



FACULTY OF COMPUTING & INFORMATICS
CSE6224 - SOFTWARE REQUIREMENTS ENGINEERING
TERM 2420

PART 1: Campus Wellness Portal with Medical System and Fitness Center Integration

TT6L – GROUP 5 – Task 4_Elecitation_Execution

STUDENT NAME	STUDENT ID
Ng Jia Hong	1211101788
Danish Haziq	1221302704
Lee Ken Yu	1221303813

LECTURER'S NAME: DR ZARINA BINTI CHE EMBI

SUBMISSION DATE:

25th May 2025

Contents

3.0 Elicitation Execution Documentation	1
3.1 Dissatisfier	1
3.2 Satisfier.....	3
3.3 Delighter	5
3.4 Elicitation Evidence	9
3.4.1 Interview 1.....	9
3.4.2 Interview 2.....	10
3.4.3 Brainstorm	12

3.0 Elicitation Execution Documentation

3.1 Dissatisfier

1. Interview

Requirement 1: User Authentication

Category	Details
Functional	The system provides a secure user registration and login via university credentials, incorporating optional multi-factor authentication
Quality	Fast and reliable login within a few seconds experience with minimal delay
Constraint	The system must comply with institutional identity management policies and relevant privacy legislation such as PDPA and GDPR

Requirement 2: Medical Appointment Availability Validation

Category	Details
Functional	The system shall validate doctor and room availability in real-time during the appointment booking process.
Quality	Appointment bookings must reflect actual availability and return immediate feedback upon selection.
Constraint	Integration with the health centre's backend scheduling system must allow for real-time conflict checking and error-free synchronization.

Requirement 3: Fitness Class Capacity Management

Category	Details
Functional	The system shall restrict class registrations when capacity is full and offer alternative suggestions where possible.
Quality	Capacity limits must be enforced before confirmation with visual indicators of available slots.
Constraint	Booking logic must be consistent across web and mobile platforms and updated within 1–2 seconds to reflect real-time class occupancy.

Requirement 4: Wellness Progress Visualization

Category	Details
Functional	The system shall generate graphical summaries and trends based on user-submitted wellness data.
Quality	Users must be able to view progress and patterns over time using intuitive visuals (charts, graphs).
Constraint	Data must be stored securely, and visual analytics must not affect system responsiveness.

Requirement 5: Notification Timing and Relevance

Category	Details
Functional	The system shall deliver timely and actionable notifications for fitness classes and appointments.
Quality	Notifications must be delivered at least 15 minutes prior and allow quick response (confirm, cancel).
Constraint	Must support email, push, and in-app notifications with no redundancy or confusion.

Requirement 6: User Role Switching Restrictions

Category	Details
Functional	The system shall allow seamless switching between multiple roles in a single session.
Quality	Switching roles should not require re-login or cause session resets.
Constraint	Must securely isolate and manage permissions dynamically per role context.

Requirement 7: Privacy and Data Visibility Control

Category	Details
Functional	The system shall allow users to set visibility controls on their wellness logs.
Quality	Users must have clear control over who can view their data (e.g., private, counsellor-only).
Constraint	Must comply with PDPA/GDPR and provide toggle-based privacy configuration per entry.

3.2 Satisfier

Requirement 1: Real-Time Appointment Checking

Category	Details
Functional	Doctor and room schedules must be verified at the time of booking.
Quality	Users should receive instant confirmation or error handling.
Constraint	System must connect to internal scheduling API with live sync.

Requirement 2: Visible Class Capacity Before Registering

Category	Details
Functional	Students should see real-time slot availability before selecting a fitness class.
Quality	System must display "available seats" count clearly.
Constraint	Must refresh availability automatically after every registration or cancellation.

Requirement 3: Wellness Tracking and Visualization

Category	Details
Functional	Users must be able to view mood/stress tracking history in graph/chart format.
Quality	Visualization must be interactive, responsive, and insightful.
Constraint	Charts must be updated with each new log entry and comply with UI accessibility standards.

Requirement 4: Actionable Notifications

Category	Details
Functional	Notifications must allow one-tap responses like confirm, decline, or reschedule.
Quality	Delivered notifications must be contextual and under 60 seconds latency.
Constraint	All responses must be captured in user logs and synced with backend updates.

Requirement 5: Multi-Role Usability

Category	Details
Functional	Users with more than one role (e.g., staff and student) must use both without logout.
Quality	System should maintain one session with modular role switching.
Constraint	Role context must be auditable and session state preserved.

Requirement 6: Customizable Privacy Settings

Category	Details
Functional	Each wellness log entry should have a visibility toggle (e.g., private, shared).
Quality	Default settings should be user-configurable and reversible.
Constraint	Must meet all institutional privacy guidelines and retain activity logs securely.

