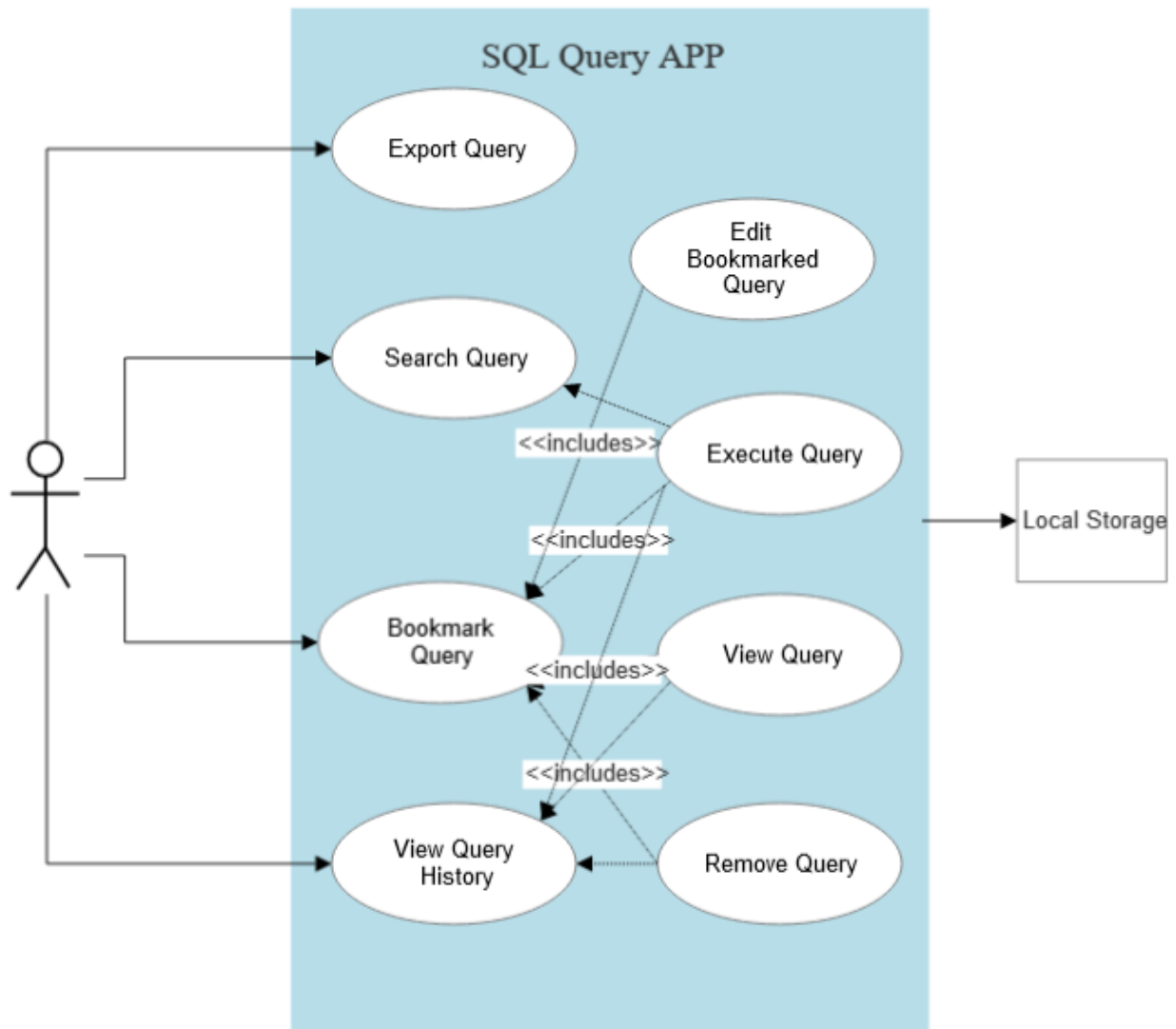


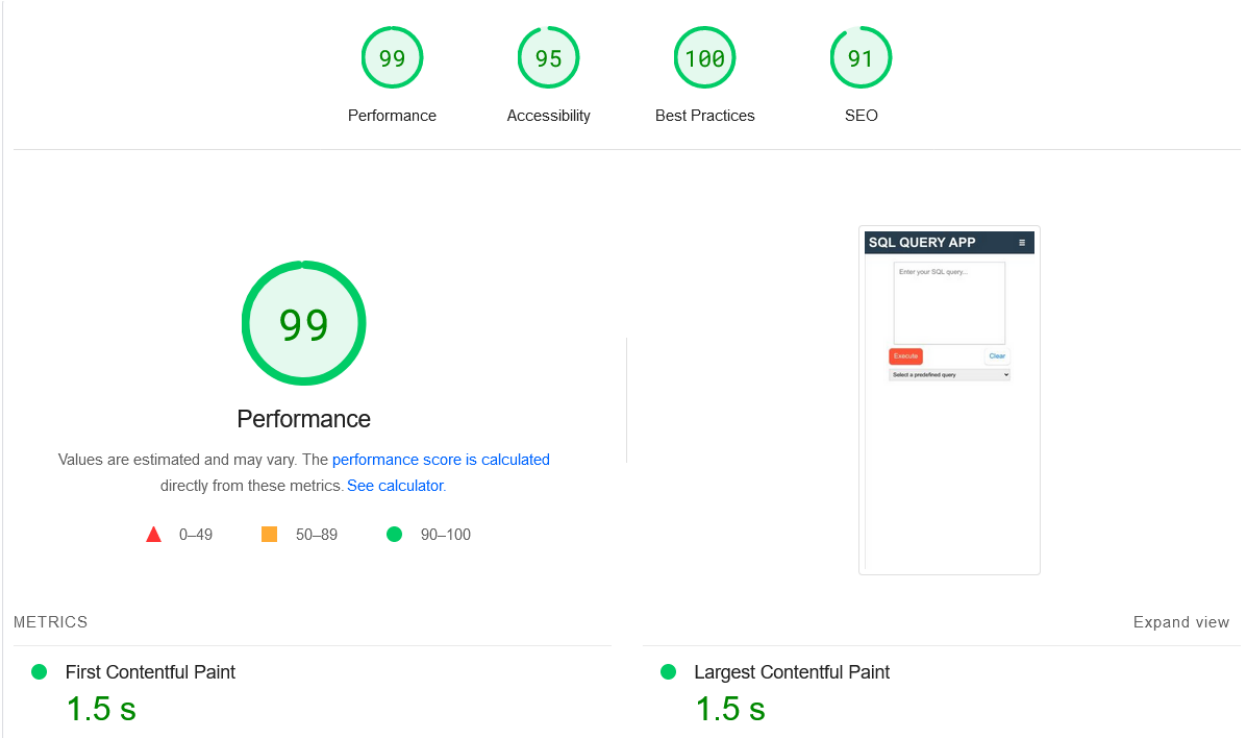
# Detail Document

## Use-case Diagram



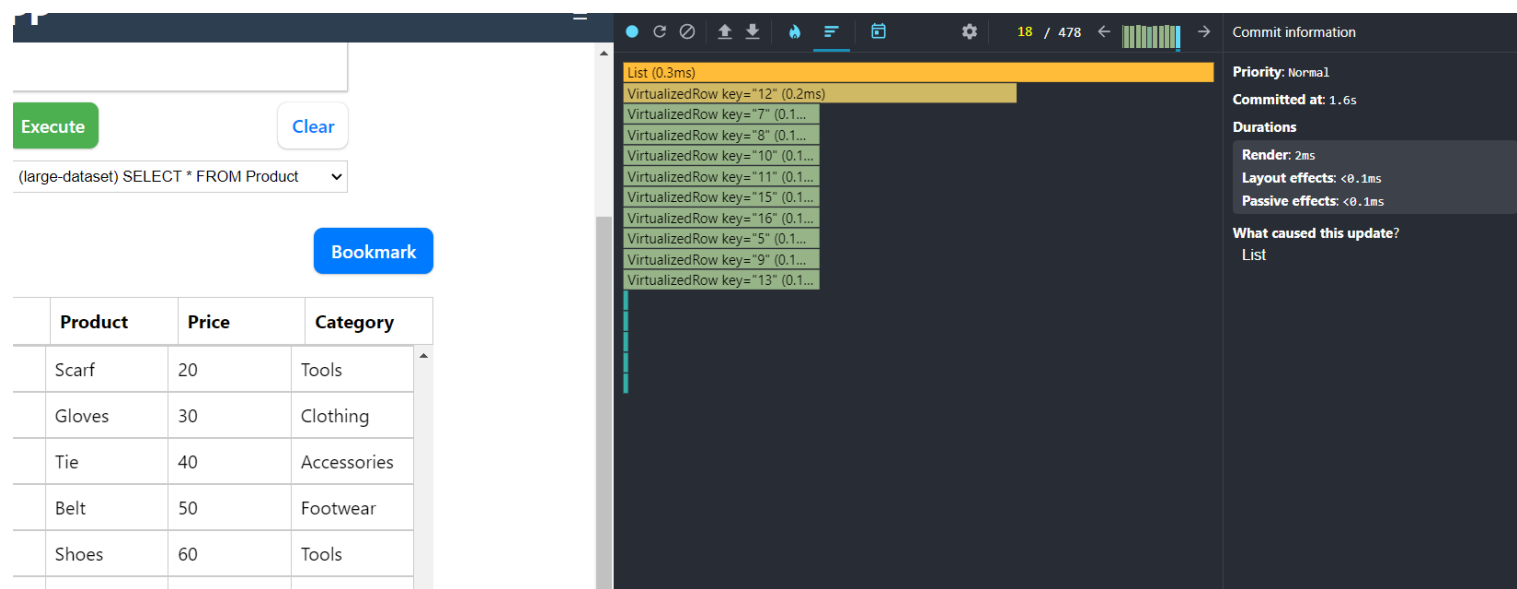
# Performance Measure:

## Google PageSpeed Insights



# Performance Optimization

- Utilized **react-window** for **virtualization** to efficiently handle large datasets, ensuring smooth scrolling and rendering of the table.
- Employed **React Profiler** to measure rendering performance, achieving an **impressive 2ms rendering time for the entire table**, with **each virtual row rendering in just 0.1-0.2ms**. This guarantees a highly performance, even with extensive data.



# Features:

## Virtualization of large Tables:

Test by selecting large-dataset in predefined queries

## Custom Field validations:

SQL QUERY APP

SELECT \* FROM Student  
SELECT \* FROM Student  
SELECT \* FROM Student  
SELECT \* FROM Student  
SELECT \* FROM Student  
SELECT \* FROM Student  
SELECT \* FROM Student  
SELECT \* FROM Student

Query exceeds the maximum allowed length.

ExecuteClear

(medium-dataset) SELECT \* FROM Student

SQL QUERY APP

Enter your SQL query...

Query cannot be empty.

