### 5.2 Quest Feature

**Feature Goal**: Guide users through structured philosophical explorations with clear learning objectives, interactive elements, and rewards.

#### System Architecture

**Frontend Components**:

* QuestScreen.tsx: Quest browsing and selection
* QuestDetailScreen.tsx: Individual quest view
* QuestStep.tsx: Individual step in a quest
* QuestProgress.tsx: Progress indicator

**Backend Components**:

* quest\_service.py: Quest management and progress tracking
* concept\_service.py: Concept integration

**Database Models**:

* quests: Quest definitions and metadata

CREATE TABLE quests (

id UUID PRIMARY KEY DEFAULT uuid\_generate\_v4(),

title VARCHAR(100) NOT NULL,

description TEXT NOT NULL,

difficulty VARCHAR(20) NOT NULL,

estimated\_duration INTEGER NOT NULL,

xp\_reward INTEGER NOT NULL,

concepts JSONB NOT NULL,

prerequisites JSONB,

is\_premium BOOLEAN DEFAULT FALSE,

created\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

updated\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW()

);

* quest\_steps: Individual steps within quests

CREATE TABLE quest\_steps (

id UUID PRIMARY KEY DEFAULT uuid\_generate\_v4(),

quest\_id UUID NOT NULL REFERENCES quests(id),

step\_number INTEGER NOT NULL,

title VARCHAR(100) NOT NULL,

content TEXT NOT NULL,

step\_type VARCHAR(50) NOT NULL,

interaction\_data JSONB,

xp\_reward INTEGER NOT NULL,

created\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

updated\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

UNIQUE(quest\_id, step\_number)

);

* user\_quests: User progress on quests

CREATE TABLE user\_quests (

id UUID PRIMARY KEY DEFAULT uuid\_generate\_v4(),

user\_id UUID NOT NULL REFERENCES users(id),

quest\_id UUID NOT NULL REFERENCES quests(id),

status VARCHAR(20) NOT NULL,

current\_step INTEGER DEFAULT 1,

started\_at TIMESTAMP WITH TIME ZONE DEFAULT NOW(),

completed\_at TIMESTAMP WITH TIME ZONE,

xp\_earned INTEGER DEFAULT 0,

UNIQUE(user\_id, quest\_id)

);

* user\_quest\_steps: User progress on individual steps

CREATE TABLE user\_quest\_steps (

id UUID PRIMARY KEY DEFAULT uuid\_generate\_v4(),

user\_quest\_id UUID NOT NULL REFERENCES user\_quests(id),

step\_id UUID NOT NULL REFERENCES quest\_steps(id),

status VARCHAR(20) NOT NULL,

user\_response JSONB,

completed\_at TIMESTAMP WITH TIME ZONE,

xp\_earned INTEGER DEFAULT 0,

UNIQUE(user\_quest\_id, step\_id)

);

#### API Endpoints

* GET /api/v1/quests: Get available quests
  + Query Parameters:
    - difficulty: Filter by difficulty (easy, medium, hard)
    - concept\_id: Filter by related concept
    - status: Filter by user status (not\_started, in\_progress, completed)
  + Response:

{

"quests": [

{

"id": "550e8400-e29b-41d4-a716-446655440000",

"title": "Introduction to Stoicism",

"description": "...",

"difficulty": "medium",

"estimated\_duration": 30,

"xp\_reward": 100,

"concepts": ["stoicism", "virtue", "nature"],

"is\_premium": false,

"user\_status": "not\_started"

},

...

],

"total": 15

}

* GET /api/v1/quests/{id}: Get quest details
  + Response:

{

"id": "550e8400-e29b-41d4-a716-446655440000",

"title": "Introduction to Stoicism",

"description": "...",

"difficulty": "medium",

"estimated\_duration": 30,

"xp\_reward": 100,

"concepts": [

{

"id": "123",

"name": "stoicism",

"description": "..."

},

...

],

"prerequisites": [],

"is\_premium": false,

"steps": [

{

"id": "650e8400-e29b-41d4-a716-446655440001",

"step\_number": 1,

"title": "The Stoic Worldview",

"content": "...",

"step\_type": "reading",

"xp\_reward": 20

},

...

],

"user\_progress": {

"status": "not\_started",

"current\_step": null,

"started\_at": null,

"completed\_at": null,

"xp\_earned": 0

}

}

* POST /api/v1/quests/{id}/start: Start a quest
  + Response:

{

"success": true,

"user\_quest\_id": "750e8400-e29b-41d4-a716-446655440000",

"quest\_id": "550e8400-e29b-41d4-a716-446655440000",

"status": "in\_progress",

"current\_step": 1,

"xp\_earned": 5

}

* POST /api/v1/quests/{id}/steps/{step\_id}/complete: Complete a quest step
  + Request:

{

"user\_response": {

"answer": "Virtue is living in accordance with nature.",

"reflection": "..."

}

}

* + Response:

{

"success": true,

"step\_id": "650e8400-e29b-41d4-a716-446655440001",

"status": "completed",

"xp\_earned": 20,

"next\_step": {

"id": "650e8400-e29b-41d4-a716-446655440002",

"step\_number": 2,

"title": "The Four Cardinal Virtues",

"content": "...",

"step\_type": "multiple\_choice",

"interaction\_data": {

"question": "Which of the following is NOT one of the four cardinal virtues in Stoicism?",

"options": ["Wisdom", "Justice", "Courage", "Happiness", "Temperance"],

"correct\_answer": 3

},

"xp\_reward": 25

},

"quest\_progress": {

"completed\_steps": 1,

"total\_steps": 5,

"percentage": 20

}

}

#### User Experience Flow

1. User browses available quests on the QuestScreen
2. User selects and views details of a quest on the QuestDetailScreen
3. User starts the quest via POST /api/v1/quests/{id}/start
4. System presents quest steps sequentially using the QuestStep component
5. User completes interactive elements (readings, questions, reflections, etc.)
6. System tracks progress via the QuestProgress component and awards XP
7. User completes the quest and receives rewards (XP, badges, concept mastery)

#### XP Integration

* XP awarded for starting quests (+5 XP)
* XP awarded for completing quest steps (+10-30 XP per step, based on difficulty)
* XP awarded for completing full quests (+25-100 XP, based on difficulty)
* Badges for quest completion milestones (5, 25, 50 quests)
* Concept mastery progress for related concepts

#### Implementation Considerations

* **Step Types**: Support for various interactive elements (reading, multiple choice, reflection, AI interaction)
* **Offline Support**: Quest content will be available offline after initial download
* **Premium Content**: Some quests marked as premium for paid subscribers only
* **Prerequisites**: Some quests may require completion of other quests or concept mastery levels
* **Content Updates**: Regular updates with new quests via content management system