Requirement 7: Feedback Collection and Acknowledgment

Category	Details
Functional	The system shall allow users to submit structured feedback related to appointments, fitness classes, and overall portal experience.
Quality	Feedback should be acknowledged in real-time with a success message or email confirmation.
Constraint	Feedback must be stored securely, support anonymity, and comply with institutional privacy policies.

3.3 Delighter

Brainstorming Minute

Date: 25/04/2025

Time: 4 PM

Moderator: Ng Jia Hong

Team Members: Danish Haziq, Lee Ken Yu

1. Goals of the Session:

The primary goal of this brainstorming session was to identify features that are optional yet involves innovative functionalities which could significantly boost student engagement, satisfaction, and long-term platform adoption when implemented in the Campus Wellness Portal. These features are not mandatory but would create a "wow" effect if delivered well.

2. Rules for Brainstorming:

To ensure a productive and unbiased idea generation session, the following structured and research-backed brainstorming principles were applied:

- **Quantity Over Quality (Initial Phase):** Emphasis was placed on generating a large number of ideas quickly, as this increases the likelihood of identifying innovative concepts.
- **No Evaluation During Ideation:** Ideas were recorded without criticism or filtering during the generation phase to avoid suppressing creativity (as per Osborn's classical brainstorming model).
- **Encouragement of Wild Ideas:** Unconventional or “out-of-the-box” suggestions were welcomed, as these often lead to unique and impactful features.
- **Building on Others’ Ideas (Piggybacking):** Participants were prompted to expand on previous suggestions to encourage synergy and evolve concepts collaboratively.
- **Equal Participation:** The session was facilitated to ensure that every participant contributed equally, avoiding domination by a few voices.
- **Documentation and Transparency:** All ideas were logged in real time for traceability, reflection, and later prioritization.

3. Collected Ideas:

- Gamification system to reward healthy habits with badges or points.
- Virtual wellness assistant/chatbot to give quick health advice.
- AI-driven personalized wellness tips and class suggestions. Just ok
- Social features like group fitness challenges or leaderboards.
- Mood tracking journal with data visualization.
- Integration with smartwatch fitness trackers.

- Monthly wellness progress report emailed to users.
- Student-led community forums or mental health discussion boards.
- Relaxation and mindfulness sound playlists within the app.
- QR check-in for fitness classes and events.

4. Categorization of Ideas:

Engagement Features:

- Gamification rewards system
- Social challenges & leaderboards
- Student forums

Smart Assistance Features:

- AI-based wellness tips
- Virtual chatbot assistant
- Smartwatch integration

Self-Monitoring Features:

- Mood tracker with visual history
- Monthly health summary report
- Relaxation and mindfulness tools

Convenience Features:

- QR code check-in
- Auto-suggest fitness classes based on goals

5. Voting Results:

Each participant was provided **three votes** to allocate to the most valuable or feasible delighter features. The voting outcome was as follows:

- **QR check-in for fitness classes and events: 2**
- **AI-driven personalized wellness tips and class suggestions: 2**
- **Monthly wellness progress report emailed to users: 1**

The top three winning ideas were selected based on total votes and alignment with project goals.

6. Selected Top Three Ideas:

Based on the updated voting results and alignment with user-centered design principles, the following top three delighter features were selected for potential inclusion in the Campus Wellness Portal:

1. QR Check-In for Fitness Classes and Events

A QR code-based check-in system will streamline attendance logging for fitness classes and wellness events. This feature enhances convenience, reduces manual effort, and enables real-time attendance tracking, contributing to better engagement data collection and user accountability.

2. AI-Driven Personalized Wellness Tips and Class Suggestions

Leveraging machine learning, the system will analyze a student's activity, preferences, and wellness goals to provide tailored class suggestions and wellness advice. This personal touch encourages consistent participation and reinforces positive wellness habits.

3. Monthly Wellness Progress Report (Email Delivery)

The system will automatically generate and email personalized reports summarizing the student's attendance, achievements, feedback, and wellness milestones for the month. This feature promotes self-awareness, goal tracking, and a sense of accomplishment, further motivating students to stay engaged.

7. Feedback Collection:

• Positive Remarks:

Participants appreciated the open nature of the discussion and felt their ideas were well received. Many agreed the gamification feature could drive user engagement significantly.

• Suggestions for Improvement:

- Include health professionals or fitness instructors in future brainstorming.
- Prioritize ideas that balance innovation with implementation feasibility.
- Conduct surveys with students to validate selected delighter features before development.

