Software Requirements Specification

for

<Smoke-Free Website>

Version 1.0 approved

Prepared by <WhiteNBlack members>

<WhiteNBlack>

<5th Nov 2020>

Table of Contents

Revision History

Name	Date	Reason For Changes	Version
Pang Kee Yang	5th Nov	First draft	1.0

1.   Introduction

1.1   Purpose

Product: Smoke-Free Application (Demo version)
This SRS describes the entirety of the product, Smoke-Free website application.
The scope of this SRS includes covering the product's target audience, purpose, functions and non functional requirements, system environment, and its interfaces.

(Delete before submission)
<Identify the product whose software requirements are specified in this document, including the revision or release number. Describe the scope of the product that is covered by this SRS, particularly if this SRS describes only part of the system or a single subsystem.>

1.2   Document Conventions

- Times, Heading 2 for heading
- Arial, font 11, for normal text

(Delete before submission)
<Describe any standards or typographical conventions that were followed when writing this SRS, such as fonts or highlighting that have special significance. For example, state whether priorities for higher-level requirements are assumed to be inherited by detailed requirements, or whether every requirement statement is to have its own priority.>

1.3   Intended Audience and Reading Suggestions

This SRS is intended for developers and tutor.
The rest of this document will contain overall description of the product and then detailed description of its technical requirement such as functional requirement and system environment, and its non-technical requirement such as the non-functional requirements, security,and safety.

(Delete before submission)
<Describe the different types of reader that the document is intended for, such as developers, project managers, marketing staff, users, testers, and documentation writers. Describe what the rest of this SRS contains and how it is organized. Suggest a sequence for reading the document, beginning with the overview sections and proceeding through the sections that are most pertinent to each reader type.>

1.4   Product Scope

We aims to promote a healthier community support system by providing a platform with resources to aid smokers in their efforts to quit smoking. Certified doctors will post articles about smoking and its risks, while smokers will be able to comment on these articles and interact with one another. Similarly, smokers will also be able to share their own recovery stories on their own posts.

Non-Smokers can also gain better knowledge about effects of smoking to share with their community.

By being a community for smokers to quit smoking, we strive for reducing the amount of active smokers and thereby alleviating the cases of lung cancer in Singapore.

(Delete before submission)
<Provide a short description of the software being specified and its purpose, including relevant benefits, objectives, and goals. Relate the software to corporate goals or business strategies. If a separate vision and scope document is available, refer to it rather than duplicating its contents here.>

1.5   References

TO DO *The stated retrieved date are just anyhow one*

User interface style reference, Retrieved August 15, 2020, from data.gov website: https://data.gov.sg/dataset?groups=health&page=3

User interface style reference, Retrieved August 15, 2020, from healthhub website: https://www.healthhub.sg/programmes/88/IQuit

User interface style reference, Retrieved August 15, 2020, from moh gov website: https://www.moh.gov.sg/hpp/all-healthcare-professionals/healthcare-professionals-search

Top 5 Leading Cancer by Gender

(n.d.). Retrieved August 15, 2020, from Data.gov website: https://data.gov.sg/dataset/top-5-leading-cancers

Top 3 Causes of death in Singapore

(n.d.). Retrieved August 15, 2020, from Axa website: https://www.axa.com.sg/blog/health/top-3-causes-of-death-singapore

Anjana Motihar Chandra, Cigarette Smoking Is The Main Cause Of Lung Cancer
 (n.d.). Retrieved August 15, 2020, from HealthXChange website:
https://www.healthxchange.sg/cancer/lung-cancer/cigarette-smoking-main-cause-lung-cancer

(Delete before submission)
<List any other documents or Web addresses to which this SRS refers. These may include user interface style guides, contracts, standards, system requirements specifications, use case documents, or a vision and scope document. Provide enough information so that the reader could access a copy of each reference, including title, author, version number, date, and source or location.>

2.   Overall Description

2.1   Product Perspective

This product is a new, self-contained website that aims to provide accurate and related information about smoking and lung cancer. Microsoft SQL Server will be used as a database.

