Version <1.0>

Revision History

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| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 19/03/2016 | 1.0 | First SRS | Xinchi Wang  Caixing Su |
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# Introduction

## Purpose

The purpose of this document is to describe the specifications on the external behaviors of a question and answer system. It also documents nonfunctional requirements, design constraints and other factors necessary to provide a complete and comprehensive understanding of the To-Be system.

The intended audience of this document includes the prospective software development team and the potential users of the system.

## Scope

This software system is a system which is based on the interest and the browser/server structure and this system will be referred to as “FQA system” thorough this document.

The two main users of this FQA system are user and administrator. The purpose of administrator is to maintain smooth operations of the system and ensure the high quality of the questions and answers. Meanwhile, user uses this system mainly for asking their question and answering question of the other user. In order to meet the needs of user and administrator, the system is designed as five subsystems. Each of them is an independent but correlated subsystem.

* Reporting Subsystem shows some questions which user may interest in and other useful links
* Question Subsystem allow user to manage questions, (correct) answers, their votes and associated comments.
* Search Subsystem page allow user use it to search their question and answer
* Profile Subsystem allow user to update their information and check some detail information of themselves
* Administrator Subsystem allow administrator to administrate the system

## Definitions, Acronyms and Abbreviations

Temporarily unavailable

## References

* **Rational Unified Process**, SRS template (upedu\_srs.doc), COSC2151 Final Year Software

Engineering Project, RMIT International University Vietnam, 2004

## Overview

The rest of this document is divided into two main sections:

* The Overall Description (section 2) describes the general factors that affect the system and its requirements.
* The Specific Requirements (section 3) contains all software requirements that the system must meet in order to satisfy customer’s needs.

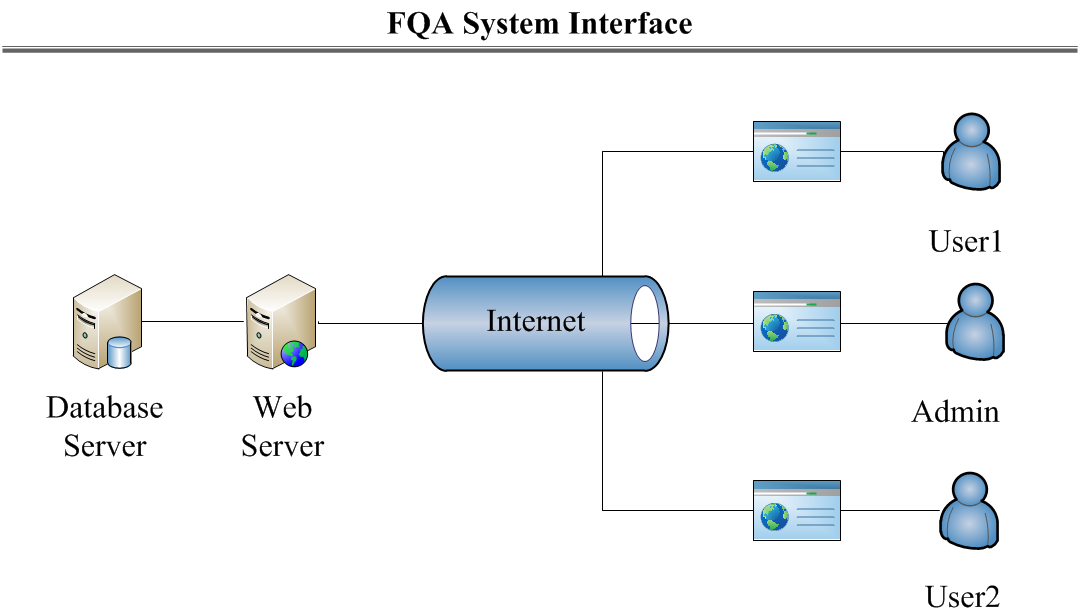
# Overall Description

## Product Perspective

Nowadays, there are many question and answer system exists in the internet and every of them have their own feature and function. However, many people have found that it is too difficult to match the right answer of their question effectively from those question and answer systems on the internet and sometime people need to spend many time on searching the answer.

Base on that need, it is necessary to building a question and answer system which help people to find the answers of their question easily and quickly. The goal of FAQ system is to save the money and time of people in spending on searching answers.

### System Interfaces

The FAQ system is a browser and server mode application that can be deployed on the Internet

### User Interfaces

The user interfaces can accessible through any web browser such as IE, Mozilla, FireFox, and Safari etc.

FQA system administrators also connect to the system via web browser like other users but administrators have their administrate center and they have higher access right to the system.

All users’ accesses to the Database, which is powered by MySQL server, must be performed indirectly through FQA system.

