Menstrual Hygiene Awareness Application (ChatBot)

---- By: Nischay Yadav
(nish2447)

Contents

1 Introduction
1.1 Purpose . . . . . .
1.2 Overview . . . . . .
1.3 Intended Audience:. . . . . .
2 Overall Description
2.1 Product Perspective . . . . . .
2.2 Product Functions . . . . . .
2.2.1 Login . . . . . .
2.2.2 Chat Bot . . . . . .
2.2.2 Read Articles . . . . . .
2.2.2 Discuss in forum . . . . . .

2.2.2 Period Tracker . . . . . .
2.3 User Classes and Characteristics . . . . . .
2.4 Operating Environment . . . . . .
2.5 User Documentation . . . . . .
3 System Interfaces
3.1 User Interfaces . . . . . .
3.2 Hardware Interfaces . . . . . .
3.3 Communication Interfaces . . . . . .
4 System Features
4.1 Feature 1: Chat Bot . . . . . .
4.2 Feature 2: Read Articles. . . . . .
4.3 Feature 3: Discuss in forum. . . . . .
5 Non-functional Requirements
5.1 Performance Requirements . . . . . .
5.4 Security Requirements . . . . . .
5.3 Software Quality Requirements . . . . . .
5.5User Documentation . . . . . .

1.Introduction:

1.1 Purpose:

The major Reason that discourages the target users from discussing their concerns with a fellow human is that they feel “shy” as the subject is intimate and the societal norms and stigma does not allow open discussion over the same. The purpose of this software is to replace human-human interaction with Human-Computer Interaction, as a potential Solution to overcome the issue of “hesitation”, as it gives the user a sense of security that they are interacting with a machine.

The purpose of this document is to articulate the software’s design and thereby its requirements.

1.2 Overview of Document:

Section 2 describes the functioning of the system via various behavioral UML diagrams and defines some environments where the system will be working in.
Section 3 describes the various system interfaces
Section 4 defines the functioning of each feature of the software.

1.3 Intended Audience:

Young Adult females (17-30 years of age) approaching puberty or menstruating.

2. Overall Description:

2.1 Product perspectives:

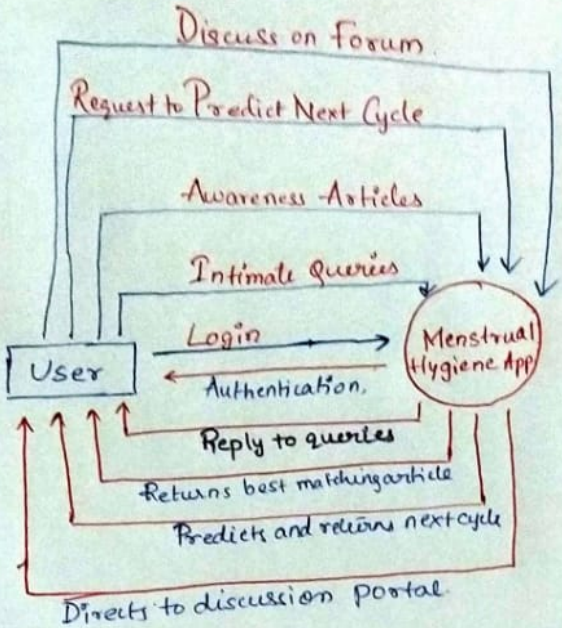
Cultural taboos and limiting social norms make it challenging to communicate and teach about menstrual health in India. How Might We provide a safe platform for young adult women to enable them to safely discuss their menstrual health related concerns without hesitation, which otherwise remain unanswered due to the stigma attached.