(Delete before submission)
<Describe the context and origin of the product being specified in this SRS. For example, state whether this product is a follow-on member of a product family, a replacement for certain existing systems, or a new, self-contained product. If the SRS defines a component of a larger system, relate the requirements of the larger system to the functionality of this software and identify interfaces between the two. A simple diagram that shows the major components of the overall system, subsystem interconnections, and external interfaces can be helpful.>

2.2   Product Functions

The website must be able to host and display smoking related articles posted by doctors.
Articles need to be viewable and commentable by all registered users.
The website must be also able to host and display smoking related stories posted by smokers and non-smokers (general users).
Stories need to be viewable and commentable by all registered users.
Proper data storage and retrieval by database must be maintained
Secured Signup and Login of user must be maintained

Smokers
1.   Able to post stories
2.   Able to read stories
3.   Able to login and logout
4.   Able to read article
5.   Able to comment

Non-Smokers
1.   Able to post stories
2.   Able to read stories

3. Able to login and logout
4. Able to read article
5. Able to comment

Guest
1. Able to sign up as smoker/non-smoker, or doctor

Doctor
1. Able to post articles
2. Able to read articles
3. Able to login and logout
4. Able to read stories
5. Able to comment

Admin
1. Able to read stories
2. Able to read articles
3. Able to approve/reject newly registered doctor
4. Able to approve/reject newly posted article

(Delete before submission)
<Summarize the major functions the product must perform or must let the user perform. Details will be provided in Section 3, so only a high level summary (such as a bullet list) is needed here. Organize the functions to make them understandable to any reader of the SRS. A picture of the major groups of related requirements and how they relate, such as a top level data flow diagram or object class diagram, is often effective.>

2.3   User Classes and Characteristics

Admin:
Daily user. With high privilege level.
Smoker:
Daily user. With normal privilege level.
Non-Smoker:
Infrequent user. With normal privilege level.
Guest:
Impromptu user. With lowest privilege level.
Doctor:
Infrequent user. With normal privilege level.

(Delete before submission)
<Identify the various user classes that you anticipate will use this product. User classes may be differentiated based on frequency of use, subset of product functions used, technical expertise, security or privilege levels, educational level, or experience. Describe the pertinent characteristics of each user class. Certain requirements may pertain only to certain user classes. Distinguish the most important user classes for this product from those who are less important to satisfy.>

2.4   Operating Environment

The product will operate on common internet browsers, Edge,Firefox,Chrome.
Operational on common computer operating system , Windows,Linux,macOS.
Operational on common mobile phone, Android, iOS, Windows

(Delete before submission)
<Describe the environment in which the software will operate, including the hardware platform, operating system and versions, and any other software components or applications with which it must peacefully coexist.>

2.5   Design and Implementation Constraints

No regulatory policies documented.
Only english language is used for the product
Constraint from using MVC design architecture
Developers are responsible for continuous maintenance and update to the product

(Delete before submission)
<Describe any items or issues that will limit the options available to the developers. These might include: corporate or regulatory policies; hardware limitations (timing requirements, memory requirements); interfaces to other applications; specific technologies, tools, and databases to be used; parallel operations; language requirements; communications protocols; security considerations; design conventions or programming standards (for example, if the customer's organization will be responsible for maintaining the delivered software).>

2.6   User Documentation

None

(Delete before submission)
<List the user documentation components (such as user manuals, on-line help, and tutorials) that will be delivered along with the software. Identify any known user documentation delivery formats or standards.>

2.7   Assumptions and Dependencies

This product depend on the following external software component:
- Microsoft SQL Server
- Antilr   v3.5.02
- bootstrap   v4.4.1
- EntityFramework   v6.1.3
- jQuery   v3.4.1
- jQuery.Validation   v1.17.0
- Microsoft.AspNet.Identity.Core   v2.2.3
- Microsoft.AspNet.Identity.EntityFramework   v2.2.3
- Microsoft.AspNet.Mvc   v5.2.7
- Microsoft.AspNet.Razor   v3.2.7
- Microsoft.AspNet.Optimization   v1.1.3

- Microsoft.AspNet.WebPages   v3.2.7
- Microsoft.jQuery.Unobtrusive.Validation   v3.2.11
- Microsoft.Web.Infrastructure   v1.0.0
- Modernizer   v2.8.3
- Newtonsoft.Json   v12.0.3
- PagedList   v1.17.0
- PagedList.Mvc   v4.5.0
- popper.js   v1.16.0
- WebGrease   v1.16.0

Any updates to the above dependencies can affect the behaviour of the product.

