Quality Attributes Analysis

It is known that MonoGame is a software structure that focus on C# game developing, so the table below illustrates six scenario of MonoGame quality attributes:

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| --- | --- | --- | --- | --- | --- | --- |
| **Quality Attribute** | **scenery** | **stimulus** | **stimulation** | **product** | **environment** | **response** |
| **Availability** | A Linux user wants to develop a game using MonoGame | A game developer | Using Linux operating system | A optimized structure MonoGame that can support Linux system | Normal operation | Record the requirement and respond to the public to look for solution |
| **Mutability** | Add a new function for the structure or perfect current system | Developers and other contributors | Further need for the functions of the structure | A better usable structure MonoGame | During testing, designing and running | Find the part to be changed, and test after changing |
| **Performance** | A game using MonoGame as its structure can not perform quickly | From inside the structure | Gamer’s operation arrives | A higher speed structure and optimized algorithms | Override pattern | Handle the stimulation |
| **Security** | A attacker is trying to rewrite the major part of the structure.(Since MonoGame is a open-source structure) | Attackers | An attempt to change structure data | Safety defender will start to work for the structure | Online attack | Main leaders of the structure stop the attacker and repair the structure |
| **Testability** | After a new part of the structure were developed | Developers and testers | A newly developed structure | A new version of the structure | During designing, developing and deploying | Test again and again |
| **Usability** | A game developer is trying to figure out how to use MonoGame to develop a game | Game developers | An attempt to get familiar to the structure | A user guide website | During developing time | Develop a web to introduce MonoGame and release a series of tutorials |