Software Requirements Specification

*Encyclopedia Web Application*

**Version** *1.3*

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**Revision History**

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| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
|  |  |  |  |
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# Introduction

## Purpose

This project has been prepared to output as an online free encyclopedia web application. The site aims to help users to get and reach the latest articles, the users can explore and receive knowledge in different life domains and they can also contribute and share their knowledge

The scope of the site is to approach everyone that has a desire to get knowledge in different life domains and to contribute too by sharing their knowledge.

## Intended Audience and Reading Suggestions

While the software requirement specification (SRS) document is written for a more general audience, this document is intended for individuals directly involved in the development of Encyclopedia. This includes software developers, project consultants, and team managers. This document need not be read sequentially; users are encouraged to jump to any section they find relevant. Below is a brief overview of each part of the document:

* Part 1 (Introduction)

This section offers a summary of the encyclopedia project, including goals and objectives, project scope, general system details, and some major constraints associated with the intended platform.

* Part 2 (Overall Description)

This section describes the overall description of the Encyclopedia system including product perspective, product features, the operating environment, design and implementation constraints, the user documentation and assumptions and dependencies.

* Part 3 (System Features [Functional Requirements])

This section covers all of the details related to the structure of the functional requirements

* Part 4 (External Interface Requirements)

This section describes the interfaces requirements which could be user interfaces, Software interfaces, Hardware interfaces.

* Part 5 (Non-Functional Requirements)

This section covers all of the details related to the structure of the non-functional requirements, including performance requirements, safety requirements, security requirements and software quality requirements.

* Part 6 (Other Requirements)

This section defines any other requirements not covered elsewhere in the SRS. This might include database requirements, legal requirements, design constraints for the project, and so on

## Project Scope

This software system will be a Web platform that will act as an online free encyclopedia. This system will be designed to host tons of information by providing articles in different categories and navigate between different categories.

More specifically, this system is designed to allow a user to view articles, he can publish an article , upload videos and record voice recordings , and he can also follow specific category to get notifications whenever any article is added in that category by any user.

# Overall Description

## Product Perspective

It is a web based system, The encyclopedia System provides a simple mechanism for users to receive and explore knowledge and also contribute and share knowledge in different life domain.

The following are the main features that are included in encyclopedia System :

* User account: The system allows the user to create their accounts in the system and provide features of viewing articles.
* Publish articles: provides users the accessibility of uploading articles once he logged in.
* Uploading video and record voice recordings: Allow users to upload and record a voice note but he must logged in first.
* Following a category: Allow users to follow specific category to get notifications whenever any article added in that category by any user once he logged in
* Number of users being supported by the system: Though the number is precisely not mentioned but the system is able to support a large number of online users at a time.

## Product Features

Functional Requirements:

**User**

1. Functional Requirement 1 (User Register) 🡪 The user creates an account in order to perform specific functionalities.
2. Functional Requirement 2 (Login) 🡪 The user login to the system by entering his/her username and password
3. Functional Requirement 3 (Logout) 🡪 The user log out from his/her own account in the system
4. Functional Requirement 4 (Forget Password) 🡪The user use forget password in case he/she didn’t remember the password
5. Functional Requirement 5 (Choose Category) 🡪 The user choose a specific category from a drop down list
6. Functional Requirement 6 (Publish an Article) 🡪 The user can publish his/her own article in a specific category but he must logged in first.
7. Functional Requirement 7 (Upload Video) 🡪 The user can upload video in a specific category but he must logged in first.
8. Functional Requirement 8 (Record Voice) 🡪 The user can record voice recordings on the web application
9. Functional Requirement 9 (Follow Specific Category) 🡪 The user can follow specific categories and so later on he can receive notification if any new article is added to those specific categories.
10. Functional Requirement 10 (Notify User About New Article) 🡪 The user receives notification when any new article is added to any of the categories that he followed
11. Functional Requirement 11(Choose Language) 🡪 The user can choose the desired language they needed form the list of language
12. Functional Requirement 12 (Notify User About Content ) 🡪 The user receives notification when any content has been deleted.

