MongoDB Data Modeling Document

# Introduction

This document outlines the data modeling strategy for the Smart Event Management Platform using MongoDB. The system manages various components of event organization such as events, themes, guests, feedback, budgets, and collaborators.

# List of Collections

1. events

2. themes

3. guests

4. feedback

5. budget

6. collaborators

# Data Modeling Strategy

The platform uses a hybrid approach of embedding and referencing, depending on the nature of the data and access patterns.

## Embedding

- Inside the budget collection, the categoryAllocations are embedded to represent detailed budget breakdown by category.  
- Guest-specific metadata like rsvp\_status, guest\_type, and qr\_code are stored inside each document in the guests collection.

## Referencing

- eventId is used to link other collections to the main events collection.  
 - guests, feedback, budget, and collaborators use eventId to reference their associated event.  
- This reduces duplication and keeps the event information centralized in the events collection.

# Relationship Summary

|  |  |
| --- | --- |
| Relationship Type | Example |
| One-to-Many | An event has many guests, feedback, and collaborators. |
| One-to-One | Each event has one budget document. |
| Many-to-Many (via referencing) | Collaborators may work on multiple events (each stored as a separate document with a reference to the event). |

# Data Model Diagram (Placeholder)

A visual representation of collections and their relationships would include:  
- Arrows pointing from:  
 - guests → events  
 - feedback → events  
 - budget → events  
 - collaborators → events  
- Embedded substructures like categoryAllocations inside budget.  
  
You can later create this using draw.io, Lucidchart, or even PowerPoint.