(Delete before submission)
<List any assumed factors (as opposed to known facts) that could affect the requirements stated in the SRS. These could include third-party or commercial components that you plan to use, issues around the development or operating environment, or constraints. The project could be affected if these assumptions are incorrect, are not shared, or change. Also identify any dependencies the project has on external factors, such as software components that you intend to reuse from another project, unless they are already documented elsewhere (for example, in the vision and scope document or the project plan).>

3.   External Interface Requirements

3.1   User Interfaces

Probably need to revisit this section

Common layout,at the top, for each pages

SMOKE FREE   HOME   ARTICLES   STORIES   QUIT CENTRES   ABOUT US   PROFILE   LOGOUT

Common trademark, at the bottom, for each pages

© 2020 - Smoke Free

Default fonts for all wordings

LOREM IPSUM DOLOR SIT AMET

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusr
veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex e.
esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat c
laborum.

(Delete before submission)

<Describe the logical characteristics of each interface between the software product and the users. This may include sample screen images, any GUI standards or product family style guides that are to be followed, screen layout constraints, standard buttons and functions (e.g., help) that will appear on every screen, keyboard shortcuts, error message display standards, and so on. Define the software components for which a user interface is needed. Details of the user interface design should be documented in a separate user interface specification.>

3.2　Hardware Interfaces

Not sure what to do about this section

HTML Protocol is used for the website

(Delete before submission)
<Describe the logical and physical characteristics of each interface between the software product and the hardware components of the system. This may include the supported device types, the nature of the data and control interactions between the software and the hardware, and communication protocols to be used.>

3.3　Software Interfaces

This section abit chim. Maybe just put database interaction?

Microsoft Sql Database:
- Signing up

Guest informations after filling in the registration form, it is posted through http post, the website will pack them into a user data model and then save it onto the database if there is no duplicated registration.

(Delete before submission)
<Describe the connections between this product and other specific software components (name and version), including databases, operating systems, tools, libraries, and integrated commercial components. Identify the data items or messages coming into the system and going out and describe the purpose of each. Describe the services needed and the nature of communications. Refer to documents that describe detailed application programming interface protocols. Identify data that will be shared across software components. If the data sharing mechanism must be implemented in a specific way (for example, use of a global data area in a multitasking operating system), specify this as an implementation constraint.>

3.4　Communications Interfaces

Email sending:
- SmtpCilent is used for sending simple email notification to user
- Credential is using zappiky@gmail.com for system email address
- Default message formatting is used if admin doesnt add his own message for notification
- Any type of email address for the receiver will work

4.   System Features

4.1. The Website must have a home page.

4.1.1 The homepage must have a title and summary of our website.

4.1.2 The homepage must have links to general information about our website

4.1.3 The homepage must let users sign in or create an account to use our website.

4.2. Before logging in, the homepage must have a navigation bar at the top

4.2.1 The navigation bar in the homepage will contain 4 tabs: Home, Quit Centres, About Us and Sign In.

4.3. Users must be able to select Quit Centres Page.

4.3.1 Users must be able to view map with Quit Centres available.

4.4. The Users must be able to view information About us.

4.4.1 The User must be able to read about our mission.

4.4.2 The User must be able to see our doctors.

    4.4.2.1 Each Doctor must include their workplace and what they are specializing in.

4.5. The Users must be able to Sign in using their username and password

4.5.1 Users must create an account as a member or doctor to sign in by clicking the Sign Up button.

    4.5.1.2.1 Users who clicked on sign up as member are prompted to enter Username, Password, Confirm Password, Name, Email Address, Date Of Birth, Gender, if they are a smoker, and upload their profile photo.

