GROUP : ZEN

Reference No.: PROPOSAL/UTM/2023 (01)

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PROJECT PROPOSAL

PROJECT TITLE : SafeSpace

PROJECT MANAGER : MAATHUREE A/P VEERABALAN

EXECUTIVE SUMMARY

The aftermath of the 2020 COVID-19 pandemic has highlighted a pressing concern for mental health. The pandemic-induced fear, uncertainties about the future, and prolonged isolation have taken a severe toll on people's mental well-being, underscoring the need for accessible and effective mental healthcare.

We are starting a revolutionary effort to create a complete mental health assistance application in response to this problem. The purpose of this application is to serve the requirements of individuals who are 18 years of age and older who are employed or not, in partnership with adult psychiatrists and other relevant parties.

Our primary stakeholders include working adults seeking support to manage workplace stress and mental well-being, non-working adults looking for resources to address their mental health needs, adult psychiatrists providing expert guidance and treatment, employers and HR departments interested in boosting their employees' well-being, clinical psychologists contributing their expertise to enhance user experience and pharmacies that play a vital role in the efficient and secure delivery of prescribed medication to users.

This project endeavours to create a user-centric, accessible, and inclusive mental health platform. It will offer immediate access to licensed mental health professionals, including 24/7 consultations, mood tracking tools, and online prescription services. Furthermore, it will bridge the language gap by offering bilingual language options (Bahasa Melayu and English), making it easier for users to express themselves comfortably.

Our goal is to establish this application, known as SafeSpace, as the premier mental health resource, setting new standards for innovation, inclusivity, and user experience. SafeSpace aims to change the way people perceive and utilise mental health resources, promoting emotional stability, resilience, and reducing societal stigma.

Our approach integrates expert-backed content and resources, facilitating comprehensive mental health assessments and enabling easier access to professional assistance. SafeSpace empowers users to make informed decisions about their mental health journey while reducing the stigma associated with seeking help.

In a landscape with existing competitors, SafeSpace distinguishes itself through its unique features such as 24/7 psychiatrist access, online prescriptions, and bilingual language options. We also offer a free primary assessment for first-time users, making mental health support accessible to a wider audience.

The technology stack underpinning SafeSpace includes Flutter, Github, Jira, and Clockify, ensuring efficient development, collaboration, and project management.

In summary, our project aims to address the critical need for accessible and effective mental healthcare, especially in cases of urgent mental health concerns and language barriers. SafeSpace strives to become a reliable source of support, offering personalised, expert-backed care and resources for individuals of all backgrounds, contributing to a healthier and more compassionate future for all

PROJECT DOMAIN

Domain : Developing a comprehensive mental health support application for working and non-working adults of ages 18 and above, in collaboration with adult psychiatrists.

Stakeholders :

1. Working adults : Employees in various industries seeking accessible and effective mental health support to manage workplace stress and mental well-being.

2. Non-working adults : Individuals who are not part of the workforce, such as students, homemakers, retirees or those between jobs, looking for a resource to support their mental health needs.

3. Adult psychiatrists : Licensed mental health professionals specialising in the diagnosis, the treatment, and support of individuals with various mental health disorders. They provide expertise, guidance as well as prescriptions to ensure the application's effectiveness.

4. Employers and HR Departments : Organizations and human resource departments interested in providing mental health resources for their employees to boost productivity and well-being.

5. Clinical Psychologists : Licensed mental health professionals specialising in providing therapeutic support and guidance. They contribute to the application's effectiveness by offering their expertise and insights to enhance user experience.

6. Pharmacies : Pharmaceutical providers who are involved in the prescription delivery process, ensuring that users can access their prescribed medications conveniently and safely.

Target users :

1. Working adults of ages 18 and above : Employees in a wide range of industries, facing workplace-related stress and mental health challenges, seeking convenient and accessible support.

2. Non-working adults of ages 18 and above : This group comprises all those not involved in the workforce who require a platform to address their mental health needs and well-being.

3. Adult psychiatrists : Licensed mental health professionals providing their expertise, guidance and support to individuals through the application.

4. Clinical psychologists : Licensed mental health professionals specialising in therapy and counselling. They may use the application for professional resources, continuing education, and recommending to clients.

5. Pharmacies: Pharmaceutical providers who participate in the medication delivery process, ensuring that users receive their prescribed medications efficiently and conveniently through the application.

