Software Requirements Specification

Version 1.0

<<Annotated Version>>

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Web Publishing System

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Submitted in partial fulfillment

Of the requirements of

CS 310 Software Engineering

<<Any comments inside double brackets such as these are *not* part of this SRS but are comments upon this SRS example to help the reader understand the point being made.

Refer to the SRS Template for details on the purpose and rules for each section of this document.

This work is based upon the submissions of the Spring 2004 CS 310. The students who submitted these team projects were Thomas Clay, Dustin Denney, Erjon Dervishaj, Tiffanie Dew, Blake Guice, Jonathan Medders, Marla Medders, Tammie Odom, Amro Shorbatli, Joseph Smith, Jay Snellen, Chase Tinney, and Stefanie Watts. >>

# Table of Contents

[Table of Contents i](#_Toc77487619)

[List of Figures ii](#_Toc77487620)

[1.0. Introduction 1](#_Toc77487621)

[1.1. Purpose 1](#_Toc77487622)

[1.2. Scope of Project 1](#_Toc77487623)

[1.3. Glossary 2](#_Toc77487624)

[1.4. References 2](#_Toc77487625)

[1.5. Overview of Document 2](#_Toc77487626)

[2.0. Overall Description 4](#_Toc77487627)

[2.1 System Environment 4](#_Toc77487628)

[2.2 Functional Requirements Specification 5](#_Toc77487629)

[2.2.1 Reader Use Case 5](#_Toc77487630)

[Use case: Search Article 5](#_Toc77487631)

[2.2.2 Author Use Case 6](#_Toc77487632)

[Use case: Submit Article 6](#_Toc77487633)

[2.2.3 Reviewer Use Case 7](#_Toc77487634)

[Use case: Submit Review 7](#_Toc77487635)

[2.2.4 Editor Use Cases 8](#_Toc77487636)

[Use case: Update Author 8](#_Toc77487637)

[Use case: Update Reviewer 9](#_Toc77487638)

[Use case: Update Article 9](#_Toc77487639)

[Use case: Receive Article 10](#_Toc77487640)

[Use case: Assign Reviewer 11](#_Toc77487641)

[Use case: Receive Review 11](#_Toc77487642)

[Use case: Check Status 12](#_Toc77487643)

[Use case: Send Response 12](#_Toc77487644)

[Use case: Send Copyright 13](#_Toc77487645)

[Use case: Remove Article 14](#_Toc77487646)

[Use case: Publish Article 14](#_Toc77487647)

[2.3 User Characteristics 15](#_Toc77487648)

[2.4 Non-Functional Requirements 15](#_Toc77487649)

[3.0. Requirements Specification 17](#_Toc77487650)

[3.1 External Interface Requirements 17](#_Toc77487651)

[3.2 Functional Requirements 17](#_Toc77487652)

[3.2.1 Search Article 17](#_Toc77487653)

[3.2.2 Communicate 18](#_Toc77487654)

[3.2.3 Add Author 18](#_Toc77487655)

[3.2.4 Add Reviewer 19](#_Toc77487656)

[3.2.5 Update Person 19](#_Toc77487657)

[3.2.6 Update Article Status 20](#_Toc77487658)

[3.2.7 Enter Communication 20](#_Toc77487659)

[3.2.8 Assign Reviewer 21](#_Toc77487660)

[3.2.9 Check Status 21](#_Toc77487661)

[3.2.10 Send Communication 22](#_Toc77487662)

[3.2.11 Publish Article 22](#_Toc77487663)

[3.2.12 Remove Article 23](#_Toc77487664)

[3.3 Detailed Non-Functional Requirements 23](#_Toc77487665)

[3.3.1 Logical Structure of the Data 23](#_Toc77487666)

[3.3.2 Security 25](#_Toc77487667)

[Index 26](#_Toc77487668)

# List of Figures

[Figure 1 - System Environment 4](#_Toc77487669)

[Figure 2 - Article Submission Process 6](#_Toc77487670)

[Figure 3 - Editor Use Cases 8](#_Toc77487671)

[Figure 4 - Logical Structure of the Article Manager Data 23](#_Toc77487672)

# 1.0. المقدمة :

## 1.1. الهدف:

الهدف من هذا الملف وصف النظام المراد تطويره، وعرض المهام التي من الواجب أن يُقدمها هذا النظام بحيث يلبي كافة احتياجات الزبون، كما يحوي هذا الملف إلى المدة المتوقعة لإنجاز المشروع وتسليمه بشكل نهائي.

