



# **American International University-Bangladesh (AIUB)**

**Faculty of Science and Technology (FST)  
Department of Computer Science (CS)**

**SDPM Group Project, Fall 2023**

**MIND MENTOR** (Mental health Support & Well-being)

**Section: [A]**

**Submitted By  
Group-04**

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## 1.0 Introduction:

Welcome to the Mind Mentor Project Documentation, a pivotal resource meticulously crafted to illuminate the vision, purpose, and strategic framework of our ambitious endeavor focused on Mental Health Support & Well-being.

### Intent of this Document:

In the evolving landscape of mental health awareness and advocacy, the Mind Mentor Project Documentation stands as a foundational cornerstone. It is designed to serve as a comprehensive reference, detailing the intricacies of our project, from its conceptualization to its anticipated impact on individuals and communities.

This document aims to achieve the following:

1. **In-depth Insight:** Provide an in-depth insight into the Mind Mentor project, elucidating its inception, key objectives, and the underlying philosophy that steers our commitment to mental health.
2. **Methodology and Approach:** Outline the methodologies, strategies, and best practices that will be employed throughout the project's lifecycle. This includes a detailed discussion on support mechanisms, interventions, and collaborative efforts that will be integral to our success.
3. **Operational Framework:** Present a detailed operational framework, guiding project team members, collaborators, and stakeholders on how Mind Mentor will be structured, coordinated, and executed to ensure maximum effectiveness.

### Audience:

The primary beneficiaries of this document include:

- **Project Team Members:** Offering a comprehensive understanding of their roles, responsibilities, and the collective vision they are working towards.
- **Collaborators and Partners:** Providing insight into the collaborative opportunities within Mind Mentor and facilitating a unified approach to mental health support.
- **Sponsors and Donors:** Offering transparency on how resources will be utilized and the anticipated impact on mental health outcomes.
- **Healthcare Professionals:** Detailing potential collaborations, resource sharing, and opportunities for professionals to contribute their expertise.
- **Advocates for Mental Health:** Equipping advocates with the necessary information to champion the cause of mental health awareness and destigmatization.

## **Objectives of this Document:**

1. **Clarification and Understanding:** Offer a comprehensive and clear vision of the Mind Mentor project to ensure a shared understanding among stakeholders regarding its goals, methodologies, and anticipated impact.
2. **Engagement and Alignment:** Facilitate engagement and alignment of diverse stakeholders with the core mission of enhancing mental health support and promoting overall well-being.
3. **Guidance and Roadmap:** Serve as a practical guide for project planning, implementation, and evaluation, providing a detailed roadmap for stakeholders to navigate the various phases of the Mind Mentor initiative.
4. **Advocacy and Communication:** Empower stakeholders to effectively advocate for mental health support, destigmatize mental health challenges, and foster a culture of well-being within our community through informed and strategic communication.

As you delve into the nuanced details within this document, you are not only gaining insight into the Mind Mentor project but are also becoming an integral part of a collective effort to foster mental health awareness and support. Your commitment and involvement are crucial elements in realizing our mission and creating a positive impact on the lives of those seeking solace and guidance in their mental health journey.

## **2.0 Project Title: Mind Mentor (Mental Health Support and Well-being)**

The proposed software system for the Mind Mentor project will be named "Mind Mentor." This comprehensive platform is designed to provide holistic support for mental health and well-being, incorporating a wide approach to address various aspects of individuals' mental wellness. Mind Mentor will serve as a dynamic and user-friendly tool, fostering a supportive community, delivering personalized resources, and facilitating meaningful connections to empower individuals on their mental health journey.

## **3.0 Objectives:**

**Overall Objective:** Empowering individuals to prioritize and enhance their mental health and well-being through an integrated and accessible platform, fostering a supportive community and personalized resources.

### **Specific Goals:**

1. **Community Building:**
  - Establish a vibrant and inclusive online community within Mind Mentor, encouraging users to share experiences, insights, and support one another.

- Facilitate connections among individuals with similar challenges or goals to create a sense of belonging and understanding.

## **2. Personalized Support:**

- Provide personalized mental health resources, including articles, exercises, and coping mechanisms tailored to individual needs and preferences.
- Implement machine learning algorithms to offer targeted content based on user interactions, preferences, and historical data.

## **3. Therapeutic Tools and Activities:**

- Integrate therapeutic tools, such as mood trackers, journaling features, and mindfulness exercises, to encourage self-reflection and emotional awareness.
- Offer a variety of mental wellness activities, such as guided meditations, stress-relief exercises, and goal-setting tools.

