

Software Development Plan

Medical Blog

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Version 1.5

Presented to:

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Submitted By:

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Project description

Finding reliable information and support for chronic conditions can be challenging, especially when resources are scattered across various platforms and may be issued by people who are not specialists in this field. Our goal is to create a comprehensive website that connects individuals living with chronic conditions to relevant resources and healthcare providers.

The potential audience for this website includes individuals living with chronic conditions such as diabetes, arthritis, asthma, heart disease, and more, healthcare providers, nutritionists and dieticians, fitness and physical activity experts and medical researchers and experts. Our platform aims to provide accessible and informative content tailored to each chronic condition.

Revision History:

| Date | Author | Distributed to | Version |
|------------|--------|----------------|---------|
| 02/18/2024 | All | All | 1.0 |
| 03/24/2024 | All | All | 1.1 |
| 04/07/2024 | All | All | 1.2 |
| 04/14/2024 | All | All | 1.3 |
| 05/05/2024 | All | All | 1.4 |
| 05/12/2024 | All | All | 1.5 |

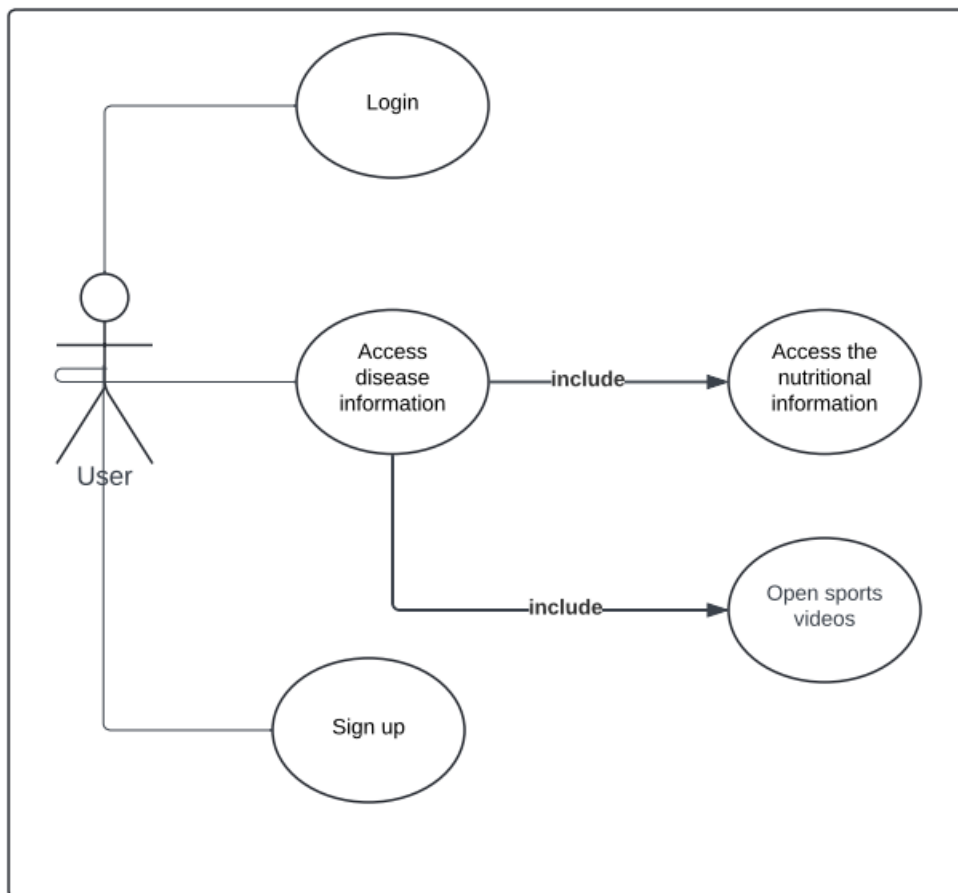
2. TEAM DESCRIPTION

| Team Members | Kholoud Khaled | Nada Mohamed | Sara Khairy | Hafsa Desouky |
|------------------------|----------------|--------------|-------------|---------------|
| Concepts | | | | |
| Database “Mongodb” | X | X | | |
| HTML | | | X | X |
| CSS | | | X | X |
| Javascript | | | X | X |
| Nodejs | x | x | | |
| Database management | X | X | | |
| User Interface | | | | |
| User Management | | | | |

