Quality Goals

SoundScorez seeks to deliver high quality usability of the software application by vigorously testing its functional processes and system attributes. Our application’s primary focus is on efficiently streamlining the scoring process of car audio events through automation while providing accurate displays of any results. From this brief overview we can then begin to breakdown the intended users of our system as well as their associated tasks. For the sake of simplicity we can organize users into two separate categories: facilitators such as the event coordinator, event judge and webmaster, and website end-users such as fans of the sport or competitors who wish to conveniently browse event results.

Facilitators are concerned with the interface and functionality of portable app such as being able to create a new event instance, sorting results by categories such as competitor, score, and classes; being able to successfully upload TermLab files to the official website, and auditing results both before submission and on the actual website. We will consider the interface design and assess whether or not the application is easy to navigate. Does every element provide a significant purpose and do those elements convey a specific meaning to the user? Will first time users be able to grasp the flow of the process and functions during the course of an event? This is purely subjective so we are always open to any critical feedback from our intended user audience.

As for the application software itself, we must test its deployment over a wide variety of devices such as both iOS and Android mobile smartphones as well as tablets with various display sizes. Encompassing that idea is our measurement of code quality, specifically portability and the ability to run our source code in different machines and platforms.

Other qualities of our code necessary for evaluation include its reliability, maintainability, testability, and reusability. Our code will be subject to numerous debugging and testing activities. This may include testing the runtime execution speed of the primary functions of our application with focus on optimization while still providing reliability. In order to measure the quality of both the code and the overall system design, it is vital to establish clear process standards throughout development as well as verifying that documentation captures the important ideas in a uniform way. As with all processes aforementioned, our organization will determine if they achieve the level of quality that meets our standards or if they require additional improvements.

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| **Quality Attribute or Goal** | **Evaluation** |
| System usability | A series of moderated usability tests.  Participants are required to navigate through the interface to complete tasks  Observational focus:   * Task success * Completion speed * Body Language * Common errors |
| Responsive Design & Portability | Test application accessibility over a wide variety of devices (personal computer, mobile, etc) running various operating systems (macOS, Windows, iOS, Android, etc.)   * Proper execution * Displays properly |
| Functionality of software components | Automated unit tests |
| Software testing of overall system | Peer review   * Functional Testing * Performance Testing * Use Case Testing * Security Testing |
| Resilience of overall system | Performance testing   * Load testing * Stress testing * Endurance testing * Spike testing |
| Adherence to our group’s quality standards | Provide and review project documents, ensure documents encapsulate the entirety of the project and conform to our group’s standards |