ExecuteClear

Select a predefined query

SQL QUERY APP

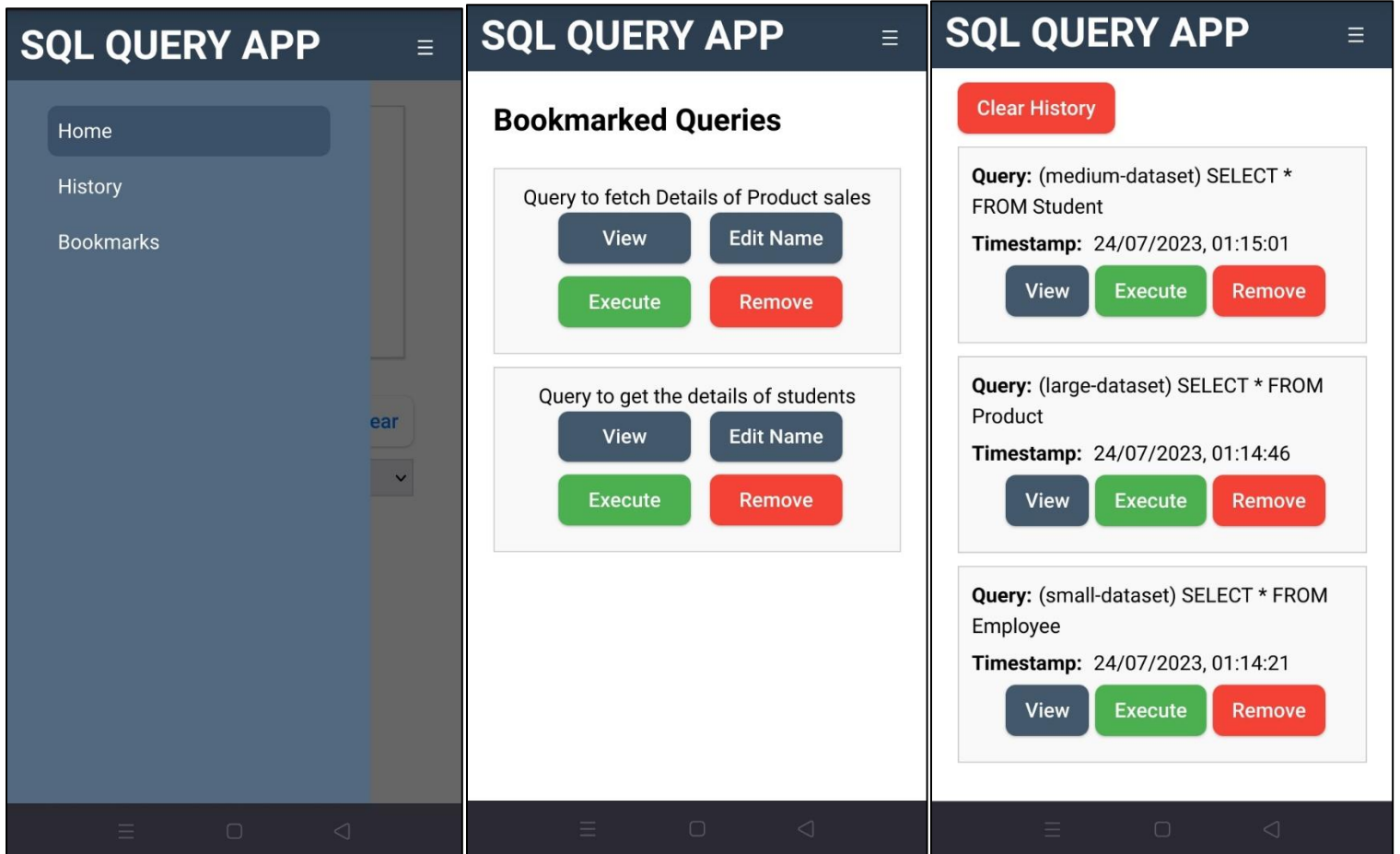
SELECT @

Invalid character @ found in the query.

ExecuteClear

Select a predefined query

# Mobile Menu and Responsive interface



# Table Export:

SQL QUERY APP

Home

History

Bookmarks

(small-dataset) SELECT \* FROM Employee

Execute

Clear

(small-dataset) SELECT \* FROM Employee

Export

Bookmark

ID	Name	Age	Country	Email	Department	Position	Salary	JoiningDate	Status
101	John Doe	30	USA	john.doe@example.com	HR	Manager	60000	2022-01-15	Active
102	Alice Smith	25	Canada	alice.smith@example.com	Finance	Accountant	55000	2022-02-20	Active
103	Bob Johnson	35	UK	bob.johnson@example.com	IT	Software Engineer	65000	2021-11-10	Inactive

