

# **Front End Engineering - II**

## **Project Report**

**Semester-IV (Batch-2022)**

### **NOTES APP**



**Supervised By:**

**Parul Gahelot**

**Submitted By:**

**Gopika Ashutosh Goyal, 2210990328 (G7)**

**Department of Computer Science and Engineering  
Chitkara University Institute of Engineering & Technology,  
Chitkara University, Punjab**

# **ABSTRACT**

This project report presents Notes App, a user-friendly, front-end application designed to manage personal notes efficiently. In an era where digital organization is paramount, Notes App addresses the growing need for a streamlined, intuitive solution for note management. The application provides a range of functionalities including the ability to add new notes, search for existing notes, archive and unarchive notes, and permanently delete notes. By offering these features, Notes App simplifies the process of note-taking and retrieval, ensuring that users can manage their information seamlessly and effectively.

The report is structured to provide a comprehensive overview of the project, starting with the background and motivation for developing Notes App. It outlines the objectives of the project, emphasizing the importance of efficient note management in enhancing productivity and organization. The significance of Notes App is highlighted, demonstrating how it can benefit users by providing a centralized platform for their note-taking needs.

The proposed design and methodology section provides an in-depth look at the architecture of the application, including schematic diagrams and file structure. This section also explains the algorithms used to implement the core functionalities of Notes App, such as adding, searching, archiving, unarchiving, and deleting notes. These algorithms are designed to be efficient and user-friendly, enabling quick and accurate note management.

The results section showcases the application through detailed descriptions and screenshots of the user interface, illustrating key features such as the note-taking screen, search functionality, and the archive management system.

In conclusion, the report presents Notes App as a valuable tool for anyone looking to improve their digital note-taking and organization practices. This detailed project report aims to provide a clear and thorough understanding of Notes App, from its inception to its implementation and performance.

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# **1. INTRODUCTION**

## **1.1. BACKGROUND:**

In today's fast-paced digital world, managing personal information efficiently has become a critical need. As individuals juggle numerous responsibilities, tasks, and information daily, the traditional methods of note-taking—such as pen and paper—often prove to be cumbersome and disorganized. These conventional methods can lead to difficulties in storing, retrieving, and managing notes, thereby causing inefficiencies and potential loss of valuable information.

Notes App is designed to address these challenges by offering a streamlined, digital solution for creating, organizing, and retrieving notes. Unlike traditional note-taking methods, Notes App leverages the power of front-end technologies to provide users with a modern, user-friendly interface. The application ensures quick and easy access to notes without the need for backend infrastructure, making it lightweight and efficient. This focus on front-end technology means that users can enjoy a responsive and intuitive experience, whether they are adding a new note, searching for existing ones, or managing their archived notes.

The digital transformation of note-taking processes offered by Notes App aligns with the broader trend of digitization across various domains. By shifting from analog to digital, Notes App not only enhances the accessibility of notes but also introduces functionalities that were previously difficult to achieve. These functionalities include robust search capabilities, efficient archiving systems, and secure deletion processes, all of which contribute to a more organized and productive workflow.

Additionally, as remote work and digital collaboration become more prevalent, the need for efficient and accessible note-taking tools has grown significantly. Professionals, students, and individuals alike require tools that allow them to capture and organize thoughts, ideas, and information seamlessly across different devices and environments. Notes App addresses this need by providing a consistent and reliable platform that supports various use cases, from personal journaling to collaborative projects. This adaptability makes Notes App a valuable tool in both personal and professional settings, catering to a wide range of users with different needs and preferences.

## **1.2.OBJECTIVE:**

The primary objectives of Notes App are multifaceted, aiming to create a comprehensive note management system that addresses the diverse needs of its users. These objectives include:

### **1. Developing an Intuitive User Interface for Note Management:**

The user interface (UI) of Notes App is designed to be simple yet powerful, ensuring that users can easily navigate and utilize the application. The intuitive UI aims to reduce the learning curve for new users while providing advanced features for more experienced ones. This includes a clean layout, clear navigation, and responsive design elements that adapt to various screen sizes and devices.

### **2. Implementing Robust Search Functionality for Quick Note Retrieval:**

One of the core features of Notes App is its powerful search functionality. Users can quickly find specific notes by typing keywords or phrases into the search bar. The search algorithm is designed to deliver accurate results promptly, making it easy for users to locate the information they need without scrolling through numerous notes manually.

### **3. Providing Features for Archiving and Unarchiving Notes:**

Note management often involves distinguishing between active and inactive notes. Notes App includes features for archiving notes that are not currently needed but may be useful in the future. Users can archive notes with a simple click and unarchive them just as easily when they need to access them again. This helps keep the workspace clutter-free while retaining important information for future reference.

#### 4. **Ensuring Secure and Permanent Deletion of Notes:**

To address privacy and organizational concerns, Notes App includes functionality for the secure and permanent deletion of notes. When a user decides to delete a note, the application ensures that the note is removed completely, preventing any unauthorized access or accidental recovery. This feature is crucial for maintaining the confidentiality and security of sensitive information.

### **1.3. SIGNIFICANCE:**

The significance of Notes App lies in its ability to enhance productivity and organization through a digital platform for note management. By offering a suite of functionalities tailored to the needs of modern users, Notes App transforms the way individuals handle their notes and personal information. Key benefits and significances of Notes App include:

#### 1. **Enhanced Productivity:**

Notes App streamlines the process of note-taking and retrieval, allowing users to focus more on their tasks and less on managing their notes. With features like robust search and easy archiving, users can quickly find the information they need and keep their workspace organized, leading to increased productivity.

#### 2. **Improved Organization:**

The application provides a systematic way to manage notes, reducing the clutter and confusion associated with traditional note-taking methods. Users can categorise, archive, and delete notes as needed, ensuring that their information is well-organized and easily accessible.

### 3. **User-Centric Design:**

The design and development of Notes App are centered around user needs and feedback. By focusing on creating a user-friendly experience, Notes App ensures that it meets the expectations and requirements of its diverse user base. Continuous updates and improvements based on user feedback help in maintaining the relevance and effectiveness of the application.

### 4. **Data Security and Privacy:**

Notes App prioritizes the security and privacy of user data. With features like secure deletion and local storage management, users can trust that their information is protected from unauthorized access and loss. This focus on security is particularly important in an age where data breaches and privacy concerns are prevalent.

In conclusion, Notes App represents a significant advancement in the field of digital note management. By addressing the limitations of traditional methods and leveraging modern technologies, Notes App provides a comprehensive solution that enhances productivity, organization, and user satisfaction. This project report aims to detail the development, design, and functionality of Notes App, showcasing its potential to transform the way users manage their notes in the digital age.

## **2. PROBLEM DEFINITION AND REQUIREMENT**

### **2.1. PROBLEM STATEMENT:**

In today's fast-paced and interconnected digital landscape, individuals are constantly inundated with a vast array of information from various sources. From work-related tasks to personal projects and creative endeavors, the volume of data encountered on a daily basis can be overwhelming. Amidst this deluge of information, one common challenge that many individuals encounter is the effective management of their notes.

Traditional methods of note-taking, such as scribbling ideas in physical notebooks or saving digital notes across multiple disparate platforms, often result in disorganized storage and fragmented information. Users frequently struggle to locate specific notes when needed, leading to frustration, wasted time, and diminished productivity. The inefficiencies inherent in these outdated note-taking practices hinder individuals from harnessing the full potential of their ideas and insights.

Moreover, the prevalence of scattered digital documents exacerbates the problem, as users contend with a myriad of file formats, storage locations, and inconsistent naming conventions. As a result, the process of retrieving relevant information becomes akin to searching for a needle in a haystack, further impeding productivity and hindering the realization of creative and intellectual pursuits.

Recognizing the pressing need for a modern and user-centric solution to address these challenges, there arises a clear imperative for the development of a reliable front-end application dedicated to simplifying note-taking and streamlining the retrieval process. Such an application must offer intuitive features for organizing notes efficiently, enabling users to effortlessly capture, categorize, and retrieve their thoughts, ideas, and insights.

By providing a centralized platform for note management, this application aims to empower individuals to declutter their digital workspace, regain control over their information, and unlock their full creative and cognitive potential. Through seamless integration with existing workflows and intuitive user interface design, the application seeks to enhance user productivity, facilitate knowledge discovery, and foster a sense of clarity and organization in an otherwise chaotic digital landscape.



In essence, the development of this front-end note-taking application represents a transformative endeavour aimed at revolutionising the way individuals interact with and manage their notes in the digital age. By addressing the inherent challenges of traditional note-taking methods and leveraging the power of modern technology, the application endeavors to empower users to capture, organize, and retrieve their ideas with ease, efficiency, and precision.

## **2.2.SOFTWARE REQUIREMENTS:**

### **1. Programming Language:**

- JavaScript: A versatile language for web development, allowing dynamic and interactive functionalities.

### **2. Framework:**

- React: A popular JavaScript library for building user interfaces, known for its component-based architecture and virtual DOM rendering.

