

# أكاديمية البرمجة Coding Academy



## Technical Documentation

### Sports and Health

#### Abstract:

Technical report documentation for the Sports and Health website. This document outlines key technical details of the Sports and Health website. Content includes research, requirements, use cases, data requirements, analysis and design, testing, usability, GUI design and layout and class diagrams.

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# **1 INTRODUCTION**

## **1.1 PURPOSE OF THIS DOCUMENT**

*This document is designed to be a reference for any person wishing to implement or any person interested in the architecture of the sports and Health Website, sports and Health server Website , dialog database, or the sports and Health database. This document describes each website's architecture and sub-architecture their associated interfaces, database schemas, and the motivations behind the chosen design. Both high-level and low-level designs are included in this document.*

*This document should be read by an individual with a technical background and has experience reading data flow diagrams (DFDs), control flow diagrams (CFDs), interface designs, and development experience in object oriented programming and event driven programming.*

*This design document has an accompanying specification document and test document. This design document is per sports and Health Specification version 1.0.*

## **1.2 EXECUTIVE SUMMARY**

*sports and Health Website is a community based health and fitness website aiming to curb the rising trend in obesity levels and increase physical activity by tapping into the huge market penetration of website. The application offers an endless supply of workout programs , health and fitness advice through user generated content as well as a community and articles about health ,recipe of food.*

## **1.3 OVERVIEW**

*sports and Health Website is a community based health and fitness Website. It aims to offer a social environment for people interested in health and fitness. The Website will be fueled by user generated comments and questions. users will be able to submit and view exercise programs within the website. All content in the Website will be free only comments and questions will be submitted by users of the Website, so if a user finds a certain article works really well for them or finds a useful recipe on the website, they can comment it to the website for other users to try out. Users will be able to make questions submitted to the website and answer from expert, this will help ensure high quality content within the website.*

*This idea was chosen as there is huge interest in the health and fitness industry and activity in this area continues to rise. While the health and fitness industry continues to grow at a rapid pace, unfortunately, so too do obesity levels.as well as encouraging people to be more active, can only be a good thing. The website aims to give people a tool to help them be their best self and turn the tide on obesity.*

## **1.4 PROJECT BACKGROUND: CUSTOMER SURVEY**

*As part of background research into the viability of the website a customer survey was carried out at a local people in amman, there were 25 respondents. The aim of*

*the survey was to establish how open gym users are to the main ideas and functionality of the application. The survey consisted of five questions and was left at the sign in desk for anyone interested in participating. The questions were as follows:*

*Q1: Would you use a workout companion to aid you with your workouts? Y/N*

*Q2: Would you find an website's that enables you to access and manage your workouts and programs at any time useful? Y/N*

*Q3: Do you often use the internet or other public sources to find workouts, programs or fitness advice to aid in your own training? Y/N*

*Q4: Would you feel more encouraged to exercise as part of a group or in collaboration*

*with others? Y/N*

*Q5: Do you feel the ability to customize a workout or program to suit your personal needs is important? Y/N*

*Feedback to the questions above was generally positive and reinforced the idea that people are far more willing to embrace technology to aid them with their health and fitness than ever before. Most people were willing to use an application to manage their workouts and many of them often used the internet to source information and find workouts.*

## **1.5 PROJECT BACKGROUND: COMPETITION RESEARCH**

*As part of the research into the viability of the application, research was carried out on three websites currently in existence that serve a similar purpose to the proposed application. Details of the websites and the comparisons made are listed below:*

*1- Medium: This website allows users to browse a list of premade articles and edit them if they wish. However, the list of articles on selection are static and won't change dynamically.*

*2- Al-tabe: This website supplies the user with premade, static questions and consultants.*

## **1.6 RESEARCH ANALYSIS & CONCLUSIONS**

*Based on feedback given in the questionnaire, most people are happy to use a website to help them access and take advice their exercise programs. Most people surveyed often use the internet as a source of information to help them workout and a majority of the people who participated said they find the ability to customize their programs to suit their needs very important in to mobile application beside website.*

## 1.7 TECHNOLOGIES/RESOURCES

Technology/Resource	Description
Visual Studio	Visual Studio is an <b>Integrated Development Environment(IDE)</b> developed by Microsoft to develop GUI(Graphical User Interface), console, Web applications, web apps, mobile apps, cloud, and web services, etc. With the help of this IDE, you can create managed code as well as native code
HTML	<b>HTML</b> is short for <b>Hypertext Markup Language</b> . HTML is used to create electronic documents (called pages) that are displayed on the World Wide Web. Each page contains a series of connections to other pages called <u>hyperlinks</u> . Every web page you see on the Internet is written using one version of HTML code or another.
CSS	Stands for "Cascading Style Sheet." Cascading style sheets are used to format the layout of Web pages. They can be used to define text styles, table sizes, and other aspects of Web pages that previously could only be defined in a page's HTML.
Bootstrap	One of the main benefits of development frameworks like Bootstrap is that they can help speed up development times, while maintaining quality and consistency across the site. You no longer need to re-design every element. And you don't need to spend hours trying to get everything looking and working right across browsers, platforms, and devices.
JavaScript (JS)	JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities
React JS	React is a library for building composable user interfaces. It encourages the creation of reusable UI components, which present data that changes over time. Lots of people use React as the V in MVC. React abstracts away the DOM from you, offering a simpler programming model and better performance. React can also render on the server using Node, and it can power native apps using React Native. React implements one-way reactive data flow, which reduces the boilerplate and is easier to reason about than traditional data binding.
PHP	PHP is a server-side scripting language, which means that PHP scripts, or programs, usually run on a Web server. The process of running a PHP script on a Web server.
Laravel	Laravel is an open-source PHP framework, which is robust and easy to understand. It follows a model-view-controller design pattern. Laravel reuses the existing components of different frameworks which helps in creating a web application. The web application thus designed is more structured and pragmatic.
MySQL	is a freely available open source Relational Database Management System (RDBMS) that uses Structured Query Language ( <b>SQL</b> ).A database is a separate application that stores a collection of data. Each database has one or more distinct APIs for creating, accessing, managing, searching and replicating the data it holds.

## 2 USER REQUIREMENTS DEFINITION

### 2.1 PRODUCT PERSPECTIVE

*The software will be written in Technologies/Resources table 1.7. The software will run on browser like:Google Chrome.It will provide users with the ability to find or submit read,search,addcomments,calculate,advice,add question and watch exercise videos inside the website. Users will be able to register an account and log in using their details to take part in an online community and gain access to user submitted content. the intended readership of this document.*

### 2.2 PRODUCT FUNCTIONS

- *Users will be able to register to the website with their personal details. Initially this will be via email and password but future changes could allow for Google and Facebook log in functionality.*
- *Registered users will be able to sign in and comment on post and make questions.*
- *Registered users will be able to sign in and browse a list of user submitted questions save them to their own personal list. This serves the purpose of allowing users to edit a comments and questions suit their needs.*

### 2.3 USER CHARACTERISTICS

- *Unregistered User*

*Unregistered users will not be able to gain access to the question and comments or use any of its features. The whole focus of the website's is on user submitted content and social interactions, none of this is possible without an account alias to tie a user to. Additionally, the services offered by the application will be behind a ToS (Terms of Service) agreement, this model was chosen as users will be following programs submitted by other users completely at their own risk. No liability is accepted by the developer of the application or any parties in connection with the developer.*

- *Registered User*

*Registered users will gain full, non admin access to the application. Once a user registers their details and agrees to the ToS they will be able to post comment questions.*

- *Administrator*

*The administrator will maintain the data in the website behind the scenes. They will also manage articles data based on user feedback. If a program receives enough negative feedback it will need to be removed from the application by the administrator. The administrator will also carry out day to day housekeeping within the application and ensure the quality of the application content.*

*3-System  
Architecture*

## 3 USER REQUIREMENTS DEFINITION

### 3.1 OPERATING ENVIRONMENT

*3.1.1 The websit is designed to work on browser See architecture diagram under its heading below.*

*4.1.2 The website will store all data in a mySQL database. The website will require an online connection at all times to allow for user sign on, use communication mapping and location functionality and access to online user submitted content.*

### 3.2 GENERAL CONSTRAINTS

3.2.1 The software requires an connection two different enviroment frameworks laravel and react.

3.2.2 The ability of the software to interface with an responsive.

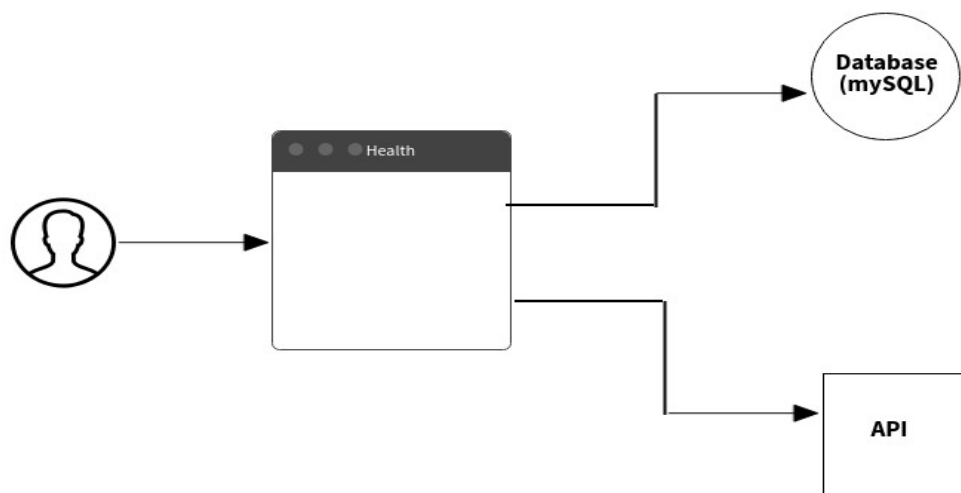
3.2.3 The software must be able to access the Authenticate user .

### 3.3 ASSUMPTIONS & DEPENDENCIES

3.3.1 Unregistered users will have no access to the questions and comment.

3.3.2 Users will only be permitted to register and gain access to the software once they agree to the terms of service agreement.

### 3.4 ARCHITECTURE DIAGRAM





## **4 SYSTEM REQUIREMENTS SPECIFICATION**

### **4.1 External Interface Requirements**

#### **User Interface**

4.1.1 The user interface shall offer the user a logical representation of what the software is asking the user to do. Dropdown menus and buttons should be used where possible to aid the user. Input hints shall be used to aid the user when entering data.

4.1.2 The application should have its logo present on each screen once a logo has been designed.

4.1.3 A user friendly color scheme should be chosen, UI design should be carried out with visually impaired and color blind users in mind.

4.1.4 The UI should have well defined constraints to ensure that the software displays correctly on the screens of all compatible devices. The UI should display in both portrait and landscape.

4.1.5 The GUI should have continuity, all screens should have the same design and layouts should be consistent.

#### **API Interfaces**

4.1.7 The software must store user information and user submitted content in a MySQL database using Laravel files to achieve communications between the database and the application.