    4.5.1.2.2 Users who clicked on doctor are prompted to enter Username, Password, Confirm Password, Name, Email Address, Date Of Birth, Gender, Work Location, Contact Number, Doctor ID and upload their profile photo.

        4.5.1.2.2.1 Upon doctor account creation, the admin has to verify the doctor's information before the doctor account can be use.

4.6. After the user signs in, there will be a navigation bar at the top with additional tabs: Stories, Articles and Profile.

6.1 If it is a doctor account, they will be directed to Article Page.
6.2 If it is a member account, they will be directed to the Stories Page.
6.3 If it is a admin account, they will be directed to Manage Page.

4.7. Both members and doctors must be able to click on the Articles Page.
4.7.1 This page must list out articles related to smoking and how it affects a person's health posted by Doctors.
4.7.1.1 Users must be able to view articles related to smoking and lungs posted by Doctor.
4.7.1.2 Users must be able to comment on articles.
4.7.1.3 Users must be able to share any articles

4.8. Both members and doctors must be able to click on the Stories Page.
4.8.1 This page must list out stories about quit smoking journeys posted by other members.
4.8.1.1 Users must be able to click on a particular story to read it.
4.8.1.2 Users must be able to comment on the story.
4.8.1.3 Members must be able to create new story by selecting the Create Story button.
4.8.1.3.1 For each new story, members must fill in title, content, and tags for their story.
4.8.1.3.2 Members must be able to share story by selecting on the Create button.
4.8.1.3.3 Members must be able to cancel creating new story by selecting on the Cancel button.

4.9. Both members and doctors must be able to click on Profile Page.
4.9.1 If User is a member, member must be able to view his/her Profile, number of days Smoke-Free and amount of money saved., a list of their own stories, Edit Profile button , and Create Story button.
4.9.1.1 Members must be able to mark the current date on a calendar as smoke-free day after selecting the Check in progress button.
4.9.1.2 Smoke Free Progress must be able to track the number of days smoke free, number of cigarettes not smoked and amount of money saved.
4.9.1.3 Members must be able to edit their own profile by selecting the Edit Profile button.
4.9.1.4 Members must be able to view the comments on their own stories.
4.9.1.5 Members must be able to share stories by selecting the share button.
4.9.1.6 Members must be able to create new story by selecting the Create Story button.
4.9.1.6.1 For each new story, members must fill in title, content, and tags for their story.
4.9.1.6.2 Members must be able to share story by selecting on the Create button.

4.9.1.6.3 Members must be able to cancel creating new story by selecting on the Cancel button.

4.9.2 If User is a doctor, doctor must be able to view his/her Profile, a list of their own stories with article status, Edit Profile button , and Create Article button.

4.9.2.1 Doctors must be able to edit their own profile by selecting the Edit Profile button.

4.9.2.2 Doctors must be able to view the comments on their own articles.

4.9.2.3 Doctors must be able to share articles by selecting the share button.

4.9.2.4 Doctors must be able to create new article by selecting the Create Article button.

4.9.2.4.1 For each new article, doctors must fill in title, content, tags and insert article picture for their article.

4.9.2.4.2 Doctors must be able to share article by selecting on the Create button.

4.9.2.4.3 Doctors must be able to cancel creating new article by selecting on the Cancel button.

9.3 Users must be able to log out by selecting Log Out.

4.10. Administrators must be able to manage the website's content

4.10 Administrators must be able to manage the articles

4.10.1.1 Administrators must be able to view all pending, accepted and rejected articles

4.10.1.2 Administrators must be able to view a pending article

4.10.1.3 Administrators must be able to publish, reject, or move on to the next pending article

4.10.1.3.1 When administrators reject, they must add reason for rejection

4.10.2 Administrators must be able to manage the stories

4.10.2.1 Administrators must be able to remove stories and comments

4.10.2.1.1 Administrators must be able to write the reason for removal

4.10.3 Administrators must be able to manage users

4.10.3.1 Administrators must be able to ban Users

5.   Other Nonfunctional Requirements

5.1   Usability Requirements

- The functionality of the user interface(UI) are in simple headings that makes it clear to users immediately after they have seen it.
- The appearance with simple colour and standardisation, it is easier for users to read.
- The Buttons Available are also big enough and make it user-friendly for people with eyesight problems.
- No fanciful colours, users who are colourblind can still use our website comfortably.
- There is a search bar for users to search for an article/story easily by typing the keywords of a title or tags.
- Smoke free progress provide sufficient information for members who needs to know about their progress and it is easy to use.

