

Quierra

A solution to query your NoSQL Data



By Team Suits

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Overview

Quierra is a fast and simple Browser tool to query our NoSQL data by uploading your JSON file on our website.

The output will be provided to the user in multiple formats, such as via HTML page, CSV/JSON format.

Key Requirements

- Front-end of the application: The user will be provided with 2 interfaces: the simple query UI & the complex query UI
 - In simple query UI, the user will be given drop down menus which will change according to the previous choice. This will be a simplified interface version of simple queries.
 - The complex query UI will directly provide the query and the output will be provided.

Query Modes

Simple Query Mode

Filters will be provided to avoid taking complex queries from users by selecting dropdown values.

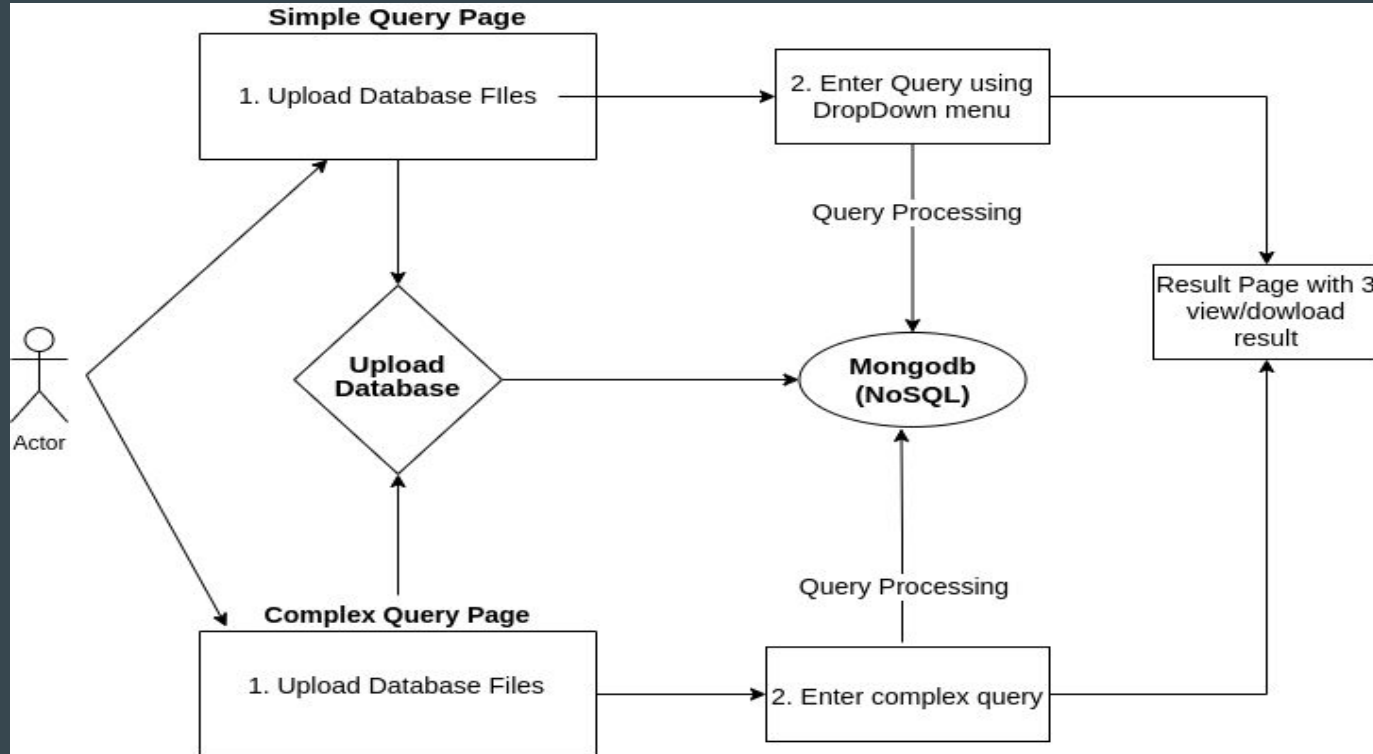
Complex Query Mode

User can enter complex queries in the given text area according to their need.