## **5 REQUIREMENTS OF EXTERNAL INTERFACE**

### **5.1 User Data**

5.1.1 A user's email address will need to be stored in order to give each user an alias to operate the application under. The email address will be used for account validation and to tie a user to their content.

5.1.2 A user will need to create a password in order to verify themselves when accessing the system. The password will need to be stored in the system and tied to a user's email address.

### **5.2 Question and Comments Data**

5.2.1 The website will need to manage the input and display of public comment ,questions.

5.2.2 The website will need to manage the input and display of personal comments,question. All personal comments,question will be saved from the public site section andedited by the user pulling down that data.

## **6 Functional Requirements**

### **6.1 User**

6.1.1 All users of the software shall have the ability to create an account which is used tostore user data and tie user actions to a user alias.

6.1.1.1 User registration and login shall be mandatory.

### **6.2 Create an Account**

6.2.1 The system should provide the user with an easy to use GUI to facilitate their creating an account.

6.2.2 The system shall ask for an email address and password.

6.2.3 The system shall notify the user if incorrect characters are used in the email or password fields.

6.2.4 The system should notify the user if their email has already been used.

6.2.5 The system should notify the user if any required fields are left empty.

6.2.6 The system should not allow the user to create weak or unsecure passwords.

6.2.6.1 The system should explain how the submitted password is unsecure.

### **6.3 Login**

6.3.1 The system should provide a user friendly GUI to allow the user to login when theapplication launches.

6.3.2 The system should prompt the user for their email address and password.

6.3.2.1 The system should notify the user if submitted information is incorrect.

### **6.4 Submit Questions and Comments**

6.4.1 The system should provide an intuitive UI for logged in users to allow them to submit their comments and questions to the website.

6.4.1.1 The system should prevent the user submitting a blank or empty comments and questions .

6.4.2 The system shall add successfully submitted comments and questions to the MySQL Database.

6.4.3 The system should display user submitted comments and questions from MySQL database in the appropriate section of the application.

## **6.5 View Existing Website**

6.5.1 The system should provide intuitive and user friendly navigation to allow users to move the current list of user sto other pages.

6.5.2 Once selected, the system shall retrieve all user all content submitted programs from the MySQL database and display them to the user.

6.5.4 The system should allow quick and easy navigation between different pages in the list.

## **6.6 Edit Personal Program**

6.6.1 The system should provide an intuitive and user friendly UI to allow the user to view and manage their personal list of comments and questions programs.

6.6.2 The system should allow editing of programs saved to a user's personal list.

6.6.2.1 Multiple edits can be made and all changes must be saved in real time

# **7 Non Functional Requirements**

## **7.1 Ease of Use**

7.1.1 The website should be user friendly and intuitive to use. GUIs should make their functions clear and navigation around the application should be straight forward.

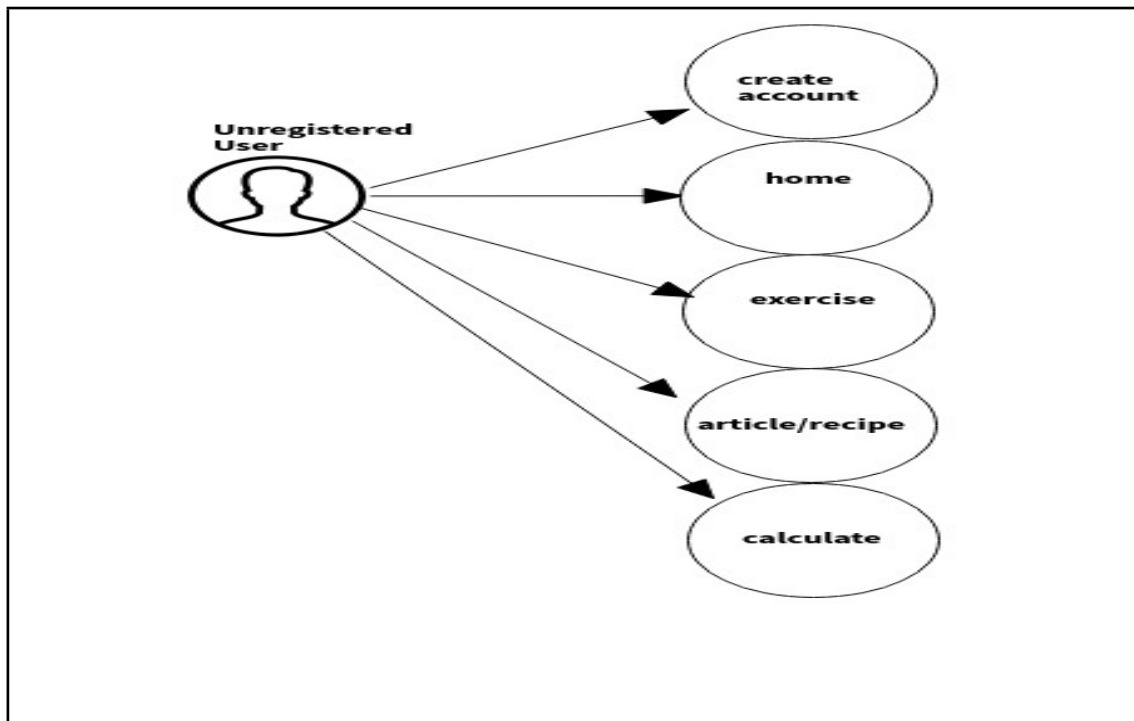
7.1.1.1 Users should be comfortable using the website after 5 minutes of use.

## **7.2 Speed**

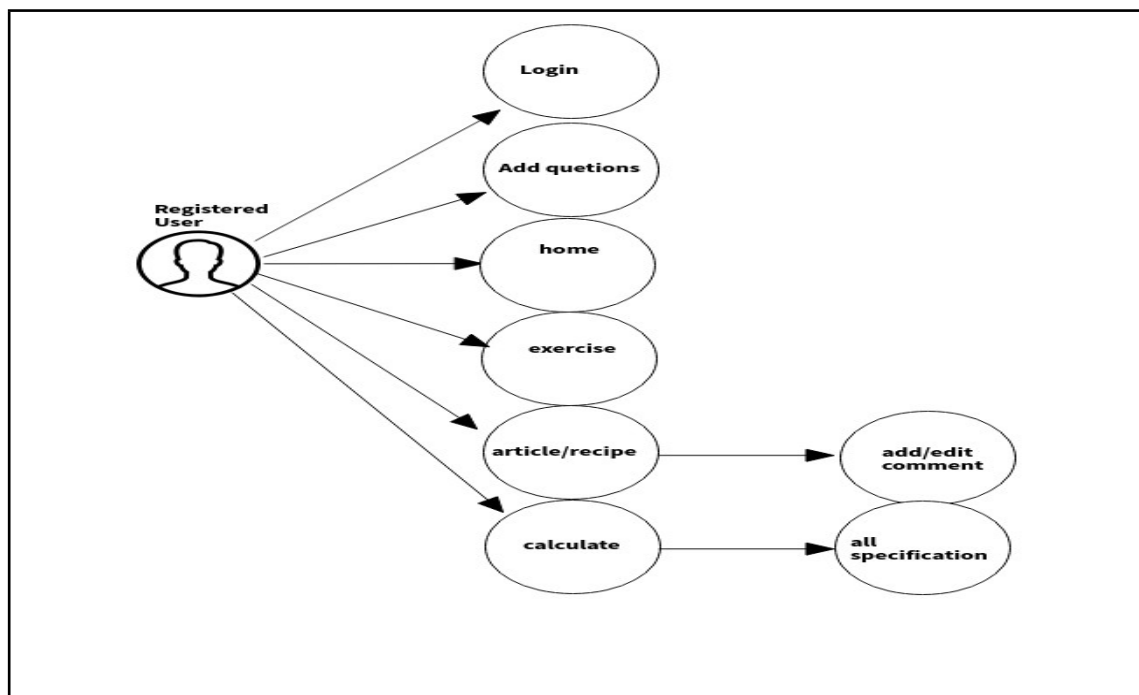
7.2 .1 The UI should be quick and smooth with no delays between button presses and screen reaction.

7.2 .2 All database reads/writes should take no longer than 5 seconds. If the database encounters any errors, a user friendly warning should be displayed to the user.

## 8 Use Cases (Behavior for each user)



*Figure 8.1:Unregister User*



*Figure 8.2:Register User*

## 8.1 Use Case #1 – Create Account /Log In

Table 8.1: Use Case 1.

Use Case Element	Description
Use Case Number	1
Website	Health and Sports
Use Case Name	Create Account
Use Case Description	A user starts the website for the more features and is prompted to create an account.
Primary Actor	Unregistered User
Trigger	The unregistered user taps the register button
Basic Flow	1. This use case starts when a new user launches the website for the first time and options to create an account. 2. The user inputs their email and password into the allotted text fields. 3. The website notifies the user that the account has been created and grants them access to the website.
Alternate Flows	1. The user does not want to create an account and chooses to exit the website or only read . 2. The user enters invalid characters into the text field or leaves them blank. The system notifies the user of their error.
Termination	The flow is terminated once the user is successfully registered and their details stored in the database.
Post Condition	The use is returned to the Login page and the system enters a wait state and only read.

## Use case #1 – Create Account Mockup

The mockup shows a web form titled "Create Account". It features five input fields arranged vertically, each with a label to its left: "user name", "email", "add photo optional", "password", and "Re-password". Below these fields is a single button labeled "Create Account". The form is presented within a browser window frame.

Figure 8.3.1: Use Case 1 Create Acoount.

### 8.3 Use Case #2 – Login

Table 8.2: Use Case 2.

Use Case Element	Description
Use Case Number	2
Website	Health and Sports
Use Case Name	Login
Use Case Description	A registered user starts the more feature and is prompted to login using their personal details.
Primary Actor	Registered User
Trigger	A registered user starts the a
Basic Flow	1. This use case starts when a registered user runs the application and is presented with a login GUI page. 2. The user enters their username and password and is granted access to the system.
Alternate Flows	1. The user inputs an incorrect username or password and is notified by the system.
Termination	The flow is terminated when the user is validated by the system and logged in to the application.
Post Condition	The user is brought to the website Home page and the system enters a wait state and all features.

