**Learning Hub Web Application**

**Software Requirements Specification**

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V1.0

**Information Technology Institute- ITI**

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**Software Testing and quality assurance**

**Smart Village**

Contents

[**Revision History** 3](#_Toc128101957)

[**Document Approval** 3](#_Toc128101958)

[**1. Introduction** 4](#_Toc128101959)

[**1.1 Purpose** 4](#_Toc128101960)

[**1.2 Scope** 4](#_Toc128101961)

[**1.3 Definitions, Acronyms, and Abbreviations** 5](#_Toc128101962)

[**1.4 References** 5](#_Toc128101963)

[**2. Specific Requirements** 5](#_Toc128101964)

[**2.1 External Interface Requirements** 7](#_Toc128101965)

[**2.1.1 User Interfaces** 7](#_Toc128101966)

[**2.1.2 Hardware Interfaces** 7](#_Toc128101967)

[**2.1.3 Software Interfaces** 7](#_Toc128101968)

[**2.1.4 Communications Interfaces** 7](#_Toc128101969)

[**2.2 Design and Implementation Constraints** 8](#_Toc128101970)

[**2.3 Operating Environment** 8](#_Toc128101971)

[**3. System Features** 8](#_Toc128101972)

[**3.1 Front End Details** 8](#_Toc128101973)

[**3.2 Technical Requirements** 10](#_Toc128101974)

[**3.3 Functional validations** 13](#_Toc128101975)

[**3.4 Classes / Objects** 14](#_Toc128101976)

[**3.4.1. Attributes** 14](#_Toc128101977)

[**3.4.2 Functions** 14](#_Toc128101978)

[**3.5 Non-Functional Requirements** 15](#_Toc128101979)

[**3.5.1 Performance Requirements** 15](#_Toc128101980)

[**3.5.2 Security Requirements** 15](#_Toc128101981)

[**3.5.3 Software Quality Attributes** 15](#_Toc128101982)

[**3.6 Legal Requirements** 16](#_Toc128101983)

[**3.7 Design Constraints** 16](#_Toc128101984)

[**3.8 Logical Database Requirements** 16](#_Toc128101985)

[**3.9 Other Requirements** 16](#_Toc128101986)

[**4. Analysis Models** 17](#_Toc128101987)

[**4.1 Use Case Diagram (UML)** 17](#_Toc128101988)

[**5. Change Management Process** 18](#_Toc128101989)

[**A. Appendices** 18](#_Toc128101990)

# **Revision History**

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| **Date** | **Description** | **Author** | **Comments** |
| 19/2/2023 | Version 1 | Alaa | Initial Draft |
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|  |  |  |  |

# **Document Approval**

The following Software Requirements Specification has been accepted and approved by the following:

|  |  |  |
| --- | --- | --- |
| **Printed Name** | **Title** | **Date** |
| Omar | Project owner | 19/2/2023 |
|  |  |  |
|  |  |  |

# **1. Introduction**

Learning Hub Web Application is a e-Learning project aims to create an engaging and informative online articles, videos, and records. that helps learners achieve the desired learning outcomes, but this is from the macro perspective. This release will have limited features. Over a period of time, new and new functionalities will be added to the site.

Learning hub is a web platform that will act as an online free encyclopaedia hosting tons of information so the users can explore and receive knowledge in different life domain and also to be part of the community to contribute and share their knowledge.

## **1.1 Purpose**

*The Purpose of this document is to outline the requirements for the learning hub web application to be developed for Tech.*

*This document provides a detailed description of a software development project. The SRS outlines the technical requirements of the proposed system, defines the purpose of the system and its components, and includes sufficient detail for technical teams to build the system. The SRS should provide a complete overview of the project and will be used by everyone involved in the project to aid in its successful completion. Once the SRS is complete, a PPD would be produced that summarizes the findings of the SRS. The PPD would be presented to the customer for approval.*

*This document will be used by all stakeholders including developers and testers.*

## **1.2 Scope**

*The scope of this project is limited to the testing of the features described in the succeeding sections of this document.*

*Non-functional testing like stress, performance is in scope of this project.*

*Automation testing is beyond scope.*

*Functional testing & external interfaces are in scope and need to be tested.*

## **1.3 Definitions, Acronyms, and Abbreviations**

|  |  |
| --- | --- |
| **Abbreviation** | **Word** |
| A | Admin |
| U | User |

## **1.4 References**

***1.4.1*** *Customer requirements specification.*

***1.4.2*** *Sample in Question (SIQ).*

# **2. Specific Requirements**

The Learning Hub will have 2 roles.

