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Software Requirements Specification

CSE1005 – SOFTWARE ENGINEERING (LAB)
L4+L5

MOOD JAR:
PERSONALISED MENTAL HEALTH TRACKER

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SCOPE

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1. Introduction

1.1 Purpose

The purpose of the "Mood Jar" system is to provide users with a digital tool to monitor their emotional well-being, understand mood patterns, and access personalized mental health resources. It offers a secure, user-friendly platform that supports emotional tracking, journaling, and resource sharing to promote mental health awareness and emotional resilience.

1.2 Scope

"Mood Jar" caters to a diverse audience, including individuals seeking personal growth, those managing emotional challenges, and mental health professionals. Its core functionalities include mood tracking, journaling, data visualization, and access to curated mental health content. Future scalability includes AI-driven insights and integration with wearable devices.

Key Features:

- Secure user authentication.
- Mood logging with visualization tools.
- Journaling for reflection.
- A curated library of mental health resources.
- Data privacy and encryption for sensitive information.

1.3 Definitions, Acronyms, and Abbreviations

- **Mood Logging**: Recording daily emotional states.
- **Data Visualization**: Graphical representation of mood patterns over time.
- **Admin Panel**: A dashboard for administrators to manage content and user feedback.

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2. Functional Requirements

2.1 User Authentication

- Secure login system with email verification.
- Multi-factor authentication for additional security.

2.2 Mood Logging

- Daily prompts to log emotional states.
- Graphical analysis of mood trends (e.g., pie charts, line graphs).
- Ability to tag entries with keywords or specific emotions.

2.3 Journaling

- Private journaling feature with search functionality.
- Export options for entries (PDF/CSV).

2.4 Content Management

- Access to mood-enhancing articles, categorized by emotional states.
- Feedback mechanism for users to suggest content.

2.5 Admin Functionality

- Manage and moderate resources.
- Approve content from contributors like mental health professionals.

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3. Non-Functional Requirements

3.1 Usability

- Intuitive interface for users across all age groups.
- Mobile-friendly design for accessibility.

3.2 Reliability

- Regular data backups to ensure no loss of sensitive information.

3.3 Security

- End-to-end encryption for data in transit and at rest.
- GDPR-compliant data handling and anonymization protocols.

3.4 Performance

- Scalable architecture capable of supporting thousands of concurrent users.

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4. System Design

4.1 Architecture

The system is built with a three-tier architecture:

1. **Frontend**: A responsive web interface using HTML5, CSS3, and JavaScript.
2. **Backend**: Node.js with Express.js for server-side logic.
3. **Database**: MongoDB for storing user data, mood logs, and content.

4.2 Technology Stack

- **Frontend**: HTML5, CSS3 (Bootstrap), JavaScript (Vue.js).

- **Backend**: Node.js, Express.js.
- **Database**: MongoDB (secured with AES-256 encryption).
- **Visualization**: Chart.js for generating interactive mood trend graphs.

4.3 Data Flow

1. User logs mood through the interface.
2. Data is processed by the backend and stored in the database.
3. Mood trends are visualized using Chart.js and displayed on the dashboard.

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5. Additional Considerations

5.1 Testing and Quality Assurance

- Unit testing for individual features like mood logging.
- Integration testing to ensure seamless interaction between modules.
- User acceptance testing to validate functionality against user expectations.

5.2 Future Enhancements

- Mobile application with offline capabilities.
- AI-driven mood analysis and journaling prompts.
- Integration with wearable devices for real-time data correlation.

5.3 Security Features

- Password hashing using bcrypt.
- Brute-force attack prevention through rate limiting.
- Secure session management with JSON Web Tokens (JWT).