Site Title

Log In

email

password

Log In

OR

Create Account

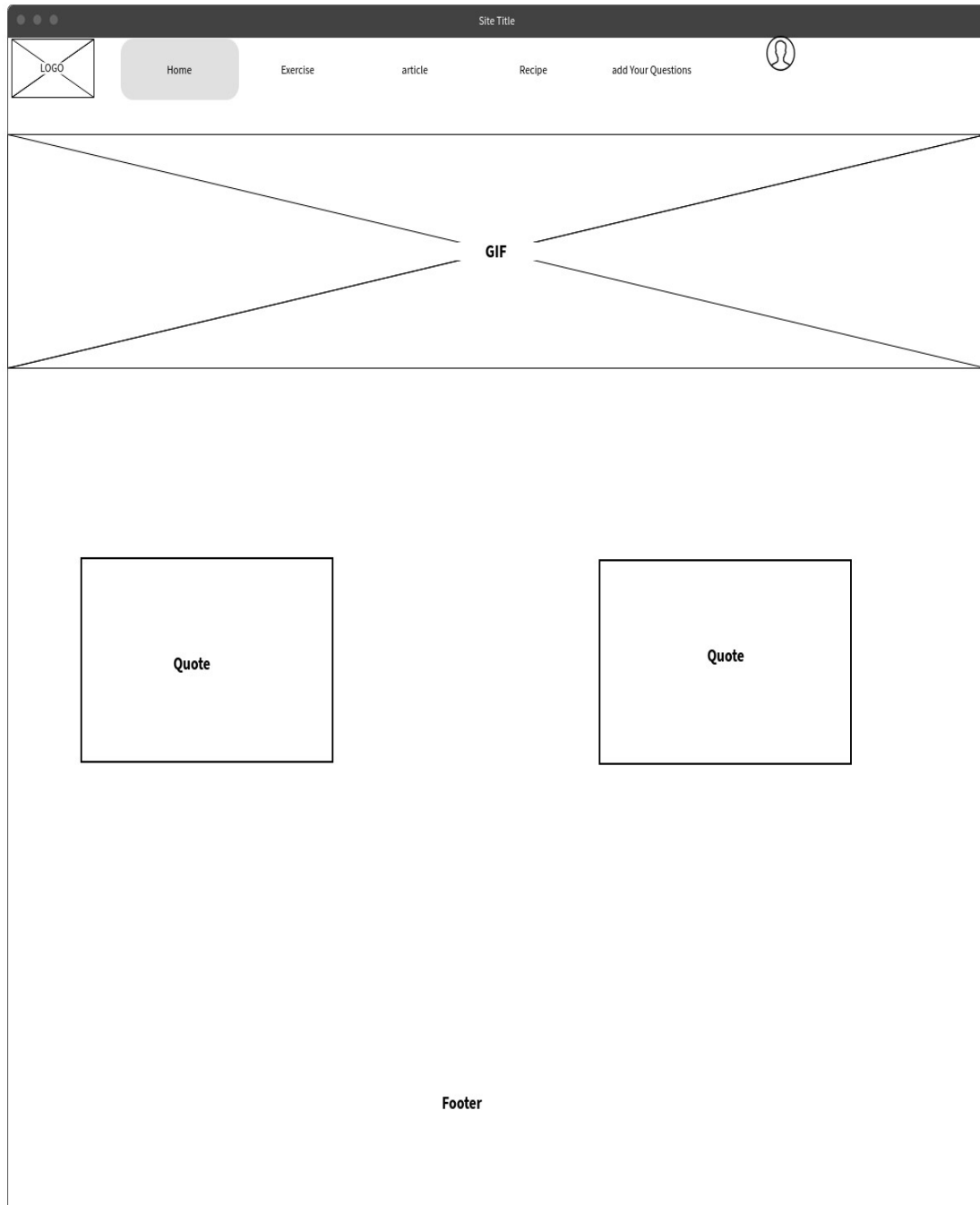
Figure 8.3.2: Use Case 2 Log In.

#### 8.4 Use Case #3 – Home Page

Table 8.3: Use Case 3.

Use Case Element	Description
Use Case Number	3
Website	Health and Sports
Use Case Name	Home page
Use Case Description	A registered/ unregistered user starts home and is prompted to register/ login using their personal details.
Primary Actor	Registered /Unregistered User
Trigger	A registered user starts the more features
Basic Flow	1. This use case starts when a user runs the website and is presented with home GUI page. 2. The user choose their page needed.
Alternate Flows	1. The user registered can make comment and give feedback ,make questions.
Termination	The flow is terminated when the user is validated by the system and logged in to the application.
Post Condition	The user is brought to the website all pages.

*Use Case #3 – Home Page Mockup.*



**Figure 8.3: Use Case 3 Home Page.**



### 8.5 Use Case #4 – Article Page

Table 8.4: Use Case 4.

Use Case Element	Description
Use Case Number	4
Website	Health and Sports
Use Case Name	Article Page
Use Case Description	A registered/ unregistered user reach home and is prompted to register/ login using their personal details.
Primary Actor	Registered /Unregistered User
Trigger	A registered user starts the more features
Basic Flow	1. This use case starts when a user runs the website and is presented with article GUI page. 2. The user choose their page needed.
Alternate Flows	1. The user registered can make comment and give feedback .
Termination	The flow is terminated when the user is validated by the system and logged in to the application.
Post Condition	The user is brought to the website all pages.

## Use Case #4 – Article Page

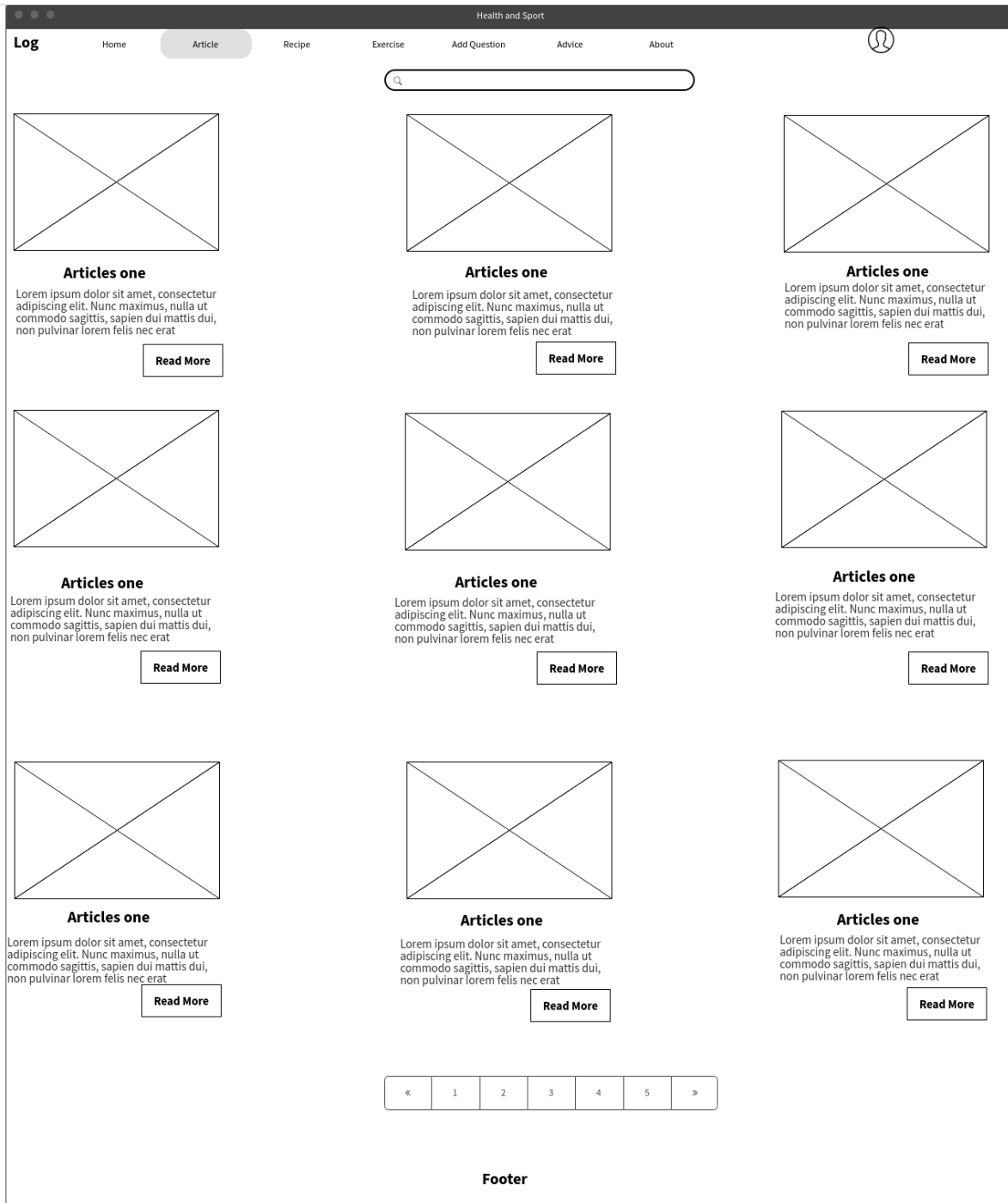


Figure 8.5: Use Case 3 Articles Page.

### Use Case 3 .1Articles Page Unregister User.

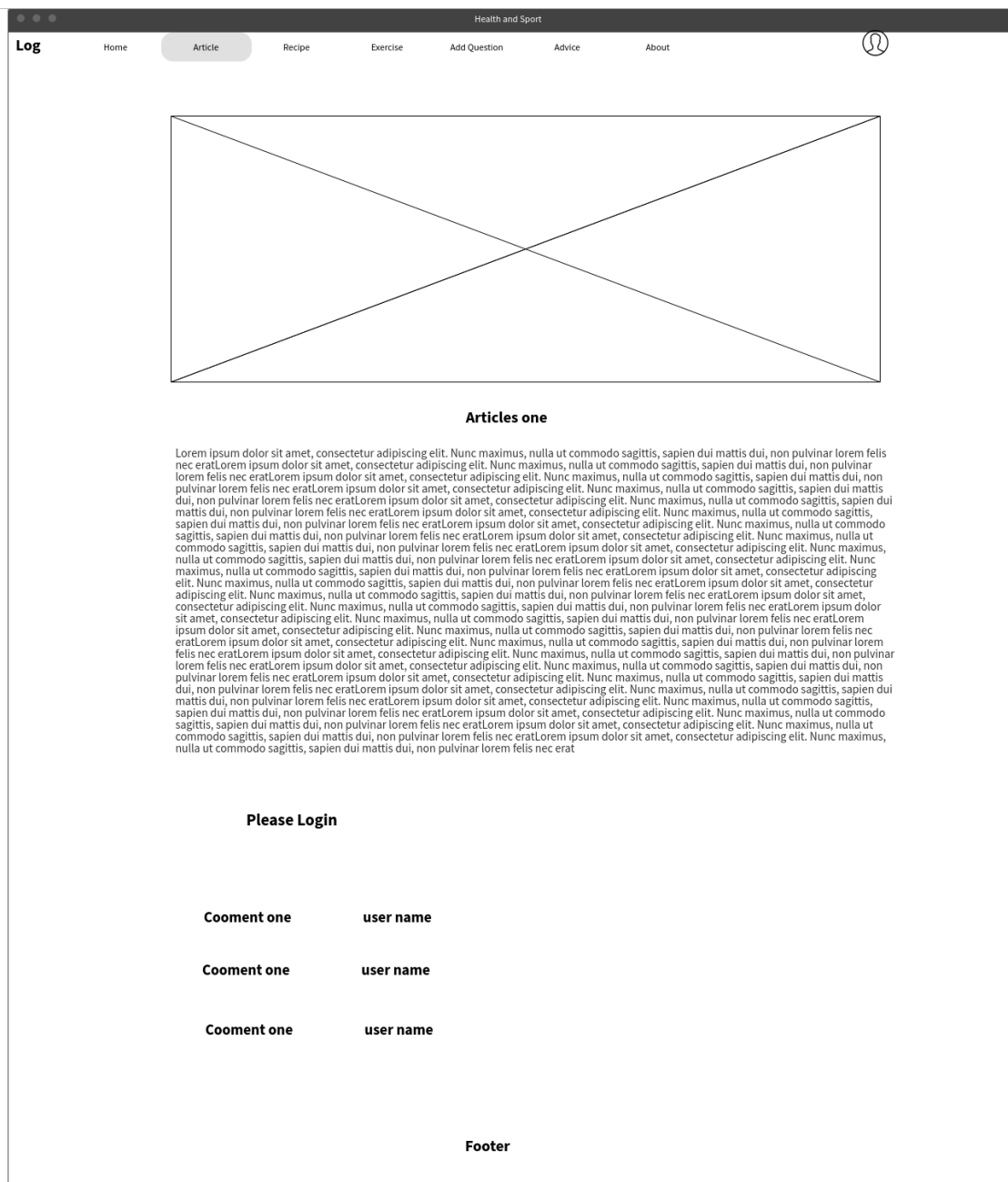


Figure 8.6 Use Case 3 Articles Page Unregister user.

