

**OBJECT ORIENTED PROGRAMMING SESSIONAL - II**  
**PROJECT REPORT**



“PCOS is not just a disease, it’s a journey”

**Project Name:** PCOS Journey

**Group Number:** O - 5

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## Overview

The PCOS Journey, a Java-based application, addresses the rising prevalence of PCOS in women. With a focus on awareness, it integrates user-friendly features, education, and direct access to healthcare professionals. In recognizing PCOS as a condition without a permanent cure, this app will become an essential tool for ongoing management. It empowers users with self-assessment tools, educational resources, and doctor profiles, providing a holistic approach to navigating the journey of PCOS.

## Features

1. **User Authentication:** Implement user accounts to allow individuals to create profiles and log in securely.
2. **Self-diagnosed quiz:** Based on some common symptoms, it'll suggest if the user has PCOS or not.
3. **Information Resources:** Providing correct information about what PCOS is, its symptoms, cure, what causes this and the diagnosis process.
  - a. What is PCOS
  - b. Mental Health
  - c. Fertility
  - d. Exercise and Fitness
  - e. Diet and Nutrition
4. **PCOS and hormones:** Users can track their level of hormones here.
5. **Medication Reminders:** Set up reminders for medication schedules.
6. **Health Professional:** List of User Doctors of PCOS and hormones.
7. **Seamless Communication Hub:** Doctors can efficiently manage patient inquiries directly from the PCOS Journey platform dashboard, streamlining communication through received emails and enabling prompt replies to patients.
8. **Search Functionality:** Enable users to search for specific topics or symptoms within the app.
9. **FAQ Section:** Implement a chatbot that can answer common questions about PCOS and offer guidance.

## Tools Used:

**GUI:** JavaFX and SceneBuilder

**IDE:** IntelliJ

**DATABASE:** File I/O

## Accessibility:

The application is accessible to all kinds of women and PCOS and hormones related health professionals.

## Functionality:

Features of the PCOS Journey can be categorized into two different modules: User Module and Doctor User Module.

1. **Homepage:** This page has general information regarding PCOS and even without sign-up or login one can have access to this page.

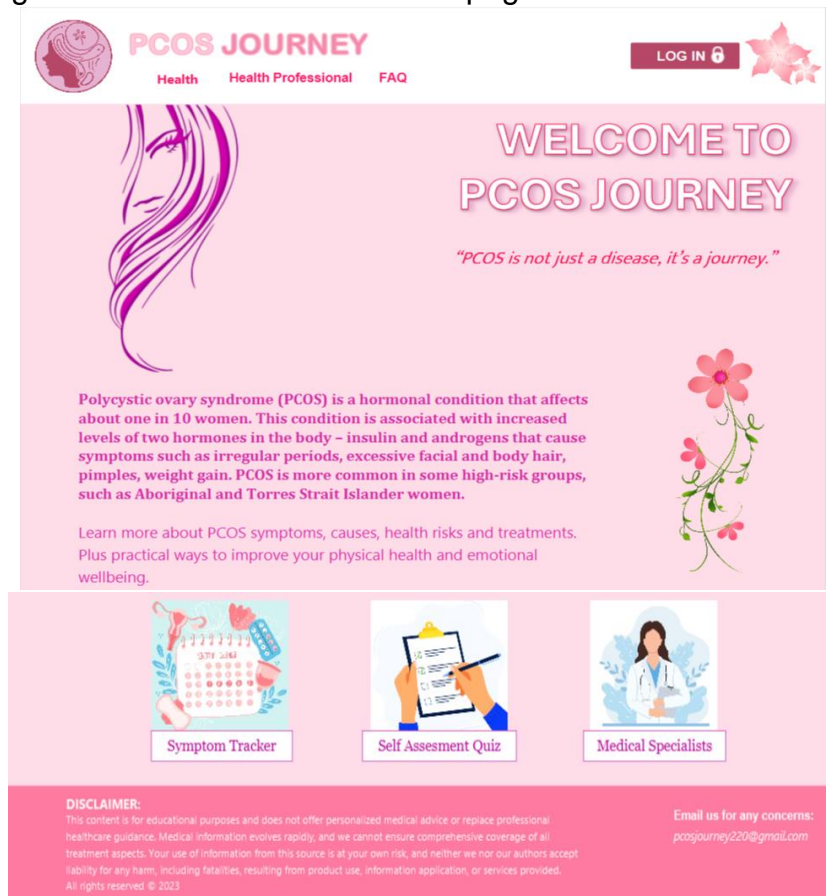


Fig-a: Homepage

- a) **Health:** This page will contain five buttons to access the pages of what is PCOS, mental health, exercise, diet and nutrition and fertility.



Fig-1a: HEALTH landing page

- **What is PCOS:** It contains the general information about PCOS, its symptoms, treatment and diagnosis process.