### **3. Libraries:**

- React DOM: A package for rendering React components to the browser's DOM, ensuring optimal performance.
- Redux: A predictable state container for JavaScript applications, facilitating centralized state management and data flow.
- CSS: A styling language used to enhance the visual presentation of web pages and applications.

#### **4. Development Tools:**

- Visual Studio Code (VS Code): A lightweight yet powerful code editor with features for writing, debugging, and collaborating on code.
- Node.js: A JavaScript runtime environment that enables server-side and client-side development, commonly used for package management with npm or yarn.

These components form the foundation of the Notes App development stack, providing the necessary tools and libraries to create a robust and efficient front-end application.

### **2.3.HARDWARE REQUIREMENTS:**

In terms of hardware, we require a computer with sufficient processing power and memory to support the computational demands of our algorithms.

While the specific hardware specifications may vary depending on the scale of the project and the size of the dataset, a standard computer with a multi-core processor and ample RAM should suffice for development and testing purposes.

### **3. PROPOSED DESIGN / METHODOLOGY**

This versatile application is structured to be modular and scalable, with a strong emphasis on its front-end interface. Developed using React.js, the front-end ensures a responsive and interactive user experience.

#### **3.1. ALGORITHMS USED:**

##### **1. Add Note Algorithm:**

- Input: Note content
- Process: Save note content to the database with the current timestamp and active status
- Output: Confirmation message

##### **2. Search Note Algorithm:**

- Input: Search query
- Process: Query the database for notes matching the search term
- Output: List of matching notes

##### **3. Archive Note Algorithm:**

- Input: Note ID
- Process: Update the note status to archived in the database
- Output: Confirmation message

#### 4. **Unarchive Note Algorithm:**

- Input: Note ID
- Process: Update the note status to active in the database
- Output: Confirmation message

#### 5. **Delete Note Algorithm:**

- Input: Note ID
- Process: Remove the note from the database
- Output: Confirmation message

These algorithms govern the core functionalities of Notes App, enabling users to add, search, archive, unarchive, and delete notes seamlessly. Each algorithm is integrated into the front-end interface, allowing users to perform these actions with ease directly from the main page.

### **3.2.PROJECT FILE STRUCTURE:**

The organization of files and directories within a project is crucial for maintaining clarity, facilitating collaboration, and ensuring efficient development.

In the case of Notes App, the file structure plays a pivotal role in organizing the codebase and resources required for the application's functionality.

## Let's delve into the directory structure of Notes App:

Notes App/

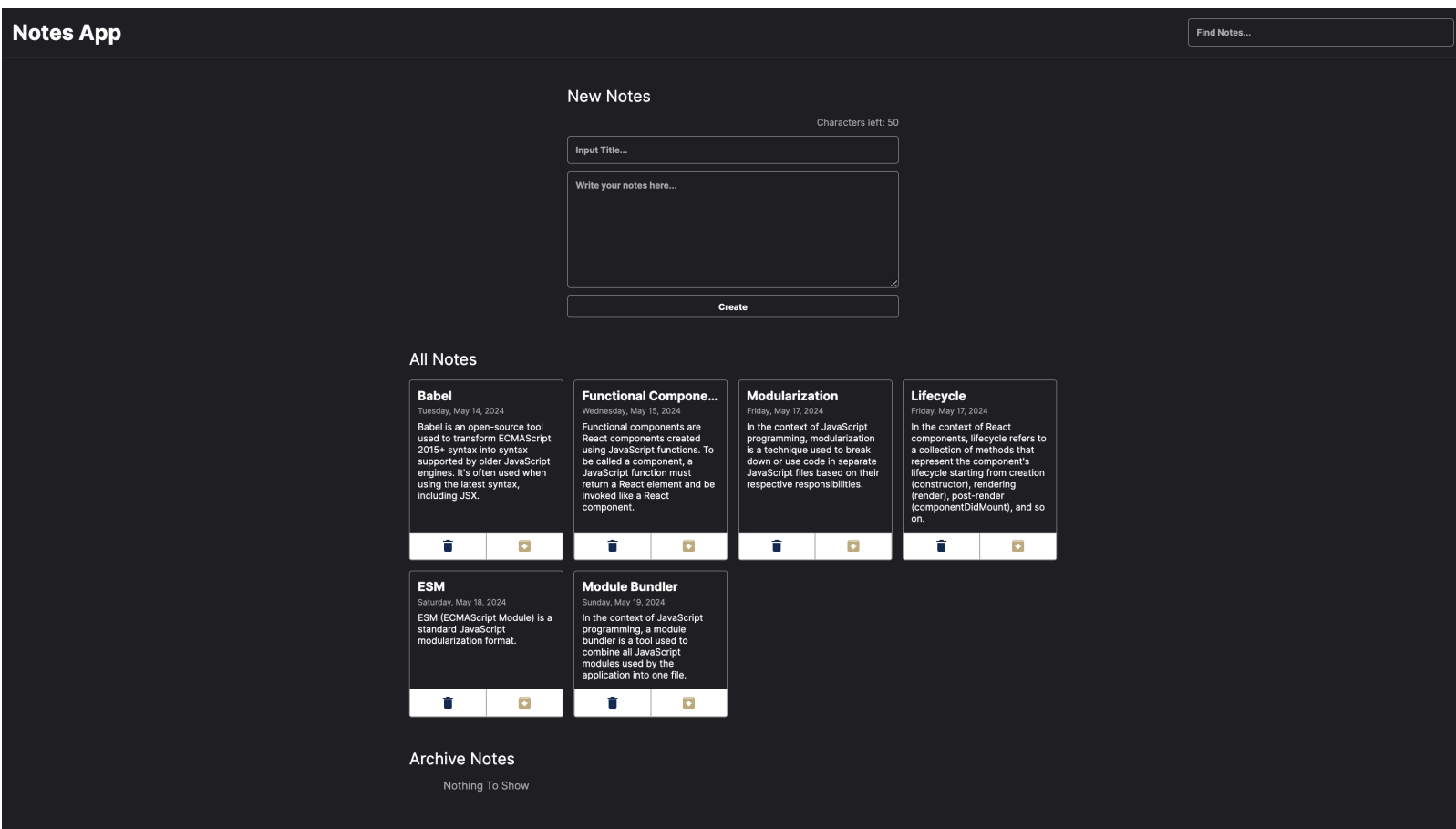
- |
- | — package-lock.json
- | — package.json
- | — src/
  - | | — App.js
  - | | — index.js
  - | | — components/
    - | | | — Action.jsx
    - | | | — Alert.jsx
    - | | | — Body.jsx
    - | | | — Content.jsx
    - | | | — Header.jsx
    - | | | — Input.jsx
    - | | | — Items.jsx
    - | | | — List.jsx
    - | | | — ShowItems.jsx
  - | | — styles/
    - | | | — style.css
  - | | — utils/
    - | | | — index.js
- | — public/
  - | | — index.html

## 4. RESULTS

### 4.1.RESULTS:

The Results section provides an in-depth analysis of the functionality, design, and resilience of Notes App. Through meticulous examination and evaluation, this section offers valuable insights into the application's performance, user experience, and potential areas for improvement. From the intricate details of note management to the broader considerations of design aesthetics, the following pages delve into the various facets of Notes App's capabilities. By presenting a comprehensive overview of its features, this section aims to provide actionable insights and strategic recommendations for the continued enhancement and optimization of Notes App.

#### 1. Home Page:



- As you can see our home page displays created notes, the search bar, an input box for the title of the new note, and another input box for the content of the note.
- You can see all created notes in the “All Notes” section.
- Archived notes can be seen in the “Archive Notes” section.
- The search bar on the top right corner enables you to search through your notes and filter the one you require.