Key Requirements

- Back-end of the application: Different databases containing different tables will be provided as input to the application. The queries provided by the user will be processed (in real-time) in the backend on the dataset provided. Then the filtered data from the query i.e., the output will be displayed to the user.
- Input format of the database is a zip file with name as <database_name>. The zip file contains multiple files <table_name>.json files, and each such file will have a corresponding metadata file.
- Output of the query can be provided in 3 formats - displaying on the page itself, CSV file (download option provided), JSON file (download option provided)

Design Requirements

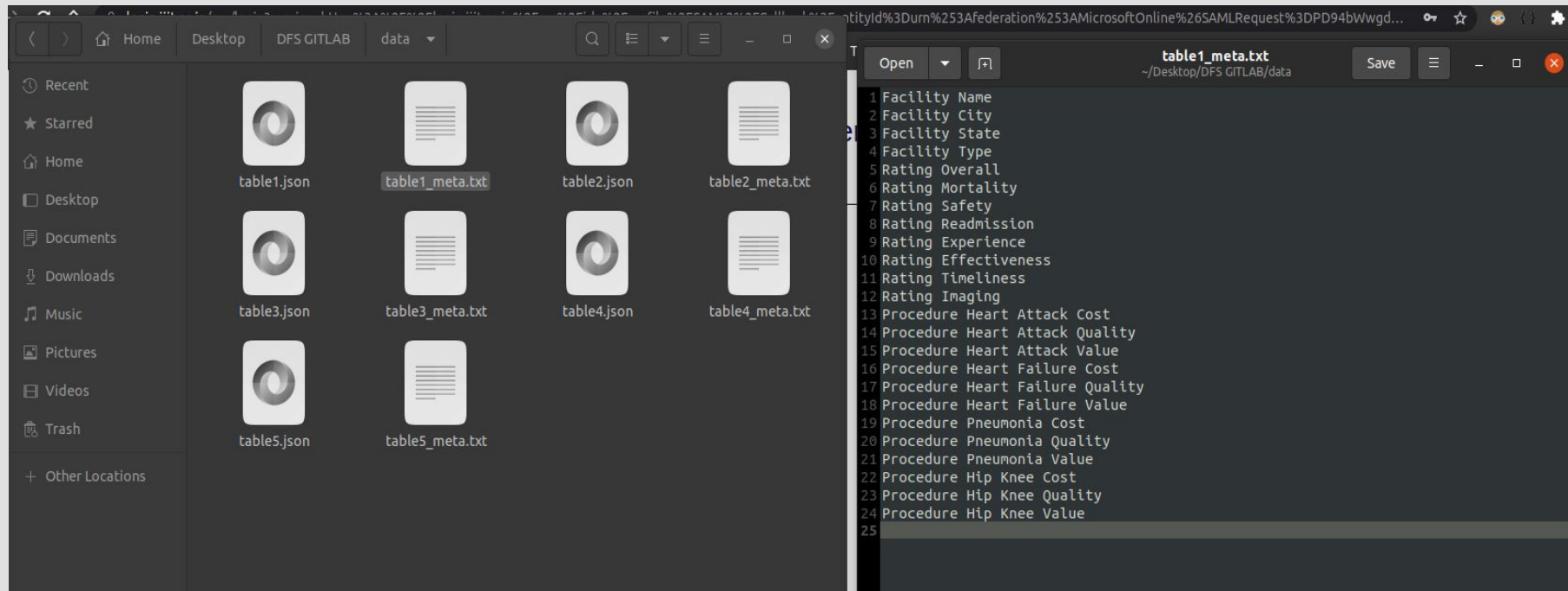


Technology Used

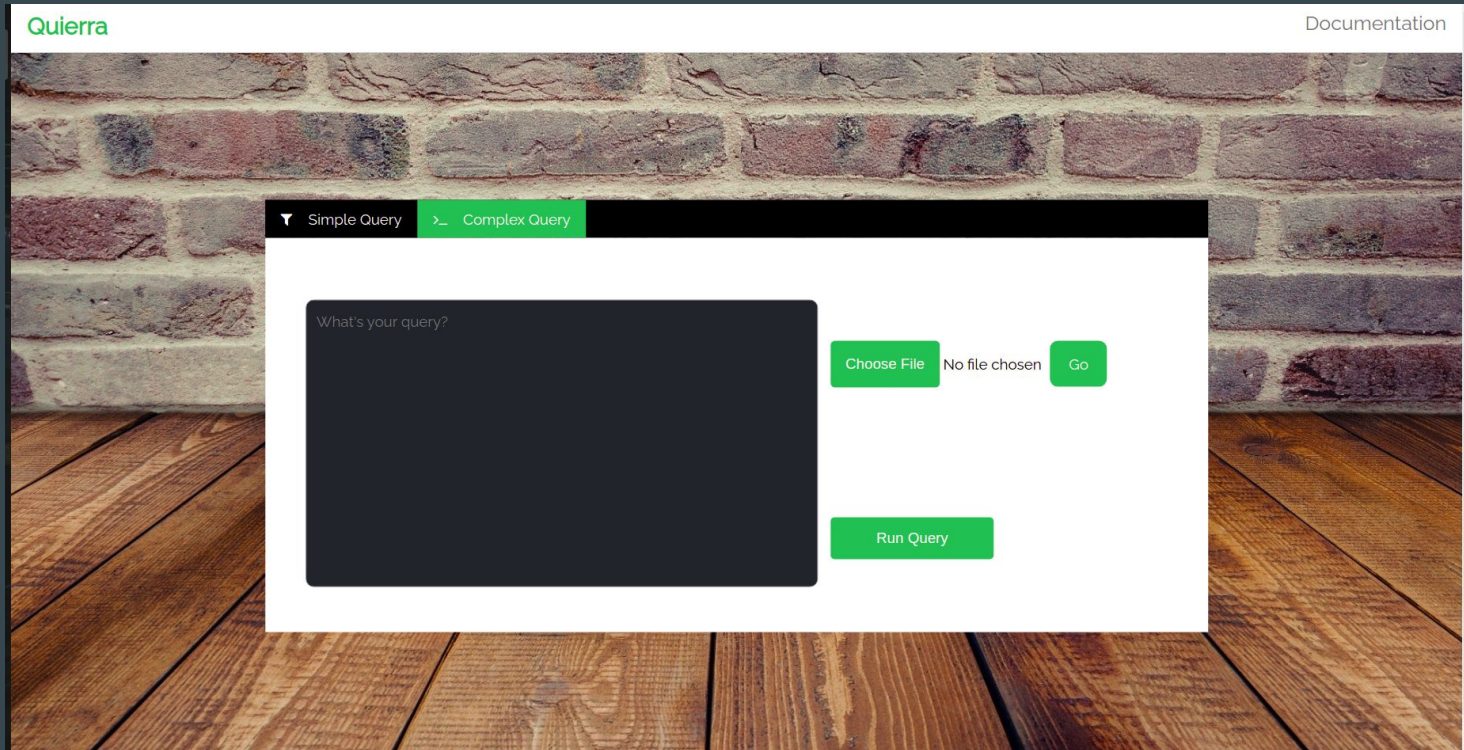
- Developed responsive website with the help of HTML, CSS, JavaScript, Ajax
- Connected front end i.e. the web pages, with backend where the query processing is done using Flask web framework
- For executing the queries, we have used MongoDB (a NoSQL database).

