**Software Requirements Document**

**Document Authorship: Halil Melih Akça, Alp Toksöz, Mustafa Çevik**

|  | Product Perspective | Product Functions | User Characteristics | Use case Definitions | Constraints | Use Case Diagram | Non-Functional requirements | User Interfaces | Software Interfaces |
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| Halil Melih Akça | ✔ |  | ✔ |  | ✔ |  |  |  |  |
| Alp Toksöz |  | ✔ |  | ✔ | ✔ | ✔ |  |  |  |
| Mustafa Çevik |  |  |  |  |  |  | ✔ | ✔ | ✔ |
| Aylin Şahin |  |  |  |  |  |  |  |  |  |

**1. Product Perspective**

IdeaPulse is a standalone, browser-based Progressive Web Application (PWA) that functions without needing a backend or login system. It stores all data locally using localstorage enabling fully offline usage. It fits in as an individual tool, not part of a larger suite.

## **2. Product Functions**

* Create and save ideas with mood and tags
* Display a list of all saved ideas
* Visualize mood statistics in an Insight view
* Clear all saved data via Settings
* Navigate between pages via responsive navbar
* Operate offline using PWA capabilities

## **3. User Characteristics**

* **Age Range:** 16–40
* **Target Users:** Creators, students, writers, entrepreneurs
* **Technical Skill:** Basic browser or app usage suffices
* **User Type:** Anonymous, no login required

## **4. Constraints**

* Runs only on modern browsers (Chrome, Edge, Safari) or phones
* Stores data only in localstorage (no server/database)
* No user authentication or syncing
* Offline-first PWA approach, no cloud fallback

## **5. System Features (Use Case Based)**

### **Use Case 1: Add Idea**

* **Actor:** User
* **Goal:** Save a new idea with metadata
* **Preconditions:** App is open and input field is available
* **Main Flow:**
  1. User types an idea
  2. Selects a mood
  3. Adds optional tags
  4. Clicks 'Save'
  5. Idea appears in list and is stored in localStorage
* **Postconditions:** Idea is saved and visible

### **Use Case 2: View Ideas**

* **Actor:** User
* **Goal:** See past saved ideas
* **Preconditions:** At least one idea exists
* **Main Flow:**
  1. User navigates to homepage
  2. App loads data from localStorage
  3. Displays list with date, mood, and tags
* **Postconditions:** Ideas are visible in scrollable list

### **Use Case 3: Mood Insight**

* **Actor:** User
* **Goal:** Understand emotional patterns from saved ideas
* **Preconditions:** Ideas with mood tags are present
* **Main Flow:**
  1. User navigates to Insights page
  2. App aggregates moods
  3. Displays data in pie/bar chart
* **Postconditions:** Visual feedback is shown

**Use Case 4: Clear Data**

* **Actor:** User
* **Goal:** Reset all data
* **Preconditions:** At least one idea is stored
* **Main Flow:**
  1. User opens Settings
  2. Clicks 'Clear All Data'
  3. localStorage is cleared
* **Postconditions:** App resets to empty state

## **6. Non-Functional Requirements**

| Category | Requirement |
| --- | --- |
| Usability | Responsive and mobile-friendly UI, intuitive for all experience levels |
| Performance | Idea creation and list updates must complete under 500ms |
| Portability | Works on mobile and desktop browsers without install |
| Reliability | Data must persist across sessions and refreshes using  localstorage |

## **7. User Interfaces**

* **Home Page:** Idea input box, mood & tag selectors, idea list
* **Insights Page:** Mood distribution graph (e.g. pie or bar chart)
* **Settings Page:** Single button to clear all saved data
* **Navigation:** Top or bottom bar with icons/links to each screen

## **8. Software Interfaces**

* No external APIs or backend services used
* All data handled via browser-native JavaScript localstorage

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## **9. Use Case Diagram**