5.2   Performance Requirements

- When a story or article is created, the website must be updated within 1 minute.

5.3   Security Requirements

- The system requires users to create an account. This is to safeguard the personal information of the members who are using the website.
- There is an Admin who can approve articles published. This is to prevent misleading information spread to the community.
- Admin is also the role to prevent cyberbullying on our website.

5.4   Data Integrity Requirements
- We're using SQL Database to maintain accuracy and consistency in our data.
- It is most commonly used, recognised by developers and highly recommended.

5.5   Regulatory Requirements
- Admin have the rights to remove offensive/illegal comments, stories, articles and ban users. Cyberbullying can hurt other users and it is an offence in Singapore. Thus our website follows the law accordingly.

5.6   Reliability Requirements
- When the page is refreshed, it will load within 5 seconds.
- Every Doctor will have their registered Doctor ID filled up during their sign up. This will make other users feel the articles posted by the doctor are reliable.

6.   Other Requirements

Appendix A: Data Dictionary

Term	Description
Members	A person who is an interested party.
Doctors	A person who is a certified doctor.
Doctor ID	A unique identification number to identify that the doctor is registered and certified.
Sign up (As Member)	When a User is interested in quitting smoking or wanting to share their own stories, signing up an account in the System allows the User to view stories and articles related to quitting smoking. At the same time, users will also have their own profile which keeps track of their quitting progress.
Sign up (As Doctor)	When a User who is a doctor wants to share their knowledge about the disadvantage of smoking, signing up an account in the System will allot them to write articles.
Article	An essay written by a Doctor. It could cover topics such as lifestyle tips, events coverage, lung cancer-related books, research, inspirational stories. Each article would have a title, the author, its contents (may include images and video), and the date published.
Stories	A story written by an Interested Party. It covers topics such as an individual's lifestyle towards healthy living, their quitting journey, and how to overcome their urge to smoke. Each story will have a title, author, contents and date published.
Comments	Users can ask questions or give comments to article or story they are interested in.
Author	A person or organisation who wrote an article. It will feature their name, a short description of themself (EG surgeon at XYZ Hospital), and an image if available
Date published	The date that the article was released on the website
Tags	Each article and story have tags attached to it. This will make it easier for users to search for what they want.
Quit Centres	Provide location of Quit Centres available for members who wants to quit smoking.
Smoke Free Progress	Members can track their quit smoking progress through this function provided by the website.