### Use Case 3 .2Articles Page Register User.

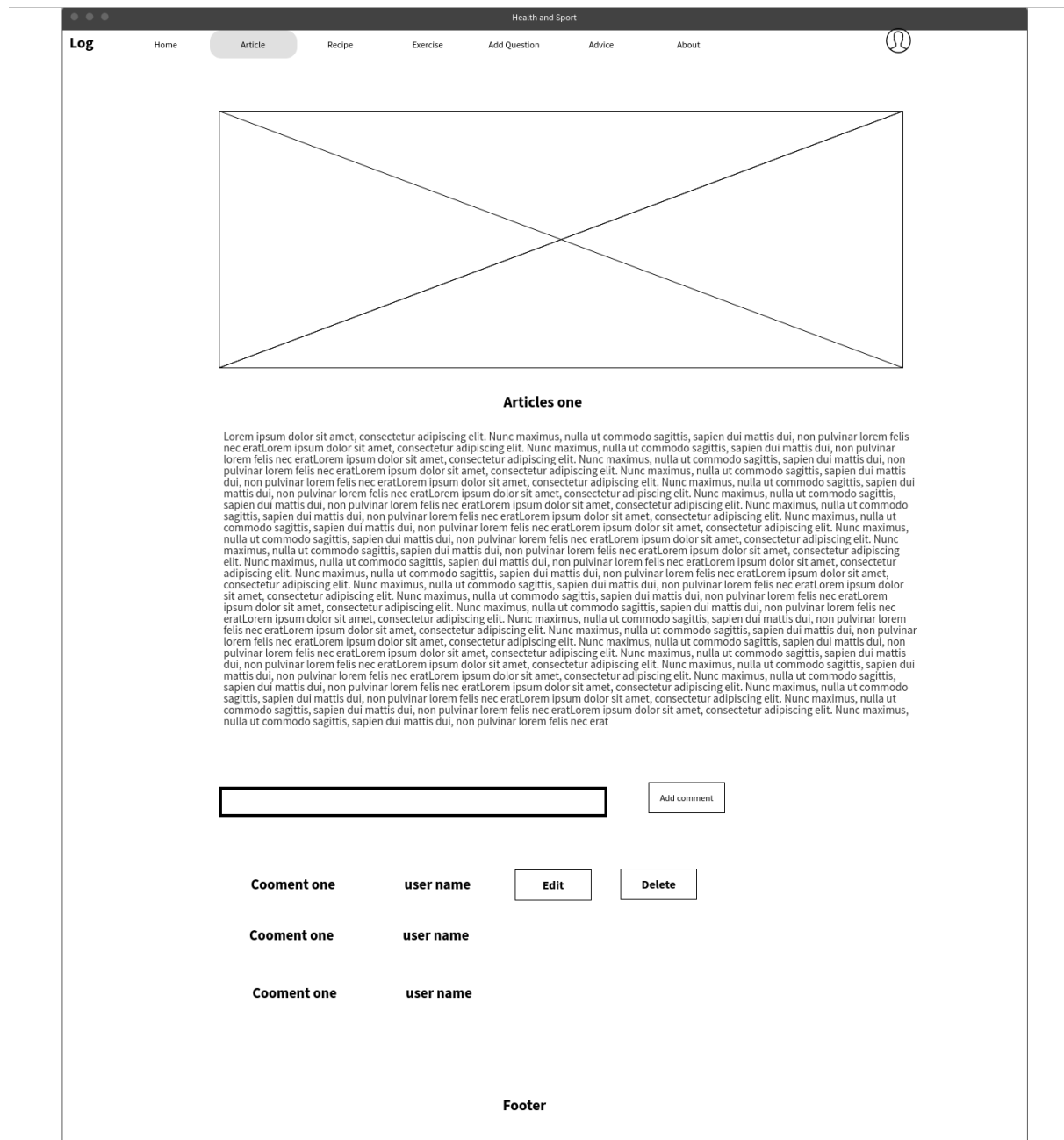


Figure 8.7: Use Case 3 Articles Page Register User.

### *8.6 Use Case #5 – Recipe Page*

*Table 8.4: Use Case 5.*

Use Case Element	Description
Use Case Number	5
Website	Health and Sports
Use Case Name	Recipe Page
Use Case Description	A registered/ unregistered user reach Recipe and is prompted to register/ login using their personal details.
Primary Actor	Registered /Unregistered User
Trigger	A registered user starts the more features
Basic Flow	1. This use case starts when a user runs the website and is presented with article GUI page. 2. The user choose their page needed.
Alternate Flows	1. The user registered can make comment and give feedback .
Termination	The flow is terminated when the user is validated by the system and logged in to the application.
Post Condition	The user is brought to the website all pages.

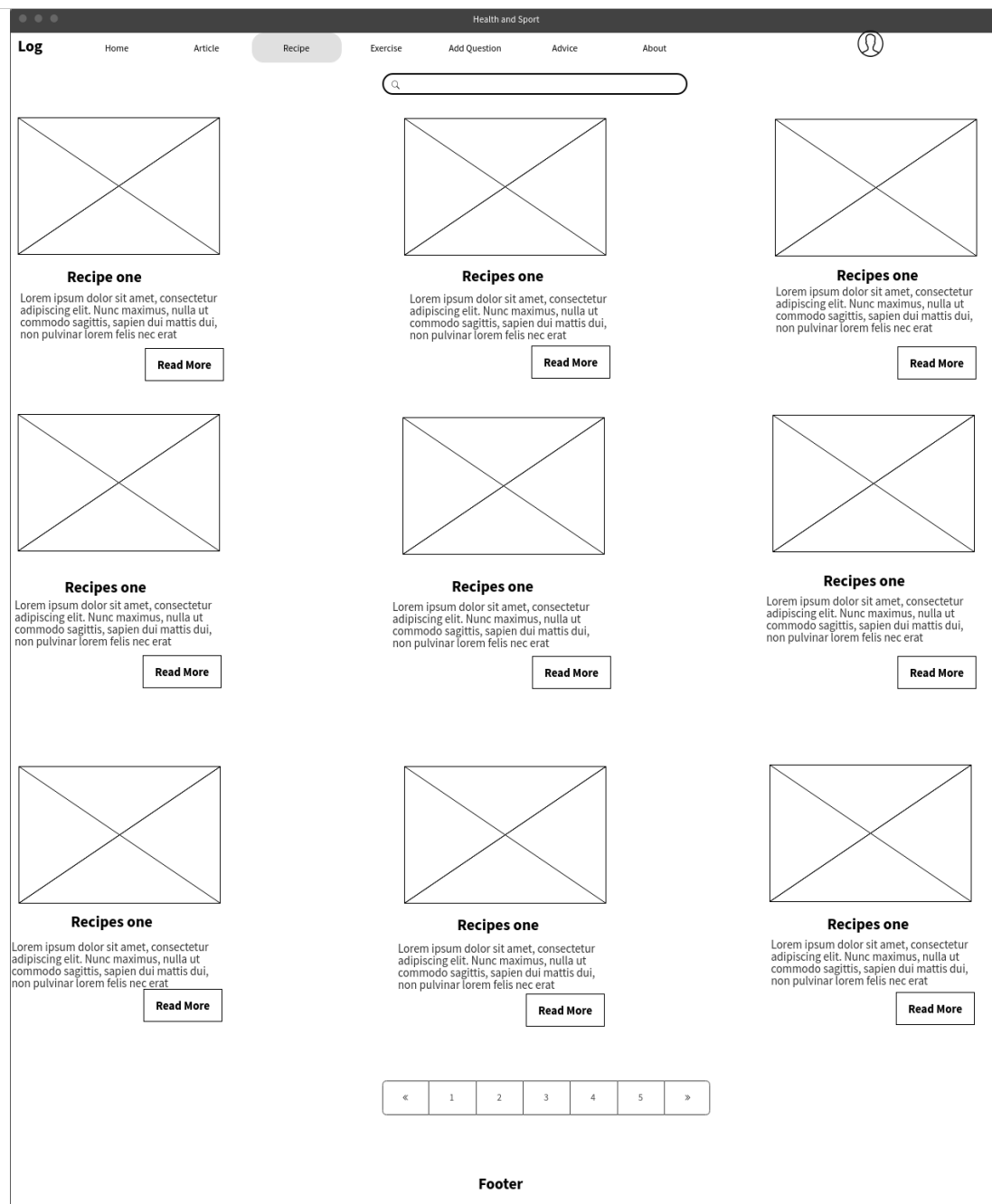
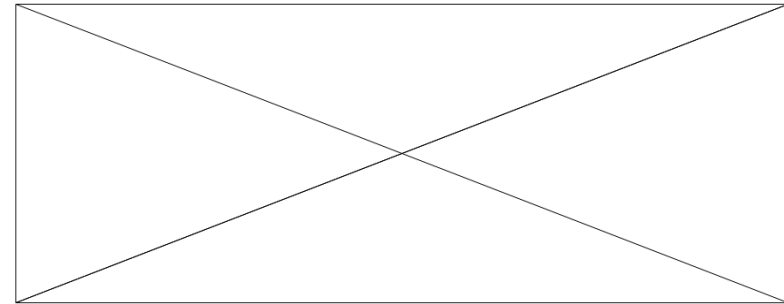


Figure 8.8.: Use Case 5Recipe Page



### Recipes one

[illegible]

**Please Login**

Cooment one                      user name

Cooment one      user name

Cooment one      user name

## Footer

Figure 8.9.: Use Case 5 Recipe Page UnRegister user.