2.2 Product Functions:

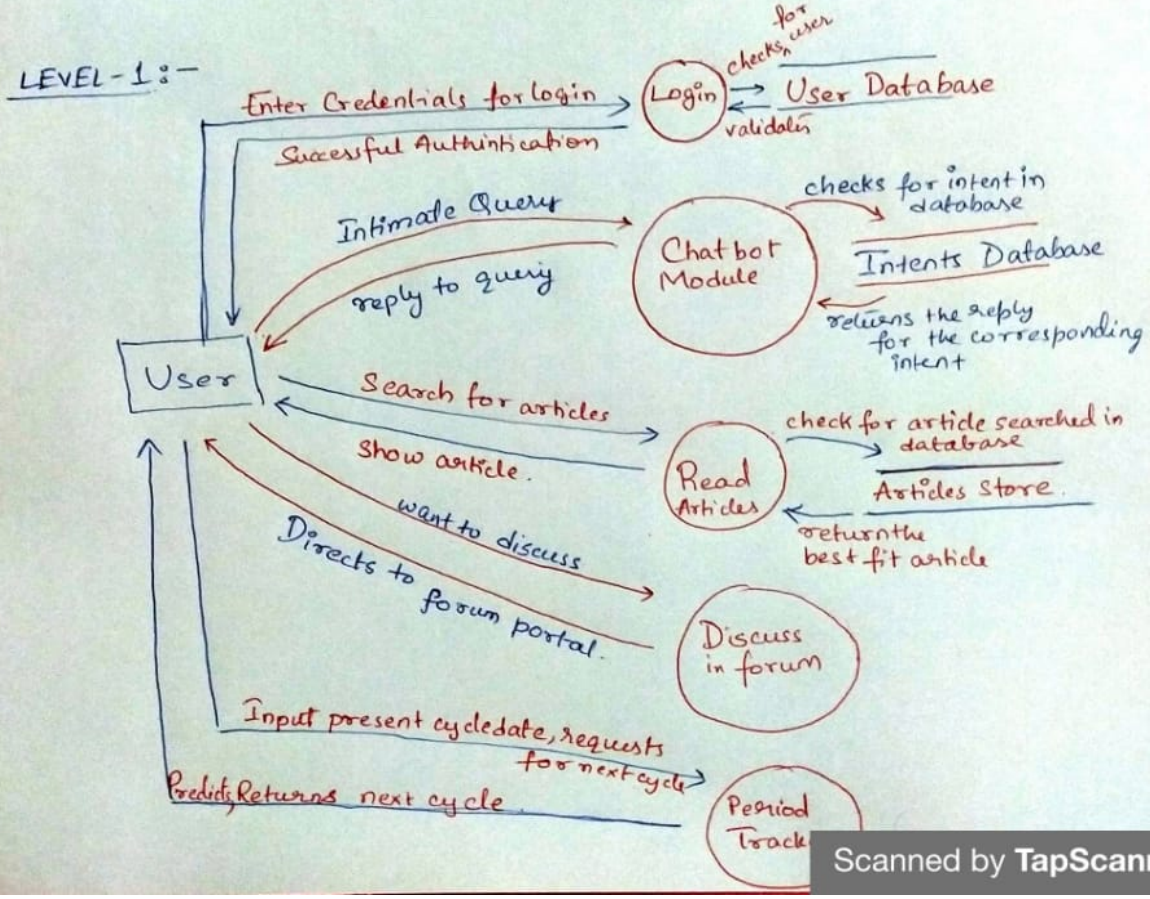
1. **Login :** Authentication of user
2. **Chat Bot:** Allows users to chat with the chat bot and post queries, get replies based on the intent matched.
3. **Read Articles:** Allows user to Search for Articles
4. **Discuss in Forum:** Post queries in forum
5. **Period Tracker:** User inputs the current data, and system predicts next cycle.

Fig 2.a Data Flow Diagram of the functionalities is as follows:

LEVEL-0 :— [Context Level]