exportedData.csv

Show all

# Table Bookmark

SQL QUERY APP

Home

History

Bookmarks

Export

Bookmarked

ID	Name	Age	Country	Email	Department	Position	Salary	JoiningDate	Status
101	John Doe	30	USA	john.doe@example.com	HR	Manager	60000	2022-01-15	Active
102	Alice Smith	25	Canada	alice.smith@example.com	Finance	Accountant	55000	2022-02-20	Active
103	Bob Johnson	35	UK	bob.johnson@example.com	IT	Software Engineer	65000	2021-11-10	Inactive
104	Mary Lee	28	Australia	mary.lee@example.com	Marketing	Marketing Manager	70000	2021-09-05	Active
105	Michael Brown	32	Germany	michael.brown@example.com	Sales	Sales Executive	50000	2022-03-25	Active
106	Emma White	27	France	emma.white@example.com	HR	Recruiter	48000	2021-10-08	Active

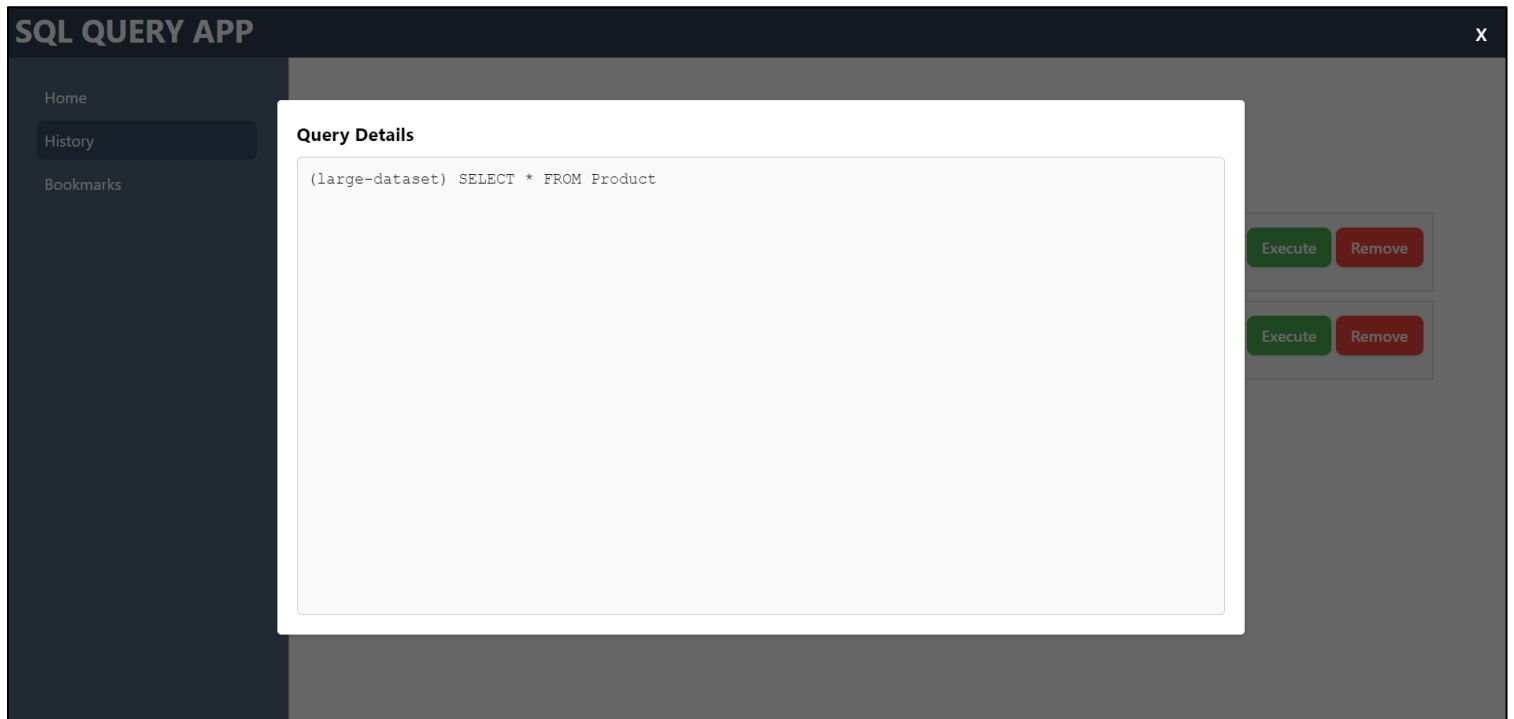
Execute

Remove

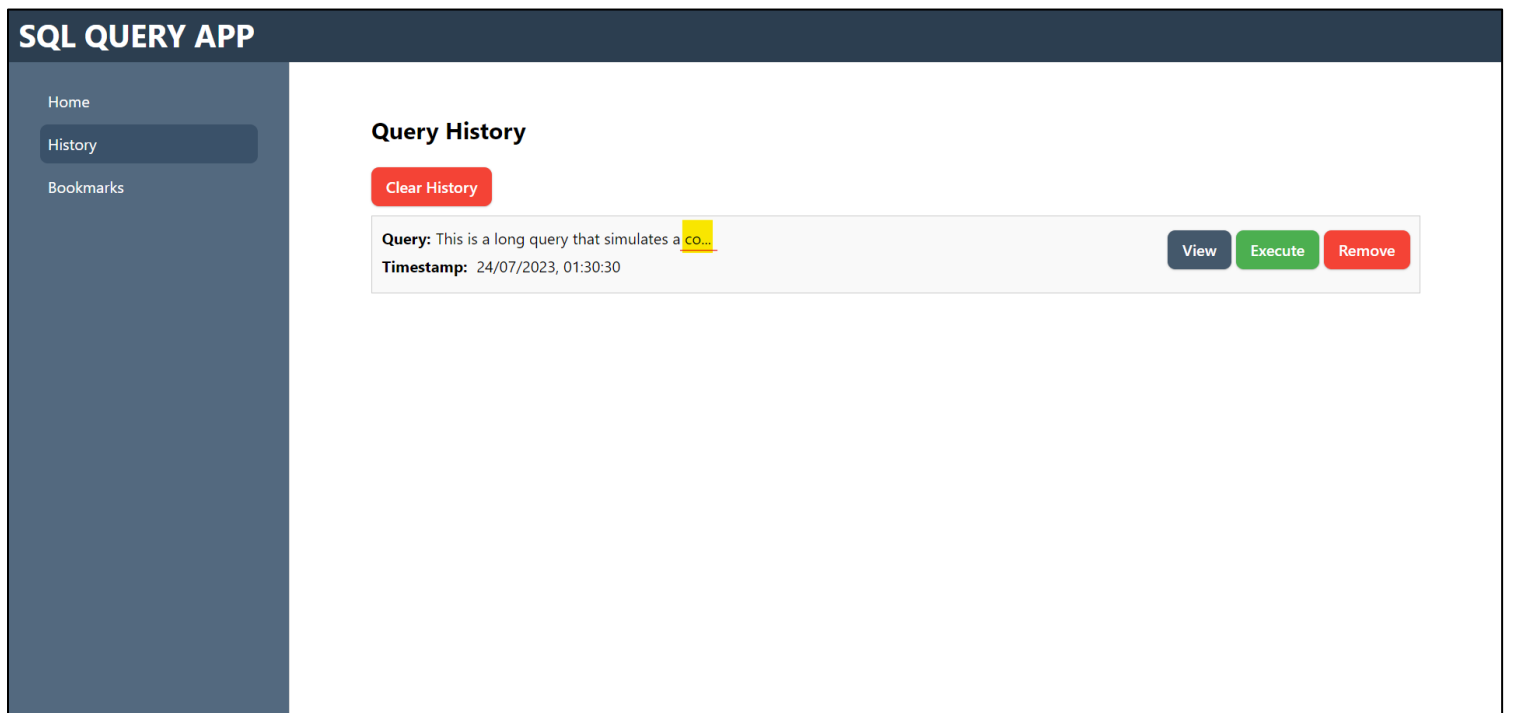
Execute

Remove

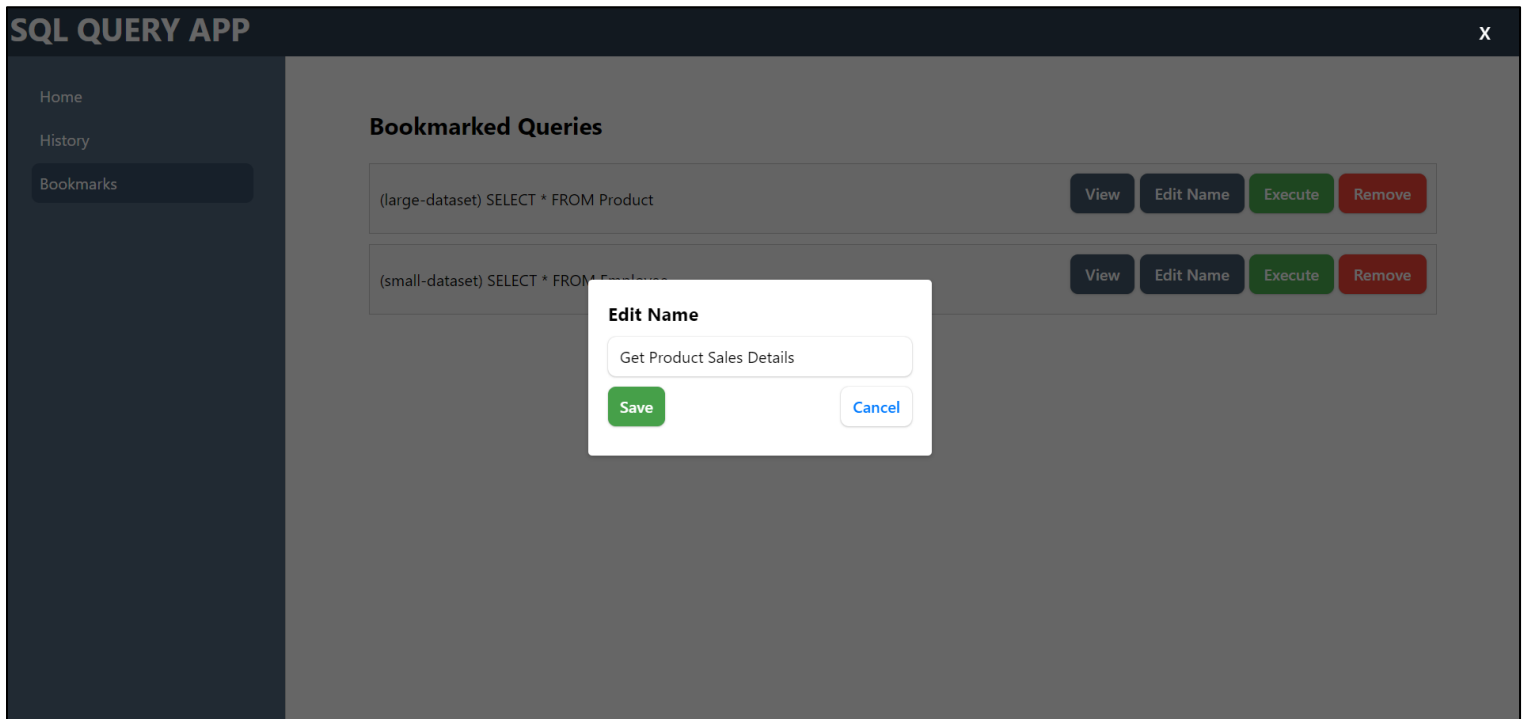
# View Queries in history and bookmarks



## Large Query Size Trim in History:



# Bookmark Rename



# Error Page