The skills needed for this project are:

- Time Management
- Good Communication Skills
- Positive Attitude
- Interpersonal Skills
- Respect each others ideas
- Experience in programming
- Experience in database management
- Everyone is willing to learn

Use cases



Use case # 1:

Name: Sign up

Participating Actor: User, Doctor, Nutritionist

Entry conditions: Website is opened by browser

Exit conditions: Account is created

Flow of Events:

1-User enters his / her data

2-The data is validated

3-New account is created

Special Requirements: if the data is invalid display error message and try again

Use case #2:

Name: Login

Participating Actor: User

Entry conditions: Account exists

Exit conditions: User access his/her account

Flow of Events:

1-User enters his/her information

2-The information is validated

3-User sent to main page

Special Requirements: if the account is invalid display error message and try again

Use case #3:

Name: Access disease information

Participating Actor: User

Entry conditions: User is logged in to his/her account

Exit conditions: User obtained the disease information

Flow of Events:

1-User logged in to account

2-select the desired disease from the list

3-User sent to disease page

Special Requirements: No special conditions

Use case #4:

Name: Access the nutritional information

Participating Actor: User

Entry conditions: User is accessed the disease page

Exit conditions: User obtain the nutritional information

Flow of Events:

1-User is accessed to disease page

2-go to the nutrition partition

Special Requirements: No special conditions

Use case #5:

Name: Open sports videos

Participating Actor: User

Entry conditions: User is accessed the disease page

Exit conditions: User watch sports video

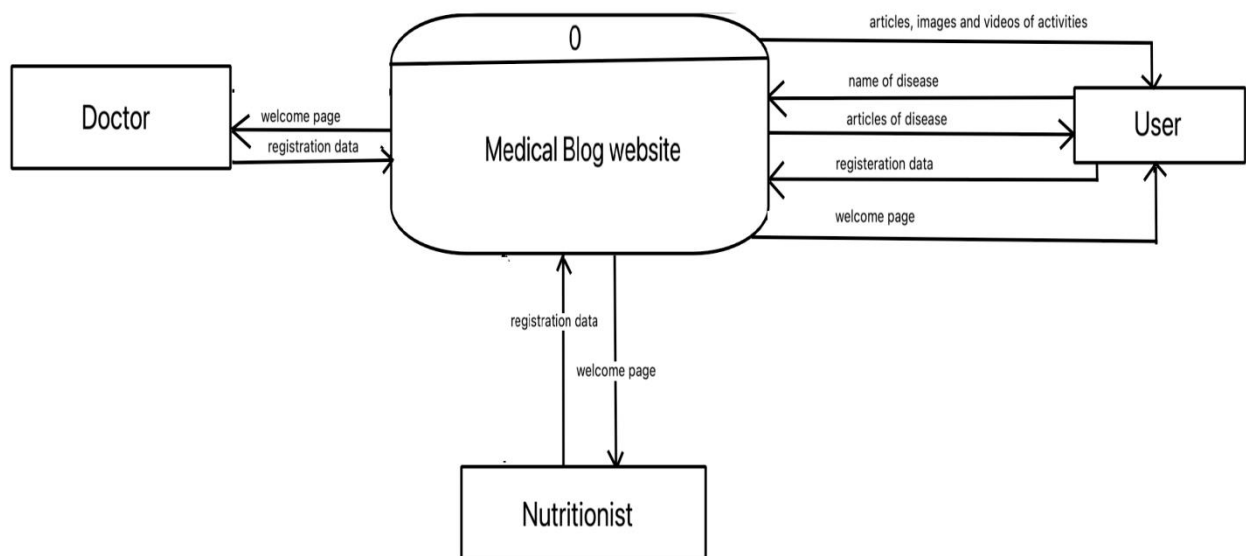
Flow of Events:

- 1-User is accessed to disease page
- 2-go to the sports partition
- 3-open the video

Special Requirements: No special conditions

Context

diagram



Software Process Model is Waterfall for these reasons

- **Simplicity and Understandability:**
 - The Waterfall Model is straightforward and easy to comprehend. Its linear structure makes it accessible to both project teams and stakeholders.
- **Clear Milestones:**
 - The model provides identifiable milestones at the end of each phase. These milestones help track progress and ensure that specific deliverables are met.
- **Well-Defined Phases:**
 - Each phase has specific deliverables, making it easier to manage and review progress. Teamwork on one phase at a time, ensuring a systematic approach.
- **Suitable for Well-Understood Requirements:**
 - Waterfall works well for our project with stable and well-defined requirements that match our project. When the scope is clear, this model can lead to successful outcomes.