1. Admin
2. User

Following features/modules will be available to these 2 different roles.

|  |  |
| --- | --- |
| Admin | User |
| Register | **Register** |
| Login | **Login** |
| Navigate | **Navigate** |
| Notification | **Notification** |
| Add | **Add** |
| Edit | **Edit** |
| Delete | **Delete** |
| Logout | **Add User** |
|  | **Delete User** |
|  | **Logout** |

**Description of the modules**

|  |  |  |
| --- | --- | --- |
| **Module Name** | **Applicable**  **Roles** | **Description** |
| **Register** | Admin  User | **Admin:** Admin can create new account using email, unique username, Strong password.  **User:** User can create new account using email, unique username, Strong password. |
| **Login** | Admin  User | **Admin:** Admin can login using unique admin username and password.  **User:** User can login with unique username and the strong password. |
| **Navigate** | Admin  User | **Admin:** Admin can Navigate from Home page to Categories page.  **User:** User Navigate from Home page to Categories page |
| **Notification** | Admin  User | Followed Categories send notification when articles added.  **Admin:** Admin can get notification whenever a new article is added.  **User:** User can get notification whenever a new article is added. |
| **Add** | Admin | **Admin:**  Admin can add articles, videos, recordings. |
|  | User | **User:** User can add articles, videos, recordings. |
| **Edit** | Admin | **Admin:** Admin can edit all articles, videos, and recordings. |
|  | User | **User:** User can edit his own articles, videos, and recordings. |
| **Delete** | Admin | **Admin:** Admin can delete all articles, videos, and recordings. |
|  | User | **User:** User can delete his own articles, videos, and recordings. |
| **Add User** | Admin | **Admin:** Admin can add new User. |
| **Delete User** | Admin | **Admin:** Admin can delete an existing User. |
| **Logout** | Admin  User | **Admin:** Admin can logout.  **User:** User can logout. |

## **2.1 External Interface Requirements**

These requirements include user interfaces (interaction logic between software and user), screen layouts, buttons, functions on every screen, hardware interfaces (here a team describes what devices the software is created for), and other relevant particularities.

### **2.1.1 User Interfaces**

* Register Screen
* Login Screen
* Home Page
* Navigation Bar
* Profile Screen
* Categories Screen

### **2.1.2 Hardware Interfaces**

* Keyboard
* Mic / Sound System
* Mouse

### **2.1.3 Software Interfaces**

* Database
* Server
* Operating System

### **2.1.4 Communications Interfaces**

* Web browser
* Communication Standards (HTTP, HTTPS, FTP)
* Message Formatting (Video, Image, Record)
* End-to-End Encryption

## **2.2 Design and Implementation Constraints**

* Web-based system/pc based.
* Unique user-ID
* Admin features needed.

## **2.3 Operating Environment**

* Operating system: Windows.
* platform: HTML, CSS, java script.

# **3. System Features**

## **3.1 Front End Details**

This section describes the Front end of Learning Hub Web Application.

It also lists a few use cases to describe the functioning of the system.

Following is a list of modules wise fields.