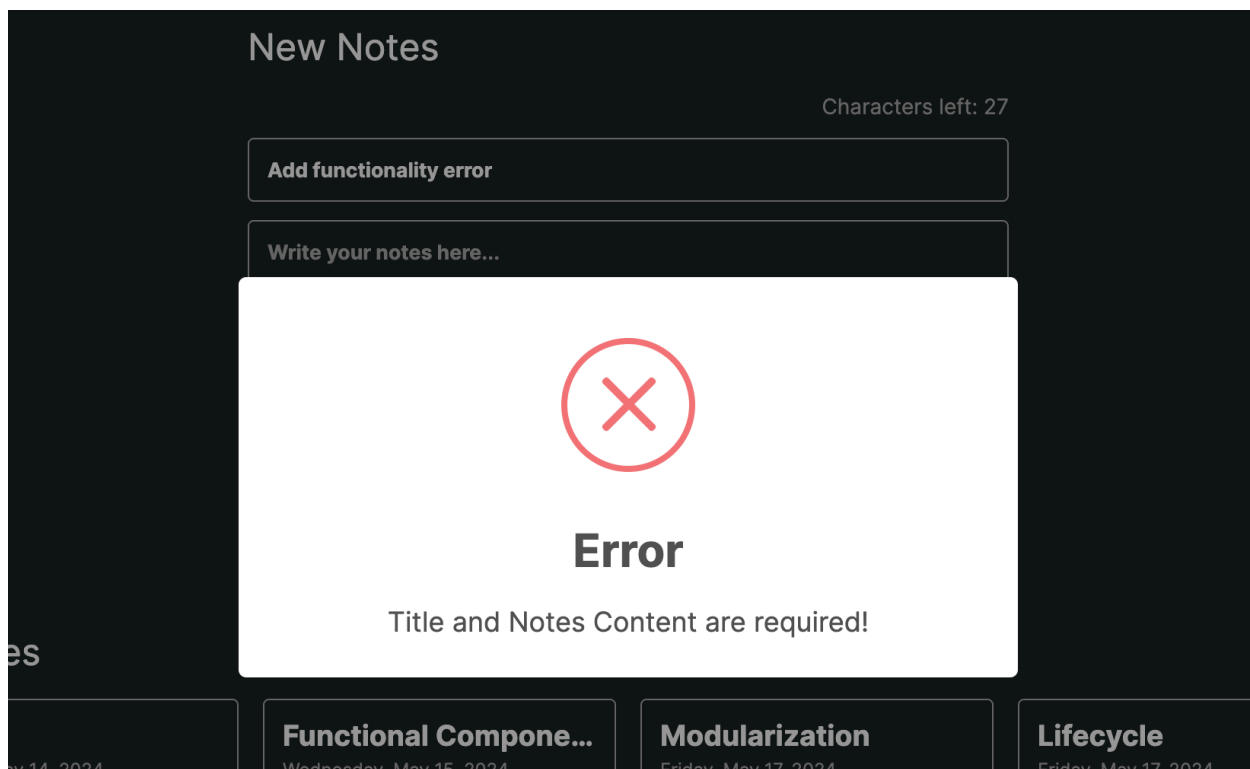
## 2. Header:

- The header displays the name of the app - Notes App along with a search bar.
- The search bar enables the users to search whichever note is required by them.
- It filters the notes according to the string the user inputs and displays them side by side.



## 3. Add Note Functionality:

- To Add a note you simply have to enter the note title (Character Limit = 50) and the note content that you want to save under the “New Notes” section.
- Its is required that you fill both fields else an error will pop up. For example:



- The above image shows a pop-up error message when either one of the fields is missing.

**New Notes**

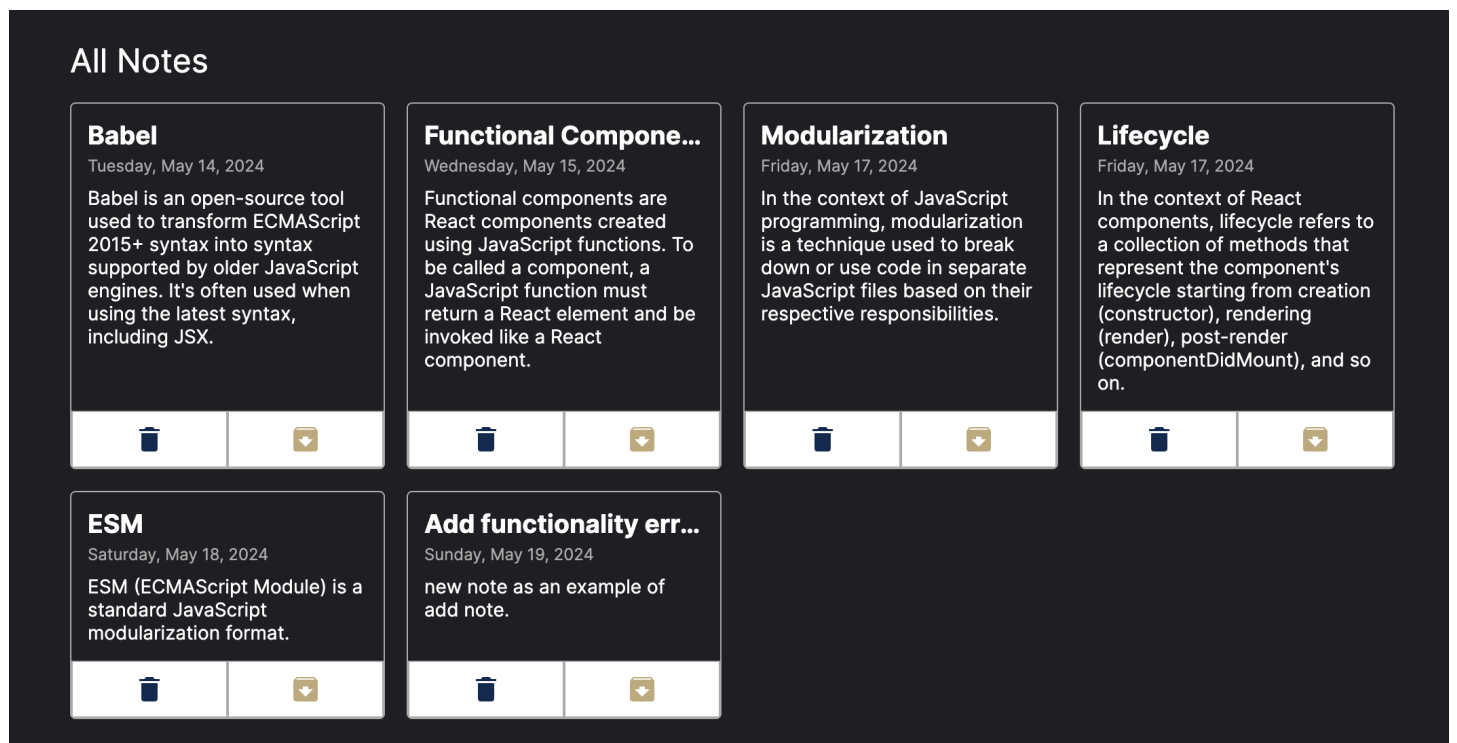
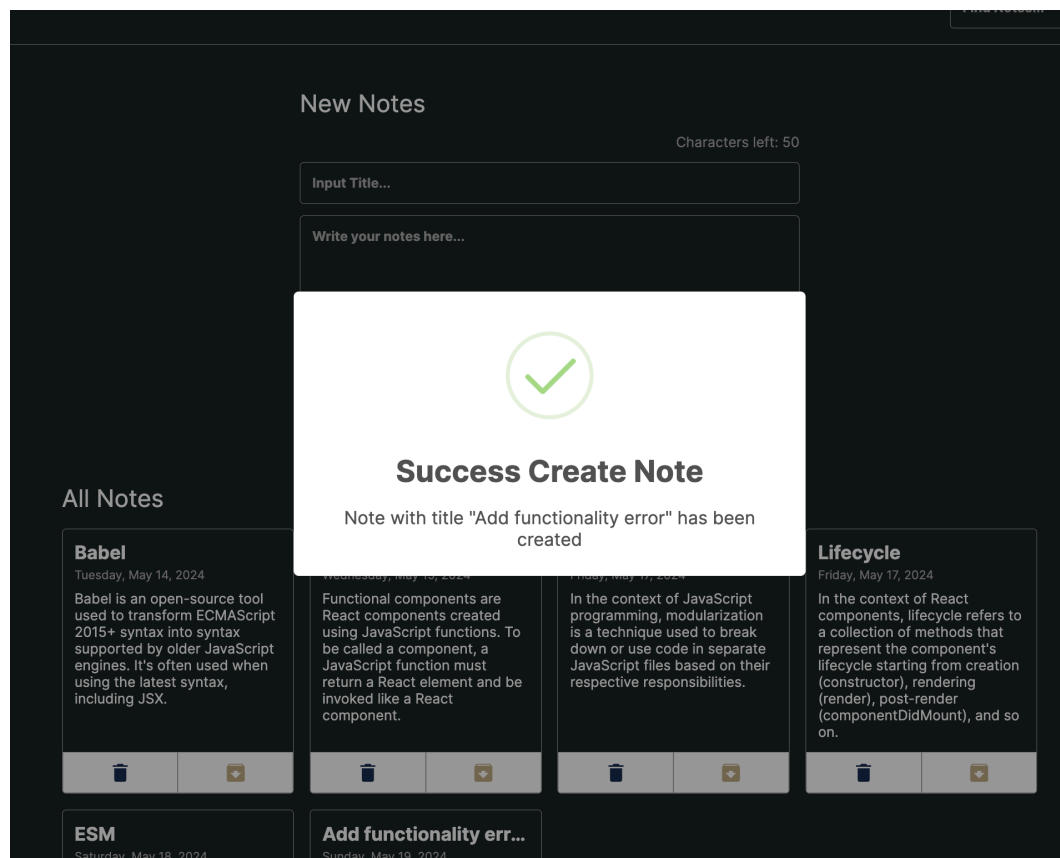
Characters left: 27

Add functionality error

new note as an example of add note.

