Feasibility Study for Web Application Publishing System

**Date:** **6th March 2023 Duration: 2 months**

**Prepared by: Project Manager**

# Introduction/ Background

## Statement of work

I own a small project management company specialized in web development with its web developers, hardware resources such as computers fully customizable for web development requirements, meeting rooms to welcome clients requesting web applications.

The Web Application Publishing System requested from the client which will be a University ***(more about the client in******Critical Assumptions Section)***accomplishes the following:

1. Authors can upload their articles

2. Readers can search for articles and read them

3. Reviewers can examine the uploaded articles (Active Articles) and can recommend the approval of articles or to request modifications to be made on the article.

4. Editors who act as admins of the system, they receive the uploaded articles, send articles to be reviewed and with the reviewers recommendation he has the final decision to publish the article on the website or not or send modifications to be made on the article to the Author.

5. A database for all the articles on the system

6. Article Manager is a page where the Active Articles are uploaded and still under reviewing, this page is only accessed by the Editor

7. Online Journal is the public page where Authors upload their articles, reviewers review an article, readers read published articles

8. User Friendly Web Application

9. Operational work & Maintenance to be done after delivering the final product

## Scope of Work:

Describe the work to be done to detail. Specify the hardware and software involved and the exact nature of the work.

Firstly, the Non-Functional Requirements:

In our system, we have four active actors (Author, Reviewer, Reader, Editor), Historical Database. The Article Manager will run on the editor’s computer and will have an access point to the database, which will be installed on this computer and is a Windows 11 operating system.

Authors and Reviewers access the Online Journal web page using a Login System with their E-Mails, readers don’t have to login, however Editors access all the system directly.

About the Security of the system, preventing unauthorized write/delete access, no restrictions made on read access. The PC on which the Article Manager resides will have its own security. Only the Editor will have physical access to the machine and the program on it. There is no special protection built into this system other than to provide the editor with write access to the Online Journal to publish an article.

About the Web Application’s scalability, it can hold 1000-2000 users for now.

Secondly, the Functional Requirements:

1. Users (Readers, Authors, Reviewers) login the Online Journal page

A simple login system for the users, it is compulsory for reviewers and authors but can be neglected by the readers logging in as guests.

2. Reader Searches for an Article

1. The Reader chooses how to search the Web site. The choices are by Author, by Category, and by Keyword.
2. If the search is by Author, the system creates and presents an alphabetical list of all authors in the database. In the case of an article with multiple authors, each is contained in the list.
3. The Reader selects an author.
4. The system creates and presents a list of all articles by that author in the database.
5. The Reader selects an article.
6. The system displays the Abstract for the article.
7. The Reader selects to download the article or to return to the article list or to the previous list.

In step b, if the Reader selects to search by category, the system creates and presents a list of all categories in the database.

c. The Reader selects a category.

d. The system creates and presents a list of all articles in that category in the database. Return to step e.

In step b, if the Reader selects to search by keyword, the system presents a dialog box to enter the keyword or phrase.

c. The Reader enters a keyword or phrase.

d. The system searches the Abstracts for all articles with that keyword or phrase and creates and presents a list of all such articles in the database. Return to step e.

3. Author Submits an Article

1. The Author chooses the Email Editor button.
2. The System uses the sendto HTML tag to bring up the user’s email system.
3. The Author fills in the Subject line and attaches the files as directed and emails them.
4. The System generates and sends an email acknowledgement.

4.Reviewer Submits a Review of an Article

1. The Reviewer chooses the Email Editor button.
2. The System uses the sendto HTML tag to bring up the user’s email system.
3. The Reviewer fills in the Subject line and attaches the file as directed and emails it.
4. The System generates and sends an email acknowledgement.

5. Editor

1. Add Author

1. The system presents a blank grid to enter the author information.
2. The Editor enters the information and submits the form, if field is blank, the Editor is instructed to add an entry. No validation for correctness is made.
3. The system checks that the name and email address fields are not blank and updates the database.