### Hardware Interfaces

All components must be able to execute on a personal computer.

### Software Interfaces

#### User Interface

* The user interact with the system through web browser
* The system supports both IE 5.5 or above and Firefox 7.0 or above

### Communication Interfaces

* The client machines must communicate with the Web Server over TCP/IP connection
* The Web Server and the Database Server are located on different servers

### Memory Constraints

* The client machine must be able to operate within 100MB minimum (including memory for browser)
* The Web Server and the Database Server must be able to operate within 256MB minimum

### Operations

FQA system should be easy for all users to use, e.g. no specific information or skills (except knowledge on how to access the Internet via Web browser) must be required to use the tool.

The Web Server installation and maintenance should be simple enough for a network administrator to perform and should not require any special technical skills from the administrator.

The Database Server should be able to import data from other external database systems. Backup and Recovery operations must be specified in case of network failure, database failure, out of power etc.

## Product Functions

## User Characteristics

The users of FQA system include system administrator and user.

* Administrators have strong knowledge on networks and web applications to be able to install and maintain FQA system. At the meanwhile, administrators are responsible for the quality of the question and maintain the daily operation of this system such as delete some question which were illegal etc.

## Constraints

The system should strictly obey and satisfy the following constraints:

* Authentication security: the system should enforce user authentication security
* Access control: the system must provide specific interface for administrator control the quality of the question
* Backup and recovery: the backup and recovery of all the system’s database must be easy to perform to prevent databases from corruption and loss risks
* The system must be developed using University of Wollongong facilities

## Assumptions and Dependencies

The following assumptions and dependencies for the system are stated:

* All potential users of E-Library system must have a unique username

# Specific Requirements

## Functional Requirements

### Profile Subsystem

This section captures functionalities that FQA system provides to administrators, moderators and users to create, view, edit user profiles.

#### User Side

|  |  |  |
| --- | --- | --- |
| **Requirement#:F3.1.1.1\_1** | **Requirement Type:** Functional | **Use Case:** |
| **Description:** The system should provide a User with a dialog box to sign up and set his/her Username, Password, E-mail address and Display name. | | |
| **Rationale:** A user wants to sign up. | | |
| **Source:** Unregistered User | | |
| **Fit Criterion:** A new user can be registered with profiles saved into database. | | |
| **Dependencies:** None | | |
| **Rank of importance:** Critical | | |
| **Supporting Materials:** None | | |
| **History:** Created by Xinchi Wang 19/03/2016 | | |

|  |  |  |
| --- | --- | --- |
| **Requirement#:F3.1.1.1\_2** | **Requirement Type:** Functional | **Use Case:** |
| **Description:** The system should provide a User with a dialog box to login to the website by entering his/her Username or E-mail and Password. | | |
| **Rationale:** A user wants to log in. | | |
| **Source:** Administrator, Users | | |
| **Fit Criterion:** An existing user can log in successfully | | |
| **Dependencies:** The user must exist in database. | | |
| **Rank of importance:** Critical | | |
| **Supporting Materials:** None | | |
| **History:** Created by Xinchi Wang 19/03/2016 | | |

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| --- | --- | --- |
| **Requirement#:F3.1.1.1\_3** | **Requirement Type:** Functional | **Use Case:** |
| **Description:** The system should provide a User with a page to view his/her own profile, including Username, Display name, Age, E-mail, Reputation, Last access date, Account creation date, Location, Number of up votes and down votes, Answers Submitted, Questions asked and Favorite tags. | | |
| **Rationale:** A User wants to view his/her profile. | | |
| **Source:** Administrator, Moderators, User | | |
| **Fit Criterion:** A user profile should be viewed successfully. | | |
| **Dependencies:** The to-be-viewed profile must exist. | | |
| **Rank of importance:** Critical | | |
| **Supporting Materials:** None | | |
| **History: Created** by Xinchi Wang 19/03/2016 | | |

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| --- | --- | --- |
| **Requirement#:F3.1.1.1\_4** | **Requirement Type:** Functional | **Use Case:** |
| **Description:** The system should provide a user with a page to change his/her own profile, including Display name, Age, E-mail, Location and Favorite tags. | | |
| **Rationale:** A user wants to change his/her profile. | | |
| **Source:** Administrator, Moderator, User | | |
| **Fit Criterion:** A user profile should be changed successfully. | | |
| **Dependencies:** The to-be-changed profile must exist. | | |
| **Rank of importance:** Critical | | |
| **Supporting Materials:** None | | |
| **History:** Created by Xinchi Wang 19/03/2016 | | |

#### Administrator/Moderator Side

### Question Subsystem

This section captures functionalities that FQA system provides to administrators, moderators and users to manage questions, answers and comments.