Appendix B: Analysis Models

Software architecture
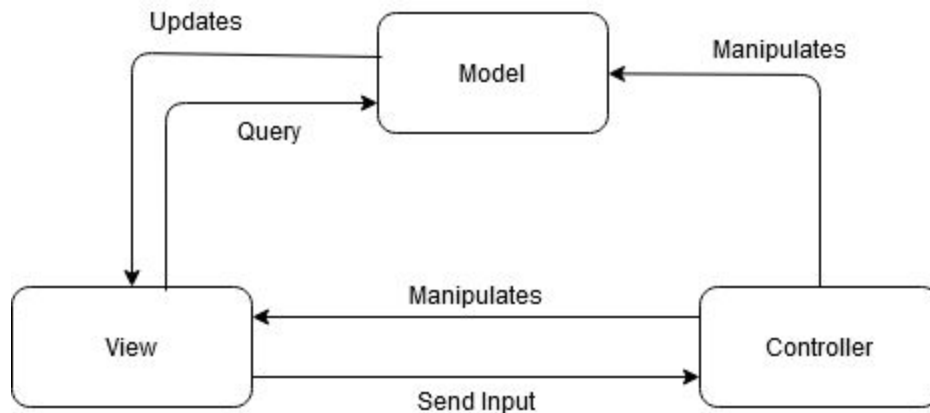
Use Case Diagram
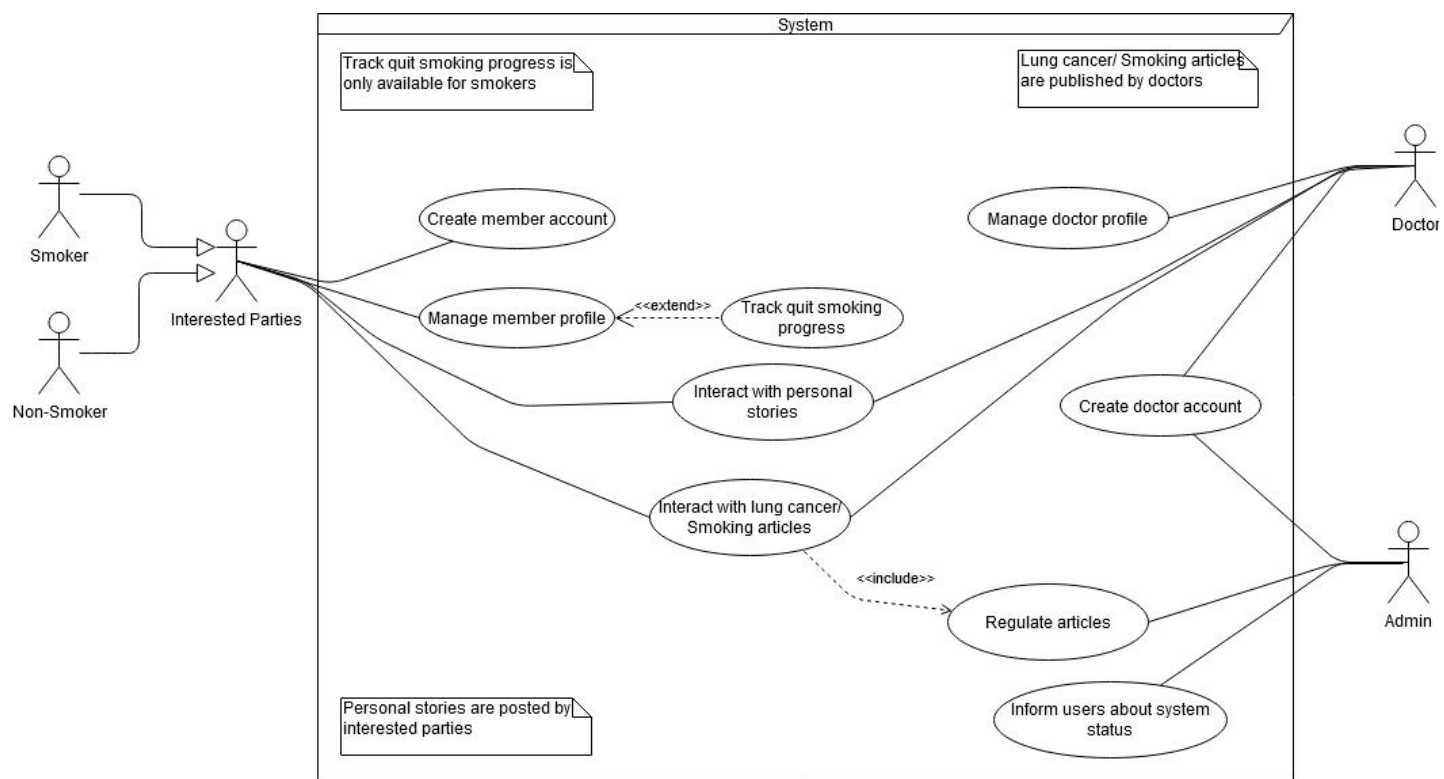
Use Case Description
Refer to CZ2006 Use Case Description

Class Diagram
Refer to CZ2006 Diagrams-Class Diagram

Dialog Map

Refer to CZ2006 Diagrams-Dialog Map

Appendix C: To Be Determined List
(Delete before submission)
<Collect a numbered list of the TBD (to be determined) references that remain in the SRS so they can be tracked to closure.>

Source: http://www.frontiernet.net/~kwiegers/process_assets/srs_template.doc