2. Add Reviewer

1. The system accesses the database Amazon S3 and presents an alphabetical list of the members proposing to be reviewers.
2. The Editor selects a person.
3. The system confirms that the chosen person is a reviewer now in the database.

3.Update Person

1. The Editor selects Author or Reviewer.
2. The system creates and presents an alphabetical list of people in the category.
3. The Editor selects a person to update.
4. The system presents the database information in grid form for modification.
5. The Editor updates the information and submits the form, if any required field is blank, the Editor is instructed to add an entry. No validation for correctness is made.
6. The system checks that required fields are not blank.

4.Update Article Status

1. The system creates and presents an alphabetical list of all active articles.
2. The Editor selects the article to update.
3. The system presents the information about the article in grid format.
4. The Editor updates the information and resubmits the form.

5. Enter Communication

1. The Editor selects the article using “Update Article Status”.
2. The Editor attaches the file to the grid presented and updates the respective information about the article.
3. When the Editor updates the article status to indicate that a review is returned, the respective entry in the Reviewer table is updated.

6. Assign Reviewer

1. The Editor selects the article using “*Update Article Status”*.
2. The system presents an alphabetical list of reviewers with their information.
3. The Editor selects a reviewer for the article.
4. The system updates the article database entry and emails the reviewer with the standard message and attaches the text of the article without author information.
5. The Editor has the option of repeating this use case from step b.

7. Check Status

1. The system creates and presents a list of all active articles organized by their status.
2. The Editor may request to see the full information about an article.

8. Send Communication

1. The system presents an alphabetical list of authors.
2. The Editor selects an author.
3. The system invokes the Editor’s email system entering the author’s email address into the *To:* entry.
4. The Editor uses the email facility.

9. Publish Article

1. The system creates and presents an alphabetical list of the active articles that are flagged as having their copyright form returned.
2. The Editor selects an article to publish.
3. The system accesses the database and transfers the article and its accompanying information to the database.
4. The article is removed from the database.

10. Remove Article

1. The system provides an alphabetized list of all active articles.
2. The editor selects an article.
3. The system displays the information about the article and requires that the Editor confirm the deletion from the database.
4. The Editor confirms the deletion from the database.

## Location of Work:

The web development will be done in the company’s offices that are equipped with computers that the developers use.

Meetings with stake holders in the meeting rooms of the company.

## Period of Performance:

* At 12th June 2023 Analyst will work on “Requirement Analysis” and “Analysis & Design” for 3 months.
* Analyst can be called again for work if needed in the first year, so Analyst worked 1 year
* At 15th September 2023 Developers (Front-End&Back-End Developer+UX Designer) will start Software Development for 21 months after waiting for Analyst to finish
* Quality Tester will work for a sum of 1 year of testing throughout the project.

## Deliverables Schedule:

Deliverable 1: A Beta Version of the Article Manager page for the Editors will be delivered in 3 months.

Deliverable 2: Then the Article Manager page (Stable Version) fully functional will be delivered in 4 months with the database connected to it. Testing the Article Manager page will take 2 months after those 4 months.

We will add up 3 months if things get wrong.

So, in total 12 months for this web site page to be delivered

First year Deliverable 1&2

Deliverable 3: Online Journal Page for Readers, Reviewers & Authors will have a Beta version delivered in 2 months.

Deliverable 4: Then the Online Journal Page (Stable Version) fully functional will be delivered in 4 months. Testing the Online Journal Page will take 2 months after those 4 months.

So, in total 8 months for this web site page to be delivered.

Deliverable 5 (Last Deliverable): Then we will integrate the two pages in 2 months, now the system is fully functional. Lastly, we will take extra 2 months to test the whole system so, in total 4 months for the integrated tested system to be delivered.

Second year Deliverable 3&4&5

So, 2 years is needed to deliver the whole web product.

## Applicable Standards:

None

## Acceptance Criteria: (Mostly meeting the scope of work requirements)

1. Functional Requirements mentioned met
2. Security requirements mentioned met
3. User Friendly web application
4. Web Application fully tested to prevent bugs
5. Web Application Scalability can hold 1000-2000 users.
6. Web Application stability guaranteed as possible ***(mentioned in risks)***
7. Web Application compatible with most used browsers (chrome, safari, edge, Firefox)
8. If Web Application crashes it can start up again and recover the state where the user of the website was on.

