

Software Requirements Specification

for

how-to-guide

Version 1.0 approved

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Introduction, Overall Description and External Interface Requirements

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Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

The purpose of this document is to capture, in natural language and at a functional level, the description and requirements of any how-to-guide website. The focus, here is eHow's needs. The main purpose of this project is to provide a reliable , secure, efficient and user friendly environment to the customers and management authorities. Also benefit the customer with efficient and faster service. This project can save money and efforts in managing the record, just a mouse click can make the task easier and faster. This is a functional description of those features required to address current educational requirements. A short discussion accompanies each requirement, to add the background and framework necessary to explain the functionality. It also describes nonfunctional requirements and other factors necessary to provide a complete and comprehensive description of the requirements for the software.

1.2 Document Conventions

All the features mentioned in this document can be accessed by Administrative Users.

Convention for Main title:

- *Font face : Arial*
- *Font style : Bold*
- *Font size : 20*

Convention for Sub title :

- *Font face: Times new roman*
- *Font Style: Bold*
- *Font Size: 14*

Convention for body:

- *Font face: Arial*

- *Font Style : Italic*
- *Font size: 11*

1.3 Intended Audience

This project is a prototype for the how-to-guide and it is restricted within the college premises. This is being implemented under the guidance of college professors. This project is useful for the developers team and as well as to their customers. Starting from the overview for all users, the developers can go on to focus on the system features and the other non functional requirements. The users can look into the interfaces such as the user interface section and the software/ hardware interface

1.4 Product Scope

A how-to-guide is an informal and often short video or text describing how to accomplish a specific task. A how-to-guide is usually meant to help non-experts and because of this, a how-to may be greatly simplified compared to a usual discussion of the subject.

This project is intended to provide a platform such that the knowledge known by the experts of the field can be shared to the novices and this project allows easy and efficient way of learning for the users by utilizing the knowledge of the experts.

The purpose of the Guide System is to create a convenient and easy-to-use application for customers, struggling to get the knowledge of various events. The system is based on a database with its guide management functions. We will have a database file supporting blog information for multiple events. Above all, we hope to provide a comfortable user experience for free.