## 1.2. نطاق النظام:

التعامل مع كافة أقسام الشركة ونظام الشركة الأساسية Perkins

## 1.3. Glossary

|  |  |
| --- | --- |
| **Term** | **Definition** |
| Active Article | The document that is tracked by the system; it is a narrative that is planned to be posted to the public website. |
| Author | Person submitting an article to be reviewed. In case of multiple authors, this term refers to the *principal author*, with whom all communication is made. |
| Database | Collection of all the information monitored by this system. |
| Editor | Person who receives articles, sends articles for review, and makes final judgments for publications. |
| Field | A cell within a form. |
| Historical Society Database | The existing membership database (also HS database). |
| Member | A member of the Historical Society listed in the HS database. |
| Reader | Anyone visiting the site to read articles. |
| Review | A written recommendation about the appropriateness of an article for publication; may include suggestions for improvement. |
| Reviewer | A person that examines an article and has the ability to recommend approval of the article for publication or to request that changes be made in the article. |
| Software Requirements Specification | A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document. |
| Stakeholder | Any person with an interest in the project who is not a developer. |
| User | Reviewer or Author. |

## 1.4. المراجع:

IEEE. *IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications.* IEEE Computer Society, 1998.

## 1.5. نظرة عامة عن الملف:

تتميز شركة Perkins بتنوع منتجاتها حيث تقوم بصناعة المحركات والمولدات الكهربائية التي تستخدم في الكثير من المجالات .

حيث تمتلك شركة Perkins العديد من الوكلاء في دول العالم ومنها شركة Electrical Power System في الجمهورية العربية السورية.

تعد هذه الشركة رائدة في مجال تصميم واستيرد وتجميع المولدات الكهربائية وصيانتها ، ومن هنا تبرز الحاجة إلى تطوير نظام لإدارتها بشكل سهل و مرن يُخفف من العبء المُلقى على الموظفين العاملين في هذه الشركة جراء التعقيد الناتج عن تشّعب العمليات و الوظائف التي يؤدونها.

نُقدم في هذا المستند توصيفاً لنظام إدارة الشركة السورية لنظم الطاقة الكهربائية ، حيث طلب منا مدير الشركة تطوير نظام لأتمتة العمل فيها بشكل كامل للتعامل مع كافة المستخدمين ، فجرى التواصل المباشر مع موظفي الشركة و الاطلاع على عملهم بكافة تفاصيله ليتم تحديد مجموعة من المتطلبات و النقاط الأساسية في مشروع تطوير هذا النظام سنقوم بعرضها في الفقرات التالية من هذا المستند

# 2.0. Overall Description

## 2.1 System Environment

Author

Reader

Editor

HS DB

Online Journal

Article Manager

Web Publishing System

Reviewer

Figure - System Environment

The Web Publishing System has four active actors and one cooperating system.

The Author, Reader, or Reviewer accesses the Online Journal through the Internet. Any Author or Reviewer communication with the system is through email. The Editor accesses the entire system directly. There is a link to the (existing) Historical Society.

<< The division of the Web Publishing System into two component parts, the Online Journal and the Article Manager, is an example of using domain classes to make an explanation clearer. >>

## 2.2 Functional Requirements Specification

This section outlines the use cases for each of the active readers separately. The reader, the author and the reviewer have only one use case apiece while the editor is main actor in this system.

### 2.2.1 Reader Use Case

#### Use case: Search Article

**Diagram:**

Reader

Search Article

**Brief Description**

The Reader accesses the Online Journal Website, searches for an article and downloads it to his/her machine.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Reader has already accessed the Online Journal Website.

1. The Reader chooses to search by author name, category, or keyword.
2. The system displays the choices to the Reader.
3. The Reader selects the article desired.
4. The system presents the abstract of the article to the reader.
5. The Reader chooses to download the article.
6. The system provides the requested article.