**Admin**

1. Functional Requirement 13 (Delete User Account) 🡪 The admin can delete any user account
2. Functional Requirement 14 (Give User Access) 🡪 The admin can give access permission to any user in the system to be an admin
3. Functional Requirement 15 (Delete User Content) 🡪 The admin can delete any content that the user adds to the web application (Videos , Records or Articles) that violates the rules of the system.

## Operating Environment

Operating environment for the airline management system is as listed below.  <<*Include the details as per your application*>>

1. Operating system: Windows/OS.
2. database: PHPMYADMIN Xampp
3. platform: .Net
4. Frontend : HTML,CSS,JAVASCRIPT.

## Design and Implementation Constraints

This system is provisioned to be built on the .Net framework which is highly flexible. Decision regarding which database to use should be taken considering the fact that data being exchanged or stored is large, and the appropriate data management system will yield efficient performance.

## Assumptions and Dependencies “MAI/MAHA”

*<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the SRS. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from another project, unless they are already documented elsewhere (for example, in the vision and scope document or the project plan).>*

# System Features [Functional Requirements]

# User

## System Feature 1

**ID:** FR1\_U

**Title:** Register user.

**3.1.1 Description and Priority**

**Description:** The user shall create an account in order to perform specific functionalities. The creation of an account requires (Email,username(special characters are not allowed),Strong Password(not less than 8 characters, at least one special character, upper and lower cases and numbers),Confirm Password).

**Priority:** High.

**3.1.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- User will navigate to the Encyclopedia website

2- User tries to access the specific functionality without creating an account and the system alerts that the user should register first if he/she does not have an account.

3- User navigates through the web application and clicks on the register button.

4- User enters the required fields.

5- User clicks on the submit button.

**Response sequences:**

1-  if the required fields are valid the system will respond with a message that the account is created successfully

2- In case any Invalid field is entered the system shall alerts the user to enter a valid data

3- In case of poor connection the system may give an error message that sign up process failed

**Dependency:** None.

## System Feature 2

**ID:** FR2\_AU

**Title:** Login

**3.2.1 Description and Priority**

**Description:** The user shall be able to login to the system by entering his/her username and password

**Priority:** High.

**3.2.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- User/Admin will navigate to the Encyclopedia website

2- User/Admin tries to access the specific functionality without logging in and the system alerts that the user should login if there is a created account.

3- User/Admin navigates through the web application and clicks on the Login button.

4- User/Admin enters the required fields.

5- User/Admin clicks on the submit button.

**Response sequences:**

1-  if the required fields are valid the system will respond with a message that the user is logged in successfully

2- In case any Invalid field is entered the system shall alerts the user to enter a valid data

3- In case of poor connection the system may give an error message that login process failed.

**Dependency:** FR1\_U (for users only).

## System Feature 3

**ID:** FR3\_AU

**Title:** Log out

**3.3.1 Description and Priority**

**Description:** The user shall be able to log out from his/her own account in the system

**Priority:** High.

**3.3.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- User/Admin is logged in the system

2- User/Admin navigates through the website to log out

3- User/Admin clicks on log out button

**Response sequences:**

1-  The system will log out successfully

2- In case of poor connection the system may give an error message that log out process failed

**Dependency:** FR2\_AU.

## System Feature 4

**ID:** FR4\_U

**Title:** Forget Password

**3.4.1 Description and Priority**

**Description:** The user shall have the forget password functionality in case he/she did not remember the password so he could be able to open his/her account by entering his email so the system shall send a verification code via email to reset password

**Priority:** High.

**3.4.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- User has an existing account on the system

2- User tries to log into the system but the user could not remember the password

3- User clicks on forget password

4- User enters his/her email

5- User clicks on send

6- User enters the verification code and the new password

**Response sequences:**

1-  when the user clicks on forget password a system shall send a message to the user to enter his email so the system shall send a verification code, when the user enters the new password, the system respond with a message that the new password is created successfully and now the user is ready to log in

2- In case of poor connection the system may give an error message that the process failed

**Dependency:** FR1\_U.

## System Feature 5

**ID:** FR5\_U

**Title:** Search for Category

**3.5.1 Description and Priority**

**Description:** The user shall navigate through the system to search for a specific Category either by entering the category name via search bar or by just navigating through the website

