**REQUIREMENT SPECIFICATION DOCUMENT**

**CHURCH MEMBER EVENT TRACKING SYSTEM**

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**INTRODUCTION**

This document outlines the requirements for the Church Member Event Tracking System, which aims to help the church manage member records, monitor attendance, and organize events effectively. It defines the system’s scope, functionality, and constraints to guide development.

The purpose of this document is to clearly define and describe the requirements for the Church Member Event Tracking System (CMETS). It will serve as a reference for developers, testers, church administrators, and other stakeholders involved in the project. The document ensures that all functionalities, features, and limitations of the system are well understood before development begins. By setting clear requirements, this document reduces misunderstandings, ensures proper project alignment with the church’s needs, and guides the development team toward delivering a reliable, user-friendly, and effective solution.

The CMETS is a desktop-based application designed to help Touching Heart Christian Assembly efficiently manage member profiles, record attendance, and track participation in church events. The system replaces traditional paper logs and scattered spreadsheets with one centralized, digital, and secure platform. It will allow administrators to add and update member details, create and manage events, record attendance.

The system is intentionally designed to be simple, reliable, and offline, making it accessible even without internet connectivity. Its primary users are church leaders and administrators, ensuring that sensitive information is secure and properly managed.

This document outlines both functional and non-functional requirements of the CMETS. It defines what the system will do, how it will behave, and the constraints within which it must operate. Specifically, the scope includes:

* Managing church member profiles in a structured database.
* Recording member attendance and participation in events.
* Displaying on-screen summaries and attendance patterns.
* Offering a secure login for administrators and staff.

The system will not include advanced features such as online access, SMS/email notifications, or mobile applications. Its focus is to remain simple, user-friendly, and effective for offline record-keeping.

**FUNCTIONAL REQUIREMENTS**

This section defines the essential features and functions of the Church Member Event Tracking System. It specifies what the system must do, including member registration, attendance tracking, event scheduling, and report generation, to ensure smooth church operations.

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| **Requirement ID** | Description | Priority | Dependencies | Acceptance Criteria |
| FR-01 | The system shall allow administrators to add, edit, delete, and search member records. | High | Database connection | Member records can be created, updated, deleted, and retrieved without error. |
| FR-02 | The system shall allow administrators to create, update, and delete church events. | High | Database connection | Events can be added and updated, and the list displays correctly. |
| FR-03 | The system shall allow administrators to record member attendance for specific events. | High | FR-01, FR-02 | Attendance is saved and linked to the correct member and event. |
| FR-04 | The system shall display on-screen summaries of attendance and participation by member and by event | Medium | FR-03 | User can view accurate attendance summaries on-screen and filter the results correctly. |
| FR-05 | The system shall provide secure login for authorized users. | High | Authentication module | Only registered admins can access the system. |
| FR-06 | The system shall provide search and filter features for members and events. | Medium | FR-01, FR-02 | Results are retrieved quickly and accurately. |

*Table 1. Functional Requirements for Church Member and Event Tracking System*

**NON-FUNCTIONAL REQUIREMENTS**

This section outlines the quality attributes of the Church Member Event Tracking System. It defines how the system should perform in terms of speed, usability, reliability, security, scalability, and maintainability to ensure efficiency and long-term effectiveness.

1. **Performance**. The system should respond to all user actions within 3 seconds on an average modern computer.
2. **Usability**. The interface must be clean, simple, and easy to navigate, requiring minimal training for administrators.
3. **Reliability**. The system must provide stable performance with must run without frequent crashes during operating hours.
4. **Security**. Access to the system must be protected by a unique username and password. Only authorized administrators can access and manage the data.
5. **Scalability**. The system must be capable of efficiently managing a database. Performance should not noticeably degrade as the data grows, ensuring that key operations such as searching for members, loading lists, and generating reports remain fast and responsive.
6. **Maintainability**. The system must be easy to maintain and update with minimal technical intervention.

**Use Cases**

The system allows administrators to manage members, events, and attendance in a simple way. They can register new members, create and organize church events, and record attendance during activities. Each use case ensures that data is saved in the database, kept accurate, and easily accessible. If errors or missing details occur, the system provides prompts to guide the user in completing the process smoothly.

**Use Case 1: Register Member**

* ID: UC-01
* Name: Register Member
* Description: An administrator records a new member’s personal details and stores them in the system.
* Actors: Administrator
* Preconditions: Administrator is logged in.
* Postconditions: Member profile is successfully stored in the database.
* Alternate Flow: If required details are missing, the system prompts the user to complete the fields.