## Special Requirements:

None

# Business Objective

The business objectives of the project and its outputs (value) and information about the business model, if relevant

Objective of project is to make Publishing, Reviewing, and reading Articles as user friendly, trust worthy and Transparent as possible.

The business this project is aiding is the Article Publication business that serves researches. professionals, lecturers and students

# Current Situation and Problem/Opportunity Statement

The project’s situation is that such a software has already been built and quite much sites are international and reliable such as Google Scholar, Microsoft Academic, Semantic Scholar and many many more.

Our real competitors are other universities that have a web publishing software as the one we intend to do, we will try as hard as we can study them see what best they achieved and their draw backs and learn from them. But we know are focusing on building the systems basic functionalities and aiming to compete with geographically near universities systems is not thought for now.

# Critical Assumption and Constraints

I (Project Manager) own a small project management company specialized in web development with its web developers, hardware resources such as computers fully customizable for web development requirements, meeting rooms to welcome clients requesting web applications.

The client is a University that wants its articles be published on the web publishing system being developed. Anyone on the internet can read those articles, Reviewers and Editors will be hired from the university and authors can be from the university such as doctors or students or outside of it but with the copyrights shared with the university.

# Analysis of Option and Recommendation

Project scope was clear no options to consider

# Preliminary Project Requirements

1. Web Application Developers: The company has enough to start the project

2. Location to have meetings: Meeting rooms in the company

3. Computers with licensed software for developing: Offices for each developer is provided

# Budget Estimate and Financial Analysis

Discussed in Base Case Financials & Cost Estimate Excel Sheets

# Schedule Estimate

Discussed in 1.5 Deliverables Schedule in this document, discussed in Gantt Chart & Network Diagram all tasks and their schedule.

# Potential Risks

|  |  |
| --- | --- |
| **Ranking** | **Potential Risk** |
| 1 | Budget Overhead |
| 2 | Exceeding Time Frames |
| 3 | Un met Requirements |
| 4 | Application not stable, suffering from craches and bugs |

# Stakeholder analysis

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Position** | **Internal/External** | **Project Role** |
| **University (Client)** | Client requesting the system | Internal from University | Its role is to attend the meetings of managing the project to discuss, project requirements, system capabilities contract, cost estimate, schedule and keeping track of the work being done.  Also, assigning roles of Editor, reviewers and authors (mentioned above) to people by the University’s choice who will use the system to get feedback from them on the system as the project progresses. |
| **Reader** | Anyone wants to search for articles on the Internet | External from University | He wants as comfortable experience as possible, fast article searching, good GUI and give feedback on the article. |
| **Author** | Doctors & Students of the University | Internal from University | He needs tools in the site to ease the publishing process and edit articles when needed. |
| **Editor** | Assigned from the university | Internal from University | Considered the admin of the system, given highest privileges with articles, authors, reviewers. |
| **Reviewer** | Assigned from the university | Internal from University | He needs tools in the site to ease the reviewing process. |

|  |  |  |
| --- | --- | --- |
| **Name** | **Level of Interest to the stakeholders.** | **Level of Influence of stakeholders in changing anything in the system**  ***(Same Percentages for all)*** |
| **University** | High interest 30%  As it represents the University reputation. | It can influence the whole project from beginning to end according to its acceptance criteria and requirements if changed. |
| **Reader** | High interest 30%  As that’s the targeted customer to appeal as many readers as possible to the site. | As he is the target customer, so we must keep up with what he is interested in the site and implement it in the system which is influential |
| **Editor** | Medium interest 20% | 20% |
| **Reviewer** | Medium interest 10% | 10% |
| **Author** | Medium interest 10% | 10% |
|  | They all act as workers on the site they will be considered of course to make their work easy with the available tools. Editor is more important since he is the administrator of the system. | We will keep with these users to get feedback on what can make their work easier on the site, but they still have the same percentage in their influence. |