# Sprint 2 SQA Lab Exercise

## Part 1 – SQA Plan for System Requirement Review

When evaluating the system requirement document of a software project, we should focus on the following areas:

### Conformance

* Were standards/guidelines and naming conventions established for the document?
* Does the document format confirm to stated standards/guidelines?
* Are the established standards and naming conventions followed throughout the document?
* Have all of the business requirements been listed in the system requirement document?
* Does each requirement have a unique reference number in the document?
* Are the functions involved with fulfilling each requirement consistent with how the business operates internally?
* Are the functions involved with fulfilling each requirement compliant with the organization’s security policy?
* Has the document been reviewed and approved by a representative from the business?

### Correctness

* Is a high level system overview of the project present in the document?
* Are all referenced documents listed?
* Are all definitions, acronyms and abbreviations included?
* Have the parties associated with each business requirement been identified?
* Has the scope of the project been clearly defined?
* Have the functional requirements been stated in terms of inputs, outputs and processing?
* Does the document include a list of functions that must be implemented to meet each business requirement?
* Have the requirements been stated such that they are discrete, unambiguous and testable?

### Integrity

* Is the document concise and easy to follow?
* Is the document written with the appropriate level of detail for the intended audience?
* Are requirements stated consistently without contradicting themselves or other requirements?
* Have the requirements been clearly defined in terms of their purpose and scope?
* Is there evidence of documentation control?
* Will the requirements lead to a software implementation that is error free?
* Do the requirements lead to a software implementation where no sensitive information is exposed?
* Do the requirements allow for a software implementation that can be easily audited?

## Part 2 – SQA Plan for System Design Review

When evaluating the system design document of a software project, we should focus on the following areas:

### Reliability

* Does the software deliver all features and capability without failure?
* Does the design lead to a software system with high uptime?
* Does the system perform well when stress tested with a large number of concurrent users?
* Can the system recover from errors quickly?
* Does the application handle all the errors that could reasonably be expected to occur?
* In the event of an error, does the application provide sufficient logging mechanisms for developers to pinpoint and fix the error?
* Are errors logged with minimal but meaningful information?
* How quickly can the system be brought back online in the event of unexpected downtime?

### Serviceability

* Are there separate production and test environments for the application?
* Can the design be modified easily without breaking existing functionality?
* Will code be written in a consistent matter throughout the application?
* Are dependencies between individual modules documented?
* Do all developers follow the same coding style and naming conventions?
* Will application code be sufficiently commented by developers?
* What are the necessary resources required to administer and execute testing?
* Have appropriate test cases been developed to confirm that the application remains functional after changes to the code?

### Reusability

* Is the presentation layer of the application decoupled from business logic?
* Is the application modularized where ever possible?
* Are there any instances of duplicated code?
* Can functions implementing the design be written in a generic manner?
* Does the design use the same data structures consistently when passing information from one function to another?
* Does the design allow for code that is platform agnostic?
* Does the application require development on a specific IDE?
* Does the document require the use of modules with OS dependencies?