### **1. Introduction**

**Project Name:** Knowledge Management  
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**Purpose:** This is a Requirements Gathering and Analysis document.

### **2. Stakeholders**

* Users (Students, Professionals, Researchers): Expect an easy way to organize, summarize, and retrieve knowledge.
* Developers: Responsible for implementing core functionalities like web scraping, AI summarization, and data storage.
* Testers: Validate that features work as expected.
* Business Analysts: Ensure alignment with business needs.

### **3. Business Objectives**

The software will systematically organize and summarize knowledge from web pages, YouTube videos. Users can:

* Store and summarize knowledge sources.
* View content as Knowledge Cards containing summaries, user notes, and (future) mind maps.
* Categorize Knowledge Cards into Knowledge Suits.
* Add and manage notes.

### **4. Terminologies**

* **Knowledge Card:** A UI component with summarized content, notes, and metadata.
* **Knowledge Suit:** A collection of Knowledge Cards with similar topics.
* **Notes:** A user-added textual section inside a Knowledge Card.

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### **5. Functional Requirements**

#### **5.1 User Authentication & Profile Management**

**FR-1:** Users can register/login using their email.  
**FR-2:** Users can manage their profiles (name, age, gender, type of user - student/working professional, etc.).

#### **5.2 Knowledge Extraction & Summarization**

**FR-3:** Users can add urls (web pages, YouTube, etc.).  
**FR-4:** The system extracts content, generates summaries, and stores them in Knowledge Cards.  
**FR-5:** Users can view and edit Knowledge Cards (title, summary, notes, and thumbnail).

#### **5.3 Content Organization & Retrieval**

**FR-6:** The system categorizes Knowledge Cards into Knowledge Suits based on topic similarity.  
**FR-7:** Users can search for Knowledge Cards using keywords.  
**FR-8:** Users can tag Knowledge Cards with a difficulty level.

#### **5.4 Collaboration & Sharing (Future Enhancement)**

**FR-9:** Users can generate shareable links for Knowledge Cards.  
 **FR-10:** Users can share entire Knowledge Suits.

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### **6. Technical Requirements**

* **TS-001:** API to handle Knowledge Card CRUD operations.
* **TS-001a:** Web scraping module to extract content.
* **TS-001b:** AI-based summarization module.
* **TS-002:** Creating vectors of Knowledge Cards using vector embedding.
* **TS-002a:** Clustering algorithm to group similar Knowledge Cards.

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