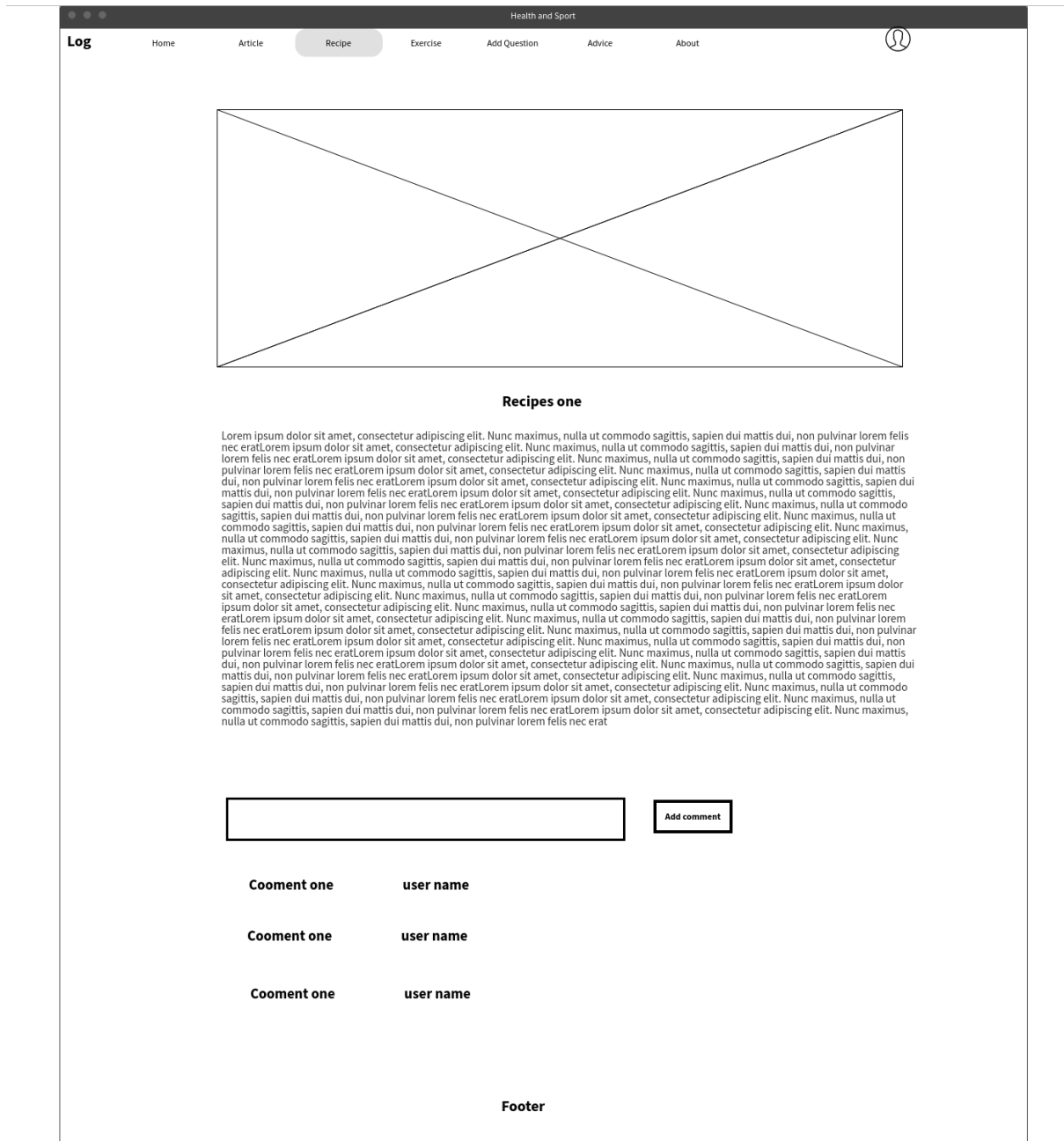


Figure8.10 Recipes Page Register User.



### 8.7 Use Case #6 – Exercise Page

Table 8.6: Use Case 6.

Use Case Element	Description
Use Case Number	6
Website	Health and Sports
Use Case Name	Exercises Page
Use Case Description	A registered/ unregistered user reach Exercises and is prompted to register/ login using their personal details.
Primary Actor	Registered /Unregistered User
Trigger	A registered /Unregistered user have same feature
Basic Flow	1. This use case starts when a user runs the website and is presented with article GUI page. 2. The user choose their page needed.
Alternate Flows	.
Termination	The flow is terminated when the user is validated by the system and logged in to the application.
Post Condition	The user is brought to the website all pages.

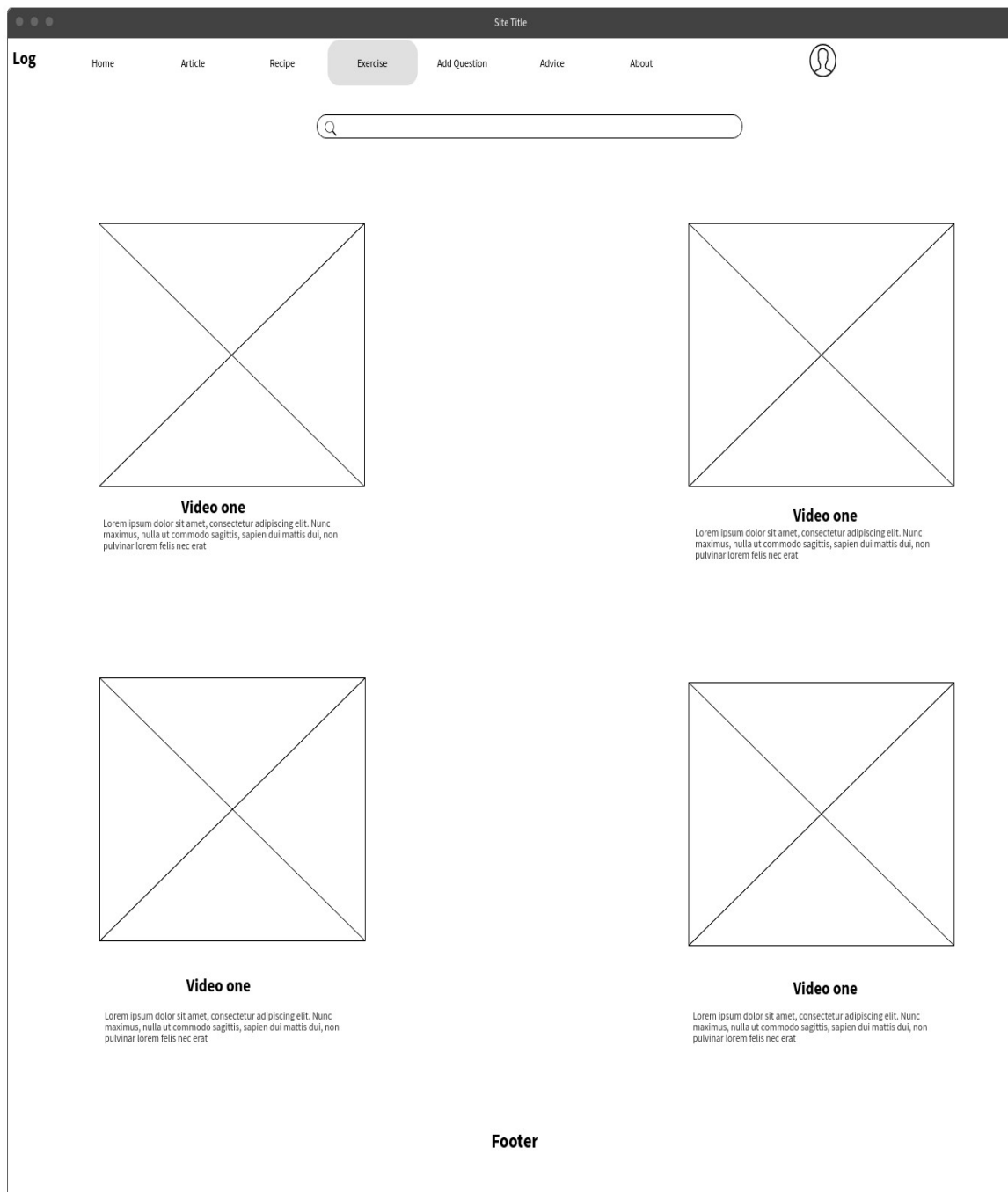


Figure8.11 Videos Page .

## 8.7 Use Case #7 –Questions Page

Table 8.6: Use Case 7.

Use Case Element	Description
Use Case Number	7
Website	Health and Sports
Use Case Name	Questions page
Use Case Description	A registered user reach question and is prompted to register/ login using their personal details.
Primary Actor	Registered User
Trigger	A registered user can add questions and edit or delete
Basic Flow	1. This use case starts when a user runs the website and is presented with article GUI page. 2. The user choose their page needed.
Alternate Flows	Unregister user only can read without add any feedback
Termination	The flow is terminated when the user is validated by the system and logged in to the application.
Post Condition	The user is brought to the website all pages.

Site Title

LogHomeArticleRecipeExerciseAdd QuestionAdviceAbout

make your questions and take expert answer

Add

Question one:-----

answer: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat

Question one:-----

answer: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat

Question one:-----

answer: Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nunc maximus, nulla ut commodo sagittis, sapien dui mattis dui, non pulvinar lorem felis nec erat

Footer

Figure8.12 Answer Page Register User.

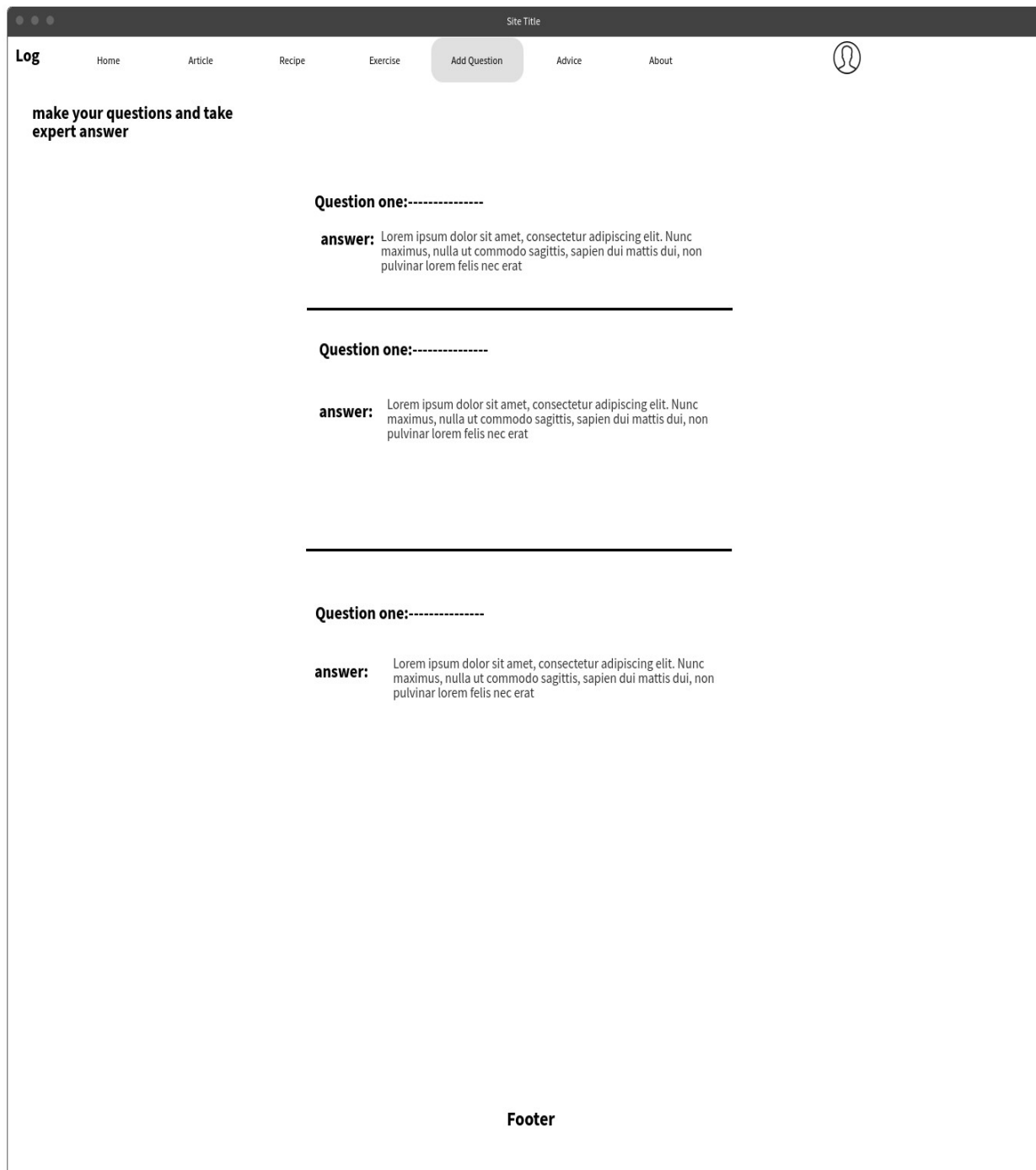


Figure8.13 Answer Page UnRegister User.