**Xref:** Section 3.2.1, Search Article

Rewrite

Review

Active Article

Submit

Publish

Figure - Article Submission Process

The *Article Submission Process* state-transition diagram summarizes the use cases listed below. An Author submits an article for consideration. The Editor enters it into the system and assigns it to and sends it to at least three reviewers. The Reviewers return their comments, which are used by the Editor to make a decision on the article. Either the article is accepted as written, declined, or the Author is asked to make some changes based on the reviews. If it is accepted, possibly after a revision , the Editor sends a copyright form to the Author. When that form is returned, the article is published to the Online Journal. Not shown in the above is the removal of a declined article from the system.

### 2.2.2 Author Use Case

In case of multiple authors, this term refers to the *principal author*, with whom all communication is made.

#### Use case: Submit Article

Author

Submit Article

**Diagram:**

**Brief Description**

The author either submits an original article or resubmits an edited article.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Author has already connected to the Online Journal Website.

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.

**Xref:** Section 3.2.2, Communicate

### 2.2.3 Reviewer Use Case

#### Use case: Submit Review

**Diagram:**

Reviewer

Submit Review

**Brief Description**

The reviewer submits a review of an article.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Reviewer has already connected to the Online Journal Website.

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.

**Xref:** Section 3.2.2, Communicate

### 2.2.4 Editor Use Cases

The Editor has the following sets of use cases:

Figure - Editor Use Cases

Update Info

Editor

Handle Art

Ck Status

Send Rec

Publish Art

**Update Information use cases**

#### Use case: Update Author

Editor

Update Author

**Diagram:**

**Brief Description**

The Editor enters a new Author or updates information about a current Author.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Editor has already accessed the main page of the Article Manager.

1. The Editor selects to *Add/Update Author*.
2. The system presents a choice of adding or updating.
3. The Editor chooses to add or to update.
4. If the Editor is updating an Author, the system presents a list of authors to choose from and presents a grid filling in with the information; else the system presents a blank grid.
5. The Editor fills in the information and submits the form.
6. The system verifies the information and returns the Editor to the Article Manager main page.

**Xref:** Section 3.2.3, Add Author; Section 3.2.5 Update Person

#### Use case: Update Reviewer

**Diagram:**

Editor

Update Reviewer

Hist Soc DB

**Brief Description**

The Editor enters a new Reviewer or updates information about a current Reviewer.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Editor has already accessed the main page of the Article Manager.

1. The Editor selects to *Add/Update Reviewer*.
2. The system presents a choice of adding or updating.
3. The Editor chooses to add or to update.
4. The system links to the Historical Society Database.
5. If the Editor is updating a Reviewer, the system and presents a grid with the information about the Reviewer; else the system presents list of members for the editor to select a Reviewer and presents a grid for the person selected.
6. The Editor fills in the information and submits the form.
7. The system verifies the information and returns the Editor to the Article Manager main page.

**Xref:** Section 3.2.4, Add Reviewer; Section 3.2.5, Update Person

#### Use case: Update Article

**Diagram:**

Editor

Update Article

**Brief Description**

The Editor enters information about an existing article.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Editor has already accessed the main page of the Article Manager.

1. The Editor selects to *Update Article*.
2. The system presents s list of active articles.
3. The system presents the information about the chosen article.
4. The Editor updates and submits the form.
5. The system verifies the information and returns the Editor to the Article Manager main page.

**Xref:** Section 3.2.6, Update Article Status

**Handle Article use cases**

#### Use case: Receive Article

Editor

Receive Article

**Diagram:**

**Brief Description**

The Editor enters a new or revised article into the system.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Editor has already accessed the main page of the Article Manager and has a file containing the article available.

1. The Editor selects to *Receive Article*.
2. The system presents a choice of entering a new article or updating an existing article.
3. The Editor chooses to add or to update.
4. If the Editor is updating an article, the system presents a list of articles to choose from and presents a grid for filling with the information; else the system presents a blank grid.
5. The Editor fills in the information and submits the form.
6. The system verifies the information and returns the Editor to the Article Manager main page.

**Xref:** Section 3.2.7, Enter Communication

#### Use case: Assign Reviewer

This use case extends the *Update Article* use case.

**Diagram:**

Editor

Assign Reviewer

Hist Soc DB

**Brief Description**

The Editor assigns one or more reviewers to an article.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Editor has already accessed the article using the *Update Article* use case.