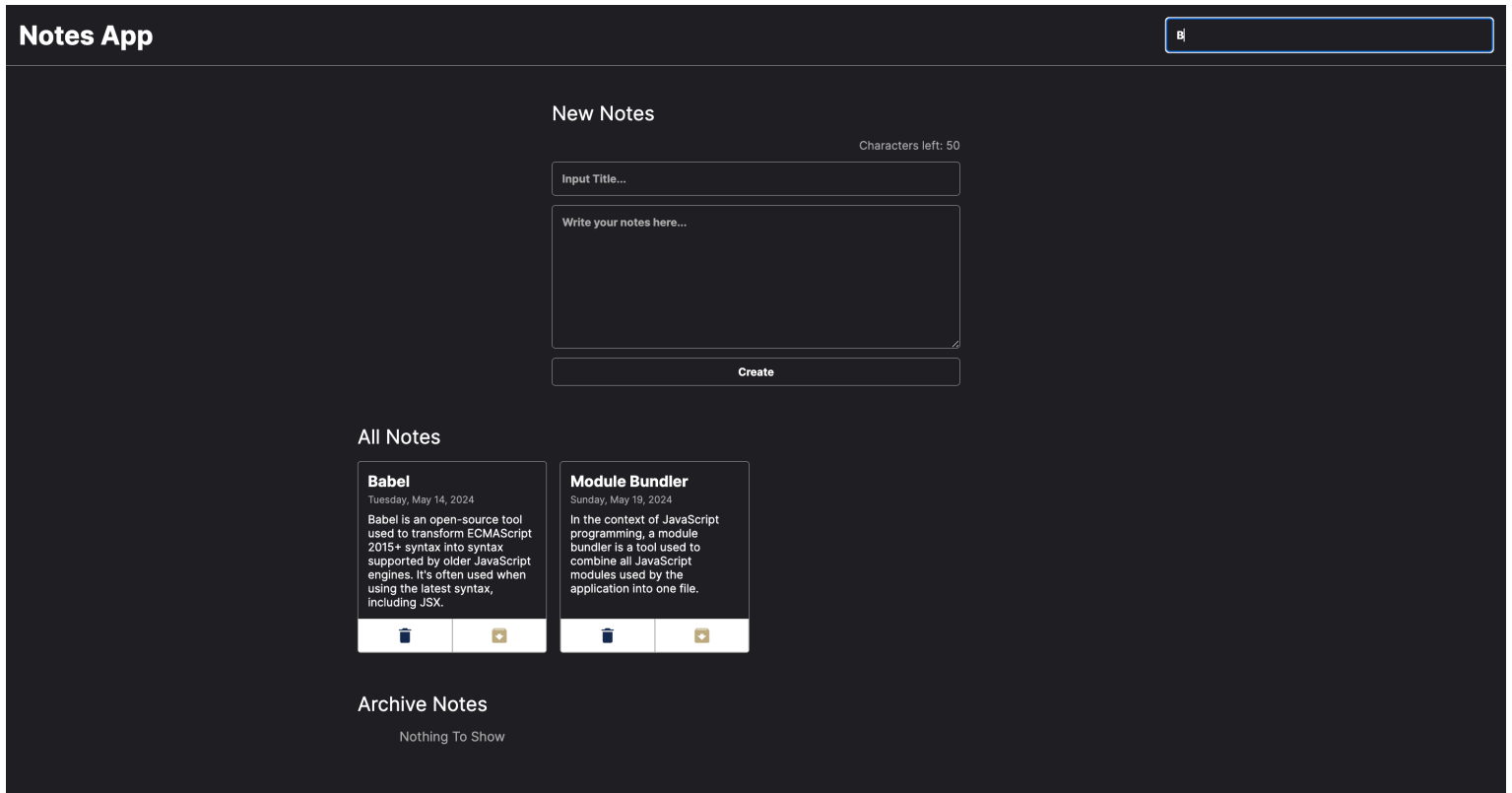
Create



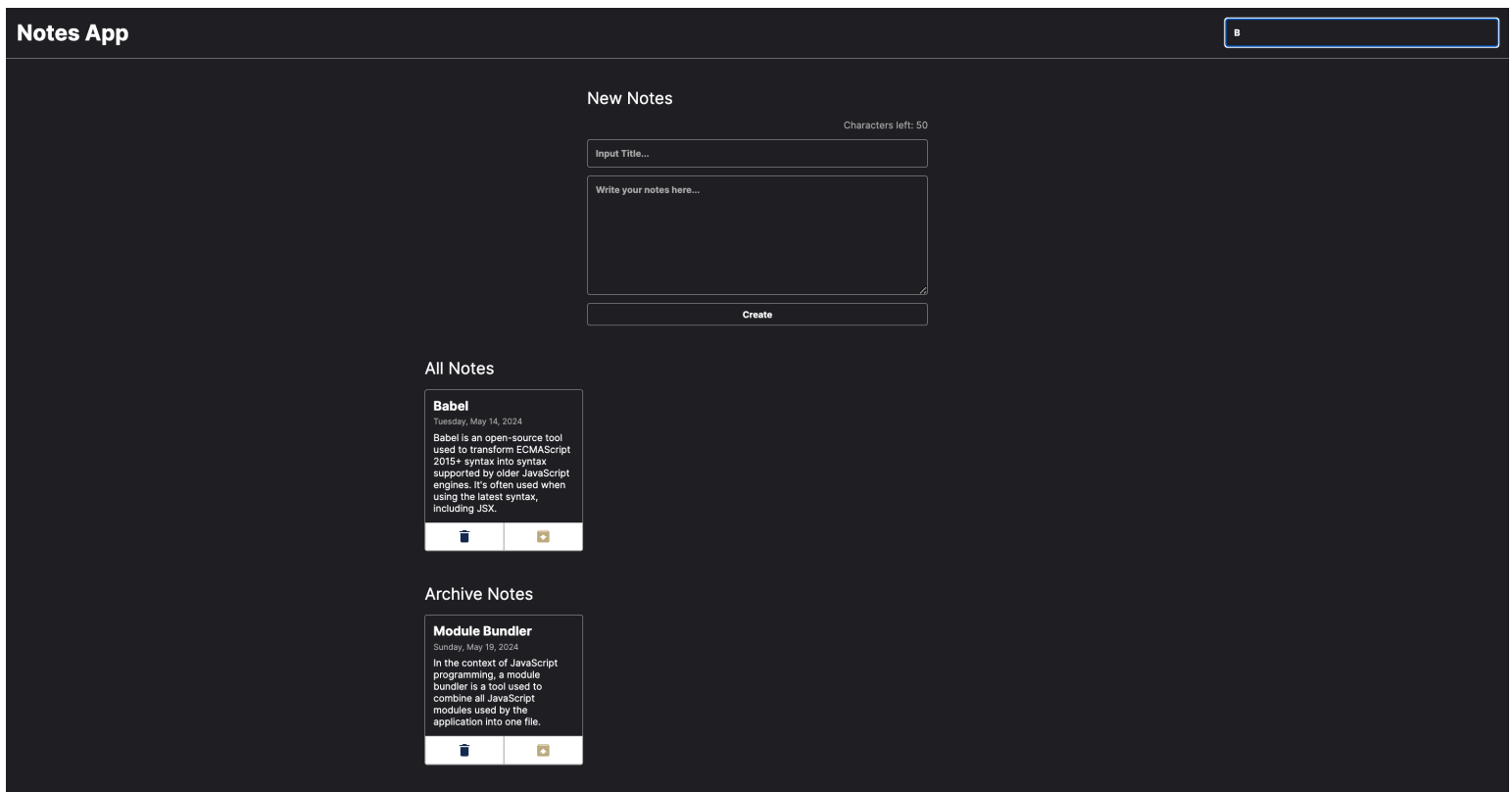


- The above image shows the successful creation of a new note.