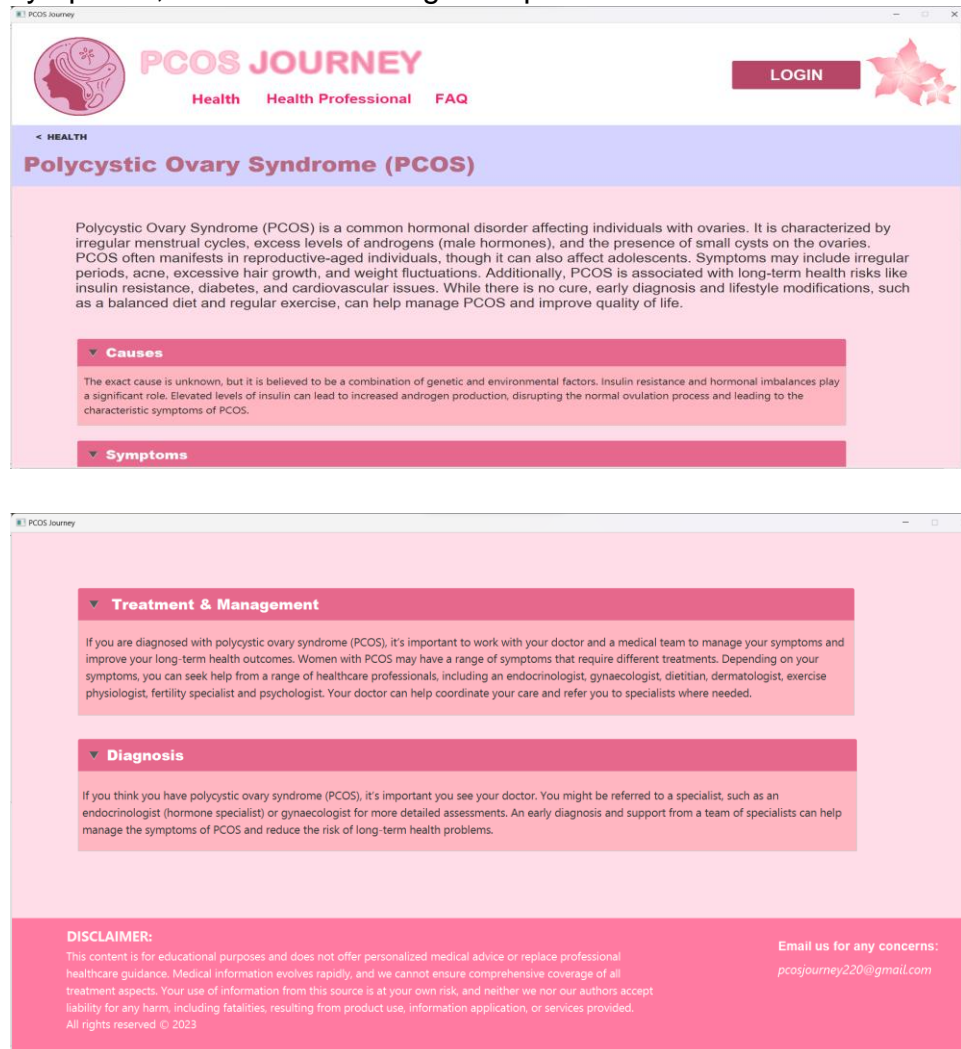
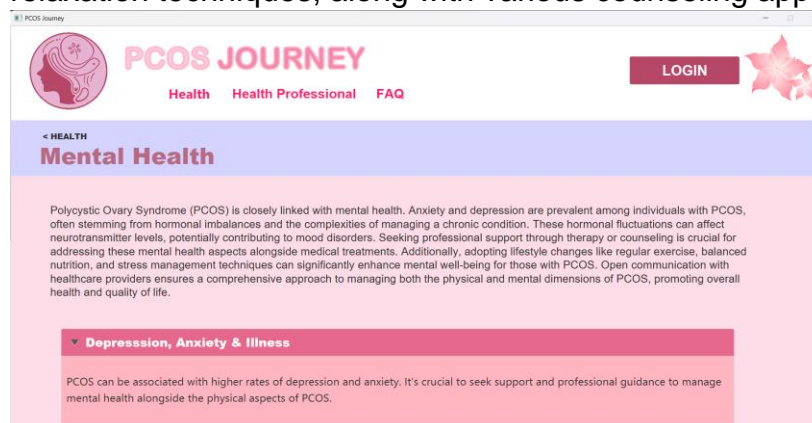
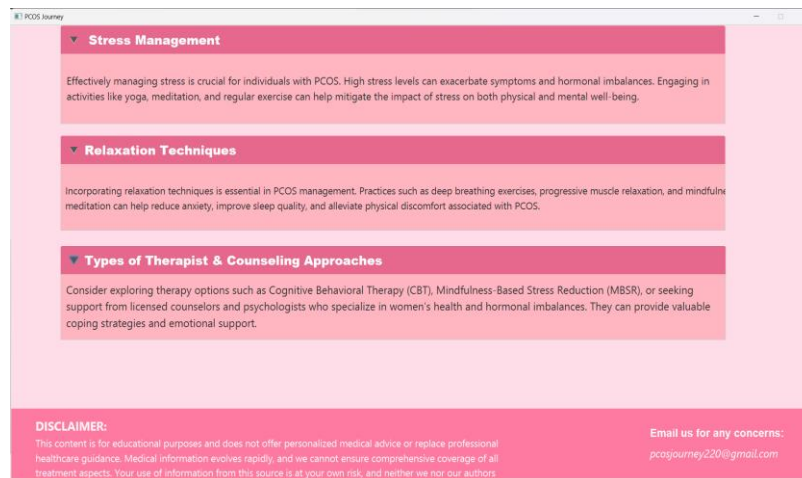


Fig-1a(i): PCOS

- **Mental Health:** It emphasizes the fact that PCOS has an impact on our mental health. Additionally, it incorporates stress management and relaxation techniques, along with various counseling approaches.





**Fig-1a(ii): Mental Health**

- **Fertility:** It includes important details about PCOS and fertility, exploring how it affects getting pregnant, infertility treatment, and its impact on mental well-being.



**Fig-1a(iii): Fertility**



- **Exercise:** It contains the importance of exercise and fitness for managing PCOS, suggestions, link with mental health and the barriers to exercise.

**PCOS JOURNEY**

Health Health Professional FAQ

LOGIN

< HEALTH

## Exercise & Fitness

Exercise and routine physical activity is very important in managing PCOS. Regular exercise has been shown to improve symptoms and reduce the risk of long-term complications. Exercise is medicine in PCOS. Being active in any way you can is important and reduces the severity of PCOS symptoms.

**▼ Why is it important?**

Women with PCOS can benefit greatly from regular exercise. It improves mood, increases energy, and assists in weight loss. It also treats insulin resistance, promotes menstrual regularity, and helps in fertility growth. Regular exercise is a vital factor in preventing diabetes and heart disease, as well as boosting general well-being, with advantages ranging from greater fitness to increased self-confidence.

**▼ What can I do?**

For a healthy lifestyle in PCOS, adults should aim for 150 minutes of moderate-intensity or 75 minutes of vigorous activity weekly, including muscle-strengthening exercises. Young women can benefit from 60 minutes of daily activity, including muscle-strengthening exercises three times a week. Those with weight loss goals should increase to 250 minutes weekly, including muscle-strengthening exercises on two non-consecutive days.

**▼ Exercise & Mental Health**

Exercise has been shown to be useful in treating mild to severe depression, lowering anxiety, and preventing depression return. While physical activity should not be used in place of regular therapy, especially for severe depression, different types of exercise are equally useful in controlling depressed symptoms.

**▼ Barriers to Exercise**

PCOS may impact women's confidence in exercising, influenced by factors like body image, weight, and past negative experiences. If initiating exercise feels challenging, seek support through comfortable exercise groups or collaborate with a specialist to build confidence for regular physical activity.

