SOFTWARE REQUIREMENTS SPECIFICATION

KNOWLEDGE CONSERVATION SYSTEM

Revision: 1

Department of Development and Automation

May, 2021

Contents

Document file

Date	Revision	Description	Author
05/11/2021	1	Development of the document	Jaramillo Regino Hector Armando
05/11/2021	1	Development of the document	Edy Cota
05/12/2021	1	Development of the document	Riggel Dehesa
05/12/2021	1	Development of the document	Christian Arismendi

Document validated by the parties on date:

Customer	Provider
Leornardo Enriquez	Dream Team

1. Introduction

This document is a Software Requirements Specification, based on the IEEE 830 standard, which contains the result of the analysis of the requirements that a program must have that allows the conservation of knowledge through topics created by company employees.

1.1 Purpose

The purpose of the specifications in this document is to clearly and precisely specify the modules, tools, functionalities and restrictions for the program to be developed.

The document is aimed at the work team that will be used both for design and development as well as for testing and evaluation.

1.2 Scope

- *It will be possible to give a name to the future system (eg My System)*
- *It will be explained what the system will do and what it will not do.*
- *The benefits, objectives and goals that are expected to be achieved with the future system will be described.*
- *All higher level documents will be referenced (eg in Systems Engineering, which include Hardware and Software, consistency should be maintained with the global system requirements specification document, if it exists).*

1.3 Personnel Involved

Name	Edy Jesús Manuel Cota Villa
Role	Developer
Professional Category	Systems Engineer
Responsibilities	Database and System Administration

Name	Jaramillo Regino Hector Armando
Role	Designer
Professional Category	Systems Engineer
Responsibilities	UI Design

Name	Riggel Alioth Dehesa
Role	Developer
Professional Category	Systems Engineer
Responsibilities	BackEnd Development

Name	Cristian Arismendi
Role	Developer
Professional Category	Systems Engineer
Responsibilities	Front End Development

1.4 Definitions, acronyms and abbreviations

Definition
TCP: Transmission Control Protocol
IP: Internet Protocol
Login: Log in with a user to the system.
FURPS: Functionality, Usability, Reliability, Performance and Supportability.

1.5 References

Reference	Title
TCP / IP	https://upanama.e-ducativa.com/archivos/repositorio/6000/6126/html/51_proto.htm#:~:text=Protocol%2FInternet%20Protocol) -, 5.1% 20Protocol% 20TCP% 2FIP% 20 (Transmission% 20Control% 20Protocol% 2FInternet% 20Protocol, y% 20se% 20pronuncia% 20% 22T% 2DC% 2DP% 2DI% 2DP% 22.
FURPS	https://sites.google.com/site/evaluaciondered/home/furps-quality-model#:~:text=Model%20presented%20by%20Hewlett%2D%20Packard,software%2C%20bajo%20el%20acr%C3%B3nimo%20FURPS.&text=El%20model% 20FURPS% 2B% 20establece% 20cinco, Usability% 20(Usability).

1.6 Document Overview

In this document the general functions of the system will be exposed to develop the requirements specified by the customer and potential users, as well as restrictions and assumptions that are expected for the correct development of the software.

The high-level requirements as well as the functional and non-functional will be presented, in addition to the characteristics that are required for a correct system operation.

2. General Description

2.1 Product Perspective

The system interacts with various computer equipment of the company and in general with the users' devices, it will make constant queries to a database provided by the company.

The system must store and manage user and administrator data, as well as provide answers to queries.

Interaction with users will be through search menus, comments and ratings, as well as elaboration of topics that will be public to all other users of the system. It will also have a content statistics view only visible to administrators.

2.2 Product Functions

This product will allow users to offer measures of publication, edition, search, view, as well as evaluation of the same published topics and a comments section, all this linked to accounts offered to users of the company, in order to allow saving the knowledge acquired by users during their stay in the company, being available to other employees with access to the platform.

Summarizing the main functions that the product will have:

- With a topic search engine that allows you to locate the topic of your interest.
- A system for creating, editing and managing topics.
- An evaluation system of the published topics, together with the possibility of leaving comments.
- A statistics view for administrators that allows them to observe the most visited, best rated topics, among other things.
- The product will also manage user accounts to which the posts, comments and ratings will be related.

2.3 User Characteristics

User Type	Administrator
Training	Engineering
Activities	- Database management. - Experience as an administrator in digital communities. - Handling of digital interfaces.

User Type	Regular User (Employees)
Training	Preparatory
Activities	● Experience in handling digital interfaces.

2.4 Restrictions

Time: A time limit is established for the delivery of the product.

Money: It is not possible to exceed the established budget by more than 20,000 pesos.

Satisfaction: The system meets the customer's expectations.

Human Resource: It is impossible to hire more workers, since there is no budget for it.

Integration: The system must propose a simple integration to the systems that the company currently manages.

Security: Guarantee the security of the information that is registered there.

Availability and ease of use: Offer users a platform that is available at all times, that is easy to use and attractive.