1. The Editor selects to *Assign Reviewer*.
2. The system presents a list of Reviewers with their status (see data description is section 3.3 below).
3. The Editor selects a Reviewer.
4. The system verifies that the person is still an active member using the Historical Society Database.
5. The Editor repeats steps 3 and 4 until sufficient reviewers are assigned.
6. The system emails the Reviewers, attaching the article and requesting that they do the review.
7. The system returns the Editor to the *Update Article* use case.

**Xref:** Section 3.2.8, Assign Reviewer

#### Use case: Receive Review

Editor

Receive Review

This use case extends the *Update Article* use case.

**Diagram:**

**Brief Description**

The Editor enters a review into the system.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Editor has already accessed the article using the *Update Article* use case.

1. The Editor selects to *Receive Review*.
2. The system presents a grid for filling with the information.
3. The Editor fills in the information and submits the form.
4. The system verifies the information and returns the Editor to the Article Manager main page.

**Xref:** Section 3.2.7, Enter Communication

**Check Status use case:**

#### Use case: Check Status

**Diagram:**

Editor

Check Status

**Brief Description**

The Editor checks the status of all active articles.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Editor has already accessed the main page of the Article Manager.

1. The Editor selects to *Check Status*.
2. The system returns a scrollable list of all active articles with their status (see data description in section 3.3 below).
3. The system returns the Editor to the Article Manager main page.

**Xref:** Section 3.2.9, Check Status

**Send Recommendation use cases:**

#### Use case: Send Response

This use case extends the *Update Article* use case.

**Diagram:**

Editor

Send Response

**Brief Description**

The Editor sends a response to an Author.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Editor has already accessed the article using the *Update Article* use case.

1. The Editor selects to *Send Response*.
2. The system calls the email system and puts the Author’s email address in the Recipient line and the name of the article on the subject line.
3. The Editor fills out the email text and sends the message.
4. The system returns the Editor to the Article Manager main page.

**Xref:** Section 3.210, Send Communication

#### Use case: Send Copyright

This use case extends the *Update Article* use case.

**Diagram:**

**Brief Description**

Editor

Send Copyright

The Editor sends a copyright form to an Author.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Editor has already accessed the article using the *Update Article* use case.

1. The Editor selects to *Send Copyright*.
2. The system calls the email system and puts the Author’s email address in the Recipient line, the name of the article on the subject line, and attaches the copyright form.
3. The Editor fills out the email text and sends the message.
4. The system returns the Editor to the Article Manager main page.

**Xref:** Section 3.2.10, Send Communication

#### Use case: Remove Article

This use case extends the *Update Article* use case.

Editor

Remove Article

**Diagram:**

**Brief Description**

The Editor removes an article from the active category.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Editor has already accessed the article using the *Update Article* use case.

1. The Editor selects to remove an article from the active database.
2. The system provides a list of articles with the status of each.
3. The Editor selects an article for removal.
4. The system removes the article from the active article database and returns the Editor to the Article Manager main page.

**Xref:** Section 3.2.12, Remove Article

**Publish Article use case:**

#### Use case: Publish Article

This use case extends the *Update Article* use case.

Editor

Publish Article

**Diagram:**

**Brief Description**

The Editor transfers an accepted article to the Online Journal.

**Initial Step-By-Step Description**

Before this use case can be initiated, the Editor has already accessed the article using the *Update Article* use case.

1. The Editor selects to *Publish Article*.
2. The system transfers the article to the Online Journal and updates the search information there.
3. The system removes the article from the active article database and returns the Editor to the Article Manager home page.

**Xref:** Section 3.2.11, Publish Article

<< Since three of the actors only have one use case each, the summary diagram only involves the Editor. Adapt the rules to the needs of the document rather than adapt the document to fit the rules. >>

## 2.3 User Characteristics

The Reader is expected to be Internet literate and be able to use a search engine. The main screen of the Online Journal Website will have the search function and a link to “Author/Reviewer Information.”

The Author and Reviewer are expected to be Internet literate and to be able to use email with attachments.

The Editor is expected to be Windows literate and to be able to use button, pull-down menus, and similar tools.

The detailed look of these pages is discussed in section 3.2 below.