**Register**

* Email
* Username
* Password
* Confirm Password
* Register
* Reset

**Login**

* Username
* Password
* Login

**Navigate**

* Navigation Bar (Categories)
* Back

**Notification**

* Name of Publisher
* Category
* Post Format (Article, Video, Record)
* Date

**Add**

* Dropdown menu (Article, video, record)
* Upload
* Publish
* Cancel

**Edit**

* Dropdown menu (Article, video, record)
* Date
* Save
* Cancel

**Delete**

* Confirm Message
* Delete
* Cancel

**Add User**

* Username
* Password
* Confirm Password
* Email
* Add
* Cancel

**Delete User**

* Username
* Email
* Confirm Message
* Delete
* Cancel

**Logout**

* Confirm Message
* Yes
* Cancel

## **3.2 Technical Requirements**

**Register**

* **User needs to enter these requirements**:

**Email**:

* Should not be blank.
* Must be in Email format.
* First character cannot have space.

**Username**:

* Should not be blank.
* Must be unique.
* First character cannot have space.
* Numbers are not allowed
* Special characters are not allowed

**Password**:

* Should not be blank.
* Must be more than 8 characters.
* Must have at least one numeric value
* Must have at least one special character.

**Confirm Password:**

* Should not be blank.
* Must match password
* **Then user press submit, if all conditions meet the requirements then the user redirected to home page**
* If email is not valid, system displays an error.
* If username is used before, system displays an error.
* If password is not valid, system displays an error.
* If confirm password is not valid , system displays an error.

------------------------------------------------------------------------------------------------

