**AiComp**



**AI-Driven Mental Health Companion Software System**

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**Batch:** CLH/20

**Name of App: AiComp**

**1.0 Introduction:**

The AI-Driven Mental Health Companion Software System is a cutting-edge solution designed to provide personalized mental health support and assistance to individuals through the use of artificial intelligence (AI) technology. This system aims to address the increasing need for accessible and effective mental health resources by offering users a virtual companion that can offer empathetic listening, personalized guidance, and helpful resources tailored to their unique needs.

**2.0 Purpose:**

The primary purpose of the AI-Driven Mental Health Companion Software System is to offer users a supportive and confidential platform where they can access mental health assistance anytime, anywhere. By leveraging AI technology, the system can provide immediate responses, personalized recommendations, and ongoing support, helping users manage their mental well-being more effectively.

**3.0 Features:**

* Personalized Support: The system utilizes AI algorithms to analyze user input and provide personalized support based on their specific needs and preferences.
* Emotional Assistance: Users can engage in conversations with the AI companion to express their thoughts, feelings, and concerns, receiving empathetic responses and encouragement
* Cognitive Behavioral Therapy (CBT) Techniques: The system incorporates CBT principles and techniques to help users challenge negative thought patterns, monitor daily mood, and develop coping strategies.
* Mood Tracking: Users can track their mood over time using the system's mood tracking feature, enabling them to identify patterns and trends in their emotional well-being.
* Resource Recommendations: Based on user input and preferences, the system can recommend relevant mental health resources such as articles, exercises, and relaxation techniques.
* Crisis Intervention: In situations where a user expresses thoughts of self-harm or suicide, the system is equipped to provide immediate intervention by offering crisis hotlines and support resources.

**4.0 Target Audience:**

The target audience for the AI-Driven Mental Health Companion Software System includes individuals seeking accessible and convenient mental health support, including those experiencing stress, anxiety, depression, or other mental health challenges. This system is designed to cater to users of all ages and backgrounds who may benefit from virtual companionship and personalized guidance.

**5.0 System Requirements:**

**Platform**: The system will be accessible via web browsers and mobile applications will be incorporated in the future (iOS and Android).

**Connectivity**: Users will require internet connectivity to access the system's features and services.

**Compatibility**: The system should be compatible with a wide range of devices to ensure accessibility for all users.

**6.0 Technology**

* **Programming Language:** C# for backend, HTMl, CSS5 and JS for frontend
* **Framework:** .NET Core
* **AI and NLP Services:** OpenAI (ChatGPT), Azure Cognitive Services (Text Analytics)
* **Web API:** ASP.NET Core
* **Security:** Use of JWT, Password Hashing, Google Oauth 2.0
* **Development Environment:** Visual Studio
* **Email Service:** Google Api
* **Database:** MSSQL

**7.0 Security and Privacy:**

* Data Encryption: User data will be encrypted to ensure confidentiality and privacy.
* Consent: Users will be required to provide consent for the collection and use of their data, with clear explanations provided regarding how their information will be utilized.

**Conclusion:**

The AI-Driven Mental Health Companion Software System offers a groundbreaking approach to mental health support by leveraging AI technology to provide personalized assistance and guidance to users. By offering a virtual companion that is available 24/7, this system aims to empower individuals to take control of their mental well-being and access the support they need, when they need it.

**Identified Users are:**

* Person using the mental app (Person)
* Mental Health Professional (Men-P)
* Admin\*

**Person Stories**

**As a Person**

* Registration and Login

1. As a person, I want to create an account and log in so that I can access personalized mental health support**.**

**Acceptance Criteria:**

* Persons can register with an email and password.
* Persons can log in with their credentials.
* Persons can reset their password if forgotten.
* Conversational Support

1. As a person, I want to chat with the AI companion so that I can receive mental health support and guidance**.**

**Acceptance Criteria:**

* Persons can initiate and maintain a conversation with the AI.
* The AI provides relevant responses based on person input.
* Conversations are stored for context continuity.
* Mood Tracking

1. As a person, I want to log my mood daily so that I can track my emotional trends over time.

**Acceptance Criteria:**

* Persons can log their mood through a simple interface.
* Mood logs are saved and can be reviewed.
* Persons can view visual charts of their mood trends.

