

BrainNest SRS

Introduction:

The BrainNest Software Requirements Specification (SRS) provides a comprehensive description of the BrainNest platform.

This document defines the problem the system aims to solve, outlines high-level product features, and specifies detailed functional and non-functional requirements. It serves as a reference for stakeholders, developers, and testers to ensure a shared understanding of the system.

Purpose:

The purpose of this SRS is to:

- Clearly communicate the system requirements to stakeholders, developers, and testers.
- Guide developers in implementing features and integrating different components.
- Assist testers in designing test cases and validating the system functionality.
- Provide a structured reference for understanding the project concepts, scope, and roles involved.

Scope:

The BrainNest platform is an intelligent system designed to help users input their goals, thoughts, or projects in natural language. The system automatically analyzes, organizes, and breaks down these inputs into actionable steps to support effective planning and decision-making.

In Scope (Must-Have Features):

1. Generate structured idea documents for users.
2. Track user progress and activity within the platform.
3. Support secure online payments using preferred payment methods.
4. Provide a personalized dashboard with options to customize the interface.
5. Enable AI-powered assistant to manage, split, and organize user ideas.

Out of Scope:

1. Offline desktop applications.
2. More than three languages for the interface.
3. Physical product integrations outside of the digital platform.

Optional Features (Enhancements):

1. Social media login (Google, Facebook).
2. Saving favorite outputs.
3. Multi-language support for up to three languages.
4. AI-generated suggestions for idea improvement.

Definitions

Term	Definition
User	Any individual who interacts with the BrainNest platform, including both customers and administrators.
Customer	A user who subscribes to or browses the platform to manage ideas, create plans, or access content.
Administrator	A user with elevated privileges responsible for managing platform settings, monitoring user activity, and handling support tasks.
AI Assistant	The system component that interprets user input, organizes ideas, and generates actionable outputs such as mindmaps or structured plans.
Dashboard	A personalized interface where users can view and manage their ideas, progress, and system notifications.
Mindmap	A visual representation of user ideas, organized hierarchically to illustrate relationships and actionable steps.
Subscription	A paid or free plan that grants users access to certain features and content within the platform.

Acronyms and abbreviations

Acronyms	Meaning
UI	User Interface
CRM	Customer Relationship Management
AI	Artificial Intelligence
SRS	Software Requirements Specification

Overview

this document contain general description of the project

Overall descriptions

The BrainNest platform is an intelligent web-based system that allows users to input goals, ideas, or projects in natural language. The system then analyzes, organizes, and transforms these inputs into actionable steps, visual plans, or mindmaps.

Product Perspective:

BrainNest is designed as a standalone web application that integrates seamlessly with several external systems and services to provide a complete and smooth user experience. These integrations include an AI Assistant to analyze and organize user inputs, a secure payment gateway for subscription transactions, a login system for user authentication and access management, and a Customer Relationship Management (CRM) system to track user activity and manage interactions.

The platform operates in a web environment, accessible via modern browsers, and is fully responsive across desktop and mobile devices. These integrations allow BrainNest to function as a comprehensive solution for managing, visualizing, and executing user ideas efficiently.

Product Functions:

1. **Chatbot Assistant:** Understands, organizes, and splits user ideas.
2. **Favorites:** Allows users to save outputs for later reference.
3. **Themes & Dashboard Customization:** Users can switch between dark/light themes and customize their dashboard layout.

User Characteristics:

- **General Consumers:** Aged 17–47, access the platform via laptop or mobile browser with limited features.
- **Students:** Free subscription with access to all platform features.
- **Premium Consumers:** Paid subscription with access to additional features.

Operating Environment:

- **Client-Side:** Web browsers including latest versions of Chrome, Safari, Firefox, and Edge.
- **Server-Side:** Node.js backend with PostgreSQL database.
- **Other:** Platform must be responsive across multiple devices and support secure payment processing.