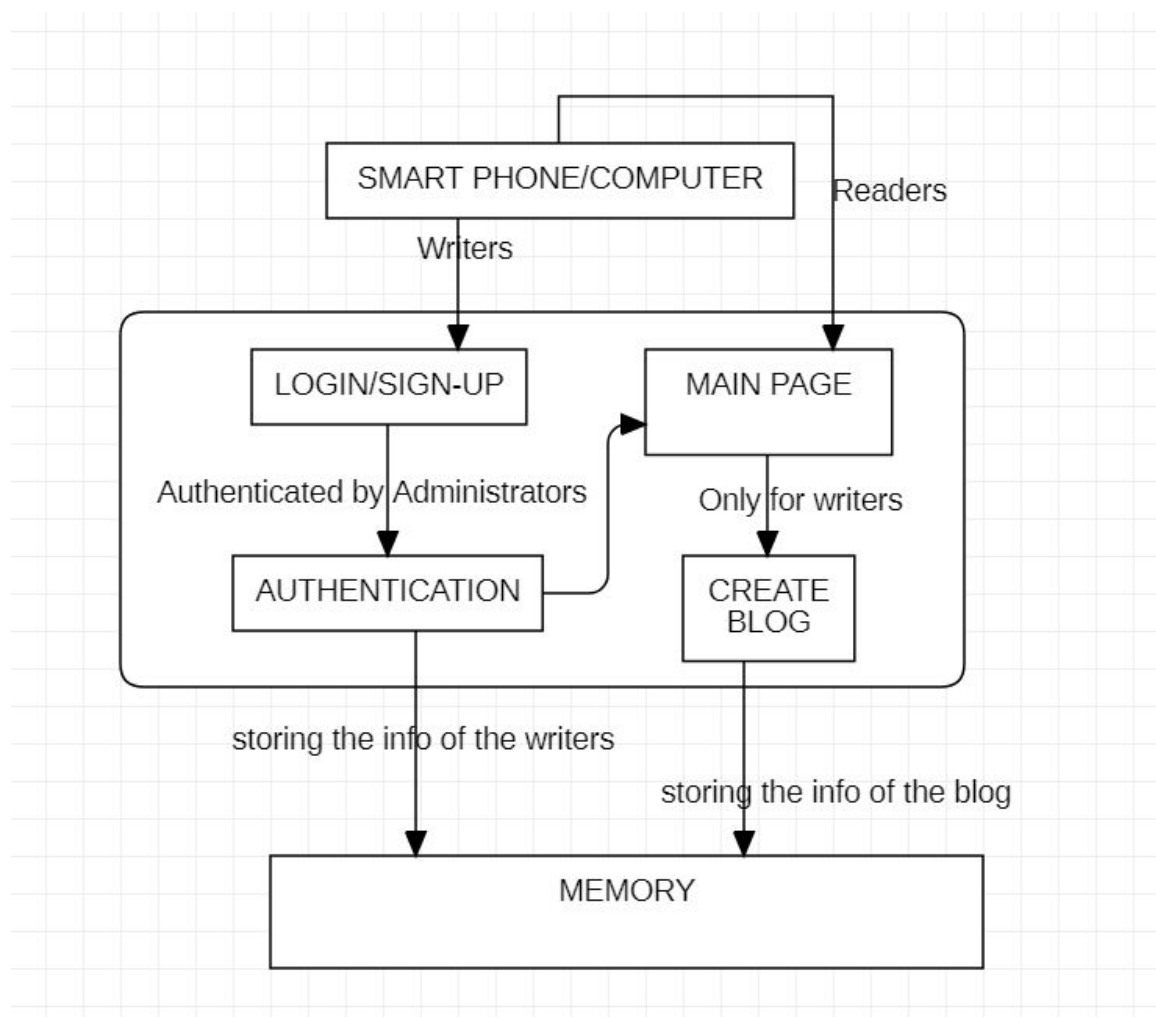
1.5 References

1. *Software Requirements and Specifications: A Lexicon of Practice, Principles and Prejudices (ACM Press) by Michael Jackson*
2. *Software Requirements (Microsoft) Second Edition By Karl E. Wiegers*

3. *Software Engineering: A Practitioner's Approach Fifth Edition* By Roger S. Pressman
4. *IEEE. IEEE Std 830-1998 IEEE Recommended Practice for Software Requirements Specifications.* IEEE Computer Society, 1998.
5. [ehow website](#)

2. Overall Description

2.1 Product perspective



Our project is meant to serve as a common platform to gain knowledge on some specific fields. Our goal is to develop a replacement to the other how-to-guide websites such as eHow and wikipedia and to make it more user friendly and to promote academic networking among the users.

2.1.1 System Interface

Apache will be used as a web server. The login for the user inputs data via the web server using HTML forms. The actual program that will perform the operations is written in PHP.

2.1.2 User interface

The new system will provide a very intuitive and simple interface to the user and the administrator, so that the user can easily navigate through blogs of different fields and the administrator will have an interface that can easily authenticate the users who want to create a blog.

2.1.3 Hardware Interface

a) Server side

The web application will be hosted on a web server which is listening on the web standard port, port 80.

b) Client side

Monitor screen : The software shall display information to the user via the monitor screen.

Mouse : the software shall interact with the movement of the mouse and the mouse buttons. The mouse shall activate areas for data input, command buttons and select options from menus.

Keyboard : the software shall interact with the keystrokes of the keyboard. The

keyboard will input data into the active area of the database.

2.1.4 Software Interface

a) Server side

An Apache web server will accept all requests from the client and forward it accordingly. A database will be hosted centrally using MySQL.

b) Client side

An OS which is capable of running a modern web browser which supports JavaScript and HTML5.

2.1.5 Communication Interfaces

The HTTP or HTTPS protocol(s) will be used to facilitate communication between the client and server.

2.1.6 Memory Constraints

Memory constraints will come into play when the size of MySQL grows to a considerable size.

2.1.7 Operations

The product shall have operations to protect the database from being corrupted or accidentally altered during a system failure.

2.2 Product Functions

For readers :

- *No authentication/authorization*
- *Search option based on certain keywords*
- *Information on specific topics*
- *Receive notifications of your favourite blogger*

For writers :

- *Authentication*
- *Date of creation, creator*
- *Knowledge Sharing - Uploading of data*

For administrators :

- *Authorization*
- *Archiving of data*

2.3 User Classes and Characteristics

- 1) **Readers** : *This document clearly explains what all steps need to be followed to effectively use our how-to-guide website. These end users can only access the content but cannot modify anything*
- 2) **Writers** : *Freelancer is type of end user who can not only view the content but also create new topics on our website and the steps to be followed to become a freelancer on our website*
- 3) **System Administrators** : *System administrators are primarily responsible for maintaining the website. They authorize which users can become a writer(i.e it checks whether that particular user has sufficient knowledge to become a writer for that particular domain. They also modify the system's configuration and make appropriate updates.*

2.4 Operating Environment

The system should be compatible for laptops, desktops and mobile phones without any constraints or restrictions on its operating system and version

2.5 Design and Implementation Constraints

User Interface Constraints

Using this system is fairly simple and intuitive. A user familiar with basic browser navigation skills should be able to understand all functionality provided by the system.

