REQUIREMENT SPECIFICATION DOCUMENT

CHURCH MEMBER EVENT TRACKING SYSTEM

A Thesis Project Presented to the

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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.

1.1 Purpose of the Document

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.

1.2 Overview of the Software System

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, and generate reports.

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.

1.3 Scope of the Requirements Specification

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.
- Providing reporting tools to generate summaries and attendance patterns.
- Offering a secure login for administrators and staff.

The system will not include advanced features such as online access, QR code scanning, 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.

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 generate attendance and participation reports by member and by event.	Medium	FR-03	Reports display accurate data in a readable format.
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 99% uptime during operating hours.
4. Security: User accounts must be password-protected, and passwords must be encrypted. Only authorized administrators can access the system.
5. Scalability: The system should be able to handle up to 1,000 members and 500 events without performance issues.
6. Maintainability: The system must be easy to maintain and update with minimal technical intervention.

Use Cases

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.

Use Case 4: Generate Report

- ID: UC-04
- Name: Generate Report
- Description: The system generates attendance or participation reports for analysis.
- Actors: Administrator
- Preconditions: Attendance data exists in the system.
- Postconditions: Report is generated in a readable format.
- Alternate Flow: If no data is available, the system notifies the user.

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.

2. **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.

3. **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.

4. **User**

    - Attributes: User ID, Username, Password (encrypted), Role.
    - Explanation: The User entity represents system administrators or staff who manage the system. Each User has login credentials and a defined Role (e.g., Admin, Staff). Passwords must be encrypted to ensure security and prevent unauthorized access.

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).

2. **Attendance as Bridge Entity**

    - The Attendance entity links Members and Events.
    - It records detailed participation, allowing the system to generate reports such as "List of members who attended a specific event" or "Attendance history of a specific member."

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

    - A single User (e.g., Admin or Staff) 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 and administrators 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

To keep the system simple, reliable, and easy to use, it's important to be clear about its limits. The system is made to run on a desktop or laptop computer and is not designed for mobile phones or tablets. It is only for internal record-keeping, so it doesn't connect to tools like email or text messaging to send reminders. Attendance will be recorded manually during events, so users need to be careful when entering data to make sure it's correct. For security, the system works on one dedicated computer only and cannot be accessed from home or through a network. Lastly, only authorized leaders and admins can use it, since it does not support multiple user roles.

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 reports.

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 - A defined level of access within the system (e.g., Administrator with full control, Staff with limited access). Roles ensure security and proper distribution of responsibilities.

Status - A field under attendance records that shows the participation result of a member in an event (e.g., Present, Absent). 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.

REVISION HISTORY

This section records the versions, dates, author, and changes made to the document to track its development and updates over time.

Version	Date	Changes Made
1.0	08/06/25	Initial draft of the Project Proposal created.
1.1	08/14/25	Adjusted document indentations and alignment
1.2	08/17/25	Added short descriptions
1.5	08/20/2025	Updated structure for clarity and consistency
1.4	08/23/2025	Minor content refinements and grammar check
1.5	08/24/25	Finalized proposal formatting for submission.

Table 2. Revision History for Church Member and Event Tracking System

Appendix

References (APA Style)

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