### 8.8 Use Case #8 –Advice Page

Table 8.7: Use Case 8.

Use Case Element	Description
Use Case Number	8
Website	Health and Sports
Use Case Name	Advice page
Use Case Description	A registered user reach question and is prompted to register/ login using their personal details.
Primary Actor	Registered User
Trigger	A registered user can add questions and edit or delete
Basic Flow	1. This use case starts when a user runs the website and is presented with article GUI page. 2. The user choose their page needed.
Alternate Flows	Unregister user only can read without add any feedback
Termination	The flow is terminated when the user is validated by the system and logged in to the application.
Post Condition	The user is brought to the website all pages.

Site Title

Log

Home

Article


Recipe

Exercise

Add Question

Advice

About



Tall

Weight

Exercises

Select

Item 1

Item 2

Item 3

Item 4

Item 5

Calculate

Pop Up Result

Footer

Figure8.13 Advice Page.

## 8.9 Use Case #9 –Advice Page

Table 8.9: Use Case 9.

Use Case Element	Description
Use Case Number	8
Website	Health and Sports
Use Case Name	Advice page
Use Case Description	A registered user reach question and is prompted to register/ login using their personal details.
Primary Actor	Registered User
Trigger	A registered user can add questions and edit or delete
Basic Flow	1. This use case starts when a user runs the website and is presented with article GUI page. 2. The user choose their page needed.
Alternate Flows	Unregister user only can read without add any feedback
Termination	The flow is terminated when the user is validated by the system and logged in to the application.
Post Condition	The user is brought to the website all pages.

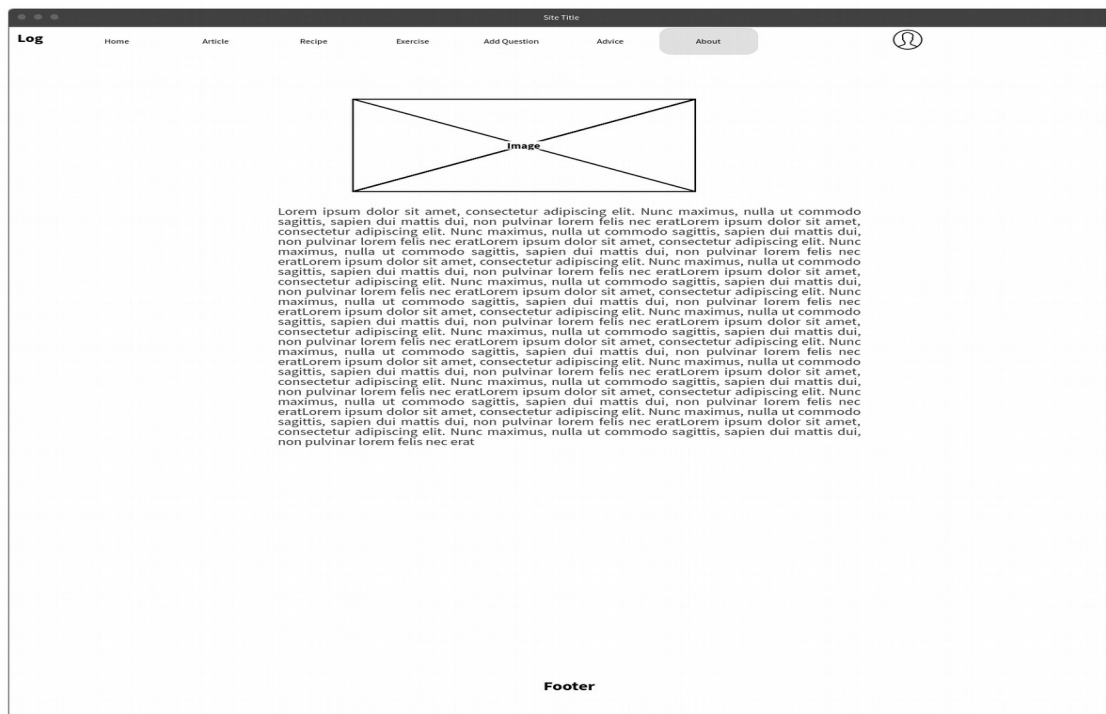


Figure8.14 About Page.



## 8.10 Use Case #10 –Admin Page

Table 8.10: Use Case 10.

Use Case Element	Description
Use Case Number	10
Website	Health and Sports
Use Case Name	Admin page
Use Case Description	Only admin can reach and add/edit/delete articles/recipe
Primary Actor	Admin page Only admin can reach and add/edit/delete articles/recipe
Trigger	Only admin can reach and add/edit/delete articles/recipe
Basic Flow	1. This use case starts when a Admin runs the website and is presented with article GUI page. 2. The Admin choose their page needed.
Alternate Flows	----
Termination	The flow is terminated when the user is validated Admin by the system and logged in to the application.
Post Condition	The user is brought to the website all pages.

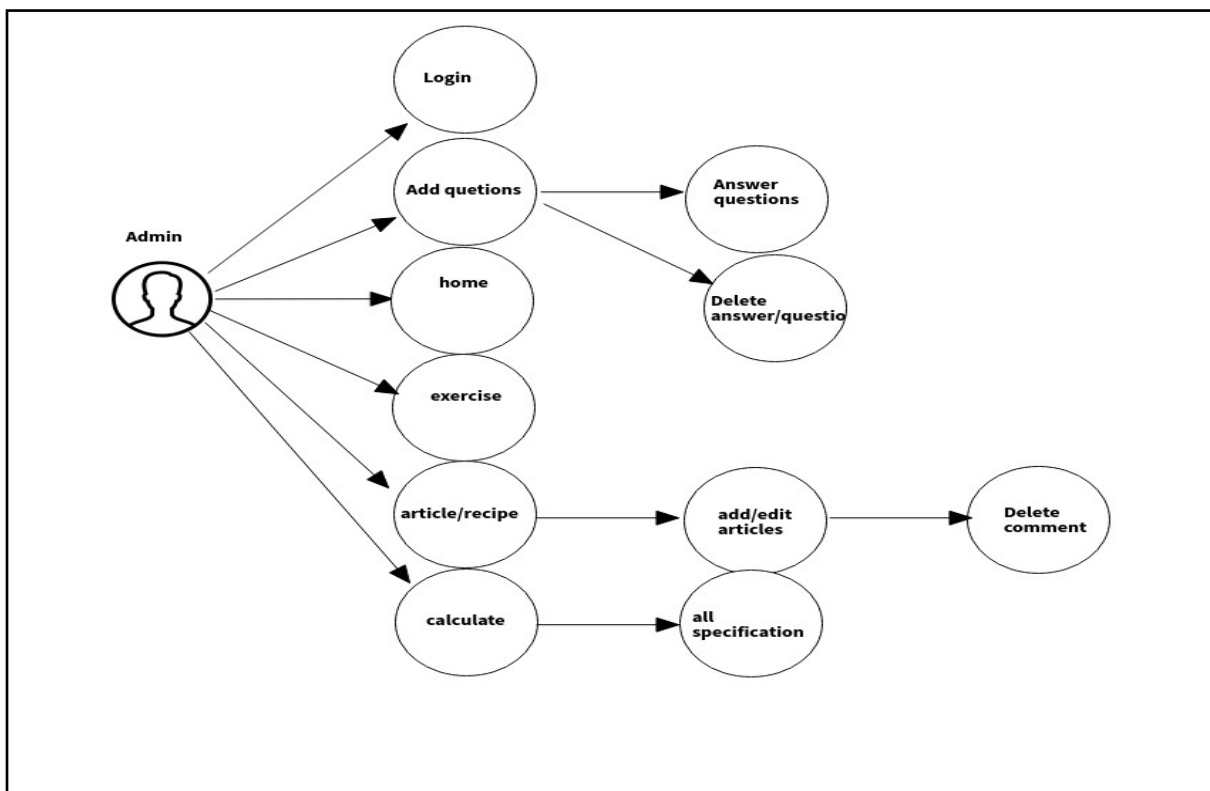


Figure8.15 Admin Page.