Hardware Constraints

The system should work on most home desktop and laptop computers which support JavaScript and HTML5.

Software Constraints

The system will be intended to run on Firefox 4 and above, Google Chrome 10 and above and Internet Explorer 8 and above.

Design Standards Compliance

The system shall be implemented in PHP.

2.6 Assumptions and Dependencies:

There are no assumptions or dependencies that could affect the requirements stated in this specification

3. External Interface Requirements

3.1 User Interfaces

- *Back-end Database File*
- *Front-end GUI*
- *This application will be user friendly and is responsive.*

User Interface Steps :

- *Registration for Writers*
- *Login for Writers*
- *Log Out for Writers*
- *Choose a guide for a specific topic from the list for both readers and writers*
- *Details of the blog for both readers and writers*

3.2 Hardware Interfaces

- *The system must allow compatible hardware devices to be connected to the system*
- *The system should work on most home desktop and laptop computers which support JavaScript and HTML5.*

3.3 Software Interfaces

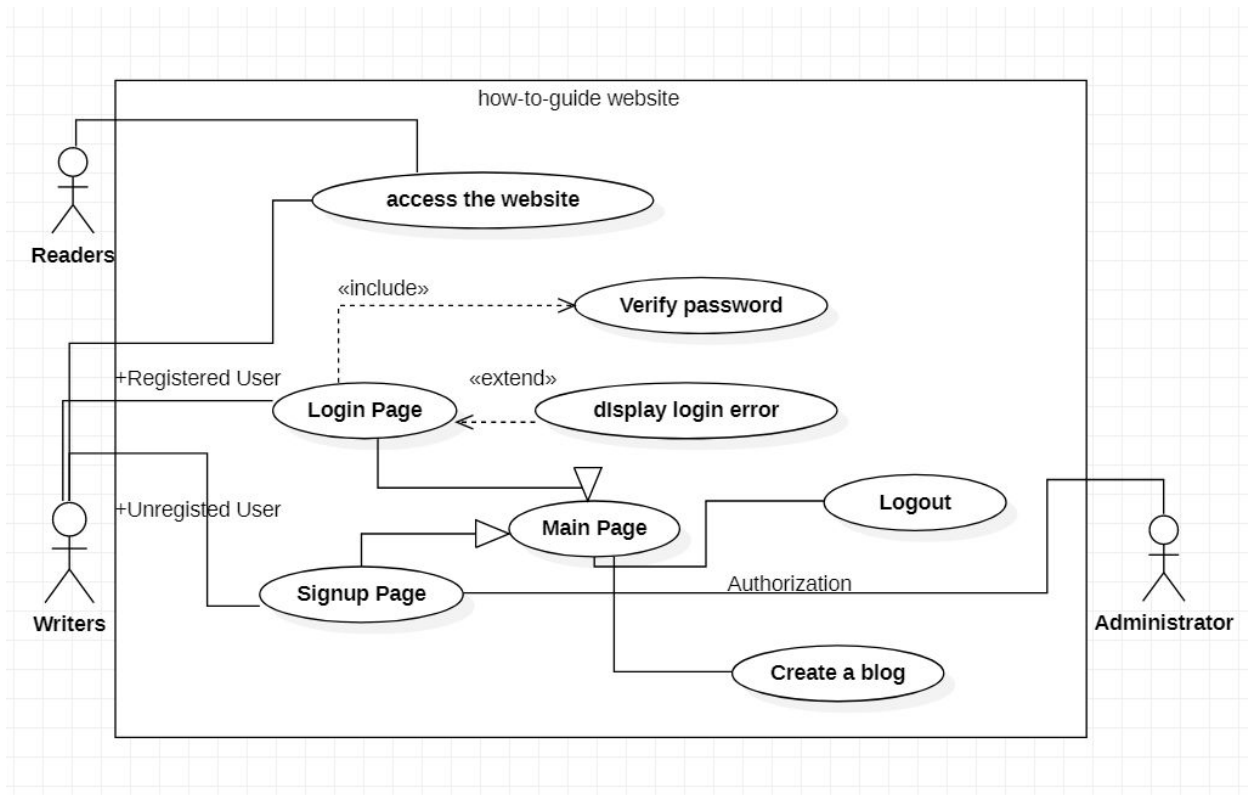
- *Operating system - Windows/Linux/macOS for their best support and user friendliness.*
- *Database File - For storing the blog information.*
- *The system shall be compatible with all softwares. This will allow the user of the system to perform searches for a specific topic.*
- *The system shall allow database files to be transferred to and from other applications. Thus, the system shall incorporate a simple file transfer mechanism*