By involving all these stakeholders and addressing the needs of these target user groups, the project aims to create a comprehensive mental health support application that offers accessible and effective mental health resources, while ensuring collaboration with adult psychiatrists to provide expert guidance and treatment as needed.

PROBLEM STATEMENT

In the aftermath of the 2020 COVID-19 pandemic, the pressing concern of mental health has come to the forefront. The pandemic-induced fear of the disease, worries about the safety of loved ones, and the pervasive uncertainty about the future have taken a significant toll on individuals' mental well-being. Prolonged periods of isolation have further exacerbated the impact on each and every individual, making this a truly grim period in our history.

It is evident that this crisis has shed light on the effectiveness and, most importantly, the accessibility of our mental healthcare system. Currently, the standard operating procedure for seeking professional mental health help involves a lengthy and often non-urgent process. It typically takes at least three, and sometimes up to a month or more, to secure a consultation with a mental health professional. This time delay is particularly concerning in cases of urgent mental health issues such as suicidal thoughts, attempts, psychosis, and delusions, which may even indicate organic conditions. Compounding the problem is the fact that many patients are reluctant to enter mental health wards, and language barriers exist, as few mental health apps are available in languages other than English. This language barrier poses a significant obstacle for patients in understanding their mental health condition and implementing effective strategies to cope with their issues, such as breathing techniques, sleep hygiene, and balanced diets.

Moreover, there are instances where patients lack the means of transportation to access necessary medications. In such cases, our application aims to provide a solution by allowing users to purchase medications through the app, which will be delivered directly to their homes.

In light of these challenges, we believe we have addressed a critical need by developing an application that seeks to revolutionise the accessibility and effectiveness of mental healthcare for all individuals, especially those facing urgent mental health concerns and language barriers. We believe we have answered with the development of our application.

GOAL

Our goal is to develop SafeSpace as a top mobile application for mental health, setting new standards for innovation, inclusivity, and user experience. Our aim is to develop the latest digital platform that goes beyond standard mental health care, making it possible for people all over the country to take charge of their mental health. With its innovative technology, supportive design, and unwavering dedication to user privacy, SafeSpace offers to completely change how people view and utilise mental health resources. By supporting emotional stability, fostering resilience, and reducing societal stigma, we hope to build a kind and encouraging community among our users. In order to shape a healthier, more compassionate future for everyone, regardless of their circumstances, we hope to establish SafeSpace as the go-to resource for private consultations with licensed mental health professionals, expert-backed content, and crisis intervention.

OBJECTIVES

1. Develop a mental health application centred around users' needs.
    - Our aim is to develop a user-friendly application, prioritise the user experience, make sure the applications are easy to navigate and accessible for users of all backgrounds and ages by producing a smooth interface. By focusing on the principles of user-centred design, SafeSpace will be a welcoming and inclusive platform to all those looking for mental health support.

2. Enable easier access to expert assistance.
    - SafeSpace enables users to schedule private sessions with licensed psychiatrists and mental health specialists without the inconvenience of visiting a hospital or scheduling appointments by guaranteeing timely and personalised treatment. The gap between users and mental health professionals is reduced thanks to this expedited access to professional support.

3. Integrate comprehensive tools for mental health assessment.
    - SafeSpace will have a self-assessment module where this module will have user-friendly, thoroughly validated mood monitoring features as well as quizzes. By equipping users with useful self-assessment tools so they can gain a better understanding of their mental health status by offering accurate insights into users' mental health and emotional wellbeing.

4. Curate expert-backed content and resources
    - One of the features that will be provided in SpaceSpace with an extensive collection of articles, videos, and guided activities where the resources will be carefully selected and assembled by mental health expertise. By providing evidence-based context and practical tools for self-improvement, SafeSpace will be a platform that enables users to improve their mental health in a thorough and efficient way.

OUTCOMES

1. Increased the engagement and empowerment of users.
    - SafeSpace will provide the user the access to extensive resources for mental health assessment, such as tests and capabilities for tracking mood where it will help empower people to make educated decisions about their mental health journey by providing accurate insights into users' emotional and mental wellbeing. By this, the user will get better awareness of their mental health condition, enabling them to actively pursue suitable assistance and resources.

2. SafeSpace is becoming a reliable source for mental health information.
    - SafeSpace will provide an accurate and reliable source for mental health information where the user has the opportunity to interact with a qualified psychiatrist, ensuring that, in light of their particular circumstances, clients receive individualised advice and assistance.