#### Question Management

This section includes all functions which are related to creating, editing and viewing questions.

|  |  |  |
| --- | --- | --- |
| **Requirement#:F3.1.2.1\_1** | **Requirement Type:** Functional | **Use Case:** |
| **Description:** The system should provide a user with a page to ask a new question with Question title, Question contents and Tags. | | |
| **Rationale:** A user wants to ask a question. | | |
| **Source:** Moderator, User | | |
| **Fit Criterion:** A question should be added to the question list. | | |
| **Dependencies:** The new question should be added successfully. | | |
| **Rank of importance:** Critical | | |
| **Supporting Materials:** None | | |
| **History:** Created by Xinchi Wang 19/03/2016 | | |

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| --- | --- | --- |
| **Requirement#:F3.1.2.1\_2** | **Requirement Type:** Functional | **Use Case:** |
| **Description:** The system should provide a user with a page to edit his/her own question, including Question contents and Tags. | | |
| **Rationale:** A user wants to edit his/her question. | | |
| **Source:** Moderator, User | | |
| **Fit Criterion:** The question should be edited successfully. | | |
| **Dependencies:** The to-be-edited question must exist. | | |
| **Rank of importance:** Critical | | |
| **Supporting Materials**: None | | |
| **History:** Created by Xinchi Wang 19/03/2016 | | |

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| --- | --- | --- |
| **Requirement#:F3.1.2.1\_3** | **Requirement Type:** Functional | **Use Case:** |
| **Description:** The system should provide a user with a page to view a question and its answers. | | |
| **Rationale:** A user wants to read a question and its answers. | | |
| **Source:** Moderator, User | | |
| **Fit Criterion:** The question and its answers should be viewed successfully. | | |
| **Dependencies:** The to-be-viewed question must exist. | | |
| **Rank of importance:** Critical | | |
| **Supporting Materials:** None | | |
| **History:** Created by Xinchi Wang 19/03/2016 | | |

#### Answer Management

This section includes all functions which are related to creating and editing answers.

|  |  |  |
| --- | --- | --- |
| **Requirement#:F3.1.2.2\_1** | **Requirement Type:** Functional | **Use Case:** |
| **Description:** The system should provide a user with a page to add a new answer to a question. | | |
| **Rationale:** A user wants to answer a question. | | |
| **Source:** Moderator, User | | |
| **Fit Criterion:** The answer should be added successfully. | | |
| **Dependencies:** The to-be-answered question must exist. | | |
| **Rank of importance:** Critical | | |
| **Supporting Materials:** None | | |
| **History:** Created by Xinchi Wang 19/03/2016 | | |

#### Comment Management

This section includes all functions which are related to creating and viewing comments.

|  |  |  |
| --- | --- | --- |
| **Requirement#:F3.1.2.3\_1** | **Requirement Type:** Functional | **Use Case:** |
| **Description:** The system should provide a user with a page to add comments to a question. | | |
| **Rationale:** A user wants to add comments to a question. | | |
| **Source:** Moderator, User | | |
| **Fit Criterion:** The comments should be added successfully. | | |
| **Dependencies:** None | | |
| **Rank of importance:** Critical | | |
| **Supporting Materials:** None | | |
| **History:** Created by Xinchi Wang 19/03/2016 | | |

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| --- | --- | --- |
| **Requirement#:F3.1.2.3\_2** | **Requirement Type:** Functional | **Use Case:** |
| **Description:** The system should provide a user with a page to view comments to a question. | | |
| **Rationale:** A user wants to view comments to a question. | | |
| **Source:** Moderator, User | | |
| **Fit Criterion:** The comments should be viewed successfully. | | |
| **Dependencies:** The to-be-viewed comments must exist. | | |
| **Rank of importance:** Critical | | |
| **Supporting Materials:** None | | |
| **History:** Created by Xinchi Wang 19/03/2016 | | |

#### Voting Management

This section includes all functions which are related to voting.

|  |  |  |
| --- | --- | --- |
| **Requirement#:F3.1.2.4\_1** | **Requirement Type: Functional** | **Use Case:** |
| **Description:** The system should provide a user with a section to view up/down votes to questions and answers. | | |
| **Rationale:** A user wants to view comments to questions or answers. | | |
| **Source:** Moderator, User | | |
| **Fit Criterion:** The comments should be viewed successfully. | | |
| **Dependencies:** The to-be-viewed comments must exist. | | |
| **Rank of importance: Critical** | | |
| **Supporting Materials:** None | | |
| **History:** Created by Xinchi Wang 19/03/2016 | | |

|  |  |  |
| --- | --- | --- |
| **Requirement#:F3.1.2.4\_2** | **Requirement Type**: Functional | **Use Case:** |
| **Description:** The system should provide a user with buttons to vote up/down to a question or an answer. | | |
| **Rationale:** A user wants to vote up/down to a question or an answer. | | |
| **Source:** Moderator, User | | |
| **Fit Criterion:** The vote should be added successfully. | | |
| **Dependencies:** The to-be-voted answer must exist. | | |
| **Rank of importance:** Critical | | |
| **Supporting Materials:** None | | |
| **History:** Created by Xinchi Wang 19/03/2016 | | |