## **4. Expert Guidance and Resources:**

- Collaborate with mental health professionals to offer expert guidance through webinars, Q&A sessions, and curated content.
- Compile a comprehensive resource library featuring articles, videos, and podcasts on various mental health topics, ensuring a wealth of information is easily accessible.

## **5. User-Friendly Interface:**

- Develop an intuitive and user-friendly interface for Mind Mentor to enhance accessibility for individuals of all technological backgrounds.
- Conduct usability testing to continually refine and improve the platform's interface based on user feedback.

## **6. Data Security and Privacy:**

- Implement robust security measures to protect user data and ensure privacy compliance with relevant regulations.
- Provide transparent information about data usage and adhere to strict ethical standards in handling sensitive information.

## **7. Feedback and Continuous Improvement:**

- Establish mechanisms for user feedback, surveys, and reviews to gather insights for continuous improvement.
- Iterate on the platform based on user feedback, technological advancements, and emerging trends in mental health.

By achieving these specific goals, Mind Mentor aims to contribute significantly to the overall objective of empowering individuals on their mental health journey, fostering a supportive online environment, and providing personalized resources that promote holistic well-being.

## **4.0 Justification:**

The creation and implementation of Mind Mentor are rooted in the imperative recognition of the profound impact that mental health has on individuals, communities, and society at large. This section explores the purpose of the system and outlines the diverse beneficiaries who stand to gain from its comprehensive approach to mental health support and well-being.

### **Purpose of Mind Mentor:**

Mind Mentor serves as a multifaceted platform designed to address the critical gaps in mental health support and resources. The overarching purpose is to empower individuals in proactively managing their mental health, breaking down barriers to access, and fostering a sense of community and understanding.

#### **1. Holistic Well-being:**

- Mind Mentor aims to promote holistic well-being by offering a diverse array of resources and tools, encompassing emotional, psychological, and social dimensions of mental health.

#### **2. Accessibility and Inclusivity:**

- The platform is built on the principle of accessibility, ensuring that individuals from diverse backgrounds, regardless of geographical location, socio-economic status, or technological proficiency, can access and benefit from mental health support.

#### **3. Destigmatizing Mental Health:**

- Mind Mentor endeavors to destigmatize mental health challenges by fostering open conversations within its community. By providing a supportive space, the platform seeks to challenge stereotypes and promote understanding.

#### **4. Preventive Mental Health:**

- Beyond reactive solutions, the system is designed to encourage proactive mental health practices. Through personalized resources and activities, users can engage in preventive measures and cultivate resilience.

## **Beneficiaries:**

### **1. Individual Users:**

- Individuals seeking mental health support, guidance, and resources will benefit by gaining access to a user-friendly platform that tailors its offerings to their specific needs and preferences.

### **2. Support Communities:**

- Mental health support groups, both formal and informal, will find a centralized space within Mind Mentor to connect, share experiences, and offer mutual support.

### **3. Healthcare Professionals:**

- Mental health professionals can leverage the platform to extend their reach, contribute expertise through curated content, and engage with a broader audience through webinars and Q&A sessions.

### **4. Advocates and Educators:**

- Advocates for mental health awareness and educators focused on destigmatization can utilize Mind Mentor as a tool to amplify their messaging, share resources, and contribute to a broader cultural shift.

### **5. Employers and Organizations:**

- Organizations committed to employee well-being can leverage Mind Mentor to provide a holistic approach to mental health support, fostering a healthier and more productive workforce.

### **6. Society at Large:**

- By promoting mental health awareness and offering accessible resources, Mind Mentor contributes to the overall societal goal of creating a more empathetic, informed, and supportive environment for mental health.

## 5.0 Use case Diagram of the proposed systems:



**Fig: Use Case Diagram**

**Description:** The use case diagram depicts a Mental Health Platform with key features for Admins, Psychiatrists, Patients, and a receptionist. Admins manage users, content, and full system. Psychiatrists schedule appointments and conduct teletherapy. Patients assess mental health, track moods, access guided meditation, and engage in teletherapy. A Receptionist adds/cancels appointments. Roles interact to provide comprehensive mental health support.

## 6.0 Stakeholders Analysis:

### Primary Stakeholders:

#### 1. Individual Users:

- **Role:** Direct beneficiaries seeking mental health support, resources, and community.
- **Influence:** Impact platform engagement and usage; their feedback is crucial for usability improvements.