3.4 Communications Interfaces

- *This product uses a login/signup page to fill the details of the users who want to write a blog.*
- *The system shall have an Internet connection. This will enable us to perform searching*
- *In addition, users shall be able to use a web browser. Therefore, both the system and devices shall use a common networking protocol.*
- *The required communication interfaces are HTTP and TCP/IP.*

4. Analysis Models

Use case diagram



5. System features

5.1 Authorization and Authentication

Authentication is the process of determining whether someone or something is, in fact, who or what it is declared to be and in our case we want only our writers to create the blogs and not the readers. In private and public computer networks (including the Internet), authentication is commonly done through the use of logon passwords. Knowledge of the password is assumed to guarantee that the user is authorized. As the portal contains sensitive information about the company that should not be viewed by users other than the company employees, care should be taken that only the authorized employees of the company get registered with the site. This is achieved by asking the employee to enter a secret code given by the organization before getting registered.

5.2 Archiving of Data

This allows all the documents, videos, audio and other files of all the blogs to be archived at a single place. This feature allows knowledge to be available at any time.

5.3 Sharing of Knowledge

This feature allows authenticated users to upload their blogs on to a server so that information can be shared .This allows documents to be archived so that all information would be at a single place.

5.4 Searching

This feature allows users to search for a particular blog on the basis of certain keywords. Searching can also be done on the basis of the author .

5.5 Notification

This feature allows users to receive notifications whenever the bloggers marked “favorite” makes a new post.

5.6 Comments/Responses

This feature allows users/readers to provide comments and to respond to other comments.

6. Other Nonfunctional Requirements

6.1 Performance Requirements

*The system should support at least 200 concurrent users.
This statement provides a general sense of reliability when the system is under load. It is important that a substantial number of users be able to access the system at the same time.*

6.2 Safety Requirements

The system will be protected against vulnerabilities such as SQL injection attacks.

6.3 Security Requirements

Passwords will be saved encrypted in the database in order to ensure the user's privacy.

The user's IP will be logged.

6.4 Software Quality Attributes

The software consists of the following elements:

- 1. The apache web server*
- 2. The PHP application*
- 3. The MySQL database*
- 4. The database should remain consistent at all times in case of an error.*

6.4.1 Reliability

The reliability of the overall program depends on the reliability of the separate components.

6.4.2 Availability

The system should be available at all times, meaning the user can access it using a web browser, only restricted by the down time of the server on which the system runs. In case of a of a hardware failure or database corruption, a replacement page will be shown. Also in case of a hardware failure or database corruption, backups of the database should be retrieved with the mySQL server and saved by the administrator.

6.4.3 Maintainability

MySQL is used for maintaining the database and the Apache server takes care of the site. In case of a failure, a re-initialization of the program is recommended.

6.4.4 Portability

Apache, PHP and MySQL programs are practically independent of the OS-system which they communicate with. The end-user part is fully portable and any system using any web browser should be able to use the features of the application.

6.5 Business Rules

Readers/users can only access the content and provide comments/responses but cannot modify anything.

Contracted writers can contribute changes to articles and create blogs.

System administrators are primarily responsible for maintaining the website. They authorize which users can become a writer. They also modify the system's configuration and make appropriate updates.

Writers have seven days to complete articles, which must include thorough research and sourcing. A copy editor then reviews the article and will either accept it or ask for a rewrite. If a rewrite is required, the writer then has four days to address the copy editor's comments and resubmit. If it's still not up to par, the article gets rejected.

7. Other Requirements

7.1 Lifecycle

The system should be functional and maintainable for many years. Modular design techniques should allow the system to be expanded and upgraded as it grows older , instead of a requirement to go through the whole process of purchasing the new system again. Ultimately the system should be operational and feasible for more years.

7.2 Documentation

The functions of the system must be fully documented. The development process must be documented for the purpose of maintenance of the system.

7.3 Data and Category Requirement

There are different categories of users namely administrators, writers and readers. Depending upon the category of user the access rights are decided.It means if the user is an administrator then he should be able to modify the data,delete, append etc. The readers only have the rights to view the information from the website. Similarly there will be different categories of content/genre available. According to the categories of content, their relevant data should be displayed.

8. Appendix A : Glossary

Apache server

An Apache server is a web server application that delivers content such as HTML pages, multimedia and CSS sheets over the internet.

Articles

A piece of writing included with others in a newspaper, magazine, or other publication.

Bloggers

A person who writes for and maintains a blog

Frameworks

Programming frameworks are the foundation on which software developers can build programs for specific platform

Prototype

A prototype is generally used to evaluate a new design to enhance precision by system analysts and users

Vulnerability

The quality or a state of being exposed to the possibility of being attacked or harmed, either physically or emotionally