## Usability

[This section should include all of those requirements that affect usability. For example,

• specify the required training time for a normal users and a power user to become productive at particular operations

• specify measurable task times for typical tasks or base the new system’s usability requirements on other systems that the users know and like

• specify requirement to conform to common usability standards, such as IBM’s CUA standards Microsoft’s GUI standards]

### <Usability Requirement One>

[The requirement description goes here.]

## Reliability

[Requirements for reliability of the system should be specified here. Some suggestions follow:

• Availability—specify the percentage of time available ( xx.xx%), hours of use, maintenance access, degraded mode operations, etc.

• Mean Time Between Failures (MTBF) — this is usually specified in hours, but it could also be specified in terms of days, months or years.

• Mean Time To Repair (MTTR)—how long is the system allowed to be out of operation after it has failed?

• Accuracy—specify precision (resolution) and accuracy (by some known standard) that is required in the system’s output.

• Maximum Bugs or Defect Rate—usually expressed in terms of bugs per thousand of lines of code (bugs/KLOC) or bugs per function-point( bugs/function-point).

• Bugs or Defect Rate—categorized in terms of minor, significant, and critical bugs: the requirement(s) must define what is meant by a “critical” bug; for example, complete loss of data or a complete inability to use certain parts of the system’s functionality.]

### <Reliability Requirement One>

[The requirement description.]

## Performance

[The system’s performance characteristics should be outlined in this section. Include specific response times. Where applicable, reference related Use Cases by name.

• response time for a transaction (average, maximum)

• throughput, for example, transactions per second

• capacity, for example, the number of customers or transactions the system can accommodate

• degradation modes (what is the acceptable mode of operation when the system has been degraded in some manner)

• resource utilization, such as memory, disk, communications, etc.

### <Performance Requirement One>

[The requirement description goes here.]

## Supportability

[This section indicates any requirements that will enhance the supportability or maintainability of the system being built, including coding standards, naming conventions, class libraries, maintenance access, maintenance utilities.]

### <Supportability Requirement One>

[The requirement description goes here.]

## Design Constraints

[This section should indicate any design constraints on the system being built. Design constraints represent design decisions that have been mandated and must be adhered to. Examples include software languages, software process requirements, prescribed use of developmental tools, architectural and design constraints, purchased components, class libraries, etc.]

### <Design Constraint One>

[The requirement description goes here.]

## On-line User Documentation and Help System Requirements

[Describes the requirements, if any, for on-line user documentation, help systems, help about notices, etc.]

## Purchased Components

[This section describes any purchased components to be used with the system, any applicable licensing or usage restrictions, and any associated compatibility and interoperability or interface standards.]

## Interfaces

[This section defines the interfaces that must be supported by the application. It should contain adequate specificity, protocols, ports and logical addresses, etc. so that the software can be developed and verified against the interface requirements.]

### User Interfaces

[Describe the user interfaces that are to be implemented by the software.]

### Hardware Interfaces

[This section defines any hardware interfaces that are to be supported by the software, including logical structure, physical addresses, expected behavior, etc. ]

### Software Interfaces

[This section describes software interfaces to other components of the software system. These may be purchased components, components reused from another application or components being developed for subsystems outside of the scope of this **SRS** but with which this software application must interact.]

### Communications Interfaces

[Describe any communications interfaces to other systems or devices such as local area networks, remote serial devices, etc.]

## Licensing Requirements

[Defines any licensing enforcement requirements or other usage restriction requirements that are to be exhibited by the software.]

## Legal, Copyright, and Other Notices

[This section describes any necessary legal disclaimers, warranties, copyright notices, patent notice, wordmark, trademark, or logo compliance issues for the software.]

## Applicable Standards

[This section describes by reference any applicable standard and the specific sections of any such standards which apply to the system being described. For example, this could include legal, quality and regulatory standards, industry standards for usability, interoperability, internationalization, operating system compliance, etc.]

# Supporting Information

[The supporting information makes the **SRS** easier to use. It includes:

• Table of contents

• Index

• Appendices

These may include use-case storyboards or user-interface prototypes. When appendices are included, the **SRS** should explicitly state whether or not the appendices are to be considered part of the requirements.]