Brainstorming

Requirement 1: QR Check-In for Fitness Classes and Events

Category	Details
Functional	The system shall allow students to check in to fitness classes and wellness events by scanning a unique QR code using their mobile devices.
Quality	The QR code scan and check-in confirmation must be completed within 2 seconds to ensure a seamless experience at event entry points.
Constraint	The feature must work both online and offline, with cached QR recognition that syncs once the device reconnects to the network.

Requirement 2: AI-Driven Personalized Wellness Tips and Class Suggestions

Category	Details
Functional	The system shall use AI algorithms to analyse a student's profile, activity history, and preferences to provide personalized health tips and class recommendations.

Quality	Recommendations must refresh weekly and reflect the user's most recent engagement patterns and wellness goals.
Constraint	AI-generated suggestions must be explainable and transparent, and data used must comply with privacy standards and be anonymized where necessary.

Requirement 3: Monthly Wellness Progress Report (Email Delivery)

Category	Details
Functional	The system shall automatically generate and email students a personalized monthly report summarizing their attendance, achievements, and wellness milestones.
Quality	Reports must be visually clear, concise, and mobile-friendly, with PDF and email-embedded formats available.
Constraint	The reporting system must ensure secure email delivery and respect opt-in preferences set by the user.

3.4 Elicitation Evidence

3.4.1 Interview 1



Transcript: To gather the requirements for the wellness campus, I would like to ask you a few questions. So, for the first question, okay let's start with the medical appointment system. Have you experienced any issues? Yes actually. Sometimes when I book an appointment, it says that it's not valid later.

It should check availability immediately. Ah, okay. I see. So real-time availability checks are missing. Right?

Okay. Got it. What about the fitness class, registration system? That's also a problem. Sometimes it's very annoying when you register already, then they say that the class is full.

Why can't you just, like, show the limit before confirming? Right. Right. Thank you. Okay.

That's clear. Now what do you have to think about the wellness tracker? Have you used it regularly? Yep. I fill in my wellness tracker every day, but then I don't see any trend or progress chart.

It's just like there. Okay. That's very useful feedback. We'll take this into account when designing the arbiter version of the portal. Thanks again for your input.

See you next time. Alright. Alright. No problem. I'm glad to help.

3.4.2 Interview 2



Transcript : Good evening. Thank you for agreeing to do this interview. So as you know, we are gathering more detailed feedback from different users for the roles for the campus wilderness portal. Let's dive right in. So can you share your thoughts on the notification system in the portal?

Sure. So far, I've been getting notifications for appointments, gym sessions, and sometimes even wellness tips. But I feel like they're not very helpful. Oh, can you elaborate on that? Yeah.

Like, I got a push notification for a fitness class. I registered four or five minutes before it started, and that's not helpful. It should come earlier as well as let me respond to it. Oh, I see. That makes sense.

Were there any other issues you noticed with the notifications? Well, sometimes I get the same alert on both email and the app, but they don't explain anything. It's not clear what to do with them, especially if there's no response button or action. Oh, got it. And that brings us to another point, user roles.

I understand your an I understand you are a medical staff, but you also use other parts of the system. Am I right? Yeah. I use the gym regularly, and I'm also a mentor for some students. But the system doesn't seem to handle the multiple roles well.

Oh, I see. What happens when you try switching between roles? It's frustrating. As a medical staff, I also intend fitness sessions attend fitness sessions, but the system logs me out when switching views. It should know where it should know I wear multiple hat.

That's that's a great insight. So the system assumes one role purpose per session and doesn't let you transition smoothly? Exactly. I have to log out and back in with a different profile just to book a gym slot or join a mentoring dashboard. It wastes it wastes my time and breaks the flow.

I see. Now that's valuable feedback. Now I'd like to ask you about wellness logging. Are you using the wellness checker or mental health locks? Yeah.

I tried to log my stress levels and mood. It's a good tool, but I've been thinking a lot about who sees the data. I see. You mean concerns about privacy? Yeah.

I want to lock my wellness, honestly, but I hesitate because I'm unsure who else can see my check ins. There should be more clarity or a toggle. So you like some form of visibility control, I'm guessing? Exactly. Like, let me choose whether it's private to me or visible to counsellors.

Maybe some logs I want to share, but, but others, I don't. Okay. I see. I see. Thanks, Aleph.

That's incredibly helpful. So to summarize, the key points we discussed were improving the timing, add clarity of notifications, and making the systems smarter by overlapping roles. Yeah. That pretty much covers it. I think those changes would make the portal more intuitive and trustworthy.

Okay. Perfect. Thank you so much. Okay. I'll see you again.

3.4.3 Brainstorm



