# Quality Assurance

## What Quality?

Quality Assurance is short for QA, which means the approaches of checking if a project meets the client’s requirements.

Quality for Industry:

1. Readability by maintainer: In order to making easier for maintainer, write readable comments and modularity code help maintainer understand the system quickly.
   1. Comments: It includes function header comments and line comments. Describe what happens for the code.
   2. Modularity: Make the code structural and clear, can be easy to add up new function or reuse the code for maintainers.
2. Separate js file: Separate the js file into different file base on the class and design pattern
3. Classes: Create classes base on the
4. XML structure: The XML should be structural, it should not write every tag in one line. It needs to

use indentation for each child tag.

1. Functionality: The project should work as required, which means the project works. There are three main users that will use the project and care about the functionality.
   1. Client
   2. 3rd World students on mobile devices
   3. Teachers- create new quizzes by modify xml file

Table 1 External characteristics of software quality

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Quality | Description | Importance | How to achieve | Measurement |
| Usability | The easiness that users can learn or use the project. | It is important that the project can easily lead the user to use it. | Show the demo to client and get feedback. | Satisfaction feedback from the client |
| Compatibility | The extent to main stream browsers without modification | The online quiz project should be supported to multi-platform, including mobile devices, and on major browsers. | Use Javascript, CSS, jQuery. Testing on different browsers. | Check the testing result |
| Functionality | The project should work as required, which means the project works | It is important to meet the client’s requirements. | Testing based on requirements. | Check the testing result and satisfaction from the client |

Table 2 Internal characteristics of software quality

|  |  |  |  |  |
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| Quality | Description | Importance | How to achieve | Measurement |
| Readability | In order to making easier for other developers, write readable comments with naming convention and modularity code help maintainer understand the system quickly. | Important for new maintainers to get the purpose and get into the project | Add up header comments and line comments. Also use naming convention to let developers know the meaning of every function. | Check the API that generated by the code |
| Maintainability | The easiness with a new developer or any other maintainers to get into the code, quick to know how the project runs. | Important for developers to maintain it or further development. | Write comments and API guide | Check the API that generated |

## Evaluation of QA Programs