Test Strategy

1. Release Scope:

- **Features:** platform will offer a seamless sign-in/sign-up process for clients, providing personalized access to a wealth of resources tailored to their needs and Intuitive navigation and comprehensive content
- **Constraints:** Limited development time, resource availability.
- **Dependencies:** Data from external chronic diseases APIs.
- **Risk Areas:** UI responsiveness, data accuracy, compatibility across devices.

2. Timelines:

- **Release Date:** Targeting end of next month.
- **Development Sprints:** 2-week iterations.
- **External Factors:** No major events or holidays.

3. Test Objectives:

- **Identify Defects:** Ensure no critical issues in core functionality.
- **Feature Testing:** Validate accurate chronic diseases data display.
- **Usability Testing:** Evaluate user experience (UX).
- **Compatibility Testing:** Test on various devices and operating systems (iOS, Android, Windows, MacOS).

4. Test Approach:

- **Manual Testing:**
 - **Smoke Testing:** Verify basic functionality after each build.
 - **Exploratory Testing:** Investigate edge cases and usability.
- **Automated Testing:**
 - **Regression Testing:** Automate repetitive scenarios.
 - **API Testing:** Validate data from external APIs.
- **Performance Testing:**
 - **Load Testing:** Simulate heavy user traffic during peak hours.
 - **Response Time Testing:** Measure website responsiveness.

5. Test Environment:

- **Browsers:** Chrome, Mozilla and Safari.
- **Operating Systems:** Windows 10, MacOS, Android 11 and IOS13.
- **Network Conditions:** Wi-Fi, 4G, 3G.
- **Test Data:** Real-time diseases data.

6. Risk Mitigation:

- **Data Accuracy:** Regularly validate data against trusted sources.
- **Device Compatibility:** Frequent testing on different devices.

Risk

Risk identification

1.Data Security Breach: With user authentication and personalized content, there is a risk of a data breach compromising sensitive user information.

2.Inaccurate Information: There's a risk of providing inaccurate or outdated medical information, leading to potential harm or confusion among users.

3.Technical Issues: The website may encounter technical issues such as downtime, slow loading times, or compatibility issues with different devices and browsers, impacting user experience.

4. Legal Compliance: There's a risk of legal issues related to medical content, such as compliance with health regulations, copyright infringement, or liability for inaccurate information.

Risk Prioritization

1. Data Security Breach.

2. Inaccurate information

Risk Mitigation:

1. Data Security Breach: Implement robust encryption and authentication methods.

2. Inaccurate Information: Establish a review process involving medical professionals and encourage user feedback.

3. Technical Issues: Partner with reliable hosting providers, conduct thorough testing, and have technical support in place.

4. Legal Compliance: Seek legal advice, clearly outline terms, obtain necessary licenses, and regularly update content.

Personas

1. Patients with Chronic Conditions: These are the primary users of the website, seeking reliable information and support to manage their health conditions effectively.

2. Healthcare Professionals: The website provides a platform for healthcare professionals, including doctors, nurses, and specialists, who may refer their patients to the website for additional information or resources.

3. Nutritionists and Dieticians: Professionals in the field of nutrition and dietetics may engage with the website's healthy food recommendations section to provide guidance and support to individuals managing chronic conditions through diet.

4. Fitness and Physical Activity Experts: Experts in fitness and physical activity may contribute to the sports and physical activities section, offering tailored exercise routines and safety precautions for individuals with specific chronic conditions.

5. Medical Researchers and Experts: Medical researchers and experts may collaborate with the website to ensure the accuracy and relevance of the disease information section, providing insights into the latest research findings and treatment options.