## 4. Search Note Functionality:



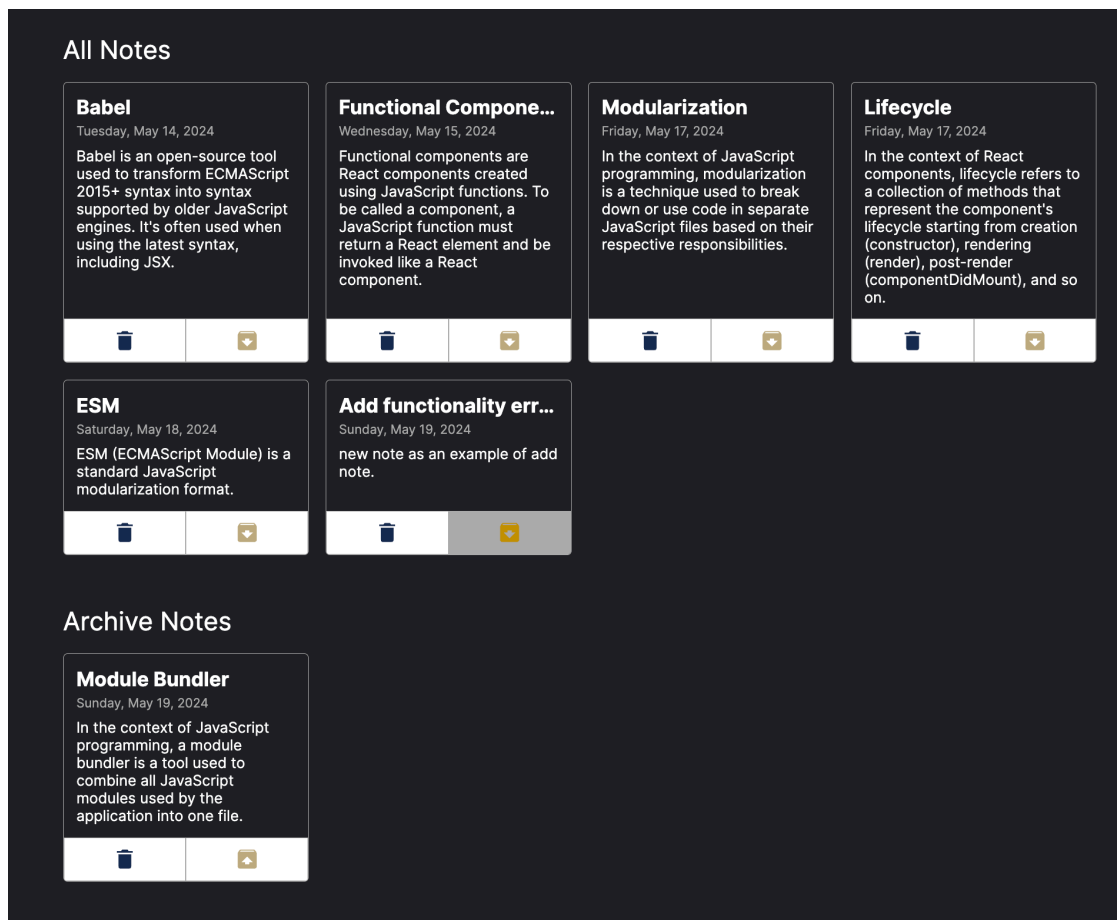
- The above image shows all the notes containing the letter “B” in their title.
- There are no archived notes therefore it is showing the message “Nothing To Show”.



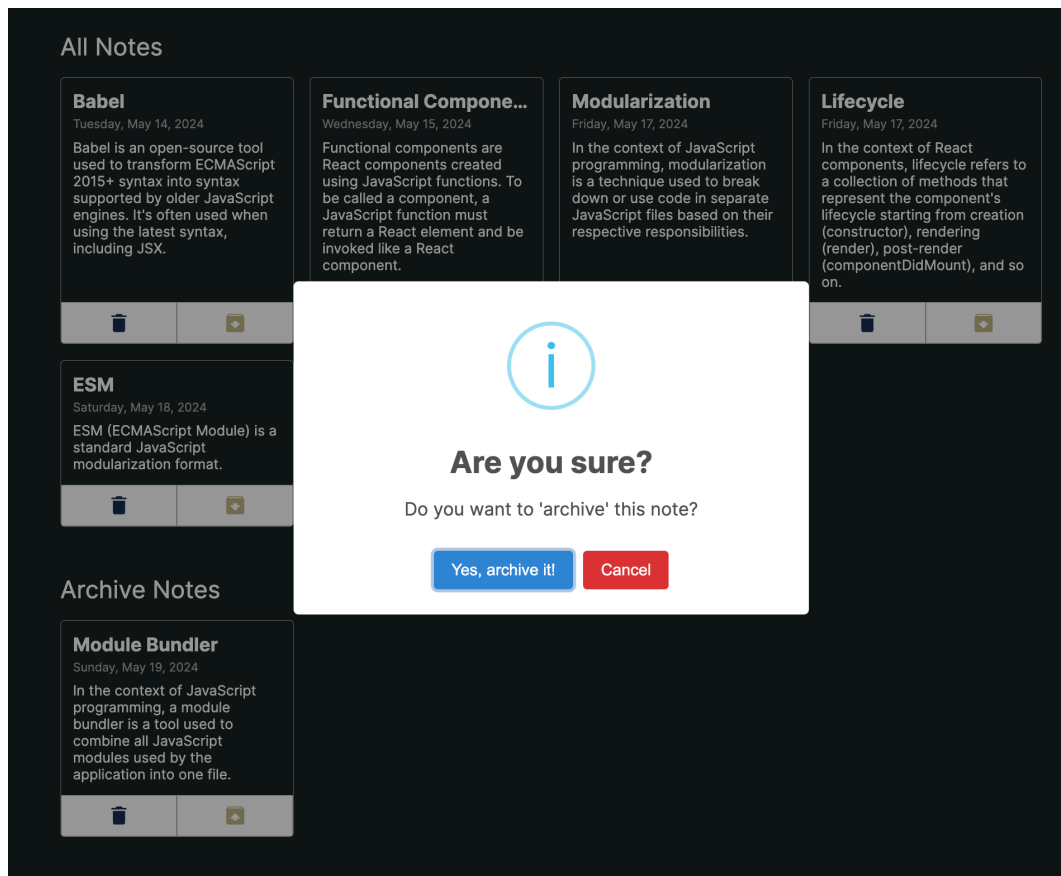
- We archived the “Module Bundler” note and then again searched for the notes containing the letter “B” in their title.
- As visible in the above image the Search functionality of the Notes App also filters the archived notes along with all notes.

### 3. Archive Note Functionality:

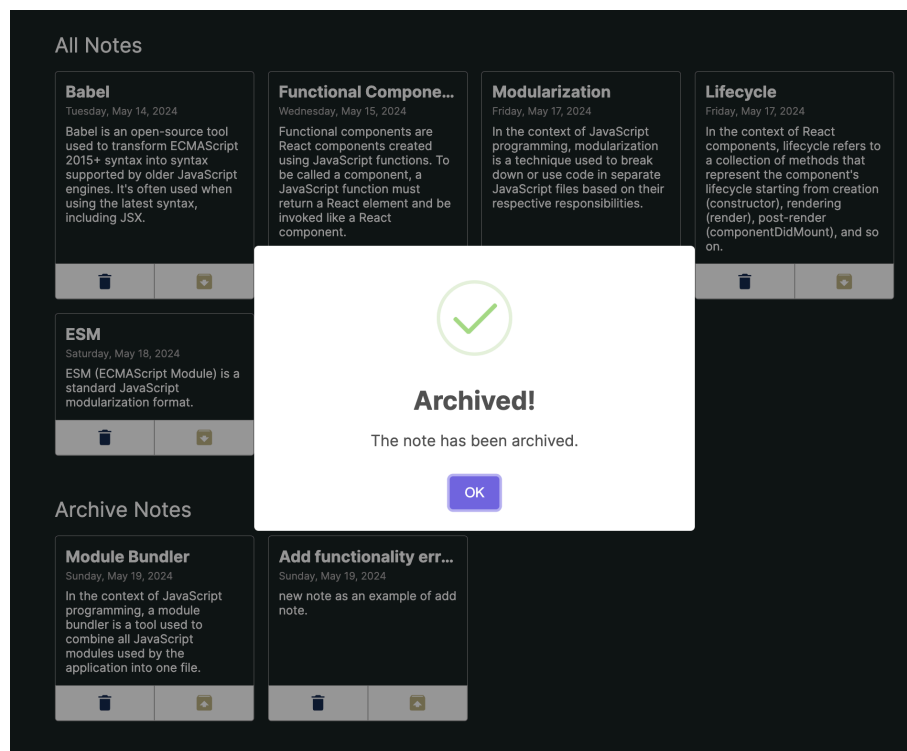
- Users can archive notes they no longer need to access regularly.
- They can simply click on the button provided and easily archive their notes.