Screenshots

“Upload Database” Format

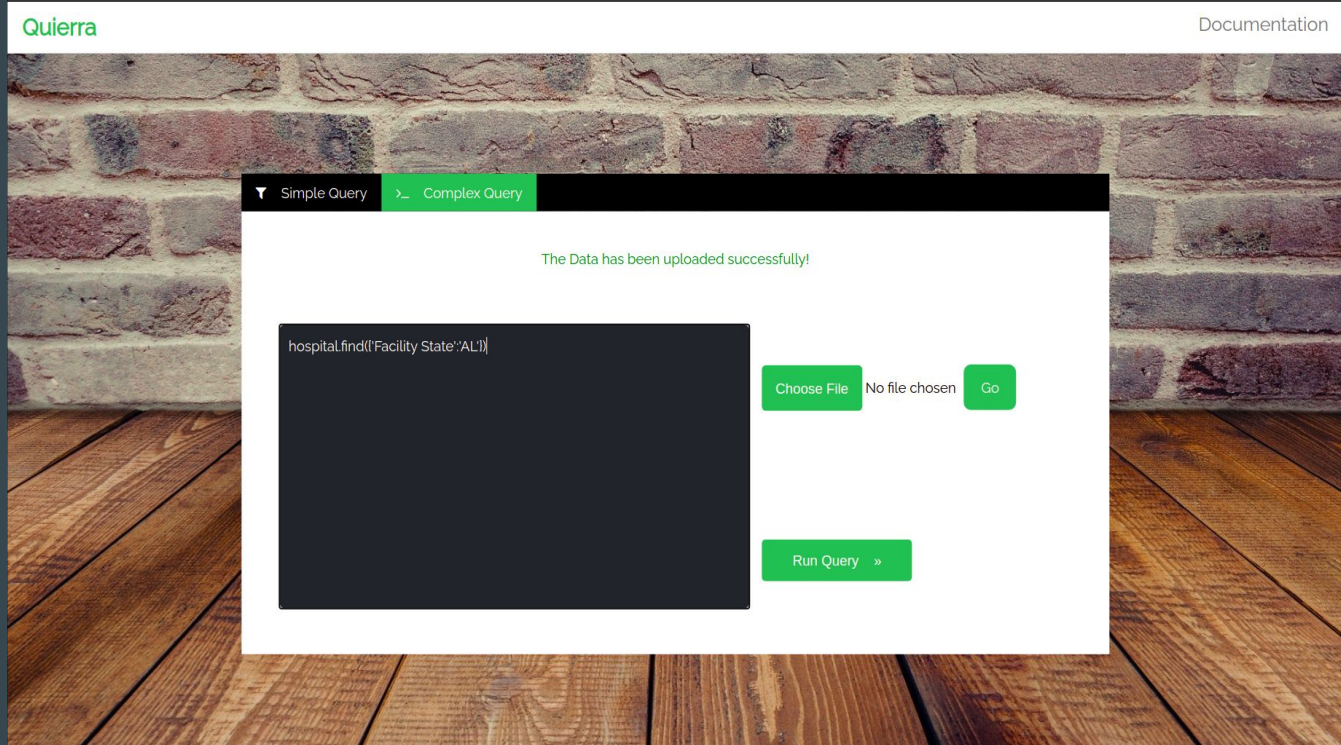


Complex Query page



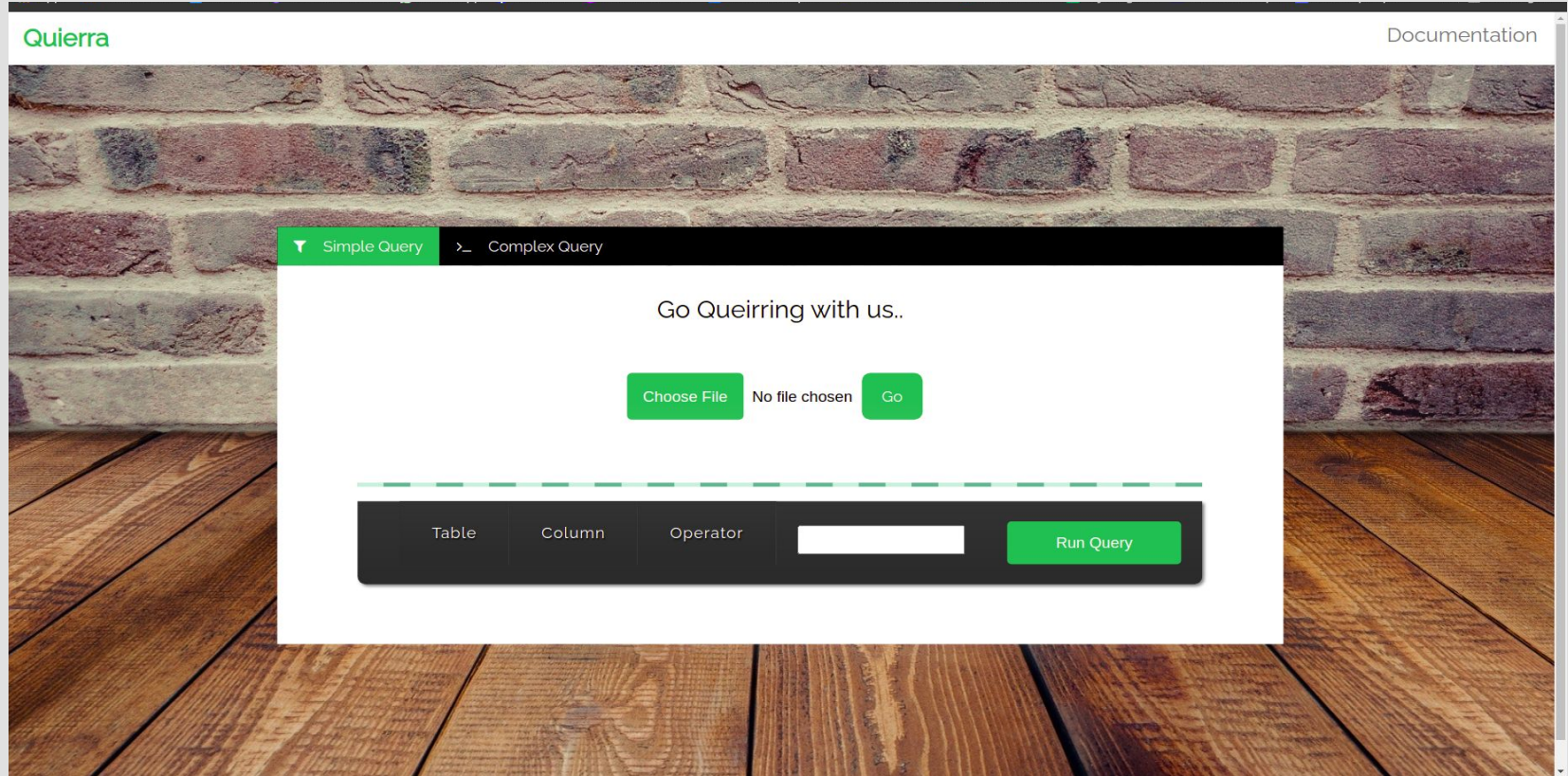
- Upload the database zip file first.
- We can enter the query that we want to run in the black textbox.

