🔮 Numerology Calendar – Project Proposal

Project Participants:
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Title:
Numerology Calendar Compatibility Generator

Executive Summary:
This project aims to build a Spring Boot application that generates a personalized 365-day numerology calendar based on a user's birthdate and a selected year. The app calculates the user's Lifepath number by reducing the digits of their birthdate to a single digit from 1 through 9. Then, for each day of the selected year, the Calendar Day number is calculated using a similar digit reduction method.

The Lifepath number is then compared to each Calendar Day number using a compatibility matrix to determine whether the day is a "Natural Match," "Compatible," or "Challenge." These are symbolized by labels such as "Sunny," "Cloudy," and "Caution," along with descriptive guidance. A new feature allows exporting the full calendar into structured output suitable for generating CSV or PDF files. The application emphasizes reusable logic, data integrity, and a clean RESTful API structure, and is scoped to be completed within 3 weeks.

✅ Initial Features

📘 Database Design (ERD Components):

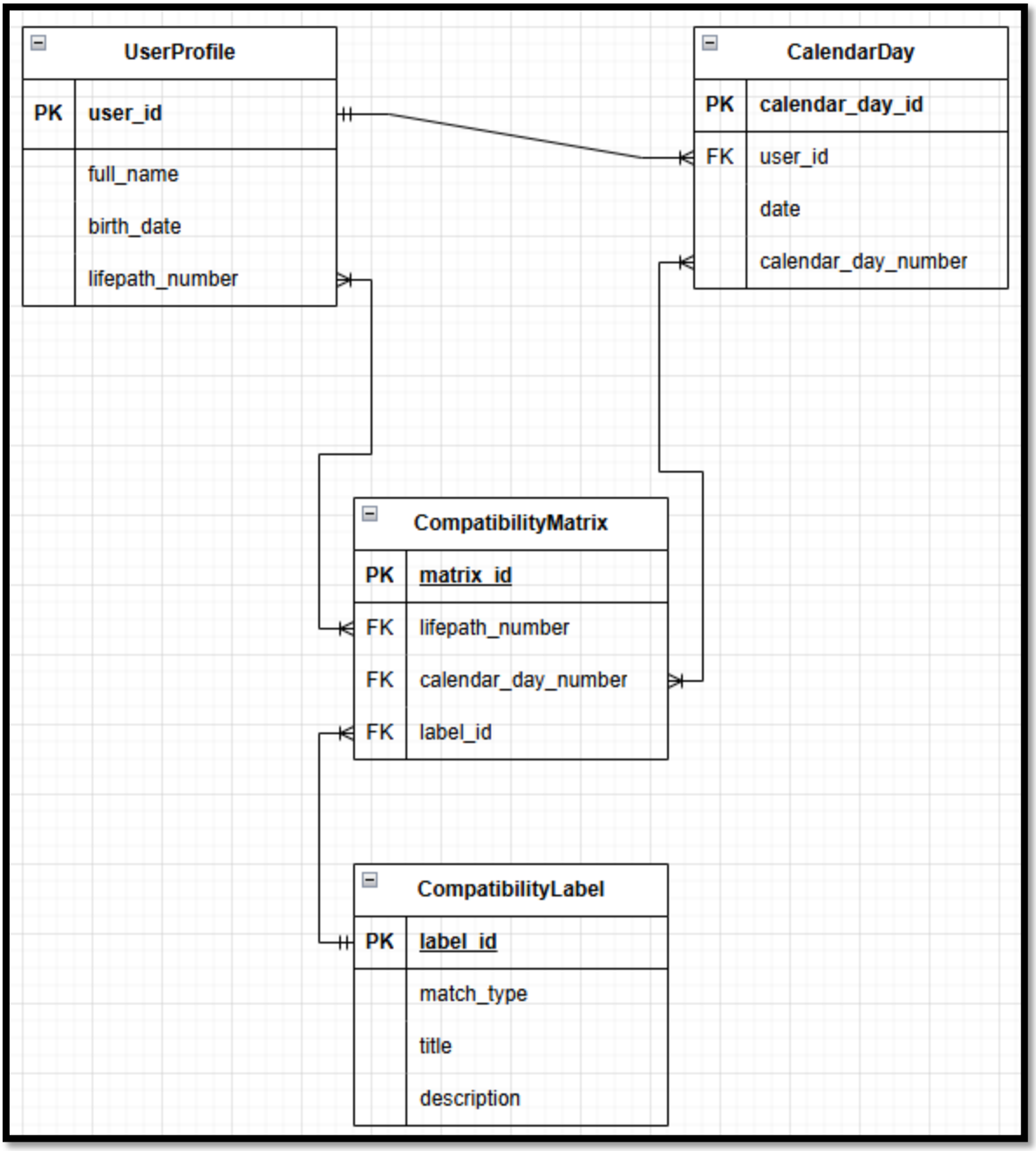
The application models **four entities**, mapped to at least **three normalized tables**, and implements both **one-to-many** and **many-to-many** relationships:

Entity	Attributes	CRUD Coverage
user_profile	user_id (primary key), full_name, birth_date, lifepath_number	Create
calendar_day	calendar_day_id (primary key),	Create

Entity	Attributes	CRUD Coverage
	user_id (foreign key), date, calendar_day_number	
compatibility_label	label_id (primary key), match_type, title, description	**Full CRUD**
compatibility_matrix	matrix_id (primary key), lifepath_number (unique), label_id (foreign key), calendar_day_number (unique)	Create, Read, Delete

✅ **Relationships**

- **One-to-Many:** A user_profile has many calendar_day entries.
- **Many-to-Many:** compatibility_matrix connects lifepath_number and calendar_day_number to a compatibility_label, enabling CRUD operations via join table or mapped entity.



🔧 Planned Features:

- Lifepath calculator based on birthdate digit reduction
- Calendar generator for 365 days per selected year
- Compatibility engine with matrix-based mapping

- Daily symbolic labels and guidance
- RESTful API tested via Swagger, Postman, or ARC
- Structured export of calendar data for CSV/PDF use
- Basic input validation and error handling

🌐 REST API Endpoints

Endpoint	Method	Description
/numerology_calendar/users	POST	Create user profile from full name and birthdate
/numerology_calendar/{userId}/{year}	GET	Generate full numerology calendar for a user and year
/numerology_calendar/{userId}/{year}/export	GET	Export calendar data as downloadable CSV
/numerology_calendar/day	POST	Create single calendar day manually
/numerology_calendar/compatibility/{lifepath}/{day}	GET	Get compatibility label by Lifepath and Day number
/numerology_calendar/matrix	GET	Retrieve full compatibility matrix
/numerology_calendar/matrix	POST	Add matrix entry (lifepath-to-day mapping)
/numerology_calendar/matrix/{id}	DELETE	Delete compatibility matrix entry by ID
/numerology_calendar/label	POST	Create new symbolic compatibility label
/numerology_calendar/label/{id}	GET	Retrieve compatibility label by ID
/numerology_calendar/label/{id}	PUT	Update label description and match type
/numerology_calendar/label/{id}	DELETE	Delete compatibility label by ID

🧩 Entity CRUD Coverage Snapshot

Entity	Create	Read	Update	Delete	Notes
UserProfile	✅	❌	❌	❌	Only creation is implemented
CalendarDay	✅	❌	❌	❌	Manual creation only
CompatibilityMatrix	✅	✅	❌	✅	Full retrieval and deletion supported
CompatibilityLabel	✅	✅	✅	✅	✅ Full CRUD now implemented

🌈 Stretch Goals (to be completed if time allows, or after graduation)

- Server-side CSV/PDF generation for download
- Interactive web client for calendar display
- Name-based numerology calculations
- Multiple saved calendar profiles
- Pagination and search for date results
- Multilingual support for labels and descriptions
- Daily affirmations and historical calendar views