## **2. Mental Health Professionals:**

- Role: Contribute expertise, offer guidance, and provide authoritative content.
- Influence: Shape the quality of mental health resources, participate in webinars, and enhance the platform's credibility.

## **3. Administrators and Moderators:**

- Role: Oversee platform operations, manage security, and maintain community guidelines.
- Influence: Directly impact platform integrity, user safety, and overall user experience.

## **Secondary Stakeholders:**

### **1. Collaborators and Partners:**

- Role: Collaborate on initiatives, contribute resources, and potentially expand the platform's reach.
- Influence: Enhance platform content and features through shared projects and partnerships.

### **2. Sponsors and Donors:**

- Role: Financially support the project, influencing its sustainability and potential expansion.
- Influence: Impact strategic decisions based on funding priorities and contribute to the platform's growth.

### **3. Advocates and Educators:**

- Role: Promote mental health awareness, destigmatization, and positive well-being.
- Influence: Amplify Mind Mentor messaging, contributing to a broader cultural shift around mental health.

### **4. Employers and Organizations:**

- Role: Encourage employee engagement with Mind Mentor, supporting workplace well-being.
- Influence: Impact user adoption within organizations, potentially integrating the platform into corporate wellness programs.



## **5. Regulatory Bodies and Privacy Advocates:**

- **Role:** Ensure compliance with data protection regulations and ethical use of user information.
- **Influence:** Shape data security measures, privacy policies, and provide guidance on ethical considerations.

Understanding the roles, interests, and levels of influence of both primary and secondary stakeholders is essential for effective collaboration and the overall success of the Mind Mentor project. Each group contributes uniquely to the platform's development, impact, and sustainability.

## **7.0 Feasibility Study:**

A feasibility study is crucial to assess the viability of the Mind Mentor project, considering both technical and financial aspects.

### **Technical Feasibility:**

#### **1. System Requirements:**

- **Hardware:** The platform will be hosted on cloud servers, ensuring scalability and efficient resource utilization.
- **Software:** Utilization of proven and reliable technologies for web development, database management, and data security.

#### **2. Development Team:**

- **Skills:** Availability of skilled developers with expertise in web development, user experience design, and data security.
- **Collaboration:** Ability to collaborate with mental health professionals for content creation and expert guidance.

#### **3. Scalability and Performance:**

- **Infrastructure:** Utilization of scalable infrastructure to accommodate growing user numbers.
- **Performance Testing:** Conducting regular performance tests to ensure optimal user experience, even during peak usage.

#### **4. Security Measures:**

- **Data Encryption:** Implementation of robust data encryption protocols to ensure user data privacy.

- **Regular Audits:** Conducting regular security audits to identify and address potential vulnerabilities.

#### **5. Integration with Third-Party Tools:**

- **API Integration:** Ensuring compatibility and seamless integration with third-party tools and mental health resources.
- **User-Friendly Interfaces:** Developing user-friendly interfaces for easy navigation and engagement.

### **Financial Feasibility:**

#### **1. Development Costs:**

- **Initial Investment:** Estimation of development costs, including software development, infrastructure setup, and initial content creation.
- **Budget Allocation:** Allocating funds for ongoing updates, improvements, and potential collaborations.

#### **2. Operational Costs:**

- **Hosting and Maintenance:** Budgeting for ongoing hosting and maintenance costs.
- **Content Creation:** Allocating resources for the creation of high-quality mental health resources and expert content.

#### **3. Revenue Streams:**

- **Donations and Grants:** Seeking financial support from philanthropic organizations, government grants, and donations from individuals and corporations.
- **Collaborations:** Exploring partnerships with mental health organizations or corporate sponsors to support the platform financially.

#### **4. User Acquisition and Retention:**

- **Marketing Budget:** Allocating funds for marketing strategies to attract users and mental health professionals to the platform.
- **User Engagement:** Investing in community-building initiatives to encourage user retention and active participation.

#### **5. Risk Analysis:**

- **Contingency Fund:** Setting aside a contingency fund to address unforeseen challenges or changes in project scope.
- **Risk Mitigation Strategies:** Developing strategies to mitigate potential financial risks, such as fluctuating donor support or changes in regulatory requirements.

## 8.0 System Components:

The Mind Mentor system is composed of several interconnected components, each serving a specific function to create a comprehensive and user-friendly platform for mental health support and well-being.

### 1. User Management Component:

- **Functionality:** Manages user accounts, registrations, and profiles.
- **Key Features:** User authentication, profile customization, and account settings.