**DISCLAIMER:**  
This content is for educational purposes and does not offer personalized medical advice or replace professional healthcare guidance. Medical information evolves rapidly, and we cannot ensure comprehensive coverage of all treatment aspects. Your use of information from this source is at your own risk, and neither we nor our authors accept

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pcosjourney220@gmail.com

**Fig-1a(iv):Exercise and Fitness**

- **Diet and Nutrition:** It tells you why having a good diet for PCOS is important and gives suggestions on what to eat.

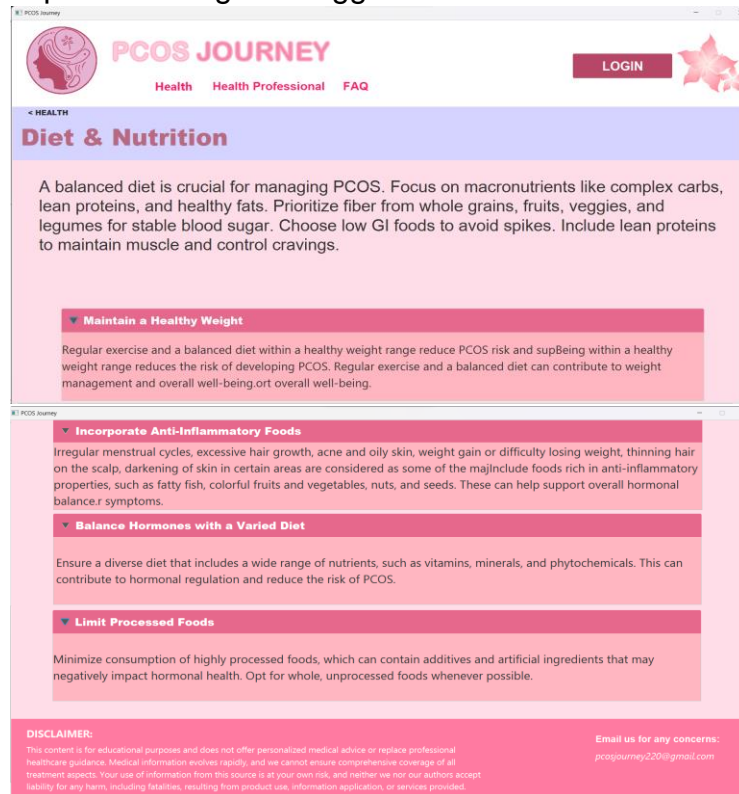


Fig-1a(v): Diet & Nutrition

- b) **Self-Assessment Quiz:** At first, users need to agree with the disclaimer then they can enter into the quiz page, by answering the questions after submitting another page will show the result.

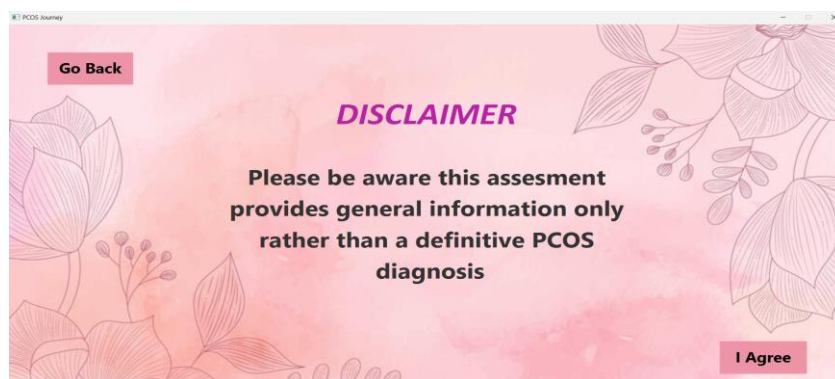
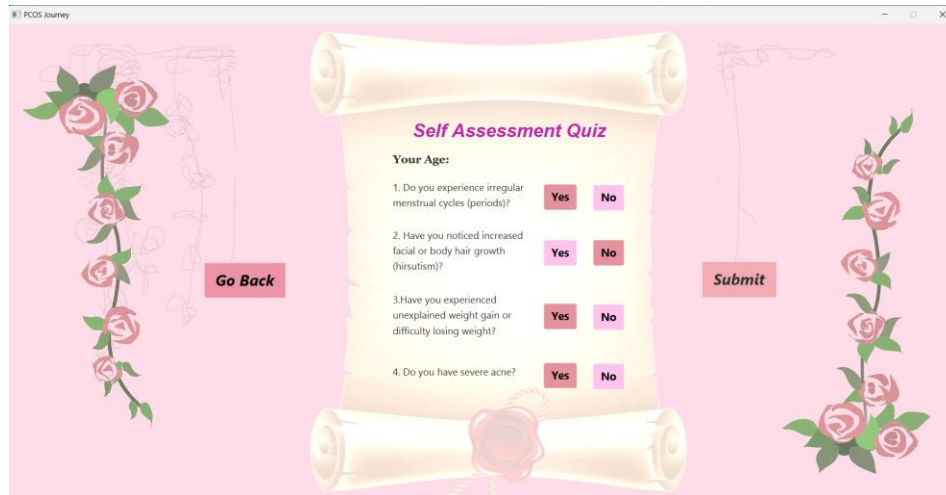


Fig-1b(i): Quiz Disclaimer





**Self Assessment Quiz**

Your Age:

1. Do you experience irregular menstrual cycles (periods)?
2. Have you noticed increased facial or body hair growth (hirsutism)?
3. Have you experienced unexplained weight gain or difficulty losing weight?
4. Do you have severe acne?

[Go Back](#) [Submit](#)

Fig-1b(ii): Quiz

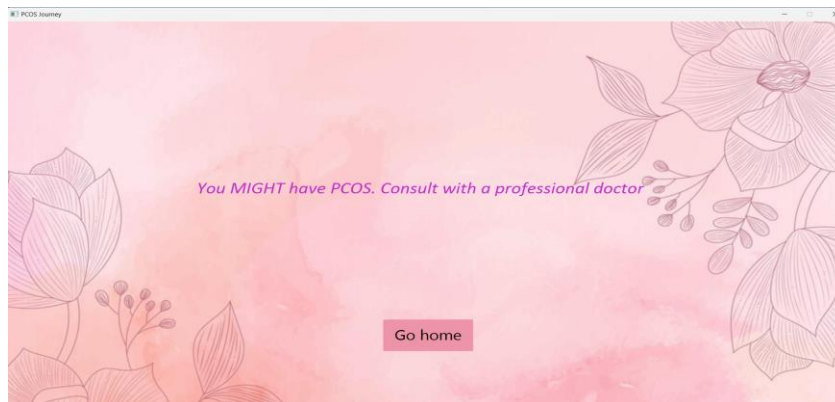


Fig-1b(iii): Quiz Result

**c) Health Professionals:** Here users can find the list of doctors in the PCOS Journey platform. They can also search for a particular doctor using the search bar.

