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**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

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**SUBMISSION DATE:**

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# 3. Elicitation Execution Documentation

## 3.1 Dissatisfier

1.Interview

Requirement 1 : User Authentication

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| --- | --- |
| 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 : Appointment Scheduling System

|  |  |
| --- | --- |
| Category | Details |
| Functional | The system shall enable students to schedule, reschedule, and cancel health center appointments with automated reminders. |
| Quality | Appointment confirmation or changes must be reflected in real-time |
| Constraint | The system must integrate with the university’s health center scheduling backend and maintain synchronization across platforms. |

Requirement 3 : Data Security Management

|  |  |
| --- | --- |
| Category | Details |
| Functional | The system must ensure encrypted data transmission and secure storage for all user data. |
| Quality | All transactions must pass through SSL/TLS encryption and be verified. |
| Constraint | The system must comply with institutional cybersecurity frameworks and not experience any breaches during the first year. |

Requirement 1 : Fitness Class Management

|  |  |
| --- | --- |
| Category | Details |
| Functional | The system shall allow students to view, register for, and track participation in campus fitness classes and personal wellness goals. |
| Quality | Class bookings and status updates must reflect within the system within 2 seconds to ensure up-to-date availability. |
| Constraint | The system must be available on both mobile and web platforms and support accessibility compliance (e.g., WCAG standards). |

## 3.2 Satisfier

Requirement 1 : Fitness Class Registration and Tracking

|  |  |
| --- | --- |
| Category | Details |
| Functional | The system shall allow students to view, register for, and track fitness class participation and wellness progress. |
| Quality | Registration confirmation and updates must appear within 2 seconds. |
| Constraint | Must be accessible through both desktop and mobile interfaces. |

Requirement 1 : Wellness Notifications and Communication

|  |  |
| --- | --- |
| Category | Details |
| Functional | The system shall send wellness updates, health tips, and event alerts via email, SMS, and in-app notifications. |
| Quality | Notifications must be delivered with 95% success rate within 1 minute. |
| Constraint | Must allow students to opt in/out of notifications and store preferences securely. |

Requirement 1 : Feedback Collection Mechanism

|  |  |
| --- | --- |
| Category | Details |
| Functional | The system shall collect feedback on wellness services and overall portal usability via a structured form interface. |
| Quality | Feedback submissions must be acknowledged in real-time and stored in a secure database. |
| Constraint | Anonymous submissions must be supported without collecting identifiable information, ensuring student privacy is upheld. |

## 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.

1. 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 analyze 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. |