**Register**

**T1**. Email is required.

**T2** Email should not be blank.

**T3** Email: Email ID must not be blank.

**T4** Email: Email ID is not valid.

**T5** Email: First character cannot have space.

**T6**. Username is required.

**T7**. Username should not be blank.

**T8**. Username must be unique.

**T9 User**name – Numbers are not allowed.

**T10 Username** – Special characters are not allowed.

**T11** Username - user name must not be blank.

**T12** Username - First character cannot have space.

**T13**. Password is required.

**T14**. Password must allow special characters.

**T15**. Password must be more than 8 characters.

**T16** Password must not be blank.

**T17** Enter at least one numeric value.

**T18** Enter at least one special character.

**T19** Choose a difficult Password.

**T20** Confirm Password must not be blank.

**T21** Passwords do not Match.

**Login**

**T22 User**name – Numbers are not allowed.

**T23 Username** – Special characters are not allowed.

**T24** Username - user name must not be blank.

**T25** Username - First character cannot have space.

**T26**. Password must not be blank.

**Add**

**T27** User or Admin valid account must be existed.

**T28** Categories page must be existed and can be reached.

**T29** Add button must be existed.

**T30** list of adding articles, videos or recordings must be existed.

**T31** Uploading feature can be implemented by user.

**Publish Article**

**T32** Article should not exist 300 character maximum.

**T33** Article should not be blank.

**T34** Article should be related to category.

**Upload Video**

**T35** Video should not exist 3 to 4 minute maximum.

**T36** Video should not be blank.

**T37** Video should be related to category.

**Upload Record**

**T38** Record should not exist 3 to 4 minute maximum.

**T39** Record should not be blank.

**T40** Record should be related to category.

**Edit**

**T41** Use or Admin valid account must be existed.

**T42** Categories page must be existed and can be reached.

**T43** Edit feature can be implemented by user or admin.

**T44** the old version of the edited document must be removed from the website.

**Delete**

**T45** User or Admin valid account must be existed.

**T46** Categories page must be existed and can be reached.

**T47** Delete feature can be implemented by user to his articles only.

**T48** Delete feature can be implemented by admin to any article in the website.

**T49** Deleted document must be removed from the website for all users and admins.

**Navigate**

**T50** User or Admin valid account must be existed.

**T51** Categories are Available and Clickable to navigate to Intended Category page.

**T52** Add Categories not allowed.

**T53** Delete Categories not allowed.

**T54** Follow Specific Category Allowed.

**T55** User can Navigate Between Different Categories.

**T56** Back Feature is available when Navigate multiple Pages.

**Notification**

**T57** User or Admin valid account must be existed.

**T58 User get Notification when new article Added.**

**T59 User get Notification when new video Added.**

**T60 User get Notification when new Record Added.**

**Add User**

**T61  User**name – Numbers are not allowed.

**T62   User**name – Special characters are not allowed.

**T63**   Username - user name must not be blank.

**T64**   Username - First character cannot have space.

**T65** Email: Email ID must not be blank.

**T66** Email: Email ID is not valid.

**T67** Email: First character cannot have space.

**T68** Password must not be blank.

**T69**   Enter at least one numeric value.

**T70** Enter at least one special character.

**T71** Choose a difficult Password.

**T72** Confirm Password must not be blank.

**T73** Passwords do not Match.

**Delete User**

**T74  User**name – Numbers are not allowed.

**T75   User**name – Special characters are not allowed.

**T76**   Username - user name must not be blank.

**T77**   Username - First character cannot have space.

**T78** Email: Email ID must not be blank.

**T79** Email: Email ID is not valid.

**T80** Email: First character cannot have space.

**Logout**

**T81** User or Admin valid account must be existed.

**T82 User or Admin must be logged in.**

## **3.3 Functional validations**

## 

**Register**

F1. If email is not valid, system displays an error.

F2. If username is used before, system displays an error.

F3. If password is not valid, system displays an error.

**Login**

User

**F4.** If username is not existed in database, system displays an error.

**F5.** If the password is not correct, system displays an error.

Admin

F6. If admin username is not existed in database, system displays an error.

F7. If admin password is not correct, system displays an error.

**Navigate**

F8. If user navigate not existed page, system displays an error.

F9. If admin navigate not existed page, system displays an error.

F10. If user navigate to a deleted page, system displays an error.

F11. If admin navigate to a deleted page, system displays an error.

**Notification**

F12. If notification for Article Deleted, system displays an error.

F13. If notification for Video Deleted, system displays an error.

F14. If notification for Record Deleted, system displays an error.

**Add**

F15. If the article is not in a pdf form, system displays an error.

F16. If the user loses his internet connection while adding a document, system displays an error.

**Edit**

**F17.**If a normal user tries to edit another user’s document, the system will display an error message.

**F18.** If the user loses his internet connection while editing a document, the system displays an error.

**Delete**

**F19.** if a normal user tries to delete another user’s document, system will display an error message.

**F20.** If the user loses his internet connection while deleting a document, system displays an error.

**Add User**

**F21.** If username is already existed in database, system displays an error.

**F22.** If email is already existed in database, system displays an error.

**F23.** If password is not valid, system displays an error.

**Delete User**

**F24.** If username is not existed in database, system displays an error.

**F25.** If user is already deleted from database, system displays an error.

**Logout**

**F26.** If username is not existed in database, system displays an error.

**F27.** If User is not logged in, system displays an error.

## **3.4 Classes / Objects**

### **3.4.1. Attributes**

Nil

### **3.4.2 Functions**

Nil

## **3.5 Non-Functional Requirements**

### **3.5.1 Performance Requirements**

* After writing the correct username and password the login process should
* take only 10 seconds,
* While in Register it should only take few seconds to make sure that the
* email isn’t already existed before.
* The system shall take no more than 10 seconds to respond to the user.
* System should upload 1000 pictures per second.

### **3.5.2 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.

### **3.5.3 Software Quality Attributes**

1. Usability

* Well-structured user manuals.
* Informative error messages.
* Help facilities.
* Well-formed graphical user interfaces

1. Reliability

* The system's downtime should not be more than 60 minutes per month.

1. Portability

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

1. Compatibility

* The system should support almost all the operating systems due to it is PC based.

1. Availability

* The Encyclopaedia System should be available 98% at 24 hours per day.

## **3.6 Legal Requirements**

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

## **3.7 Design Constraints**

Nil

## **3.8 Logical Database Requirements**

Nil

## **3.9 Other Requirements**

Nil

# **4. Analysis Models**

## **4.1 Use Case Diagram (UML)**

Diagram

Description automatically generated

# **5. Change Management Process**

Changes to the SRS either from the development, testing team or the client side will be communicated to the project sponsor.

Any change made to the SRS will require a sign off from the Development lead, QA lead and the client.

Once approved changed will be made to the SRS and the new SRS will be circulated to all stakeholders

# **A. Appendices**

*Nil*

## 