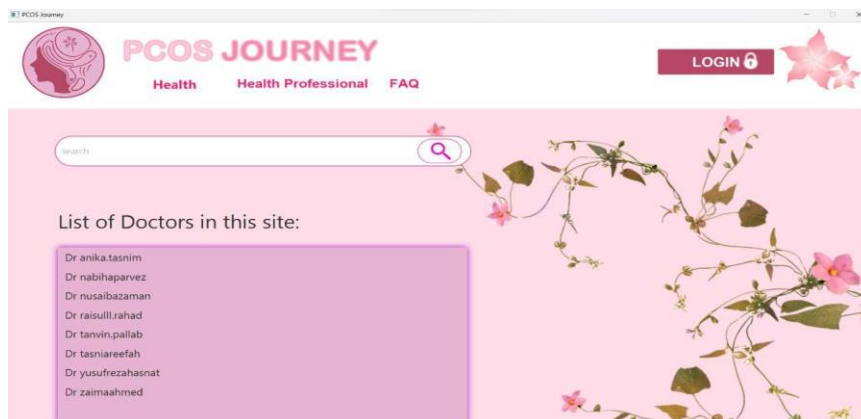


Fig-1c: List of Doctors

Here in the figure we can see that first we click a doctor username from the list of doctors and then the popup opens. Here in the popup user must input their own user email and their message to the doctor. Once the send button is clicked, it will send a mail to the doctor.

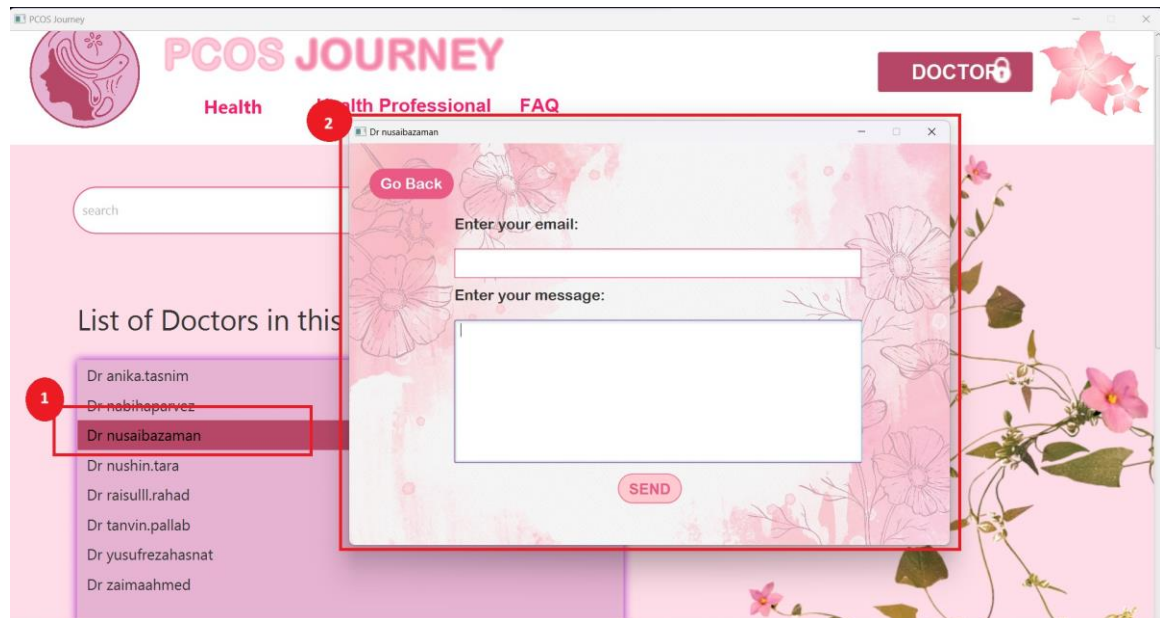


Fig-1c.ii: Pop up to send mail to doctors

2. **Signup:** New Users can create accounts by filling up the required text fields and selecting what kind of user they are.

The screenshot shows the 'SIGN UP' form on the PCOS Journey website. The form is titled 'SIGN UP' in large, bold, pink letters. Below the title, there is a question 'Are you doctor or patient?' with two radio button options: 'User' and 'Doctor user'. Below this, there are three text input fields: 'Email:', 'Password:', and 'Date of Birth:'. The 'Password:' field has a 'Show Password' toggle. Below the 'Date of Birth:' field, there is a checkbox labeled 'I agree to the Terms & Conditions of PCOS Journey'. At the bottom of the form, there is a 'SIGN UP' button. Below the button, there is a link 'Already have an account? LOG IN'. On the right side of the form, there is a large pink banner with the 'PCOS JOURNEY' logo and the tagline 'PCOS is not just a disease, it's a journey.'

Fig-2: Sign-up

3. **Login:** Users need to fill up the user type, email and password box accurately to log into our application.

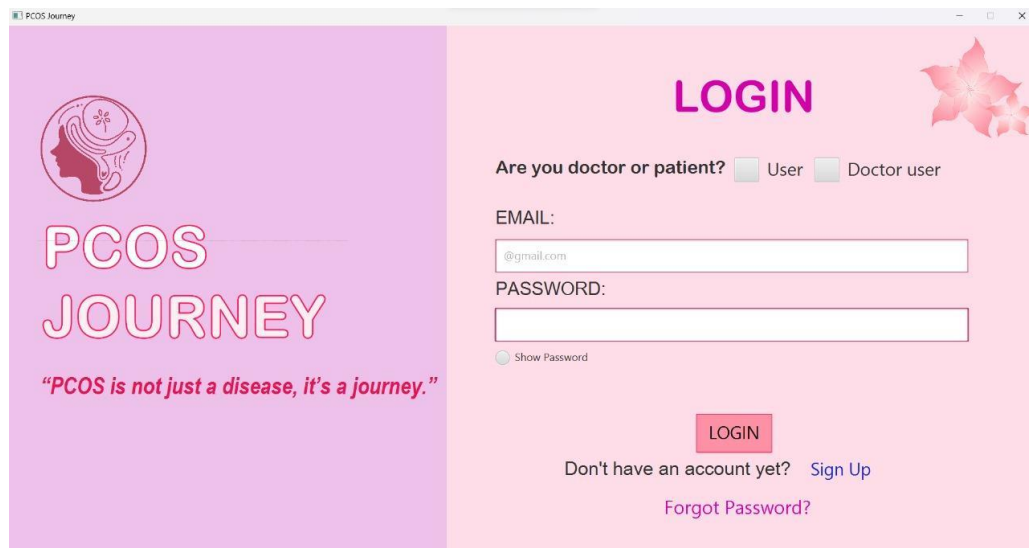


Fig-3: Login

4. **Dashboard (User Module):** User can access their doctors list, hormone and weight tracker from here.