**Priority:** High.

**3.5.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- User opens the Encyclopedia website

2- User search for the name either by entering its name or by navigating through the website

3- In case of searching for the category name, the user will press enter and then the category name will appear and they will press on it. Incase of the navigation user will just click on the category name

**Response sequences:**

1- after clicking on the category the system shall open the category that the user searched for

2- In case the user searched for a category that is not found, the system shall alert a message that no such a category found

3- In case of poor connection the system may give an error message that the process failed

**Dependency:** None.

## System Feature 6

**ID:** FR6\_U

**Title:** Publish an article

**3.6.1 Description and Priority**

**Description:** The user shall log into his/her account to be able to publish his own article in a specific category

**Priority:** High.

**3.6.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- User opens the Encyclopedia website

2- User log into his/her own account by entering username and password

3- User clicks on the category that he wants to publish the article in it

4- User clicks on publish article button

5- User chooses the article

6- User clicks Submit

**Response sequences:**

1- When the article is submitted, the system shall gives a message that the article is published successfully and appears on the system

2- In case of poor connection the system may give an error message that the process of publishing the article failed

**Dependency:** FR2\_AU (for users only)

## System Feature 7

**ID:** FR7\_U

**Title:** Upload Video

**3.7.1 Description and Priority**

**Description:** The user shall log into his/her account to be able to upload video in a specific category, also the video should not exceed two minutes

**Priority:** High.

**3.7.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- User opens the Encyclopedia website

2- User log into his/her own account by entering username and password

3-User clicks on the category that he wants to upload video in it

4- User clicks on upload video button

5- User chooses the video

6- User clicks Submit

**Response sequences:**

1- When the video is uploaded, the system shall gives a message that the video is uploaded successfully and appears on the system

2- In case of poor connection the system may give an error message that the process of uploading the video failed

3- In case the video exceeds two minutes, the system shall alert the user by giving him two options either by cutting the video in to several videos or by canceling the uploading process

**Dependency:** FR2\_AU (for users only)

## System Feature 8

**ID:** FR8\_U

**Title:** Record Voice

**3.8.1 Description and Priority**

**Description:** The User should be able to record voice recordings on the web application

**Priority:** Medium

**3.8.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- User is logged in the system

2- User navigates through the web application to show the categories

3- User clicks on the voice record button to start recording

**Response sequences:**

1- if the user logged in and clicked on the voice record button and start recording this record shall be added successfully to the web application.

2- if the user after logged in tries to record voice recording and he/she can not, the system shall alert message that there is something wrong with the system.

**Dependency:** FR2\_U.

## System Feature 9

**ID:** FR9\_U

**Title:** Follow specific categories

**3.9.1 Description and Priority**

**Description:** The User should be able to follow specific categories and receive a notify message after this articles added to the system

**Priority:** Medium

**3.9.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- User is logged in the system

2- User navigates through the web application to show the categories

3- User clicks on the follow button to follow specific categories

**Response sequences:**

1- if the user logged in and clicked on the follow button for specific categories the user shall receive any new article that is added to this category that he/she follows.

2- if the user after logged in can not receive notification after a new article is added to his/her following category the system shall alert message that there is something wrong with the system.

**Dependency:** FR2\_U.

## System Feature 10

**ID:** FR10\_U

**Title:** Notify user about new articles

**3.10.1 Description and Priority**

**Description:** The User should receive notification about any new articles that are added to the categories that this user is following.

**Priority:** Medium

**3.10.2 Stimulus/Response Sequences**

**Stimulus sequences:**

User is logged in the system

User navigates through the website to show the notifications

User clicks on notification button

User click on the newest article that added to the web application

**Response sequences:**

if the user logged in and clicked the notification button to show the newest article this article should appear successfully in the web application.

if the user after logged in can not show the notification message that there is a new article added to the web application the system shall alert message that there is something wrong with the system.

**Dependency:** FR9\_U,FR2\_U.

## System Feature 11

**ID:** FR11\_U

**Title:** Choose Language

3.11.1 Description and Priority

**Description**: The User should be able to switch from English language to Arabic language.

**Priority:** Low

3.11.2 Stimulus/Response Sequences

**Stimulus sequences:**

1- User is logged in the system

2- User navigates through the website to show the Language section

3- User clicks on Language button

4- User click on the desired language

**Response sequences:**

1- if the user logged in and clicked the language button to show the available languages this list should appear successfully in the web application.