### 2. Community Interaction Component:

- **Functionality:** Facilitates user interactions, discussions, and community engagement.
- **Key Features:** Discussion forums, topic threads, and user-generated content.

### 3. Personalized Resources Component:

- **Functionality:** Delivers personalized mental health resources based on user preferences and needs.
- **Key Features:** Content recommendation algorithms, resource libraries, and personalized content feeds.

### 4. Therapeutic Tools and Activities Component:

- **Functionality:** Provides users with tools and activities for self-reflection and emotional well-being.
- **Key Features:** Mood trackers, journaling features, mindfulness exercises, and goal-setting tools.

### 5. Expert Guidance Component:

- **Functionality:** Connects users with mental health professionals and offers expert guidance.
- **Key Features:** Webinars, Q&A sessions, curated content by professionals, and a directory of mental health experts.

### 6. Administrative and Moderation Component:

- **Functionality:** Manages and moderates the overall platform, ensuring security and user guidelines.
- **Key Features:** User account management, content moderation, and security protocols.

**7. Data Storage and Management Component:**

- **Functionality:** Handles the storage and retrieval of user data securely.
- **Key Features:** Database management, data encryption, and regular backups.

**8. User Interface (UI) and User Experience (UX) Component:**

- **Functionality:** Defines the visual and interactive elements of the platform to ensure a seamless user experience.
- **Key Features:** Intuitive design, responsive layouts, and accessibility features.

**9. Third-Party Integration Component:**

- **Functionality:** Enables integration with external tools, resources, and APIs.
- **Key Features:** Integration with mental health databases, content providers, and external support services.

**10. Analytics and Reporting Component:**

- **Functionality:** Gathers and analyzes user data for insights into platform usage and effectiveness.
- **Key Features:** Usage analytics, user behavior tracking, and reporting tools.

**11. Communication and Notification Component:**

- **Functionality:** Manages communication channels and notifications to keep users engaged.
- **Key Features:** Messaging systems, push notifications, and email alerts.

**12. Feedback and Improvement Component:**

- **Functionality:** Collects user feedback and facilitates continuous improvement.
- **Key Features:** Surveys, feedback forms, and iterative development processes.

**13. Security and Privacy Component:**

- **Functionality:** Ensures the security and privacy of user data.
- **Key Features:** Encryption protocols, secure login processes, and compliance with data protection regulations.

**14. Collaboration and Partnership Component:**

- **Functionality:** Facilitates collaboration with external organizations, collaborators, and partners.
- **Key Features:** Collaboration tools, partnership management, and shared resources.

## 9.0 Process Model: Agile Development

### Justification:

The Agile Development process model is the chosen methodology for the Mind Mentor project, and here are the key reasons for this selection:

#### 1. Iterative and Incremental Development:

- Rationale: Mental health and well-being are dynamic and individualized aspects that may require continuous refinement and adaptation. Agile's iterative and incremental approach allows for frequent assessments, adjustments, and enhancements based on user feedback and evolving needs.

#### 2. Flexibility and Adaptability:

- Rationale: The Agile model excels in environments where requirements may change or evolve. In the context of Mind Mentor, the understanding of mental health, user preferences, and the landscape of available resources may evolve, necessitating a flexible approach to development.

#### 3. User Involvement:

- Rationale: Agile emphasizes close collaboration with stakeholders, including end-users. In the case of Mind Mentor, involving users in the development process ensures that the platform is aligned with their needs, preferences, and expectations, ultimately enhancing user satisfaction.

#### 4. Continuous Feedback Loop:

- Rationale: Regular feedback from users, mental health professionals, and other stakeholders is vital for the success of a mental health support platform. The Agile model facilitates a continuous feedback loop, allowing for quick adjustments and improvements based on real-time input.

#### 5. Faster Time-to-Market:

- Rationale: Agile development enables the delivery of functional increments in short cycles. This approach ensures that valuable features and improvements are released to users quickly, addressing immediate needs and maintaining a consistent pace of development.

#### 6. Collaborative Team Environment:

- Rationale: Agile promotes a collaborative and cross-functional team environment. For Mind Mentor, where expertise in mental health, technology, and user experience design is critical, this collaborative approach ensures that all aspects are considered and integrated seamlessly.

## 7. Risk Mitigation:

- Rationale: Agile development allows for early identification and mitigation of risks. In a project like Mind Mentor, where user engagement and the sensitive nature of mental health information are concerns, the ability to address risks promptly is crucial.