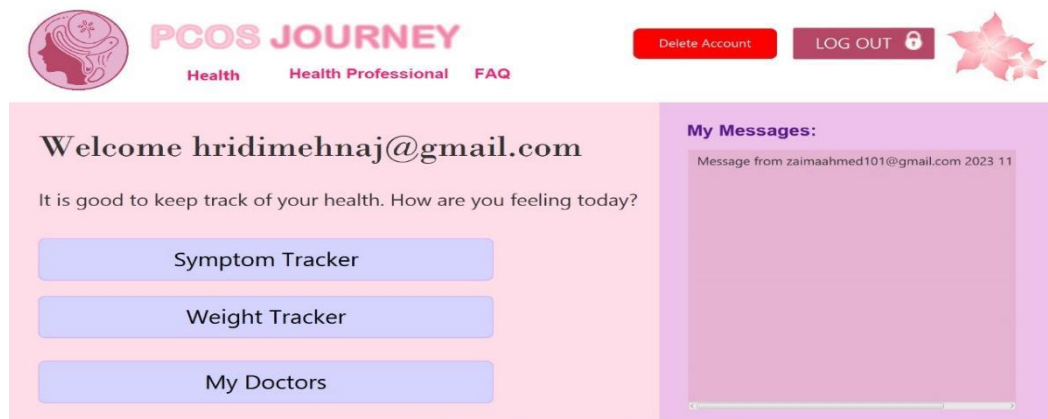


Fig-4: User Dashboard

User can delete their account using the delete account button.

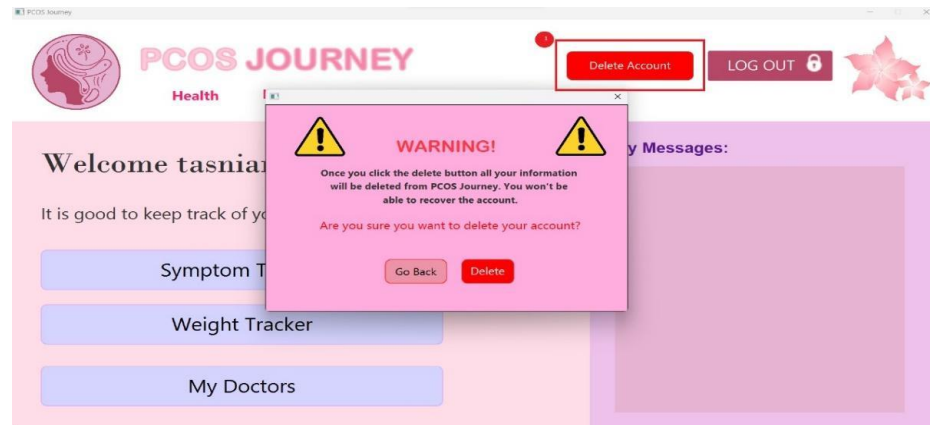


Fig-4: Delete pop-up for user account

- a) **Symptom Tracker:** In this page we will find hormone tracker and medicine tracker.

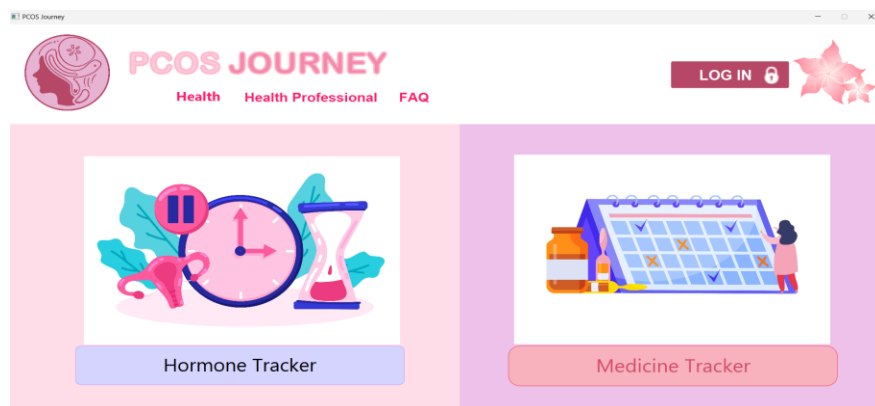
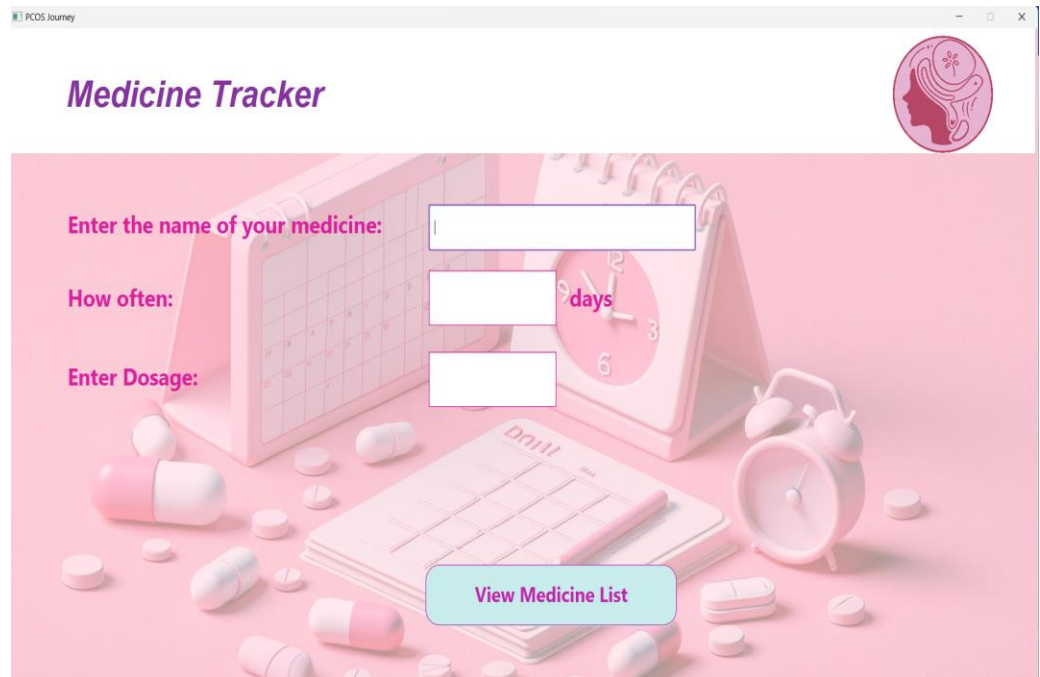


Fig-4a: Symptom Tracker

- **Hormone Tracker:** At first, users need to select a type of hormone and then enter the level of their in the box. After submitting it will show the result in that page.