1. As a person, I want to write daily journal entries so that I can reflect on my thoughts and feelings.

**Acceptance Criteria:**

* Persons can write and save journal entries.
* Entries are stored securely and can be revisited.
* Personalized Recommendations

1. As a person, I want to receive personalized mental health tips and activities so that I can improve my well-being.

**Acceptance Criteria:**

* The AI provides tips based on person interactions and mood logs.
* Recommendations are tailored to individual person preferences.
* Crisis Management

1. As a person, I want immediate assistance during a crisis so that I can get the help I need quickly.

**Acceptance Criteria:**

* The AI detects crisis keywords and phrases in person input.
* Persons are provided with immediate contact information for mental health professionals and emergency services.
* Predefined emergency contacts are alerted in case of a detected crisis.
* As a Mental Health Professional
* Monitor Person Progress

vii. As a person, I want to update my profile and password

**Acceptance criteria:**

* Update profile like name, phone number and profile pics or avatar
* Reset password or pin

**Men-p**

viii. As a mental health professional, I want to monitor the progress of my clients using the app so that I can provide better support**.**

**Acceptance Criteria:**

* Professionals can access mood logs and journal entries (with person consent).
* Summary reports of person activity and progress are available.
* As an Administrator
* Manage User Data

1. As an administrator, I want to manage user data securely so that I can ensure privacy and compliance with regulations.

**Admin**

**Acceptance Criteria:**

* Administrators can view and manage user accounts.
* Data encryption and security measures are in place to protect user information.
* System Maintenance

1. As an administrator, I want to maintain the system’s reliability and performance so that users have a smooth experience.

**Acceptance Criteria:**

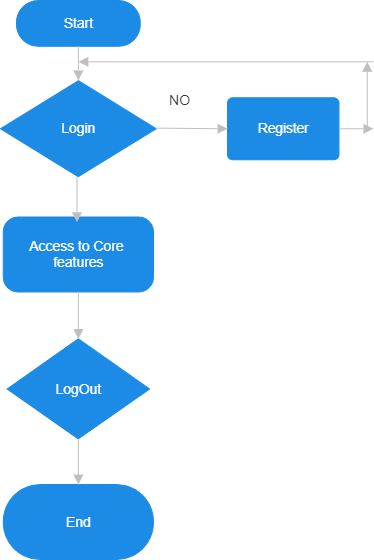
* System uptime is monitored and maintained at 99.9%.
* Regular backups of user data are performed.

**FLOW OF APP**

1. **Person Registers**

* Email
  + Check with regular expression
  + Email Validation
  + Pin or Password

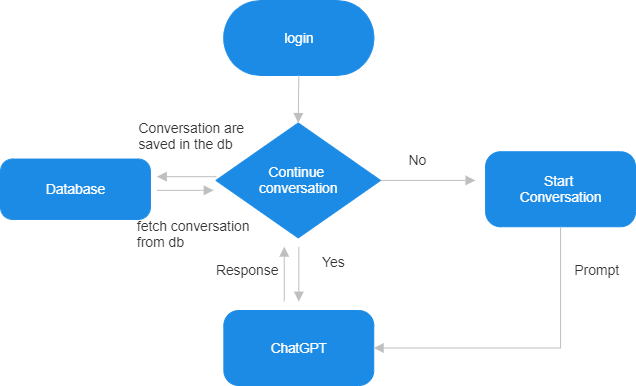
1. **Person Login with credentials**
2. **Access to the core features from user dashboard**



Yes

**Core Features**

* Conversation Support
  + Start
  + Continue conversation



* + Mood tracking
    - Logging mood
    - View Mood Trend
  + Journal Entry
  + Write Journal Entry
  + View Past Entries
  + Crisis Management
  + Detect Crisis Keywords
  + Provide Emergency Contacts
  + Alert Emergency Contacts

**Extra Features**

* + **Men-p**
    - **User Progress Monitoring**

1. Access User Data (with consent)
2. Generate Report\

<https://chatgpt.com/share/31886ccd-1c22-422d-bb4e-273d3764385d>

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