## 10.0 Efforts estimation:

$$\text{KLOC} = 300$$

$$\text{Effort} = 2.4 \times (300)^{1.05} = 957.609 \text{ PM}$$

$$\text{Development Time} = 2.5 \times (957.609)^{0.38} \text{ Month}$$

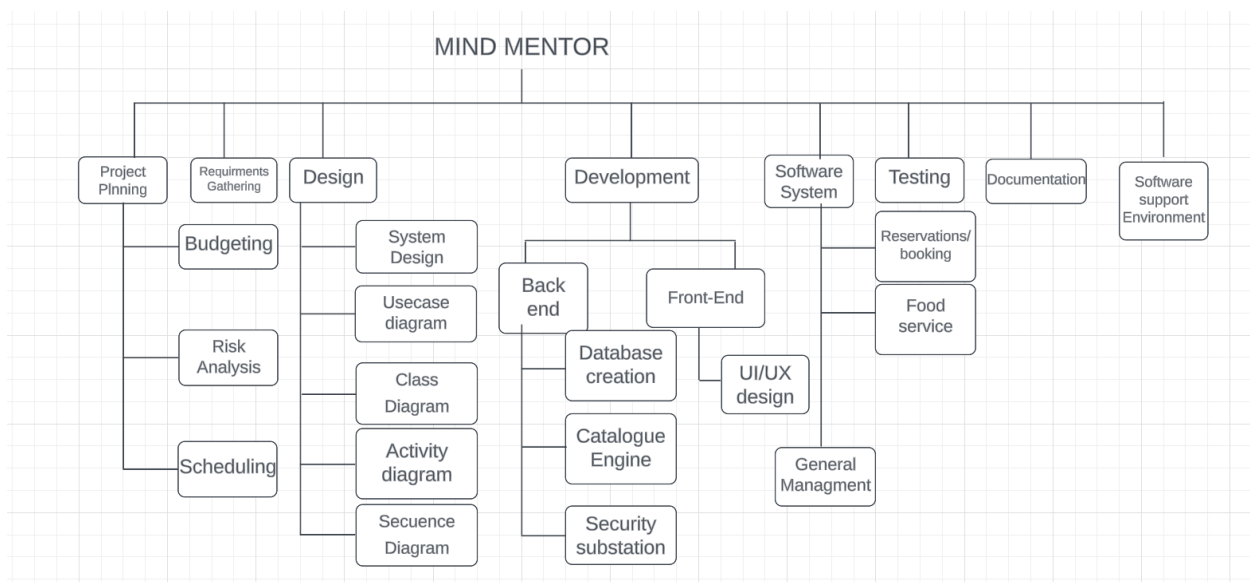
$$= 33.946 \text{ Month}$$

$$\text{People} = 957.609 \div 33.946$$

$$= 28.21 \approx 29 \text{ person}$$

For the above estimation:

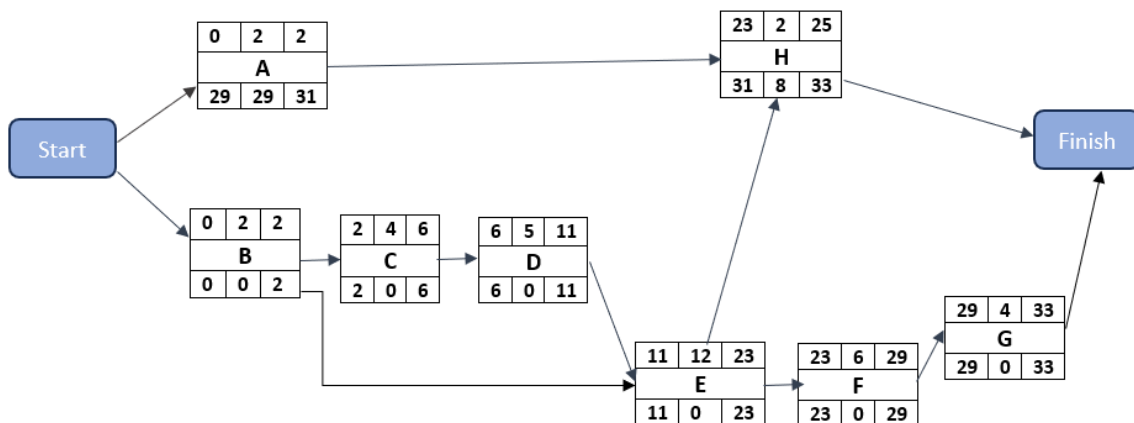
Software Project Type	Coefficient Factor	P	T
Organic	2.4	1.05	0.38