Fig-4a(i): Hormone Tracker

- **Medicine Tracker:** User will enter the medicines with how often a day and dosages. They can see their medicine list and how often and when a medicine needs to be taken in another page. They will get a reminder in their email in that particular time to take the medicine.



The image shows a web application window titled "PCOS Journey" with a "Medicine Tracker" section. The background is a pinkish-red with medical-themed illustrations like pills, a calendar, and an alarm clock. The form includes three input fields: "Enter the name of your medicine:", "How often:" (with a "days" label), and "Enter Dosage:". A "View Medicine List" button is at the bottom right.

PCOS Journey

## Medicine Tracker

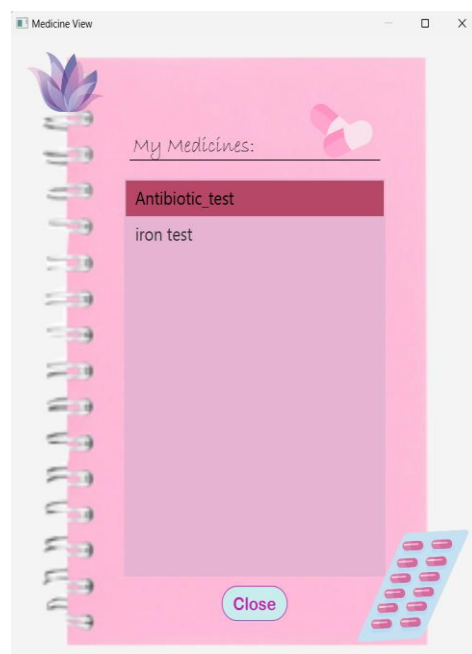
Enter the name of your medicine:

How often:  days

Enter Dosage:

[View Medicine List](#)

Fig-4a(ii): Medicine Tracker



The image shows a "Medicine View" pop-up window. It has a pink background with a spiral notebook illustration on the left and a pill blister pack on the bottom right. The text "My Medicines:" is followed by a list containing "Antibiotic\_test" and "iron test". A "Close" button is at the bottom.

Medicine View

My Medicines:

- Antibiotic\_test
- iron test

[Close](#)

Fig-4a(ii): View Medicine Pop-up

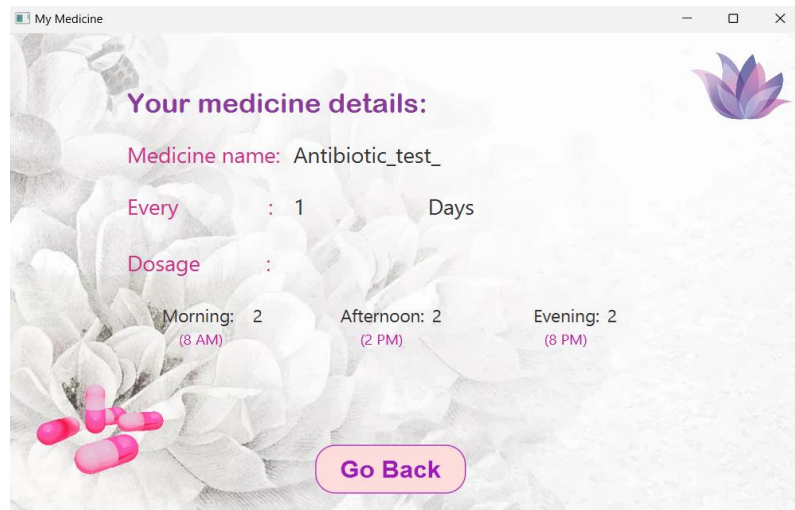


Fig-4a(ii): See Message Details Pop-up

- b) **Weight Tracker:** After user enters their weight and height, it will calculate their BMI and show the result.

A screenshot of a web application window titled "Weight Tracker". The window has a light blue header bar with the title "Weight Tracker" in bold black text. On the right side of the header, there is a circular icon containing a silhouette of a person's head and shoulders. The main content area has a light blue background with a subtle floral pattern. It contains two input fields: "Enter your weight (in kg):" with the value "62" and "Enter your height (in cm):" with the value "158". Below these fields is a blue rounded rectangular button labeled "SUBMIT". To the right of the input fields, there is a large, stylized illustration of a person's torso and arms, with a scale-like graphic on the chest. Below the "SUBMIT" button, there is a message: "Normal: Keep up the good work for a healthy BMI."

Fig-4b: Weight Tracker



- c) **My doctors:** Here, at first in a page, users will find the list of doctors they have contacted. By clicking a doctor's name, they will find the message they have sent the doctor via email.