## 8.10 Use Case #10 –Admin Page-Delet Articles/Recipes

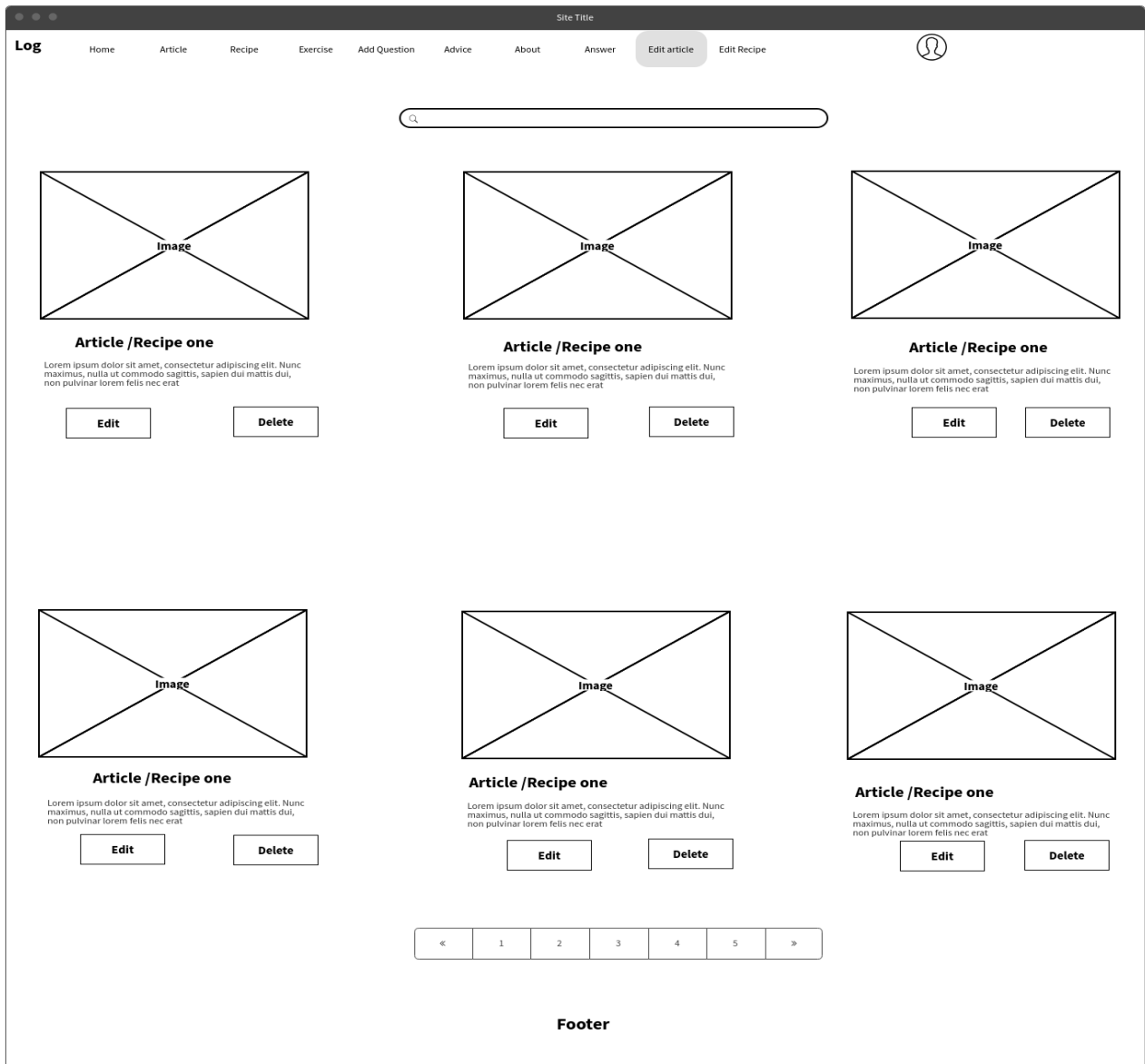


Figure8.15 Admin Page.

## 8.10 Use Case #10 –Admin Page-Edit Articles/Recipes

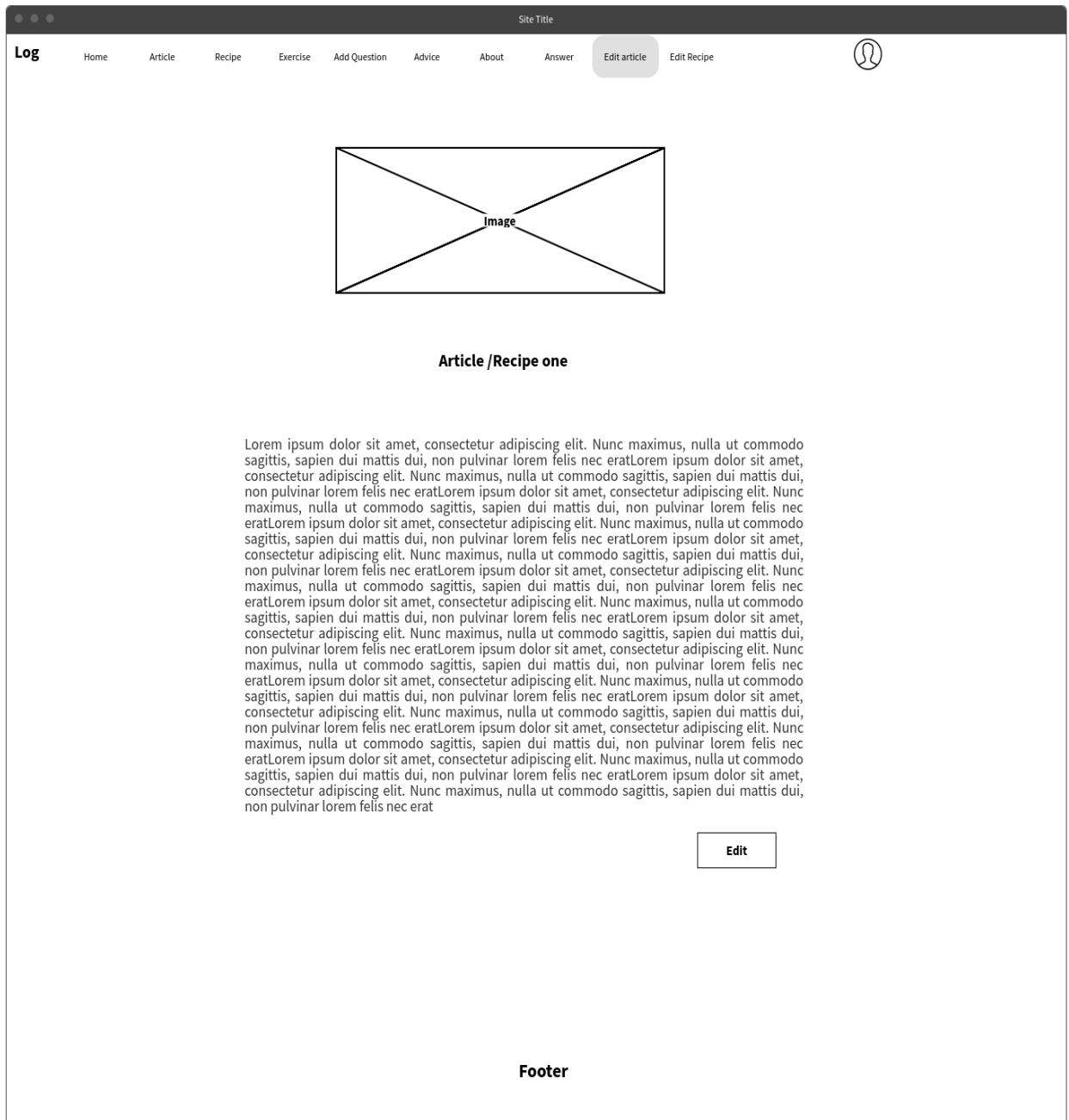


Figure8.15.1Admin Page.

### 8.11 Use Case #11 –Expert Page

Table 8.10: Use Case 10.

Use Case Element	Description
Use Case Number	11
Website	Health and Sports
Use Case Name	Expert page
Use Case Description	Only admin and expert can reach and add/edit/delete articles/recipe
Primary Actor	expert page Only admin and expert can reach and add/edit/delete articles/recipe
Trigger	Only admin and expert can reach and add/edit/delete articles/recipe
Basic Flow	1. This use case starts when a Admin or expert runs the website and is presented with article GUI page. 2. The Admin choose their page needed.
Alternate Flows	----
Termination	The flow is terminated when the user is validated Admin by the system and logged in to the application.
Post Condition	The user is brought to the website all pages.

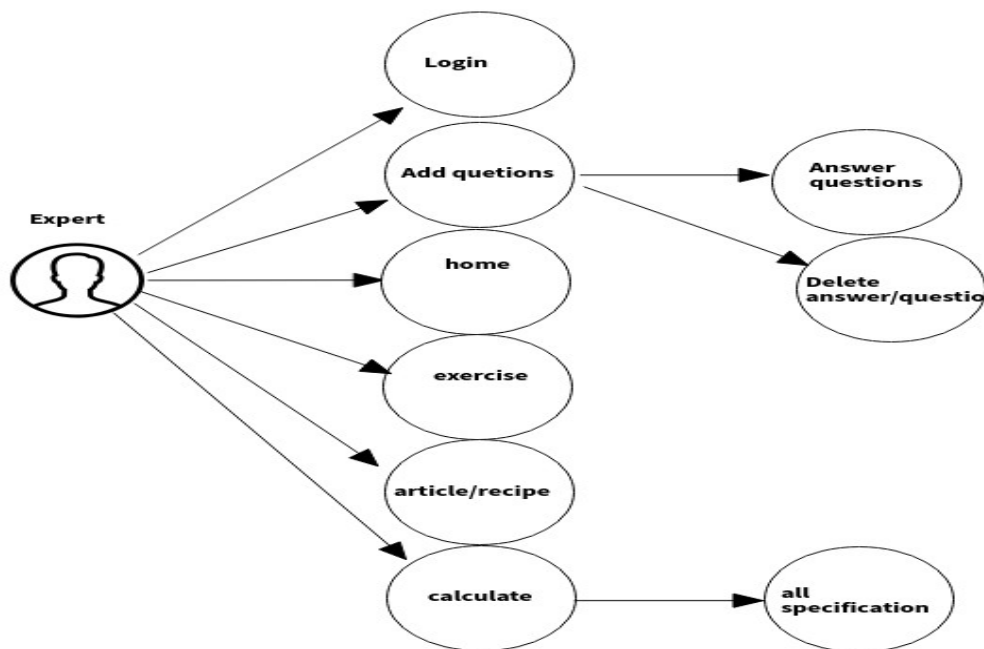
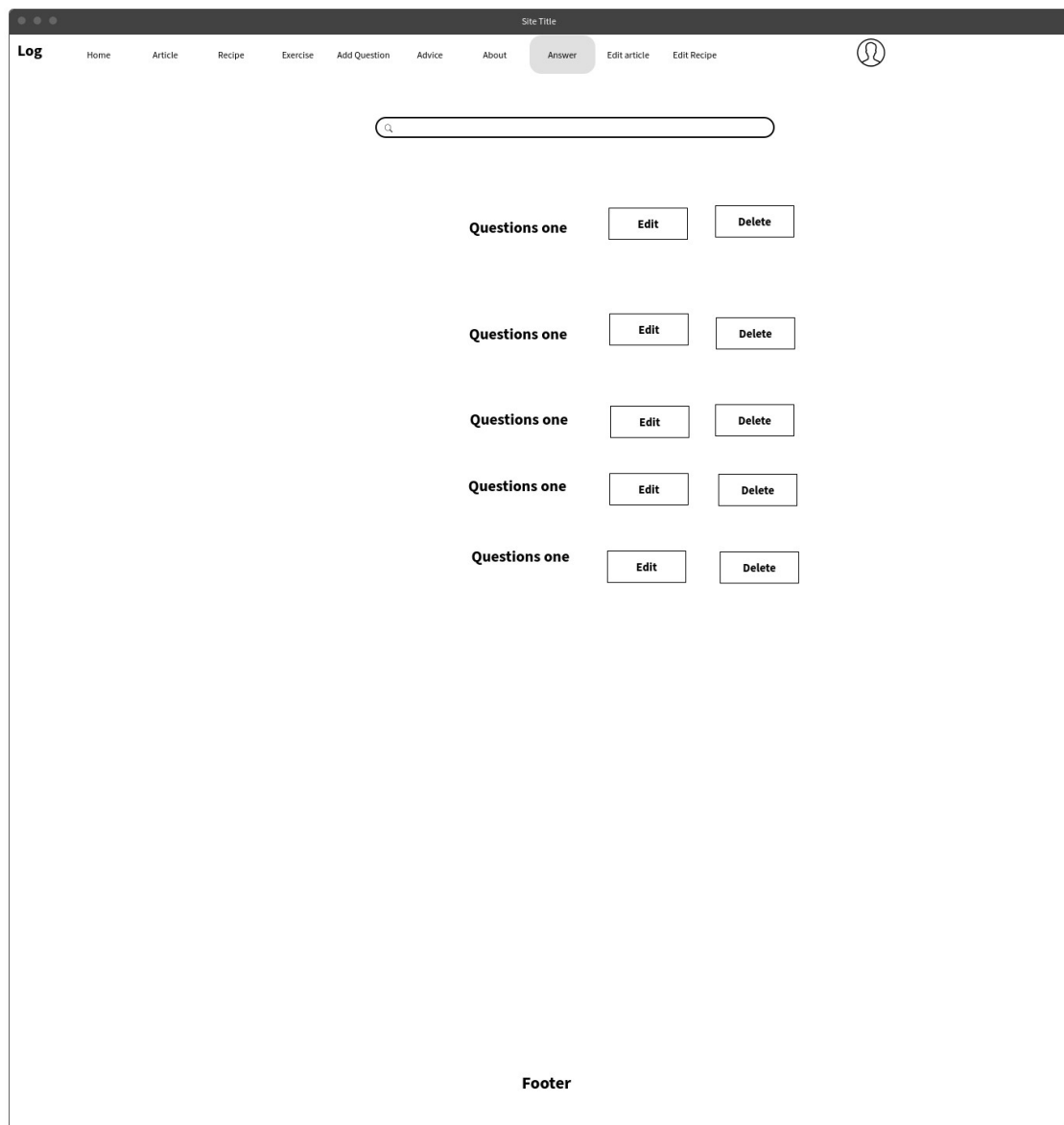