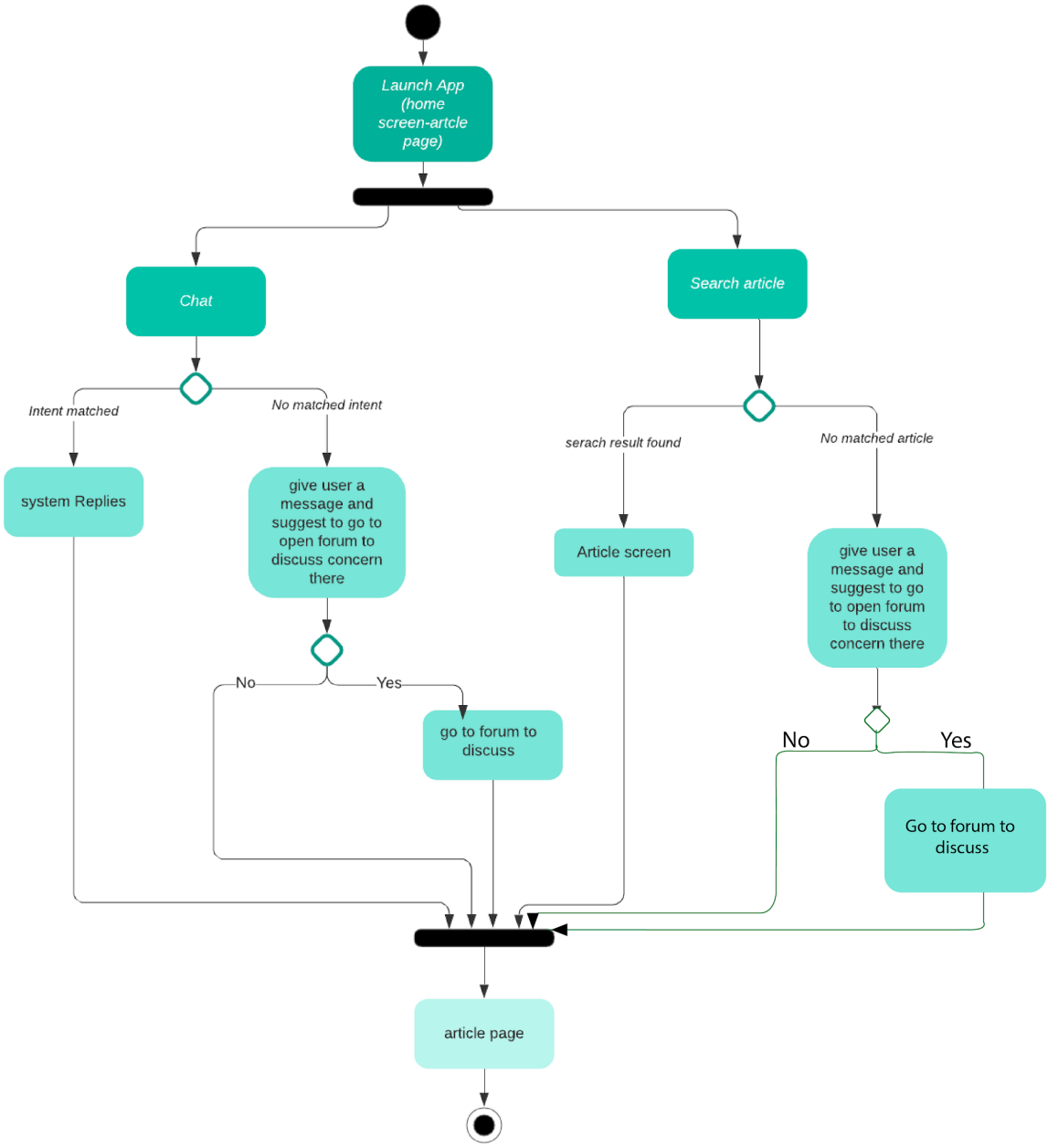


LEVEL-1 :—



Scanned by TapScanner

Fig 2.b Activity Diagram of the system is as follows:

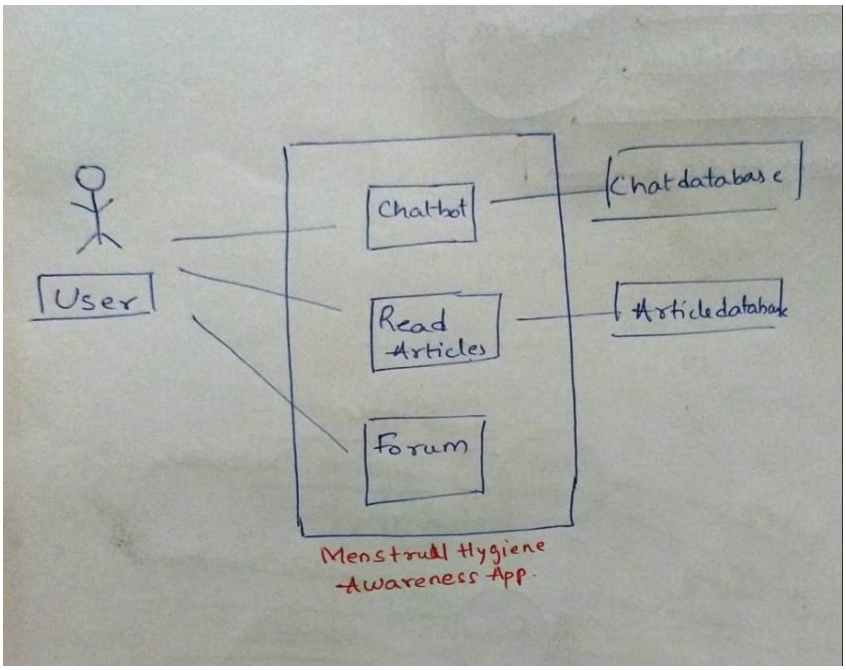


2.3 User Class and characteristics:
The user is assumed to be able to use technology. The target group of this product are women of the age group (17 to 30+years)

2.4 Operating Environment: Android, iOS

2.5 System Environment: The following shows the system requirement. There is a single actor, the user and two databases.

Fig 2.c



3. System Interfaces:

3.1 User Interface:

All screens of UI should employ an user-centric design method that separates the major sections of the application for easy access. The user should be able to determine the sections of the UI currently being viewed using visual cues, such as bold fonts, arrows, and highlighting. The application's major sections should be available from any screen of the application using a nav Bar and include the following screens: profile(contain period tracking details), Read(read articles), Chat (chat bot), Forum. The Login, and Logout shall be included in the profile section menu bar/drop down. The user must be presented with a login page when launching the application for the first time and expect the Read(read articles) screen as the landing or front page. All pages should use a consistent visual theme. Pop-ups displaying notifications, error messages, or warnings should use the same theme and template as the rest of the application.

3.2 Hardware Interface:

All server-side components must execute on server-class computers. All client-side components must execute on the user handsets.

3.4 Communication and Protocol Interfaces: We will use the Internet Protocol to communicate much like the Client -Server model. Also, There are no XYZO specific communication interface requirements. Existing OS and network infrastructure will be leveraged for communication.

4. System Features:

Feature 1: Chat Bot:

1. **Description and Priority:** Allows users to chat with the chat bot and post queries, get replies based on the intent matched.This feature is of highest priority of the product
2. **Action/Result:** User posts queries, the intents are matched from the database and appropriate reply is returned

3. **Functional Requirements:** A database of intents and their responses needs to be maintained, so as to fetch the appropriate response to the user query.

Feature 2: Read Articles:

1. **Description and Priority:** Allows users to Search for Articles. This feature is of second highest priority of the product
2. **Action/Result:** User search for desired topic, the strings are matched, and appropriate article from the database is returned
3. **Functional Requirements:** A database of articles needs to be maintained, so as to fetch the appropriate search result.

Feature 3: Discuss in forum:

1. **Description and Priority:** Allows users to post queries/ concerns on a discussion portal/forum. This is a fallback feature that the user might rely upon, in case their needs are not met in the above two features.
2. **Action/Result:** Multiple users post their concerns and discuss.
3. **Functional Requirements:** 1. Creation of thread/ Opening a discussion

   B. Opening a thread: add the discussion topic to the database-1 containing discussion topics along with updation of user ID, time stamp, date stamp.

   C. Assign Thread ID :A unique thread ID is assigned to newly created thread. This will aid in fetching all the replies and sub threads related to the thread.

Other Non- Functional Requirements:

Performance Requirements

All other performance related to storage, memory, and processing should follow industry recommended practices to ensure resource requirements are minimized.

Security Requirements

The software system defined in this SRS must follow industry recommended practices for secure software development.

Software Quality Requirements

The architecture, design, implementation, and documentation of the application must minimize the maintenance costs of the software system. The maximum person-time required to fix a security defect (including regression testing and documentation update) must not exceed two person days. Otherwise, the software system must be taken offline or the offending feature disabled. The average person-time required to make a minor enhancement (including testing and documentation update) must not exceed one person week.

User Documentation

Any user of the software system is the target audience for user documentation generated about the software system.