2- if the user after logged in can not show the available languages the system shall alert message that there is something wrong with the system.

**Dependency:** FR1\_U.

## System Feature 12

**ID:** FR12\_U

**Title:** Notify user about content deleted

**3.12.1 Description and Priority**

**Description:** The User should receive notification at his/her account showing that there is specific content deleted from their account.

**Priority:** Medium

**3.12.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- User will navigate to the Encyclopedia web Application.

2- User should be logged in to the system.

3- Click the notification button.

4- The message appeared that specific content had been deleted.

**Response sequences:**

1- if the user logged in and clicks the notify button the notification should appear successfully with the right message.

2- if the user after logging in can not show the notification the system shall alert message that there is something wrong with the system due to poor connection.

**Dependency:** FR2\_U.

# Admin

## System Feature 13

**ID:** FR13\_A

**Title:** Delete user Account

**3.13.1 Description and Priority**

**Description:** The Admin shall be able to delete any user account

**Priority:** Medium

**3.13.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- Admin will navigate to the Encyclopedia web Application.

2- Admin should be logged in to the system.

3- Admin chooses a specific user account to delete it.

4- Admin then click on the delete button.

**Response sequences:**

1- if the admin logged in and chooses to delete a specific user account a message should appear that this user deleted successfully from the web application.

2- if the admin after logging in can not delete a specific user the system shall alert message that there is something wrong with the system due to poor connection.

**Dependency:** FR2\_U.

## System Feature 14

**ID:** FR14\_A

**Title:** Give user Access

**3.14.1 Description and Priority**

**Description:** The Admin shall be able to give the access permission to any user in the system to be admin to.

**Priority:** Medium

**3.14.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- Admin will navigate to the Encyclopedia web Application.

2- Admin should be logged in to the system.

3- Admin chooses a specific user account to give access permission to be an admin to.

4- Admin click confirm button.

**Response sequences:**

1- if the admin logged in and chooses to give access permission to a specific user account to be admin, a message should appear that this user is now admin to the system successfully.

2- if the admin after logging in can not give access permission to a specific user the system shall alert message that there is something wrong with the system due to poor connection.

**Dependency:** FR2\_U.

## System Feature 15

**ID:** FR15\_A

**Title:** Delete user Content

**3.15.1 Description and Priority**

**Description:** The Admin shall be able to delete any content that the user adds to the web application like (upload videos , upload records , publish article to specific category) that violates the rules of the system.

**Priority:** Medium

**3.15.2 Stimulus/Response Sequences**

**Stimulus sequences:**

1- Admin will navigate to the Encyclopedia web Application.

2- Admin should be logged in to the system.

3- Admin navigate to a specific user account to delete specific content.

4- Admin click delete button on specific content.

**Response sequences:**

1- if the admin logged in and chooses a specific account to delete specific content from it the system should show a message that this content is deleted.

2- if the admin after logging in can not delete specific content for a specific user the system shall send an alert message that there is something wrong with the system due to poor connection.

**Dependency:** FR2\_U.

# Specific Requirements

This section contains the specific requirements of the system, in order to define completely the system the requirement should be, when possible:

• **Correct:** the requirement shall represent a real need for the system.

• **Not Ambiguous:** each requirement shall have only one possible interpretation.

• **Complete:** the requirements shall cover all the possible system responses.

• **Consistent:** the requirements shall not be contradictory.

• **Classified:** the requirements shall be classified taking into account the importance of each

of them.

• **Verifiable:** a requirement is verifiable if there is a finite, not expensive process to verify

it.

• **Modifiable:** a requirement should be modifiable in an easy, complete and consistent way.

• **Traceable:** a requirement is traceable if its origin is known and is easy to reference it.

# External Interface Requirements

This section of the SRS describes the interface requirements for the system. Requirements for user, hardware and software interfaces are defined.

## User Interfaces

The application GUI provides menus, toolbars, buttons, panes, containers, grids allowing for easy control by a keyboard and a mouse.