## 2.4 Non-Functional Requirements

The Online Journal will be on a server with high speed Internet capability. The physical machine to be used will be determined by the Historical Society. The software developed here assumes the use of a tool such as Tomcat for connection between the Web pages and the database. The speed of the Reader’s connection will depend on the hardware used rather than characteristics of this system.

The Article Manager will run on the editor’s PC and will contain an Access database. Access is already installed on this computer and is a Windows operating system.

# 3.0. توصيف المتطلبات :

## 3.1 متطلبات الواجهة الخارجية:

>>غير متوفر<<

## المتطلبات الوظيفية:

### 3.2.1 تسجيل طلب صيانة

|  |  |
| --- | --- |
| **تسجيل طلب صيانة** | اسم حالة الاستخدام |
|  | الرابط |
| **طلب الزبون من الموظف بتسجيل طلب صيانة** | القادح |
|  | الشروط السابقة |
| 1. يقدم الزبون وصف للمشكلة 2. يحول الطلب للموظف المسؤول لاستلام القطعة. 3. ثم تحول القطعة الى قسم الفحص والصيانة لتحديد المشكلة بشكل دقيق وصيانتها. 4. يرفع تقرير من قسم الفحص والصيانة الى المحاسب 5. يقوم المحاسب بقطع وصل التسليم 6. يتم حفظ عملية الصيانة مع التاريخ | التدفق الرئيسي |
|  | التدفق البديل |
| **يتم حفظ عملية الإصلاح بنجاح** | شرط النهاية الناجحة |
|  | حالات الاستثناء |
|  | أخرى |

### 3.2.2 رفع تقارير الاستيراد

|  |  |
| --- | --- |
| **رفع تقارير الاستيراد** | اسم حالة الاستخدام |
|  | الرابط |
| **طلب الزبون من الموظف بتسجيل طلب صيانة** | القادح |
|  | الشروط السابقة |
| 1. رفع طلب استيراد القطع اللازمة إلى شركة Perkins 2. حفظ عملية الإستيراد مع التاريخ | التدفق الرئيسي |
|  | التدفق البديل |
| **يتم تخزين عمملية الاستيراد وتحديث تقرير الاستيراد** | شرط النهاية الناجحة |
|  | حالات الاستثناء |
|  | أخرى |

### 3.2.3 جرد المخازن

|  |  |
| --- | --- |
| **كشف تقرير الجرد** | اسم حالة الاستخدام |
|  | الرابط |
| **الموظف** | القادح |
|  | الشروط السابقة |
| 1. جرد المخازن في كل شهر لتبيان النقص 2. تحويل التقرير الى المدير للموافقة. 3. تحويل تقارير الجرد الى قسم الاستيراد. | التدفق الرئيسي |
|  | التدفق البديل |
| **إظهار تقرير بالقطع الموجود** | شرط النهاية الناجحة |
|  | حالات الاستثناء |
|  | أخرى |

## 3.3 المتطلبات غير الوظيفية بشكل مفصل:

>>غير متوفر حالياً<<

# Index

Abstract, 6, 17, 27

add, 9, 11, 19, 20, 21

Add, 8, 9, 19

Article, 1, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28

Article Manager, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 19, 20, 21, 22, 23, 24, 25, 28

Author, 1, 4, 5, 6, 7, 8, 9, 13, 14, 16, 17, 19, 20, 22, 23, 25, 26, 27

Category, 5, 14, 17, 18, 20, 21, 23, 26, 27

Database, 2, 9, 11, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 27

Editor, 1, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 28

Field, 17, 19, 20

Form, 1, 6, 9, 10, 11, 12, 14, 19, 20, 21, 23, 24, 27

Grid, 9, 11, 12, 19, 20, 21

Historical Society, 1, 5, 9, 11, 16, 17, 19, 20, 26

Online Journal, 4, 5, 6, 7, 15, 16, 17, 18, 24, 27, 28

Reader, 4, 5, 6, 16, 17, 18

Review, 1, 7, 11, 12, 18, 21, 23, 26, 27

Reviewer, 1, 4, 5, 6, 7, 9, 11, 16, 17, 19, 20, 21, 22, 23, 26, 27

Security, 27, 28

Status, 11, 12, 13, 14, 17, 21, 22, 23, 27

update, 9, 11, 20, 21

Update, 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 22

User, 7, 16, 18

Web Publishing System, 1, 4, 5, 17