**Use Case 2: Create Event**

* ID: UC-02
* Name: Create Event
* Description: An administrator schedules a new event by entering event details into the system.
* Actors: Administrator
* Preconditions: Administrator is logged in.
* Postconditions: Event is stored and displayed in the system.
* Alternate Flow: If invalid details are provided, the system prevents saving until corrected.

**Use Case 3: Track Attendance**

* ID: UC-03
* Name: Track Attendance
* Description: An administrator records attendance for members during a church event.
* Actors: Administrator
* Preconditions: The event already exists in the system.
* Postconditions: Attendance records are saved and linked to members and events.
* Alternate Flow: If a member does not exist, the system displays an error.

**DATA REQUIREMENTS**

This section identifies the key data entities, their attributes, and relationships within the Church Member Event Tracking System. It ensures accurate storage, management, and retrieval of member, event, and attendance information.

**Data Entities and Attributes**

1. **Member**

* Attributes: Member ID, Full Name, Gender, Date of Birth, Address, Contact Number, Date Joined.
* Explanation: The Member entity stores the personal details of each church member. Member ID acts as a unique identifier to ensure proper record-keeping and linking with other entities. Attributes like Date Joined allow tracking of membership duration and engagement.

1. **Event**

* Attributes: Event ID, Event Name, Event Date, Location, Description.
* Explanation: The Event entity contains details of all church activities (e.g., worship services, outreach programs, fellowships). Each event is uniquely identified by Event ID. Additional attributes such as Location and Description provide clarity on the nature of the event.

1. **Attendance**

* Attributes: Attendance ID, Member ID, Event ID, Status (Present/Absent), Date.
* Explanation: The Attendance entity records member participation in events. It connects Members and Events, making it possible to generate attendance reports. The Status field shows whether the member was present or absent, while Date allows historical tracking.

1. **User**

* Attributes: User ID, Username, Password (Security questions for changes password), Role.
* Explanation: Each User has login credentials. For simplicity, this system implements a single-role model where all authenticated users are considered Administrators.

**Relationships**

1. **Member - Event (Many-to-Many)**

* A single Member can participate in multiple Events.
* An Event can have multiple Members.
* This relationship is managed through the Attendance entity, which acts as a bridge (junction table).

1. **Attendance as Bridge Entity**

* The Attendance entity links Members and Events.
* It records detailed participation, allowing the system to display summaries such as “List of members who attended a specific event” or “Attendance history of a specific member.”

1. **User - Member and Event (One-to-Many)**

* A single User (Administrator) can manage multiple Members and Events.
* This ensures proper access control and accountability for data updates and event management.

**ASSUMPTIONS AND CONSTRAINTS**

This section outlines the conditions assumed during system development and the limitations that may affect its design, performance, and operation.

**Assumptions**

To make this project successful, we are working with a few important assumptions. Church leaders will be properly guided on how to use the system. Since it is designed to be simple and reliable, it will run completely offline and won’t need an internet connection. All data, such as member profiles and attendance, will be entered manually by authorized users to keep records accurate and organized. Lastly, the church is expected to have a dedicated desktop or laptop that meets the minimum requirements for the system to run smoothly.

**Constraints**

The system will only run on a desktop or laptop computer and is not designed for mobile phones or tablets. It is strictly for internal record-keeping and will not connect to external tools such as email, text messaging, or online platforms. Since attendance is recorded manually, leaders must be careful when inputting data to ensure accuracy. For security purposes, the system is designed for a single dedicated deployment machine and cannot be accessed remotely or through a network. Access is restricted to authorized leaders only, as it does not support multiple roles for members.

**GLOSSARY**

This section provides definitions of key terms and concepts used in the document to ensure clarity and a common understanding among all stakeholders.

**Member**. A church individual whose personal information (e.g., name, gender, contact details) is recorded in the system. Members are participants of different events and their attendance is tracked for records and on-screen summaries.

**Event**. Any church activity or program (e.g., worship service, seminar, outreach, fellowship) that is created and managed in the system. Events include details such as date, location, and description.

**Attendance**. A record that indicates whether a specific member was present or absent in a particular event. It serves as the link between members and events for tracking participation.

**User**. An authorized system operator such as an admin or church staff. Users are responsible for encoding, updating, and managing member, event, and attendance records.

**Role**. Refers to the permission level of a user. This system utilizes a single-role model, where any authenticated user has full administrative access to all system features.

**Status**. A field under attendance records that shows the participation result of a member in an event (ex., Present, Absent and Late). This provides clear tracking of involvement.

**Database**. The structured digital storage where all system data (members, events, attendance, users) is securely stored and retrieved. It ensures data integrity and accessibility.

**System.** The Church Member Event Tracking System itself, which integrates all functions such as member registration, event management, attendance tracking, and user access control.

**Appendix**

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