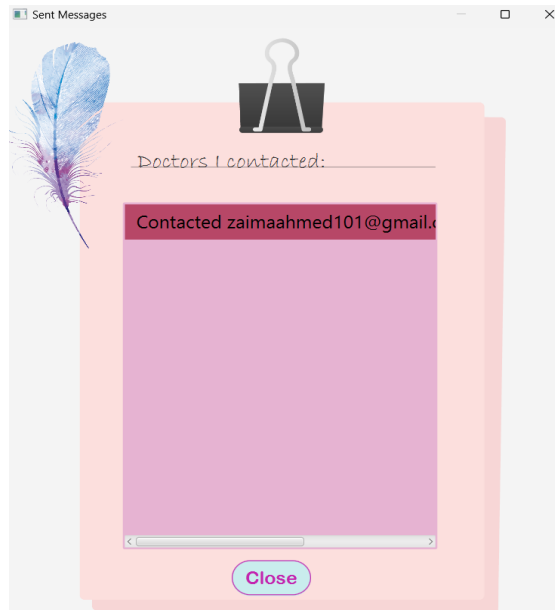


Fig-4c: Doctors I contacted pop-up

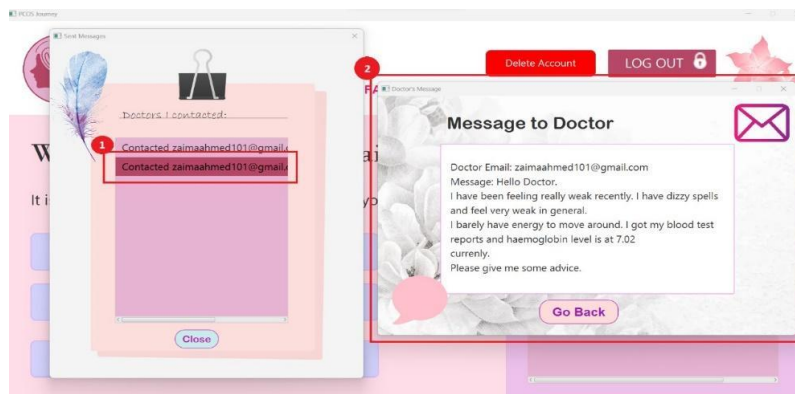


Fig-4c(i): See message i sent to doctor

Users can find the replies of the doctors from the right portion of the dashboard.

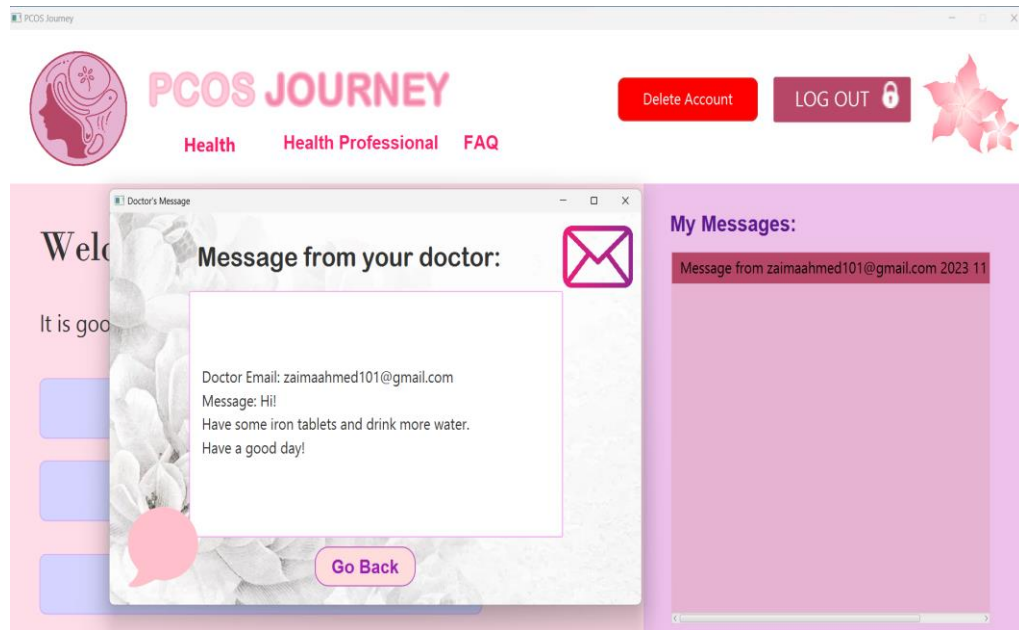


Fig-4c(i): See message from doctor

- d) **My Profile:** By clicking their name from the dashboard, a new page will be popped up with all their information and users can also change password from here.

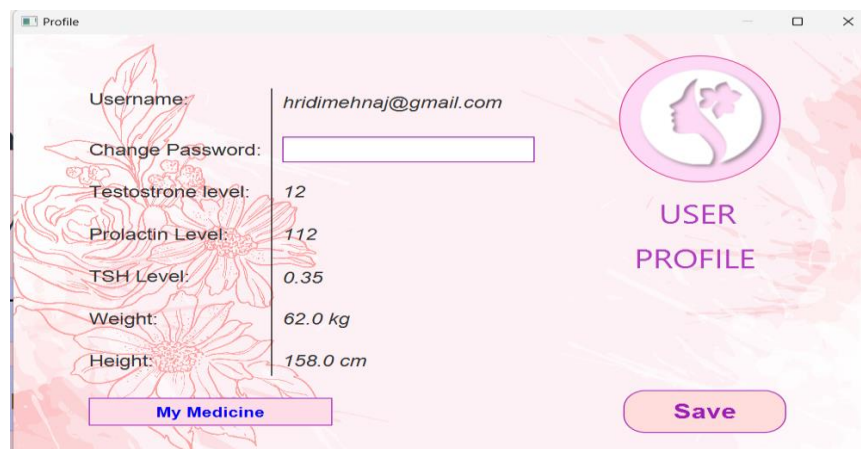


Fig-4d: My Profile

5. **Dashboard (Doctor User):** In doctor's dashboard, there will be patients' messages and his(doctor) replies to the patient.



Fig-5: Dashboard(Doctor user)