3. SafeSpace provides seamless access to professional support.
    - SafeSpace will provide rapid and straightforward access to experts by narrowing the gap between users and mental health professionals. Through the application, the users will have an effortless time setting up private consultations with authorised psychiatrists. This direct access will guarantee individualised treatment plans and better mental health outcomes, for those in need.

4. Bilingual Language Usage Option (Bahasa Melayu and English)
    - Most mental health applications are English based meanwhile Bahasa Melayu based is very limited. By providing this feature in two languages, the linguistic barriers can be reduced while boosting accessibility for a wider range of users. It is more convenient for users to express their feelings and ask for assistance in Bahasa Melayu, which promotes a sense of cultural relevance and understanding. English-speaking users will also be granted this privilege concurrently, enabling them to interact with the app in a comfortable manner.

NEEDS, APPROACH, BENEFITS, COMPETITOR (NABC)

Elements	Description
Needs	There is a growing need for mental health support due to rising stress levels, anxiety and depression among adults. Stigma around mental health issues often prevents people from seeking help. Many individuals lack access to professional support.
Approach	Our approach is to develop a mental health application that offers 24/7 access to licensed adult psychiatrists through text, voice or video chats, depending on works for both parties. Users can also access self-help resources, mood tracking tools or get prescriptions through consultations.Our main modules consist of primary assessment, real-time consultation, progress management and prescriptions for medicines.
Benefits	Users will benefit from convenient, immediate access to mental health support, helping them manage their well-being effectively. Our app will also reduce the stigma associated with seeking help.
Competitor	Several mental health applications and online therapy platforms exist, but few offer the level of personalization and accessibility that ours does. Our 24/7 psychiatrist access, online prescriptions and dual language option set us apart. We also differentiate by offering a free primary assessment for all first time users, to make mental health support accessible to a wider audience. Some examples of already existing mental health applications that are similar to ours would be talkspace, PlusVibes and IRYS.

TECHNOLOGY USED

1. Flutter
    - Flutter is an open-source UI software that allows us to build an efficient user experience across multiple platforms, including Android and iOS by using a single codebase. This feature helps us to reduce the complexity of the code and we can focus on the application development concept. Not only that, Flutter is operated by the Dart programming language where it can help us to quickly come up with practical applications while effortlessly comprehending the concepts of coding.

2. Github
    - Github facilitates collaboration among team members. Multiple developers cna work on the same project simultaneously, and their contributions are tracked. This ensures that everyone is on the same page and allows for efficient teamwork.

3. Jira
    - The uniqueness of Jira that we are able to utilise agile software development is what draws us to this project management and issue tracking software to begin with. Its robust issue tracking and bug tracking capabilities will assist us in ensuring that the project will be on track and completed in a timely manner. Jira is also able to foster great levels of collaboration among team members.

4. Clockify
    - Clockify is mainly a time tracking and project management software that was designed for the purpose of helping individuals as well as teams to manage and track their work hours and tasks. Personally we believe that its features will aid us greatly in the sense of being able to track our productivity as a team. This will also help in making sure that no task is being overlooked and that the project will progress according to the limeline set.

TEAM MEMBERS AND ROLES

Bil	Name	Roles	Description
1.	Maathuree A/P Veerabalan	Project Manager	Project managers supervise the development process and its market entry. They manage the production of the delivered requirements. They also set the goal of reaching their target and objectives via the product. They are the front-end and back-end developer of the system function. They closely cooperate with developers, the product owner, marketing specialists, sales representatives and stakeholders.
2.	Thuvaaritha A/P Sivarajah	Developer	The scope of work for a developer includes first-hand coding using various programming languages, frameworks and libraries. A developer closely collaborates with other team members such as designer and tester, so that everyone works in parallel.
3.	Qaisara binti Badrul Hisham	Designer	An application development designer is responsible for creating a user-friendly, visually appealing and highly functional interface that ensures an effective user experience.This inevitably will create an application that is not only functioning but intuitive and promotes pleasant user experience.

4.	Puteri Nur Eleeya Syafika binti Mohd Zabidi	Tester	Tester is responsible for ensuring the application's usability, quality, and functionality. Testers are in charge of thoroughly evaluating the application to find errors, malfunctions and areas of opportunity for development.