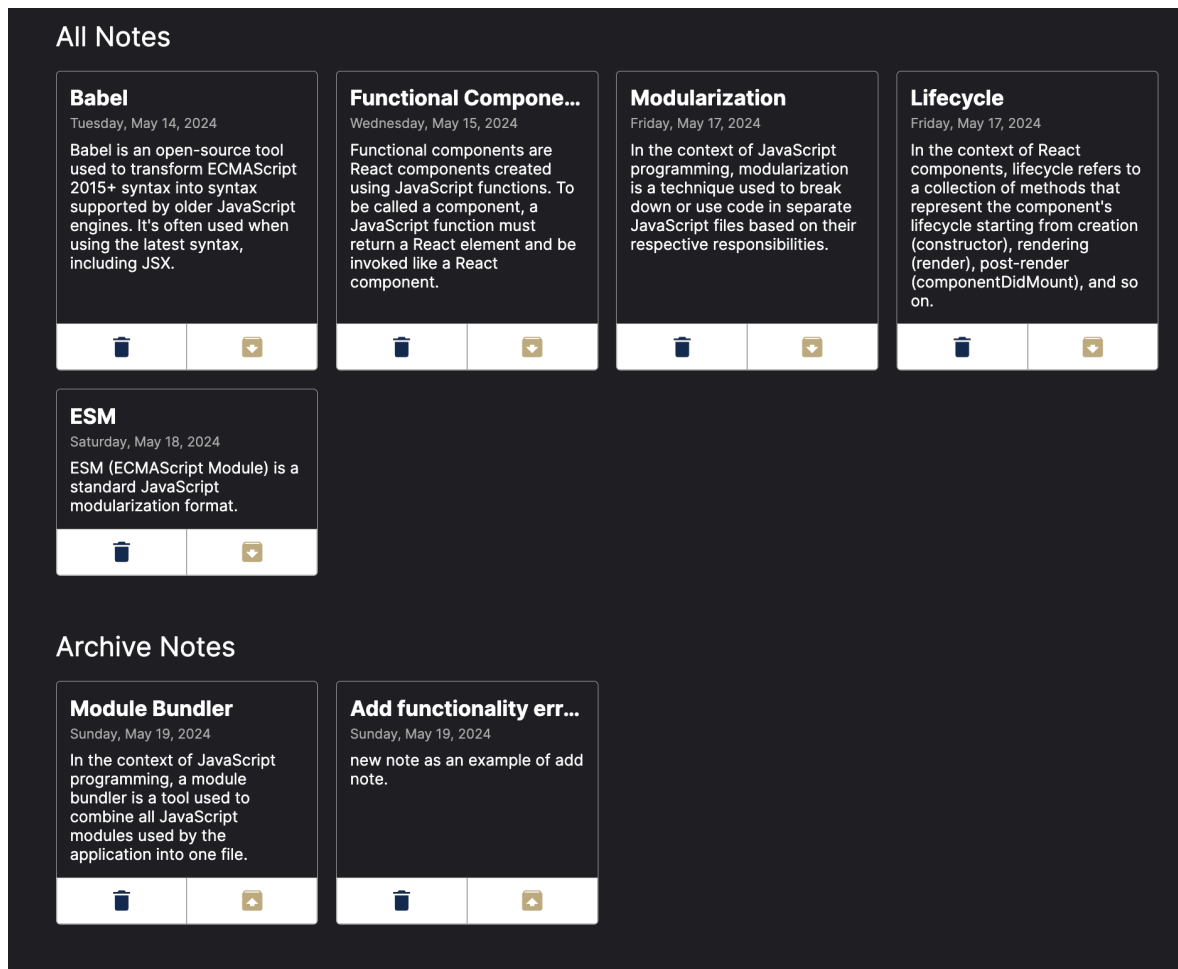
- The above image shows the archive button on the bottom right corner of each note.
- The click will prompt a pop-up to appear asking the user whether they are sure about it or if they want to cancel.



- You can cancel or go ahead with the process.

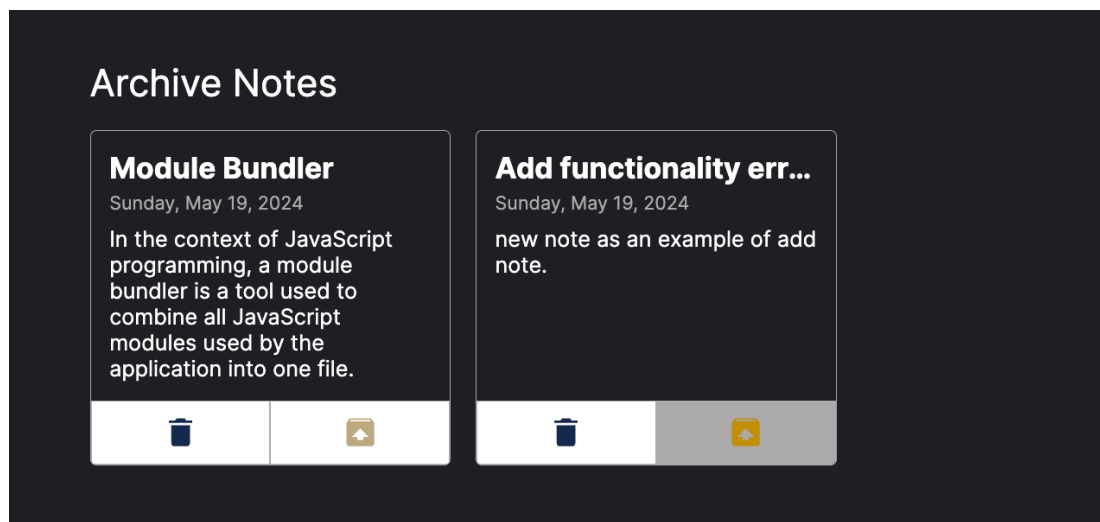


- The archived note will then be displayed in the “Archive Notes” section.

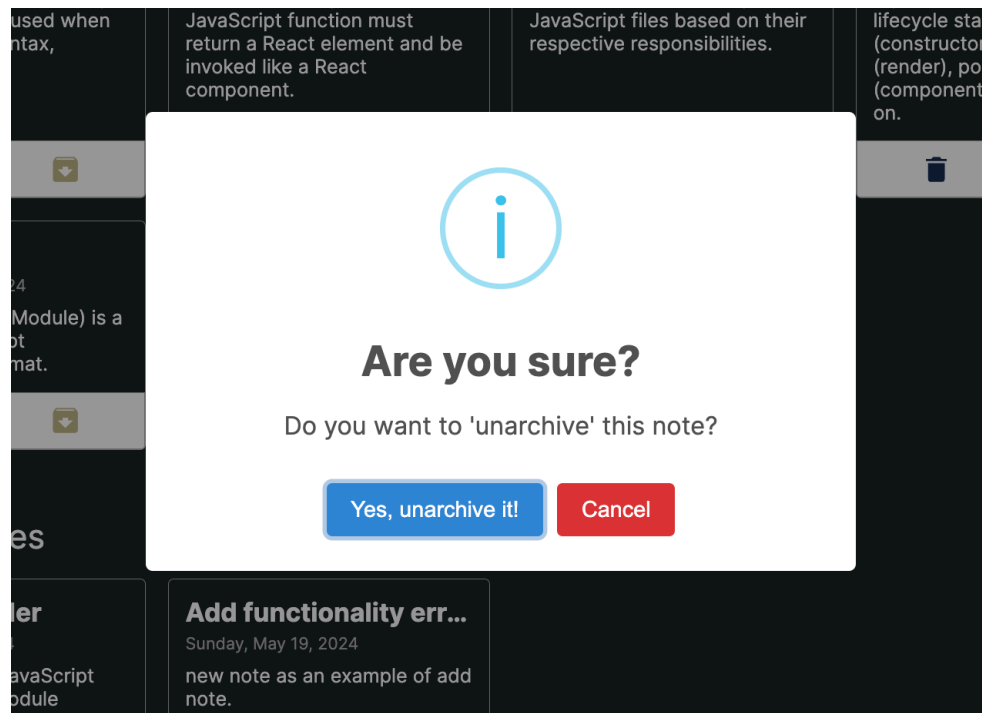


#### 4. Unarchive Note Functionality:

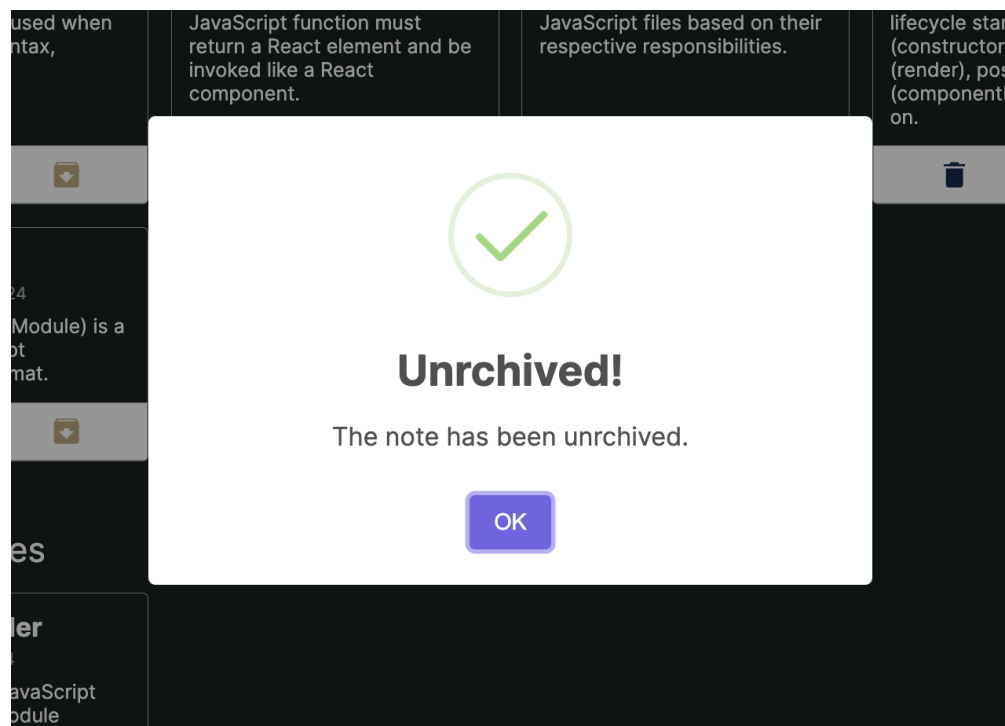
- Users can unarchive notes when they need them again.
- It is similar to the archive note process. They can simply click on the button provided and unarchive the note.



