Business Requirements Document (BRD) for Notes App

**1. Project Overview**

The Notes App is a web-based application designed to allow users to create, read, update, and delete (CRUD) notes securely. Users can manage their notes, search for specific notes, and organise them using tags and pinning functionality.

**2. Business Objectives**

User Management: Allow users to create accounts, log in, and manage their profiles.

Note Management: Enable users to perform CRUD operations on notes.

Security: Ensure secure authentication and authorization using JWT.

Search and Organization: Provide functionality for users to search notes and organise them by tags and pinning.

**3. Scope of Work**

Frontend Development: Develop a user-friendly interface using React.

Backend Development: Develop a secure and scalable backend using Node.js, Express, and MongoDB.

Deployment: Deploy the frontend on Vercel and the backend on Render.

**4. Functional Requirements**

User Management

* User Registration:
  + Users can create a new account by providing their full name, email, and password.
  + Input validation for required fields.
* User Login:
  + Users can log in using their email and password.
  + Generate JWT upon successful login.
* User Profile:
  + Users can view their profile information.
  + Secure access to user-specific data.

Note Management

* Create Note:
  + Users can create a new note by providing a title, content, and optional tags.
  + Input validation for required fields.
* Read Note:
  + Users can view a list of their notes, sorted by pinned status.
  + Users can view details of a specific note.
* Update Note:
  + Users can update the title, content, tags, and pinned status of an existing note.
* Delete Note:
  + Users can delete a specific note.

Search and Organization

* Search Notes:
  + Users can search for notes by title or content.
* Tags:
  + Users can add tags to notes for better organisation.
* Pinning Notes:
  + Users can pin important notes to the top of their notes list.

**5. Non-Functional Requirements**

* Performance:
  + The application should load quickly and handle concurrent users efficiently.
* Security:
  + User data should be protected using encryption and secure authentication mechanisms.
* Usability:
  + The user interface should be intuitive and responsive.
* Scalability:
  + The backend should be scalable to handle increasing numbers of users and notes.

**6. Technical Requirements**

* Frontend:
  + Framework: React
  + Deployment: Vercel
* Backend:
  + Environment: Node.js with Express
  + Database: MongoDB (MongoDB Atlas)
  + Deployment: Render
* Authentication:
  + JWT (JSON Web Token)
* Version Control:
  + Git with GitHub repository

**7. Assumptions and Constraints**

* Assumptions:
  + Users will have access to a modern web browser.
  + The application will be deployed in a cloud environment.
* Constraints:
  + The application must adhere to data protection regulations.

**8. Milestones and Timeline**

* Week 1:
  + Finalise project requirements and design wireframes.
* Week 2-3:
  + Develop the frontend components and pages.
* Week 4-5:
  + Develop the backend APIs and database schema.
* Week 6:
  + Implement user authentication and authorization.
* Week 7:
  + Integrate frontend with backend and perform testing.
* Week 8:
  + Deploy the application and conduct final testing.

**9. Acceptance Criteria**

The application allows users to register, log in, and manage their profiles.

Users can perform CRUD operations on notes.

The application securely handles user authentication and authorization.

Users can search and organise notes effectively.

The application is deployed and accessible online.

**10. Stakeholders**

Project Sponsor: The entity funding the project.

Product Owner: The person responsible for defining the features and requirements.

Development Team: The team responsible for building the application.

End Users: The individuals who will use the Notes App.

## Conclusion

This Business Requirements Document outlines the essential features and functionalities needed to develop a secure and efficient Notes App. By adhering to these requirements, the development team can ensure the application meets the business objectives and provides a valuable tool for users to manage their notes.