Figure8.16 Expert Page.



*Figure8.17 Answer Page.*

## 9 STORYBOARD/ CLASS DIAGRAM

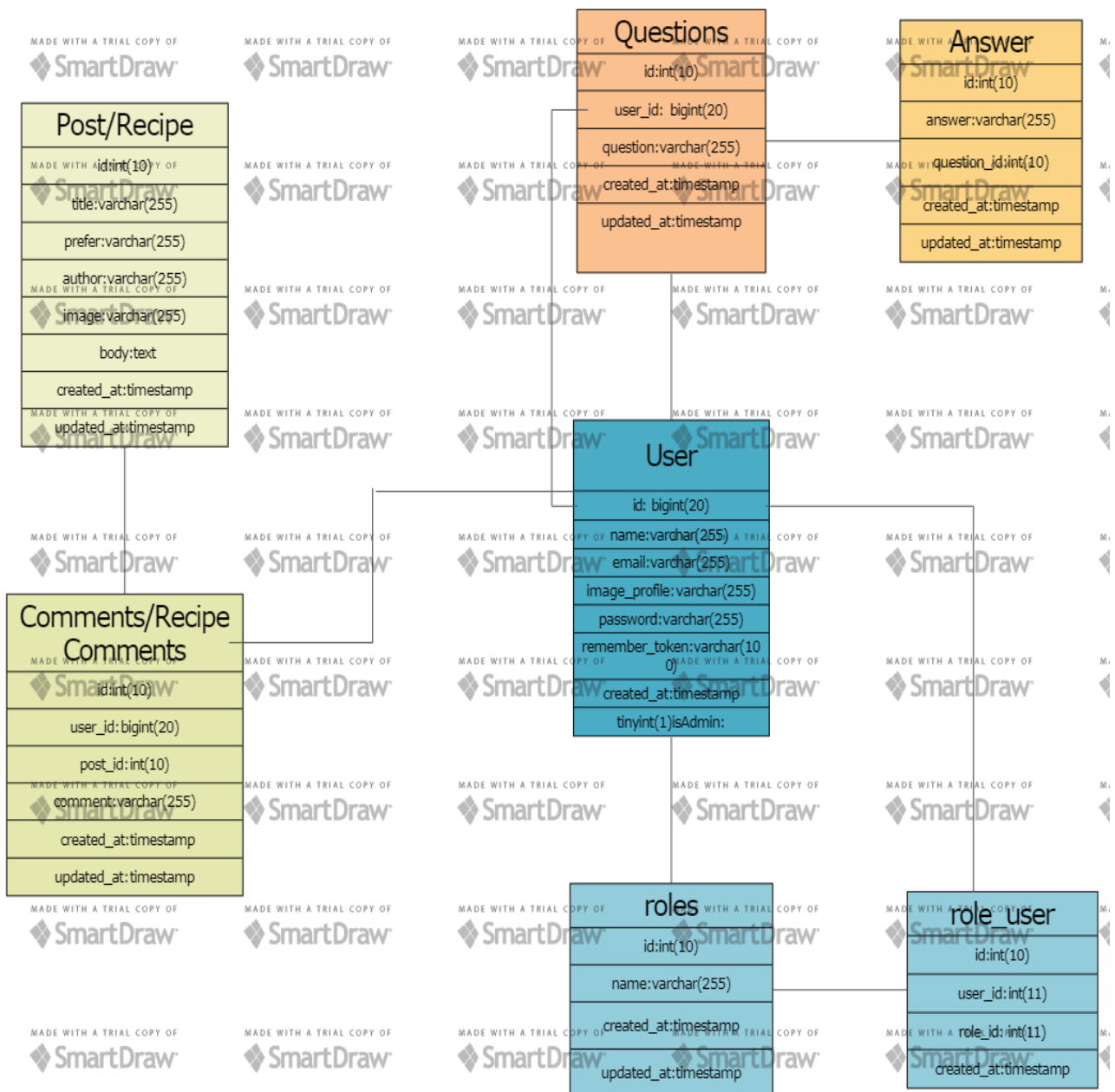


Figure9.1 Expert Page.

## **10 ANALYSIS & DESIGN INTRODUCTION**

### **10.1 PURPOSE**

The purpose of the product analysis and design section is to detail and track the necessary information required to effectively define the system architecture and system design so as to provide the developer with guidance on the architecture of the system being developed.

The intended audience of this section consists of the Project Supervisor, Project Developer, National College of Ireland faculty and National College of Ireland external markers. Subsections of this document such as User Interface details, may on occasion be made available to product users/clients and other stakeholders whose approval of the UI is required.

## **11 GENERAL OVERVIEW & DESIGN GUIDELINES**

This section describes guidelines around assumptions, constraints and standards when designing and implementing the Health and Sports Website.

### **11.1 Assumptions, Constraints & Standards**

11.1.1 The system will require an internet connection for authentication .

11.1.1.1 Offline caching of data can be implemented but periodic internet access is required to update the cache with new data and for initial data access.

11.1.2 The system will run natively on browser. This means the system will need to be developed in the in languages needs in table 1.7.

11.1.3 The system will need to interface with mySQL Database technology for data storage and file storage.

## **12 ARCHITECTURE DESIGN**

This section outlines the system architecture design of the system being developed.

## 12.1 LOGICAL VIEW

The logical view of the Health and Sports Website will focus on a central point of helping people.

All sections of the Website will be reachable from a central home activity. Backward navigation will be possible from all sections of the application to return the user to the activity they were on previously. This will help ensure the application will follow all accepted usability and design standards, i.e. all layouts will be consistent, accessible and understandable. A hierarchal diagram of the proposed UI layout is included below.

## 12.2 SECURITY ARCHITECTURE

### Blanket Database Security

laravel offers a blanket security measure when accessing data in the database. Application profiles need to be manually added by the Database Administrator in order for any piece of software to have access to the database. If an application's profile is not listed under approved applications in database settings, no access to the database is granted.

### User Authentication

As a website level security measure, users will need to authenticate themselves in order to access more features content. Authentication is done via email and password and authentication is also done via laravel. Passwords are encrypted on the server and are not readable even to the Database Administrator. Accounts can be managed and moderated by the Database Administrator if any system abuse takes place.

## 13 SYSTEM EVOLUTION MOVING FORWARD

### 13.1 With Further Development & Research

13.1.1 Social Media Login functionality could be added at a later date. Some users are less likely to manually sign up for services with their email address and password. Having Social Media Login integration allows them to sign in to the application without having to register an additional account.

13.1.2 The application will be developed on iOS and Android once development is complete.



13.1.3 As a way of generating revenue in the future, in website advertisements could be implemented. Arrangements with Gyms and Health supplement companies could be reached to advertise their products and services in the website.

## **14 APPENDIX**

### **Project Objectives**

The general goal of the software project is to develop a non-trivial IT system, evaluate and present it at two different opportunities where it will be assessed by a critical audience. Completion of the project will require a number of skills such as independent learning, problem solving, coding, debugging, testing, time management and presentation. The aim is to develop a piece of software in an approved area of our choosing. The software must offer useful and innovative functionality, filling a gap in a current technology area or branching into a new one.

### **Project Background**

Health and Sports is a community based health and fitness website application. It will offer a social environment for people interested in health and fitness. The application will be fueled by user generated content, users will be able to submit and view exercise programs within the application.

All programs in the application will be submitted by users of the application, so if a user finds a certain program works really well for them or finds a useful workout on the internet, they can submit it to the application for other users to try out. Users will be able to rate programs submitted to the application, this will help ensure high quality content within the application.

Users can browse and try out programs as provided in the app, or they can save the program to their own personal list and make tweaks to them in order to better suit their needs. A user could have an injury or other health related reason not to do a certain exercise so they can then switch out certain ones as they wish from the program they are using.

The main focus of the application is to create a positive community for like-minded people to have a place to get together and help each other in achieving a common goal. Studies have shown that people maintain their motivation much better when exercising as part of a group and sharing experiences together. To this end, the application aims to provide a discussion section where people can discuss the programs in the application and any other health and fitness topic they wish. Additionally, a one to one messaging system will be attempted, this serves many purposes but the main one is to help users pose any questions they may have about a program to its author.

This idea was chosen as there is huge interest in the health and fitness industry and activity in this area continues to rise. While the health and fitness industry continues to grow at a rapid pace, unfortunately, so too do obesity levels. Ireland is on track to become the most obese nation in Europe within the next 10 years so another tool to help tackle this, as well as encouraging people to be more active, can only be a good thing. The app aims to give people a tool to help them be their best self and turn the tide on obesity. To this end, the application will also have a “gyms nearby” feature. As the name suggests, this feature will show users the closest gyms to their current location plotted on a map. All the proposed features of the application will be broken down in more detail under the Project Functionality section.

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## DOCUMENT CONTROL

**Title:** Technical Documentation  
**Issue:** Sports And health  
**Date:** 12january2020  
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**Filename:** Mohammad Taha Al-Tamimi Technical Documentation

## DOCUMENT CHANGE RECORD

Date	Version	Author	Change Details
12/January/2020	Version 1.0.a	Mohammad Taha Al-Tamimi	First complete report