PROJECT PLANNING

SPRINTS	PIC	PHASE	API USED
Sprint 1: Primary Assessment Module Development	THUVAARITHA A/P SIVARAJAH	**Phase 1: Planning (1-2 days)** 1. Identify User Stories and Requirements for the Primary Assessment Module. 2. Create a Sprint Backlog with Specific Tasks and Assign Responsibilities. **Phase 2: Design (2-3 days)** 3. Design the login page interface 4. Design the choosing language interface 5. Design the dashboard interface 6. Design the User Interface for the Primary Assessment Module. 7. Create Wireframes and Mockups to Visualize the User Experience. 8. Define Data Models and Database Schema for Storing Assessment Data. **Phase 3: Development (7-8 days)** 9. Develop the login page with password recovery, third-party login & email verification. 10. Develop the front-end of the Primary Assessment Module (User interface for answering, producing results and reading results) 11. Develop the Back-end for Data Handling. 12. Implement API endpoints for creating, retrieving, and updating assessments. 13. Integrate User Authentication and Authorization. 14. Define the logic for computing assessment scores.	• **API used : Mental health assessment API** • **Language Translation API**

Sprint 2: Real-Time Consultation Module Development	MAATHUREE A/P VEERABALAN	**Phase 1: Planning (1-2 days)** 1. Identify User Stories and Requirements for the Consultation Module. 2. Update the Sprint Backlog with New Tasks. **Phase 2: Design (3-4 days)** 3. Design the User Interface for the Consultation Module. - Design preferred doctor option interface - Design consultation method interface - Design schedule appointment method - Design queue num and confirmation interface - Design notification and consultation schedule interface - Design consultation session interface - Design post consultation interface and feedback & rating interface 4. Plan the Architecture and Data Flow for Real-Time Consultations. 5. Define Data Models and Database Schema for Storing Assessment Data. **Phase 3: Development (7-10 days)** 6. Implement the Front-end of the Consultation Module (Develop the user interface for scheduling, joining, and conducting consultations) 7. Develop the Back-end for Real-Time Communication. 8. Integrate video conferencing or chat functionality.	• **Telehealth and Video Conferencing API** • **Appointment Scheduling API** • **Push Notification Services**

		9. Implement Scheduling and Notifications (Allow users to schedule consultations and receive reminders) 10. Perform Unit Testing During Development (Verify the functionality of real-time communication features) **Phase 4: Integration and Testing (3-4 days)** 11. Integrate the Peer Assessment Module with the Consultation Module. Conduct Integration Testing to Ensure Seamless Interaction. Perform System Testing for End-to-End Functionality. Address and Resolve Any Identified Issues and Bugs.	
Sprint 3: Progress Management Module Development		**Phase 1: Planning (1-2 days)** 1. Define Sprint Goals and Objectives for the Progress Management Module. 2. Identify User Stories and Requirements for Progress Tracking. 3. Update the Sprint Backlog with New Tasks. **Phase 2: Design (3-4 days)** 4. Design the User Interface for Progress Tracking. *(Create Wireframes and Mockups for Visual Representation.* *Plan the Architecture for Storing and Displaying Progress Data.)* **Phase 3: Development (7-10 days)** 5. Implement the Front-end of the Progress Management Module. ● Articles ● Videos	● **Content Delivery API** ● **Electronic Health Record (EHR) API** ● **Chat and Messaging APIs**