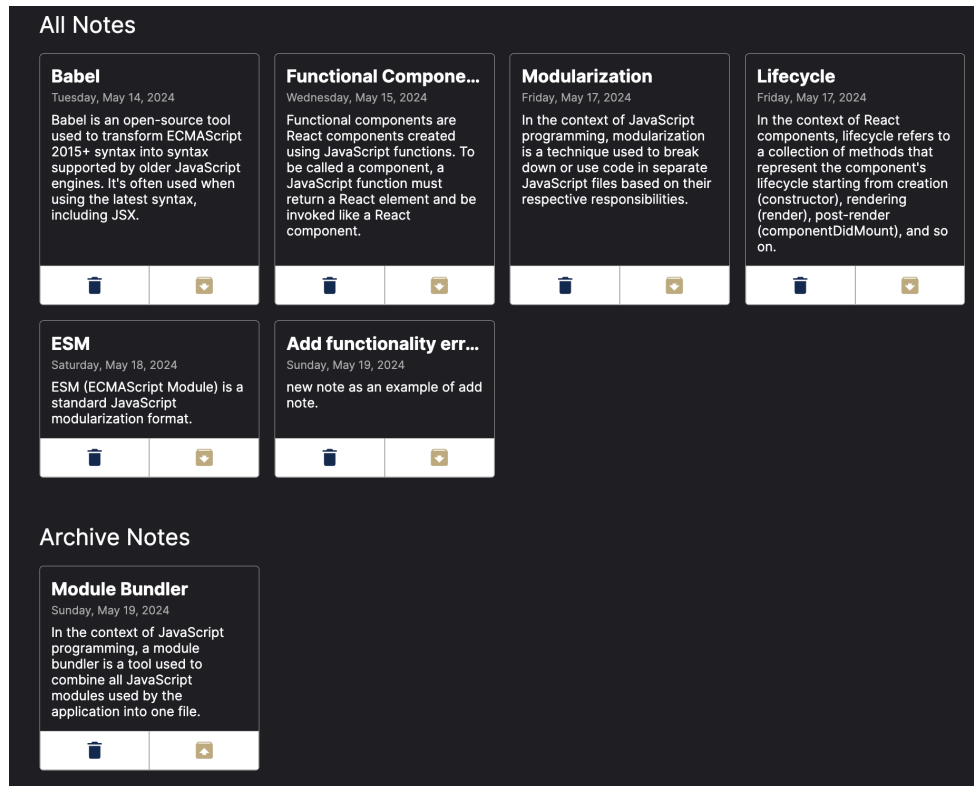
- The above image shows the unarchive button on the bottom right corner of archived notes in the “Archive Notes” section.
- The click will prompt a pop-up to appear asking the user whether they are sure about it or if they want to cancel.



- You can again cancel or go ahead with the process.

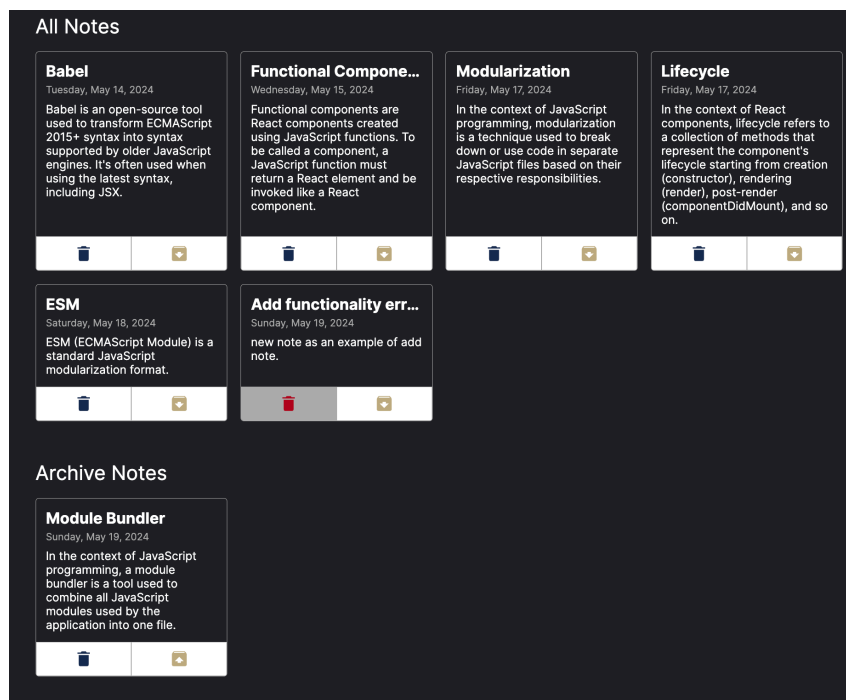


- The unarchived note will then be displayed in the “All Notes” section.

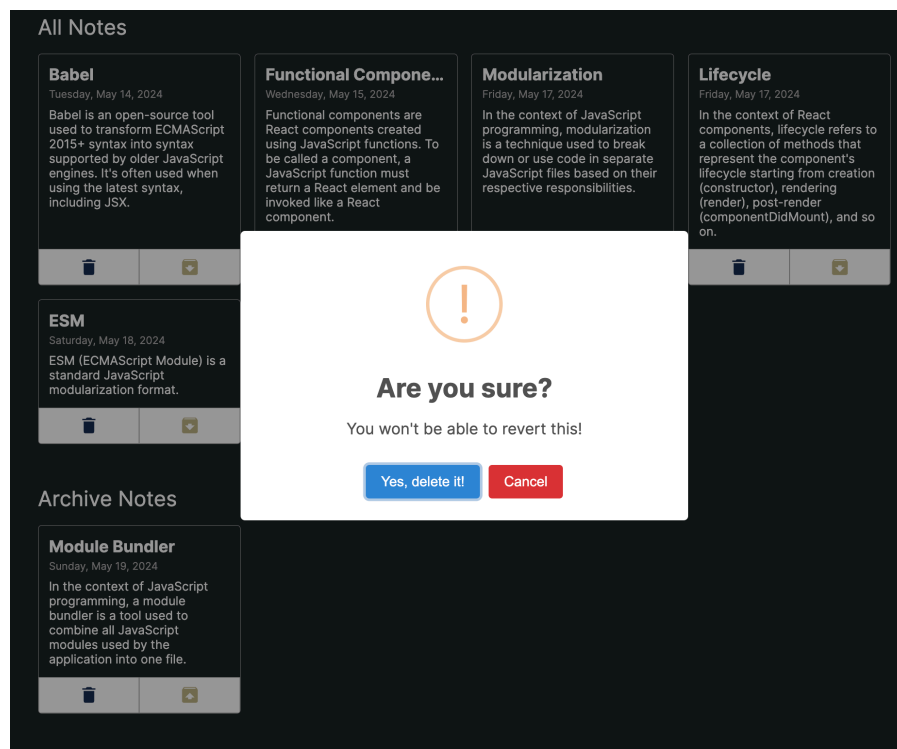


## 5. Delete Note Functionality:

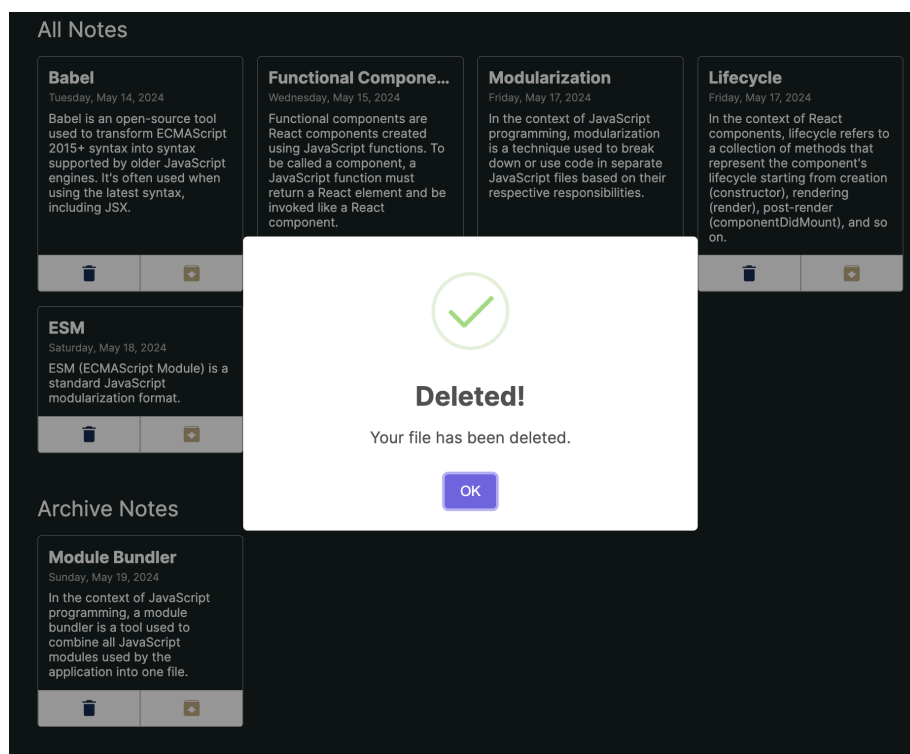
- In Notes App deleting any note is very easy, no matter if its archived or not.
- Simply click on the delete button provided in the bottom left corner of every note.