**ID:** UIR01

**Name:** Fast information access

**Description:** The User/Admin shall be able to access all the information

in two clicks or less once he/she is logged in.

**Priority:** Medium

**Stability:** Stable

**Verifiability:** Verifiable

**ID:** UIR02

**Name:** Familiar input to the user

**Description:** The input actions shall be the standard web application development actions

**Priority:** Medium

**Stability:** Stable

**Verifiability:** Verifiable

**ID:** UIR03

**Name:** Familiar output to the user

**Description:** The web application output shall be the web application development standard output.

**Priority:** Medium

**Stability:** Stable

**Verifiability:** Verifiable

**ID:** UIR04

**Name:** Navigation

**Description:** The User shall be able to go to the next and previous page in the

hierarchy level of the web application.

**Priority:** high

**Stability:** Stable

**Verifiability:** Verifiable

**ID:** UIR05

**Name:** Loading Symbol

**Description:** The User shall be able to show a loading icon if the operation to

perform last longer than 1 second.

**Priority:** low

**Stability:** Stable

**Verifiability:** Verifiable

## Hardware Interface

**ID:** HIR01

**Name:** Using Mic

**Description:** The User shall be able to access Mic in two clicks or less after clicks on record Button to be able to record voice Recording.

**Priority:** High

**Stability:** Stable

**Verifiability:** Verifiable

**ID:** HIR02

**Name:**  Using Sound System

**Description:** The User shall be able to hear the voices of the video or voice record after 2 clicks or less on the required button.

**Priority:** High

**Stability:** Stable

**Verifiability:** Verifiable

**ID:** HIR03

**Name:**  Using Keyboard

**Description:** The User shall be able to access the keyboard to be able to write articles.

**Priority:** high

**Stability:** Stable

**Verifiability:** Verifiable

## Software Interface

This section describes the software interface specific requirements for the Encyclopedia web application.

**ID:** SIR01

**Name:**  Database Connectors

**Description:**

**Priority:** NA

**Stability:**

**Verifiability:**

**ID:** SIR02

**Name:**

**Description:**

**Priority:** NA

**Stability:**

**Verifiability:**

# Nonfunctional Requirements

## Performance Requirements

* Login process shall take no more than 10 seconds after writing the correct username and password, Register shall take a few seconds to make sure of The appropriate time by E- mail shall take few seconds depending on connection speed.
* The system shall take no more than 10 seconds to respond to the user.
* System should upload 1000 pictures per second.

## Security Requirements

* The access permissions for system data may only be changed by the system’s data administrator.
* All system data must be backed up every 24 hours and the Backup copies stored in a secure location which is not in the same building as the system.
* All Admin and users Data must be encrypted.

## Software Quality Attributes

**1-Usability**

• Well-structured user manuals.

• Informative error messages.

• Help facilities.

• Well-formed graphical user interfaces

**2- Reliability:**

The system's downtime should not be more than ten minutes per month.

**3- Portability:**

The system should support almost all the browsers due to itis Web application (Internet Explorer, Safari, Chrome, and Firefox).

**4-Compatibility:**

The system should support almost all the operating systems due to itis PC based (Android, IOS).

**5- Availability:**

The Encyclopedia System would be available 99% at 24 hours per day.

# Other Requirements

* Database Requirements:

Database will be created on xampp PHP MyAdmin. Xampp is an open soure server set up to test the projects on a local server before making it available to everyone over the web. This web app development server comes pre-installed with Apache web server, MySQL database, PHP, and Perl that help you build an offline application with desired features and functions.

The disk space on Xampp Server (PHP myAdmin) should always be at least 10GB available.

* Legal Requirements:

Inappropriate content violates the system rules. Therefore, it will be deleted immediately by the admin and the user will be notified

* Design Constraints:

The system is provisioned to build A list of compatible browsers are supported by the web application (Chrome, FireFox, Internet E and Internet Explorer)

Client Side:

The installed Memory on each Web Front End server should be at least 32GB using HTML, CSS and JS technologies.

Server Side:

Backend technologies used are C#, .Net technologies and Xampp server for database.

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**Appendix B: Analysis Models**

**Appendix C: Issues List**