2.5 Assumptions and Dependencies

● We will be in constant contact with the client to validate the progress made on the functions of the program, as well as its design.
● The project is expected to be developed under the AGILE methodology and the SCRUM framework.
● During the development process, the client's support is expected to establish requirements.
● The system will not require major changes, therefore a two and a half month development period is proposed to complete the project.
● The company has its own database servers that it provides for the application.
● The computers have the Windows Vista, Windows 7 or Windows 10 operating systems.
● The computers have 100mb of storage space for the application.
● The company has its own network that allows the application's functions to be carried out.

3. Specific Requirements

3.1 List of user requirements

Number	RUS-001	
Name	Availability	
Type	☒ Requirement	☐ Restriction
Description	Offer users a platform that is available at all times, that is easy to use and attractive, as well as guaranteeing the security of stored information.	
Priority	☒ High / Essential	☐ Medium / Desired ☐ Low / Optional

Number	RU-002	
Name	Search Suggestions	
Type	☒ Requirement	☐ Restriction
Description	When a user has a problem, they will be offered a catalog with topics and solutions documented by other users.	
Priority	☒ High / Essential	☐ Medium / Desired ☐ Low / Optional

Number	RU-003	
Name	Create Topics	
Type	☒ Requirement	☐ Restriction
Description	Allow the topics to be published to also attach photos, videos or presentations with a size limit and duration .	
Priority	☒ High / Essential	☐ Medium / Desired ☐ Low / Optional

Number	RU-004		
Name	See Topics		
Type	☒ Requirement	☐ Restriction	
Description	Offer to the user the power to consult topics that they have posted as well as those rated by other users.		
Priority	☒ High / Essential	☐ Medium / Desired	☐ Low / Optional

Number	RU-005		
Name	Data Analytics		
Type	☒ Requirement	☐ Restriction	
Description	Offer data analytics on the most visited topics, topics which users have solved their problem using the recommendations or solutions made by other users.		
Priority	☒ High / Essential	☐ Medium / Desired	☐ Low / Optional

4. External interface requirements

4.1 User Interfaces

- *Visual order.*
- *Draw attention.*
- *Defined style.*
- *Simple handling.*
- *Technical resources.*

4.2 Hardware interfaces

- *Network adapters.*
- *2.00 GHz processor or higher.*
- *Minimum memory RAM minimum 2 GB.*
- *Mouse.*
- *Keyboard.*

4.3 Software Interfaces

- *WindowsSystem 7 or higher*
- *Driversnetwork*
- *Java Jdk current version*

4.4 Communication Interfaces

- *Enterprise Server*
- *Protocol TCP / IP*

5. Requirements System

5.1 Functional Requirements

Number	RF-001		
Name	Login		
Description	The user can access the system at any time .		
Preconditions	Open the application		
Normal sequence	Step	Action	
	1	Open the application	
	2	Fill in the "username" and password	
	3	Validate credentials	
fieldsPostcondition		View Home Screen	
Exceptions	Step	Action	
	1	Incorrect credentials,	
	2	Re-capture and validate the credentials.	
Priority	☒ High / Essential	☐ Medium / Desired	☐ Low / Optional

Number	RF-002	
Name	Logout	
Description	The user can log out at any time if they wish.	
Preconditions	RF-001	
NormalSequence	Step	Action
	1	Open Application

	2	Being on the initial page
	3	Login
Postcondition		Redirecting to login page
Exceptions	Step	Action
	1	
	2	
Priority	⊠ High / Essential	☐ Media / Deseado	☐ Low / Optional

Number	RF- 003		
Name	Home Screen		
Description	When logging in, the user will be redirected to the main screen from which they can choose to perform various activities.		
Preconditions	RF-001		
Normal sequence	Step	Action	
	1	Open the application	
	2	Login	
	3	Loading screen	
Postcondition		The main application screen is displayed	
Exceptions	Step	Action	
	1	Error redirecting	
	2		
Priority	⊠ High / Essential	☐ Medium / Desired	☐ Low / Optional

Number	RF-004
Name	Create Publication
Description	Users must be able to generate content through publications where they place their subject, a description and can develop the topic.
Preconditions	Must be logged into the system and it must be a normal user account.

Normal sequence	Step	Action
	1	Enter the own publications menu.
	2	Click on create publication.
	3 They	enter their subject, description and content of the post.

Postcondition		The publication is visible to all and appears in the list of own publications.

Exceptions	Step	Action
	1	If the subject is duplicated in the database when you click publish, you get a pop-up screen advising you.
	2	Rename and republish.

Priority	☒ High / Essential	☐ Medium / Desired	☐ Low / Optional

Number	RF-005
Name	Attach files
Description	The application must allow users to upload pdf, jpg, png and mp4 files within the content of their publications.
Preconditions	Being in the process of creating publications or editing publications.

Normal sequence	Step	Action
	1	Click on the location where you want to add the content.
	2	Select the file to add.
	3	They click on accept and the content is uploaded to the file.

Postcondition		The file is added to the post content.

Exceptions	Step	Action
	1	If the file is too large, a message appears that we must close.
	2 We	select a smaller file or the action is simply canceled.