Work Break Down Structure

## 11.0 Activity Diagram:

Label	Activity	Duration	Precedence
A	Feature Selection	2	-
B	Software selection	2	-
C	Planning	4	B
D	Design	5	C
E	Coding & Testing	12	B, D
F	File take on & Build	6	E
G	User training	4	F
H	Start-up	2	A, E



Critical path analysis:

$$A - H = 2+2 = 4 \text{ weeks}$$

$$B - C - D - E - F - G = 2+4+5+12+6+4 = 33 \text{ weeks}$$

$$B - E - F - G = 2+ 12+6+4 = 24 \text{ weeks}$$

$$B - E - H = 2+12+2 = 16 \text{ weeks}$$

So, Path -2 is the critical path as it has the highest number.

## 12.0 Risk Analysis:

- 1. Lack of Resource:** Resource limitations could hinder the development and quality of the project by limiting the supply of skilled workers, equipment, or infrastructure.
- 2. Scope creeping:** Scope creep occurs when the project's specifications alter or expand as it is being developed. Delays, higher expenses, and probable timeline problems can emerge from this.
- 3. Late Delivery of products:** Late product delivery can lead to missed deadlines, higher expenses, unsatisfied customers, and wasteful resource use, which could influence the project's reputation and success.
- 4. Budget risks:** These are risks related to the project's budget. Examples include cost overruns, unexpected expenses, and changes in funding.
- 5. Wrong Estimation:** Improper estimating can result in schedule delays, cost overruns, scope expansion, and lowered quality.
- 6. Lack of Testing:** Having fewer beta testers than anticipated can lead to limited feedback and a shortened list of potential problems. This could increase the likelihood of defects going undetected, usability problems, and inadequate testing of the software's performance in real-world circumstances.



## 13.0 Budget for the project:

### Development Cost:

Total working days = Monthly working days \* DM = 22 \* 12 = 264 days

Total Working hours = Working hours per day \* Total working days = 8\*264 = 2112 hours

Development cost per employee = Total Working hours \* per hour salary [per hour salary = 200]  
= 2112 \* 200 = 422,400 BDT

Total development cost = ST \* Development cost per employee = 7 \* 422,400 = 2,956,800 BDT

Project manager salary for 12 months = (12\*20,000) = 2,40,000 BDT (UI/UX)

Management and other employees' salary for 12 months=35,000BDT (Designer) Salary for 12 months = (15,000 \* 12 \* 1) = 1,80,000BDT Database Administrator Salary for 12 months = (15,000 \* 12 \* 1) = 1,80,000BDT

### Maintenance Cost:

Monthly 12 Hours (6 months and per hour salary 1000) Cost = (12 x 6 x 1000) = 72,000 BDT

### Hardware Expenses:

Server cost = 1,20,000 BDT

Desktop/Laptop cost = (7 \* 60,000) = 4,20,000 BDT Printer cost = 20,000 BDT

Total hardware expenses = (120,000 + 420,000 + 20,000) = 5,60,000BDT

### Other Expenses:

Office rent for 14 months = (12\*15,000) = 1,80,000 BDT

Utility bills = 1,50,000 BDT

Stationaries cost per month = 2,000 BDT

Total cost for 12months = (2,000 \* 12) = 24,000 BDT

Total Estimated cost = (2,956,800 + 2,40,000 + 2,40,000 + 2,10,000 + 1,80,000+ + 72,000 + 4,20,000 + 1,80,000 + 24,000) = 4,522,800 BDT

25% profit of total estimated cost = (0.25\*4,522,800) = 1,130,700BDT Total estimated budget = (4,522,800+1,130,700) = 5,653,500 BDT

**14.0 Conclusion:** The Mind Mentor Project, as detailed in the documentation, represents a robust endeavor to enhance mental health support. With a clear vision and comprehensive objectives, Mind Mentor strives to empower individuals through a user-friendly platform. The project's justification underscores its commitment to holistic well-being, accessibility, and destigmatization. Stakeholder analysis highlights a broad range of beneficiaries. The feasibility study ensures technical and financial viability, while the Agile development process aligns with the dynamic nature of mental health. Efforts estimation, work breakdown structure, and budget considerations provide a clear roadmap. In essence, the Mind Mentor Project is poised to make a meaningful impact, and the well-documented plan serves as a guide for stakeholders in achieving the collective goal of fostering mental health awareness and support.