Eyes Unclouded App – Phase 5: Data Architecture Expansion (ERD Upgrade)

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# Phase 5: Data Model Upgrade Summary

This phase documents the expansion of your original ERD to support the full functionality of the Eyes Unclouded App, including emotion perception tracking, audio-linked reflection logging, symbolic virtue analysis, and role-based symbolic guidance.

## 1. Enhanced Entity Descriptions

Below are the updated entities required for full symbolic reflection, role-linked insight, and emotional decoding.

### Users

- user\_id (PK)

- username

- role

- class

- created\_at

### UserNotes

- note\_id (PK)

- user\_id (FK)

- virtue\_id (FK)

- note\_text

- timestamp

### Virtues

- virtue\_id (PK)

- name

- description

- category

### Expressions

- expression\_id (PK)

- name

- description

- associated\_emotion

### VirtueExpressionLink

- id (PK)

- virtue\_id (FK)

- expression\_id (FK)

- context\_note

### Sources

- source\_id (PK)

- title

- author

- type

- year

### SourceVirtueLink

- id (PK)

- source\_id (FK)

- virtue\_id (FK)

- insight\_note

### Chapters

- chapter\_id (PK)

- title

- summary

- audio\_filename

- scene\_tags

### PerceptionEntries

- entry\_id (PK)

- user\_id (FK)

- chapter\_id (FK)

- emotion

- expression\_tag

- insight\_text

- timestamp

- role\_type

## 2. Entity Relationships

- Users ↔ UserNotes (1-to-many): Each user logs many virtue reflections.  
- Users ↔ PerceptionEntries (1-to-many): Each user records perceptions during chapter playback.  
- PerceptionEntries ↔ Chapters (many-to-1): Each perception is tied to a story scene.  
- Virtues ↔ Expressions (many-to-many via VirtueExpressionLink): Microexpressions are symbolically linked to virtues.  
- Virtues ↔ Sources (many-to-many via SourceVirtueLink): Mentors/books are linked to virtues through insights.  
- UserNotes ↔ Virtues (many-to-1): Each note reflects on a specific virtue.

## 3. Agile & Academic Reflection

- This model directly supports your narrative learning engine and allows you to track emotional and symbolic growth across story events.  
- It mirrors the Agile principle of incremental deliverables: each table maps to a module or sprint.  
- Aligns with your textbook guidance on modeling: "Create relationships that reflect real-world user interactions and allow for growth, normalization, and analysis."

## 4. Deliverables Checklist

- [ ] Update ERD visual to reflect enhanced tables and relationships  
- [ ] Document schema as SQL or Mongo collections  
- [ ] Plan MongoDB collections and indexes (if NoSQL)  
- [ ] Link each feature (Role, Tray, Emotion Log, Class) to data design  
- [ ] Store this document in your docs/project-docs/ folder