Priority	☒ High / Essential	☐ Medium / Desired	☐ Low / Optional

Number	RF-006	
Name	Search bar	
Description	The system has a google-style search bar that allows users in a section of publications, filter publications by keywords or matters.	
Preconditions	We are logged in and we are in the publications view.	
Normal sequence	Step	Action
	1	We click on the search bar.
	2	We write a topic.
	3 We	press enter or click search.
Postcondition		A list of topics is shown in relation to what is written in the search bar.
Exceptions	Step	Action
	1	Enter searches with invalid characters
	2	Use only alphanumeric characters

Priority	☐ High / Essential	☒ Medium / Desired	☐ Low / Optional

Number	RF-007	
Name	Personal view	
Description	Users have their own space where they can see their data, as well as well as the publications they have made within a section.	
Preconditions	Be logged into the system.	
Normal sequence	Step	Action
	1	Open application

	2	Login
	3	Click on the menu item on the name of your account.
Postcondition		A view is shown where you can see your name, a section of nametag and a section of publications made by the user.
Exceptions	Step	Action
	1	The page does not redirect to the desired page
	2	
Priority	☒ High / Essential	☐ Medium / Desired	☐ Low / Optional

Number	RF-008	
Name	NameTag	
Description	Users to protect their identity can show a nickname of their preference instead of their Name.	
Preconditions	The user is logged in with a regular account and is on personal view.	
Normal sequence	Step	Action
	1	Navigate to the NameTag section.
	2	Insert an alternative name in the nametag textbox with which you would like to be recognized.
	3	Click on the box to show only nametag.
Postcondition		The nametag of the user is displayed
Exceptions	Step	Action
	1	If the user has not inserted an alternative name, it shows a message that the alternative name will not be displayed and the box is not checked.
	2	If the nametag is already repeated it shows a message that the alternative name will not be displayed and the box is not checked.

Priority	☐ High / Essential	☒ Medium / Desired	☐ Low / Optional

Number	RF-009
Name	Edit content
Description	The owners of the publications can edit the content of the topics if required.
Preconditions	The user is logged in with a regular account and is on personal view and has at least one own publication.

Normal sequence	Step	Action
	1	The user navigates in the publications section.
	2	Select one of your publications from the list and select the edit option
	3	The content of the publication is shown where you can delete changes and add more content just like when you created the publication but with the content already added and save the changes.

Postcondition		Changes are saved upon publication.

Exceptions	Step	Action
	1	In case the user deletes all the content and wishes to save the changes, it will be impossible to do so since there must be content.
	2	A message will appear informing of the above.

Priority	☒ High / Essential	☐ Medium / Desired	☐ Low / Optional

Number	RF-010
Name	View statistics

Description	Administrators have a statistics window where they can see the best and most valued publications, as well as the most visited ones.		
Preconditions	The user is logged in with an administrator account.		
Normal sequence	Step	Action	
	1	Click on the menu where it says statistics.	
	2 You are	taken to the statistics view where you can select the data you want to see.	
	3	Make a selection	
Postcondition		The data information you selected is loaded.	
Exceptions	Step	Action	
	1	If there are no publications on the platform, a message will be shown that the statistics are not available.	
	2	Click OK to close the message and close the window.	
Priority	☒ High / Essential	☐ Medium / Desired	☐ Low / Optional

5.2 Non-functional Requirements

5.2.1 Performance

- The product is expected to handle 100 simultaneous queries with 1500 users connected at the same time on the same network.
- The queries of the topics made by the users are expected to have a maximum response of 5 seconds to them, showing all the contents on the screen.
- It is expected that the files do not take more than 30 seconds to upload to the publications, this as long as they do not weigh more than 5mb.

5.2.2 Design Restrictions

The application must have colors attached to the company, in addition to the interface must be pleasant to the eyes of the user. It is expected that it will not be monotonous and that it will facilitate navigation in the system. It is also expected to have the logo of the company.

5.2.3 System Attributes

Availability: Theis expected to be available 24 hours a day, 7 days a week and to be open to all employees with an account, whether they are administrators or normal users.

Reliability: Because the program is expected to run 24 hours a day, 7 days a week, in the event of a system crash, recovery is expected to take no more than 15 min, and at most one system crash per month .

Maintainability: The system is easily maintainable since it only has the database to store and provide information

Portability: The product will work through a local database, so it will be as portable as the network to which it is connected is accessible to the database, if it can be connected to it from anywhere in the company, any computer with network access can install the product and automatically have access to the network.

Security: The personal information of the users will not be available to others, only being visible among them the publications with their name or nickname of the person who made it, as well as the comments, also only the administrators will have access to the data analytics, all This is protected through user accounts / password to which they must login to enter the system.

5.2.4 Other Requirements

- *Some topics may contain videos or audios to complement the topic.*
- *Results of the search requested by the user are displayed ordered according to the evaluation.*
- *The system only allows access to previously registered users.*

5.2 Appendices

- *The program will be delivered with a user manual at the end of the project.*
- *The language in which the project will be carried out will be C # with the help of the MySQL database manager.*
- *One possible restriction is to dock to the company server when connecting the database.*