- The above image shows the delete button on the bottom left corner of all notes.
- The click will prompt a pop-up to appear asking the user whether they are sure about it or if they want to cancel.

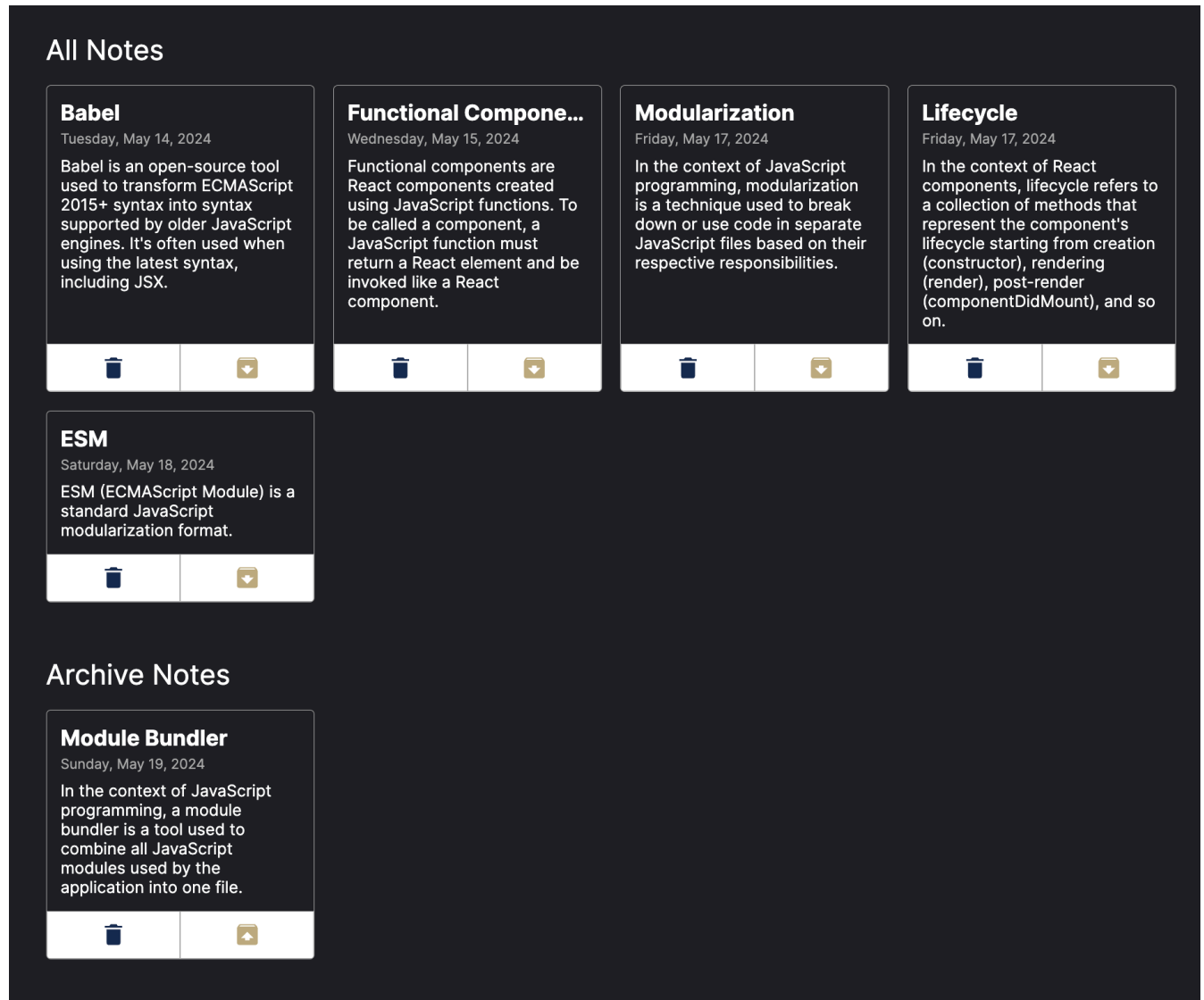


- You can again cancel or go ahead with the process.





- The deleted will be permanently deleted from the app.



The detailed analysis of Notes App's functionality, design, and resilience reveals that the application effectively addresses the core challenges of note-taking and management. The intuitive user interface, coupled with robust features like adding, searching, archiving, and deleting notes, ensures a seamless user experience. While the current implementation performs well, there are opportunities for enhancements, particularly in terms of auto-saving, advanced search capabilities, and accessibility improvements. By incorporating user feedback and embracing continuous development, Notes App can further solidify its position as a reliable and efficient tool for managing personal notes in the digital age.

## **4.2.Results Analysis:**

The detailed results provide a comprehensive overview of Notes App's functionality, design, and resilience, underscoring its effectiveness in addressing the common challenges associated with note-taking and management.

### Home Page

The home page of Notes App serves as a centralized hub for all user interactions. The design is intuitive, displaying created notes alongside a search bar, an input box for the note title, and another for the note content. The “All Notes” section offers a clear view of all created notes, while the “Archive Notes” section segregates archived notes, promoting an organized approach to note management. The presence of a search bar at the top right corner facilitates quick and efficient retrieval of notes, significantly enhancing user experience.

### Header

The header prominently displays the name of the application, "Notes App," along with a search bar. This search bar is a crucial feature, enabling users to filter notes based on the input string. The ability to search and filter notes based on keywords improves the efficiency of information retrieval and ensures that users can quickly locate the required notes.

### Add Note Functionality

The process of adding a note is straightforward, requiring users to input both the note title and content. The design includes validation checks to ensure that both fields are filled, preventing incomplete notes from being saved. This functionality is demonstrated with clear visual feedback, including error pop-ups for missing fields and confirmation messages for successful note creation. This user-friendly approach minimizes errors and enhances user satisfaction.

### Search Note Functionality

The search functionality is robust, allowing users to find notes containing specific keywords. The results include both active and archived notes, ensuring comprehensive search results. This feature is particularly useful for users managing a large number of notes, as it streamlines the process of finding specific information. The example provided, where the search term “B” filters relevant notes, illustrates the efficiency of this functionality.

### Archive Note Functionality

Archiving notes is a vital feature for users who need to declutter their active notes without permanently deleting them. The simple, intuitive design allows users to archive notes with a single click. Confirmation pop-ups ensure that users do not accidentally archive important notes, adding an extra layer of security. Archived notes are then moved to the “Archive Notes” section, where they can be easily accessed when needed.

### Unarchive Note Functionality

Similar to the archiving process, unarchiving notes is straightforward. Users can restore notes to the active state with a single click. The presence of confirmation pop-ups ensures that users are intentional about unarchiving notes. This functionality enhances the flexibility of note management, allowing users to retrieve and reactivate notes as needed.

### Delete Note Functionality

Deleting notes in Notes App is designed to be simple and definitive. Users can delete any note, whether active or archived, by clicking the delete button. Confirmation pop-ups ensure that notes are not deleted accidentally, providing an opportunity to cancel the action if necessary. Once confirmed, the note is permanently removed from the application, ensuring that users can effectively manage their note repository.

The analysis of Notes App’s functionality, design, and resilience demonstrates its efficacy in providing a streamlined and intuitive note-taking experience. The user-friendly interface and comprehensive feature set, including adding, searching, archiving, unarchiving, and deleting notes, cater to a wide range of user needs. Although the current implementation is robust, future enhancements such as auto-saving, advanced search capabilities, and improved accessibility can further elevate the application's performance and user satisfaction. By continuously evolving and incorporating user feedback, Notes App is well-positioned to remain a valuable tool for digital note management in the modern era.

## **5.REFERENCES**

- <https://www.w3schools.com/REACT/DEFAULT.ASP>
- <https://www.javatpoint.com/react-redux>
- <https://www.w3schools.com/css/>