Constraints:

1. Backend must be implemented using Node.js and PostgreSQL.
2. Frontend must be implemented using React.js, Tailwind CSS, and HTML.
3. Platform must be responsive and work on desktop and mobile devices.
4. All transactions must be securely stored in the database.

Assumptions and Dependencies

Assumptions:

The following assumptions are made regarding the BrainNest platform:

1. Users have access to a modern web browser and internet connection.
2. Users are familiar with basic web navigation.
3. AI assistant will be able to process plain text inputs effectively.
4. All payment gateways and external integrations will be functional and available.

Dependencies and Requirements:

Must-Have:

- User registration and login system.
- AI Assistant for idea analysis, organization, and generation of outputs.
- Methods to collect user ideas and inputs efficiently.

Should-Have (Recommended Features):

- Primary payment option for subscription services.
- Chat history and progress tracking for users.

- AI-generated suggestions to enhance ideas and plans.

Could-Have (Optional Enhancements):

- Social media login (Google, Facebook).
- Ability to save favorite outputs.
- Multi-language support (up to 3 languages) to improve user experience.

Won't-Have:

- Support for more than three languages.
- Offline functionality outside the web platform.
- **User Interfaces:** Login page, Registration form, Chat interface, Output page, Tasks page, Dashboard, Settings page.
- **Software Interfaces:** CRM system for tracking customer interactions, integration with information providers.

External Interfaces Requirements

User Interfaces: Login page, Registration form, Chat interface, Output page, Tasks page, Dashboard, Settings page.

Software Interfaces: CRM system for tracking customer interactions, integration with information providers.

System Features - Use Cases

Display a Virtual View (VV)

- **Actor: Customer**
- **Description:** Users input ideas and click the "Virtual View" button to convert them into a visual representation.
- **Preconditions:** User has entered ideas.
- **Basic Scenario:** User submits ideas → clicks VV → system generates visual output.
- **Alternative Scenario:** User submits ideas as images/files; system processes supported formats.
- **Failures:** Unsupported image/file type, missing or unclear values.
- **Postconditions:** Virtual view displayed and accessible.

Create Mindmaps

- **Actor: Customer**

- **Description:** Users input ideas; system generates a structured mindmap.
- **Preconditions:** User has ideas.
- **Basic Scenario:** User submits text ideas → system analyzes → mindmap generated.
- **Alternative Scenario:** User uploads images/files.
- **Failures:** Unsupported file type, missing/unclear values.
- **Postconditions:** Mindmap generated and saved.

Save Favorites

- **Actor:** Customer
- **Description:** Users can save outputs for later reference.
- **Preconditions:** User logged in.
- **Basic Scenario:** Select output → Add to Favorites → system saves output.
- **Failures:** Not logged in, storage error.
- **Postconditions:** Output saved successfully.

Themes & Dashboard Customization

- **Actor:** Customer
- **Description:** Users switch themes and customize dashboard layout.
- **Preconditions:** User logged in.
- **Basic Scenario:** Navigate to settings → select theme/layout → dashboard updated.
- **Failures:** Invalid selection, system fails to save.
- **Postconditions:** Dashboard reflects preferences.

Idea Tracking & Progress Monitoring

- **Actor:** Customer / Administrator
- **Description:** Tracks user activity and progress on submitted ideas/tasks.
- **Preconditions:** User has active submissions.
- **Basic Scenario:** System logs interactions → updates progress dashboard.
- **Failures:** System fails to log activity.
- **Postconditions:** Progress updated in real-time.

Non-Functional Requirements

Performance Requirements:

- Page should load within 3 seconds.
- Page should refresh and update content within 2 seconds.

Usability Requirements:

- System provides maps and diagrams to enhance usability.
- Simple and clean UI.
- Use of intuitive icons and toolbars.

Security Requirements:

- Automatic logout when session ends.
- Secure storage and handling of user data.

Availability:

- System available at all times.
- Backup system in place to prevent data loss.

Portability:

- Runs on web browsers only.
- Supported browsers: Chrome, Edge, Safari, Firefox.