CHAPTER V

OTHER NONFUNCTIONAL REQUIREMENTS

In this chapter, the developers discuss the different sections of the nonfunctional requirements or the software quality attributes of the application. The following nonfunctional requirements to be discussed in this chapter are performance requirements, safety and security requirements, and the testing requirements.

1. Performance Requirements

Performance requirements refer to how well the system can do the tasks that is intended or required to do (Halligan, 2016). These requirements have lots of measures being used like response time, throughput, and the likes. The general features of the application are also considered in terms of how it affects the entirety of the application. Identifying these requirements would help the developers in identifying if there improvements or changes to be made in the application overtime.

ASEAN Aid Map has four general features which are adaptive user interface, informative content, user-friendly environment, and up-to-date information. Adaptive refers to the traits of the application to adjust to new specifications or operating environment (SQA, 2016). ASEAN Aid map user interface is developed with a responsive design which can adapt to changes in screen resolution. In the informative content feature, it refers to the ability of the application to provide information about the NGOs and their projects occurring in particular places in Southeast Asia. There are also features which give information to NGOs on what projects they can join in or what NGOs they can partner with, and these suggestions are generated by the application itself. User-friendly pertains to the application environment which is easy to navigate. The design was organize in a way that the users do not experience menu lostness. With this feature, it ensures the users that they can obtain the results that they expect the application to give them. The up-to-date information indicates that the application shows recent updates or the newest information about the projects or their profile straight from the organizations themselves. The updated information is also delivered to other users of the application via notifications.

Table 13 shows the general features of the application together with the corresponding software quality attributes. These attributes would surely certify that the application is of quality with the features presented. The four general features of the application must be met in order to achieve the aimed quality of the developed application with the consequent software attributes. These attributes were derived using different software quality models like Boehm’s and McCall’s Software Quality Model, The Test Eye’s, ISO 9126, and from the research paper entitled “Website Quality Assessment Criteria” by Moustakis. The software quality attribute of adaptive user interface was derived from the ISO 9126. In terms of the user-friendly environment and up-to-date information features, the attributes were identified with the help of Boehm and McCall’s model and The Test Eye’s. The research paper by Moustakis became the basis of the software quality attribute of informative content feature.

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| Product Features | Software Quality Attributes | Mean Value | Feature Mean Value |
| Adaptive User Interface (Portability) | Adaptability | 87.5% | 87.5% |
| User-Friendly Environment (Usability) | Consistency | 90% | 93% |
| Operability | 96% |
| Learnability | 93% |
| Up-to-date Information (Reliability) | Assurance | 94.7% | 94.9% |
| Consistency | 90% |
| Authorization | 100% |
| Informative Content (Understandability) | Completeness of content | 95% | 95% |

Table 13. ASEAN Aid Map Summary of Features and Attributes.

Table 13 also shows the computed values derived from the general features and their software quality attributes counterparts. The ASEAN Aid Map has a total of eight software quality attributes which signifies the whole performance of the application including its functions. With the general features, it can be determined which software quality attribute got the lowest and the highest mean value. The software quality attribute that got the lowest mean value is adaptability with 87.5% while authorization got the highest value with 100%. Understandability got the highest feature mean value which is 95%, while portability got the lowest feature mean value which is 87.5%. Portability getting the lowest feature mean value signifies that the application needs to improve its ability to transfer from one environment to another. Understandability or the completeness of content getting the highest value means that the information that the application presents is comprehensive.