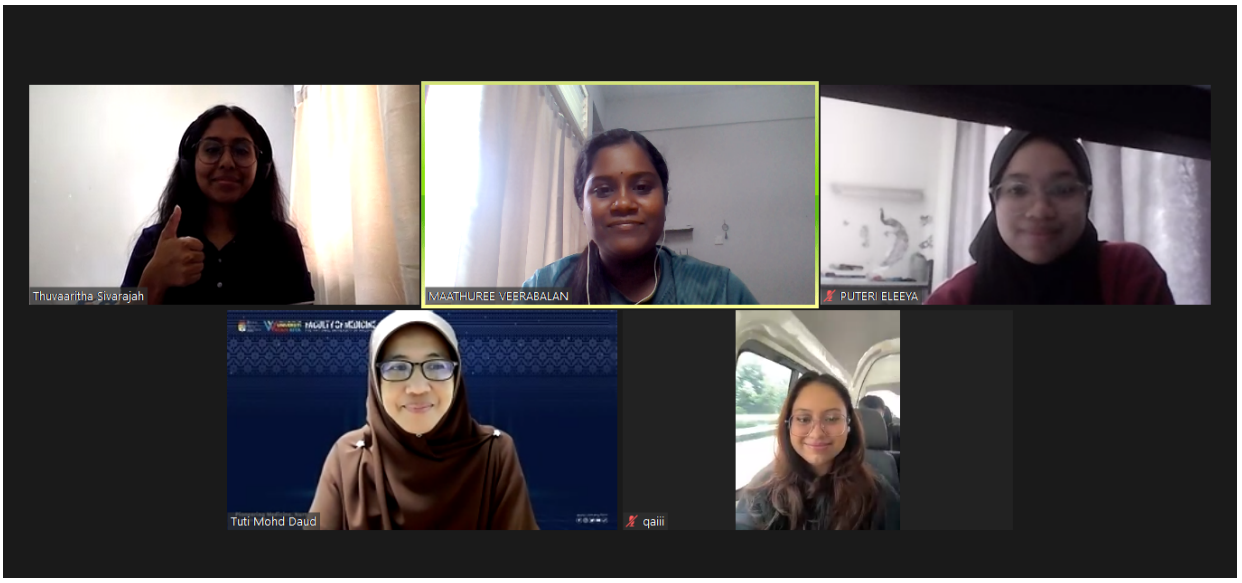
		• Chat box *2 (suggested exercises) • Progress report *2 6. Develop the Back-end for Data Storage and Retrieval. 7. Perform Unit Testing During Development. **Phase 4: Integration and Testing (3-4 days)** 8. Integrate the Progress Management Module with Existing Modules. 9. Conduct Integration Testing to Ensure Data Flow and User Experience. 10. Perform System Testing to Confirm End-to-End Functionality. 11. Address and Resolve Any Identified Issues and Bugs. 12. Define Data Models and Database Schema for Storing Assessment Data.	
Sprint 4: Medication Purchasing Module Development		**Phase 1: Planning (1 day)** 1. Define sprint goals and objectives. 2. Create tasks, sub-tasks, and user stories related to the medication purchase module. 3. Set up development, staging, and testing environments. 4. Configure necessary tools and integrations for the medication purchase module. 5. Create user persona	• **iPay88**

		Phase 2: Design (2-3 days) 1. Design the medication catalogue 2. Design the shopping cart 3. Design the medication details modal 4. Design the checkout section 5. Design the order confirmation and order summary 6. Design the frontend Blueprint Development for User Interfaces (Prescription Issuance System) 7. Database Setup (Tables for User Profiles, Prescriptions, Medications) **Phase 3: Development (4-11 days)** 1. Front-end Development ● Develop Prescription Issuance System ● Implement Medication Catalogue and Selection ● Develop Shopping Cart Functionality 2. Back-end Development ● Prescription Verification System Implementation ● Integration with Pharmacy for Prescription Dispensing ● Integration with Payment Gateway 3. Perform unit testing **Phase 4: Integration and Testing (12-14 days)** 1. Integrate Frontend and Backend Components 2. Bug Fixes and Iterative Development 3. Final User Acceptance Testing (UAT)	

		4. Performance Optimization and Security Testing	
Documentation and Final Testing	Include whole team	**Phase 1: Documentation (3-4 days)** 1. Prepare User Documentation for the Primary Assessment Development Module, Real Time Consultation Development Module, Progress Management Development Modules and Purchase Medication Development Module 2. Create Developer Documentation for Codebase, APIs, and Data Structures. 3. Document Deployment Procedures and System Architecture. **Phase 2: Final Testing and Quality Assurance (3-4 days)** 4. Conduct Comprehensive System Testing, Including User Acceptance Testing (UAT). 5. Verify Cross-Module Compatibility and Data Integrity. Address and Resolve Any Outstanding Issues or Bugs. Phase 3: Deployment (1-2 days) 6. Prepare the App for Deployment to App Stores or Web Servers. Publish the App for Users to Access.	

Interviewed Stakeholder

1. **Prof. Madya Dr. Tuti Iryani Binti Mohd Daud**, Pensyarah Perubatan in the Jabatan Psikiatri department of Universiti Kebangsaan Malaysia.



2. **Madam Hajah Dinah Razad bt Hj Yahaya**, Senior HR Manager of Intel Penang

LOGO OF SAFESPACE APP