Complex Query page



- On clicking 'Run Query', the query will be executed and page will be redirected to result page.

Simple Query Page



The screenshot shows a web application interface for 'Quierra'. At the top left is the 'Quierra' logo in green, and at the top right is a 'Documentation' link. The main content area has a background image of a brick wall and wooden floor. A dark navigation bar contains two tabs: 'Simple Query' (active, highlighted in green) and 'Complex Query'. Below the tabs, the text 'Go Queirring with us..' is centered. Underneath this text are three green buttons: 'Choose File', 'No file chosen', and 'Go'. A dashed green line separates this section from a dark query builder bar at the bottom. This bar contains four input fields labeled 'Table', 'Column', and 'Operator', followed by an empty text input field. To the right of these fields is a green 'Run Query' button.

- This is a simple query page that we made.

Simple Query Page

The screenshot shows the 'Simple Query' page of the Quierra application. The page has a white background with a brick wall and wooden floor pattern. At the top left is the 'Quierra' logo in green, and at the top right is a 'Documentation' link. Below the header is a black navigation bar with 'Simple Query' (active) and 'Complex Query'. The main content area displays the message 'Go Queirring with us..' followed by a green confirmation message 'The Data has been uploaded successfully!'. Below this is a file upload section with a green 'Choose File' button, the text 'No file chosen', and a green 'Go' button. At the bottom is a dark grey query builder bar with a green dashed line above it. It contains four input fields: 'Table', 'Column', 'Operator', and an empty text box, followed by a green 'Run Query' button.

Quierra Documentation

Simple Query > Complex Query

Go Queirring with us..

The Data has been uploaded successfully!

Choose File No file chosen Go

Table Column Operator Run Query

- Upload the database zip file first.

Simple Query Page

Quierra Documentation

Simple Query >... Complex Query

Go Queirring with us..

The Data has been uploaded successfully!

Choose File No file chosen Go

hospital Facility State == AL Run Query

- At first Table name is selected from the drop-down, accordingly the column names come. Next 3 values to be selected for the query on the table are : Column name, options like >, <, =, etc. and the last a text-field for input value.
- On clicking 'Run Query', the query will be executed and page will be redirected to result page.

Output for given query

Quierra

Documentation

Search Results

Facility Name	Facility City	Facility State	Facility Type	Rating Overall	Rating Mortality	Rating Safety	Rating Readmission	Rating Experience	Rating Effectiveness	Rating Timeliness
Southeast Alabama Medical Center	Dothan	AL	Government	2	Below	Above	Below	Below	Same	Ab
Marshall Medical Center South	Boaz	AL	Government	1	Below	Below	Below	Same	Above	Ab
Eliza Coffee Memorial Hospital	Florence	AL	Government	3	Below	Above	Above	Below	Same	Ab

Download as JSON

Go to Home

Download as CSV

Individual Contribution

Ayush Khasgiwala

- ★ Searching Dataset for this project
- ★ Web Page and Database connectivity using Flask
- ★ Project Deployment

Naman Jain

- ★ Searching Dataset for this project
- ★ UI Design and Development using HTML, JS, AJAX, CSS.
- ★ Project Deployment

Somya Lalwani

- ★ Searching Dataset for this project
- ★ Query Execution using MongoDB
- ★ Project Deployment

Apart from these individual tasks, all 3 of us helped each other in debugging and merging code

Thank You !