the current implementation, but also imagining reasonable extensions to it, or the existence of an UI. Also, it is acceptable to have considered the case where several users can concurrently use the system (which is not possible at the time being). Examples: brute force attacks are a possible threat, if the implementation does not impose strong passwords or block accounts on unsuccessful validation (not required or mentioned by Javascript); someone could use an email address shared by the user elsewhere, and generate passwords repeatedly, or use simple well known passwords, to try to gain access to the user's account and thus get access to their personal information; Some solutions: imposing string passwords on registration, two-factor authentication, locking account after failed validation a number of times.

- Reliability OR availability (see Lecture 23 part 1):

  - If reliability chosen, ROCOF was expected. Reasons: system providing regular service, failure significant because ultimately peoples' health could be impacted, it may have a financial impact, and affect businesses.

  - If availability chosen, availability itself (proportion of time system is available for use) needed to be justified. Justifications: system offers continuous service, expected to be on all or most of the time due to similar reasons as above.

- Usability: Here, any two reasonable principles described in Lecture 23 part 2 accepted, as long as a correct name is provided for them, they are justified, and there is a solution proposed to addressing them in the user interface. Example: user diversity is important because the consumers could have sight, hearing, memory difficulties. For sight difficulties, some solutions could be allowing the website to be customised for different colour schemes, or making them easy to read by screen readers.