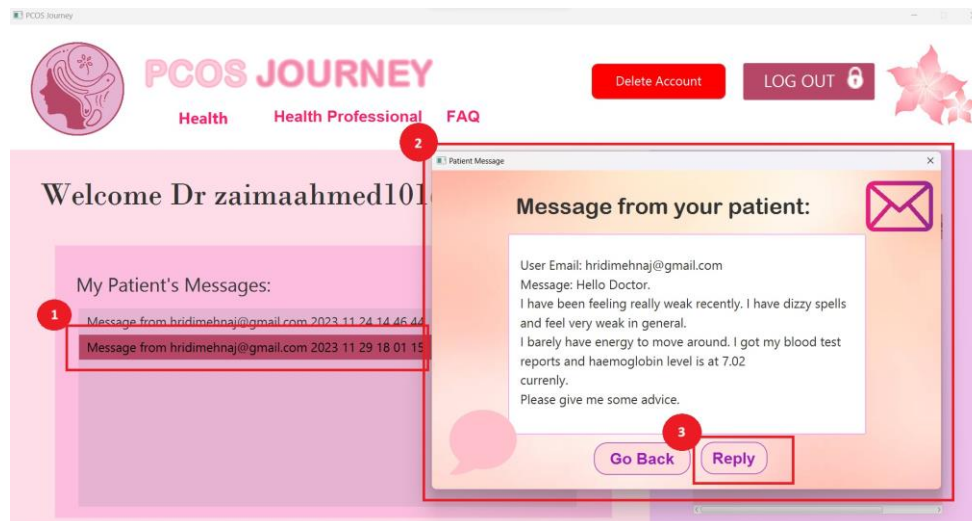


Fig-5a: Message from patient

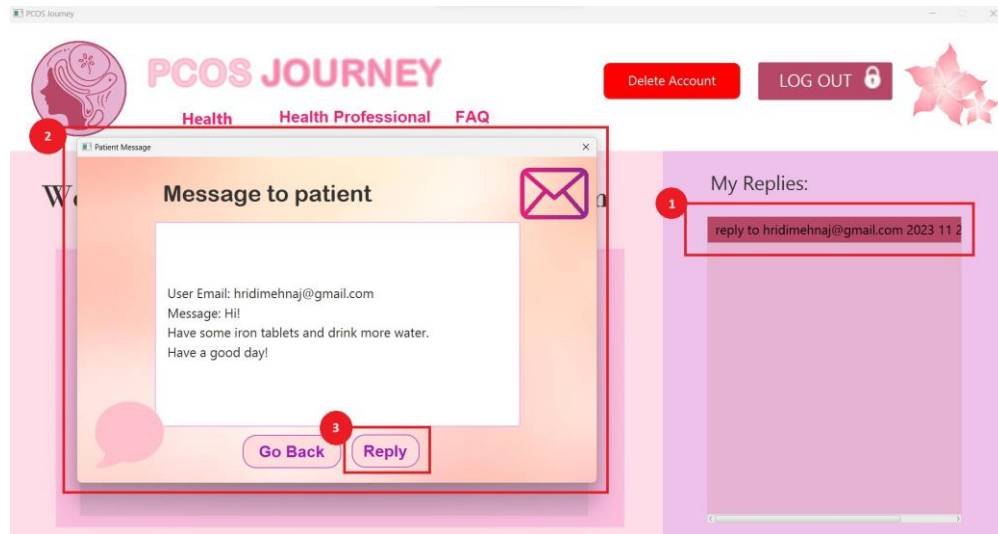


Fig-5b: Reply to patient

The screenshot shows the 'Patient Message' pop-up form. It has a 'Go Back' button at the top left. The form contains three input fields: 'Enter your email:', 'Enter reply email:', and 'Enter your message:'. The 'Enter your message:' field is a larger text area. At the bottom right, there is a 'SEND' button. The background of the form features a floral pattern.

Fig-5c: Pop-up page doctor uses to send reply to patient

6. **FAQ Section:** We have stored answers for a set of questions. When user asks a question, the chat bot will answer that.

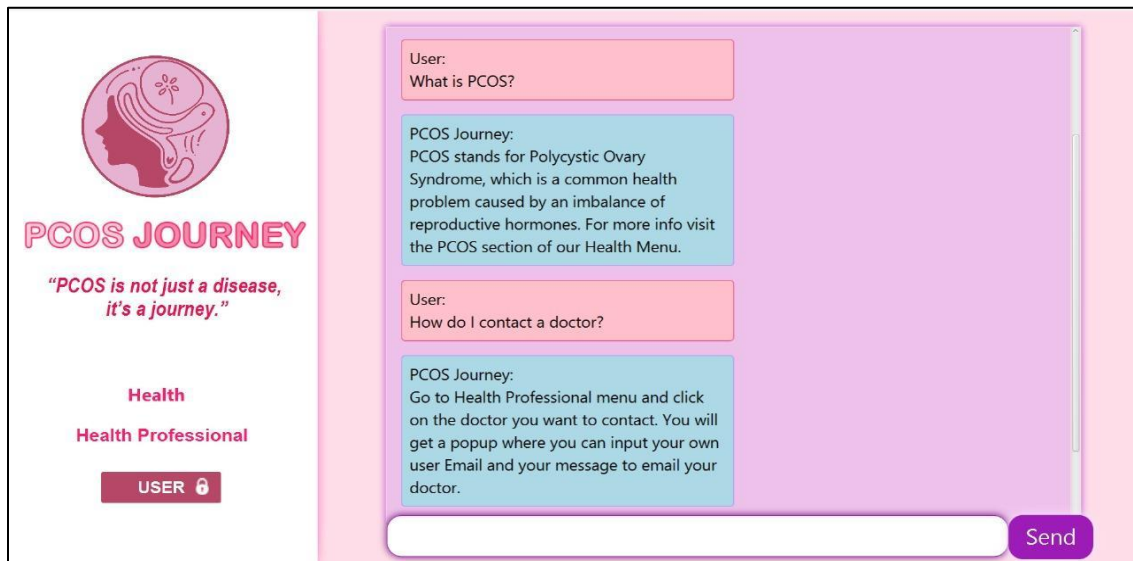


Fig-6: FAQ section with a chatBOT

## Limitations:

In our project, there are some limitations. Instead of using a database system, we chose file I/O, making the process of adding/modifying/deleting users and doctor users slow and inefficient for a large amount of data. This also causes the project to be set up on individual PCs as each file path differs from one PC to another. Due to time constraints, we haven't included the menstrual cycle tracker feature yet. Also, the scheduled mail function in the medicine tracker doesn't work right now because the project is not hosted on a server. It only works if the application is running through JDK Compiler. However, once it's hosted with a proper API in the future, this feature will start working smoothly even if the application isn't running.

## Future Scope:

PCOS Journey has a huge scope in the future. Such as,

### 1. Efficiency Boost with Database:

- Implementing a database will make our system more efficient in handling user data.

### 2. Menstrual Cycle Tracker:

- Adding a menstrual cycle tracker will allow users to monitor the regularity of their periods and thus understand the severity of their PCOS.

### **3. Exercise Reminders:**

- Introducing regular exercise reminders to help users stay on track with their fitness routines.

### **4. Personalized Diet Charts:**

- Providing customized diet charts based on individual health conditions for better dietary management.

### **5. Direct Data Sharing with Doctors:**

- Enabling direct data transfer to selected doctors, streamlining communication and enhancing healthcare.

### **6. Community Server for Support:**

- Establishing a community server where individuals with PCOS can share experiences and seek support.

As PCOS keeps becoming a bigger concern globally, the improvements to our PCOS management system will become more and more valuable in supporting overall well-being.