DBMS Project Report

Website Ranking System

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Introduction:

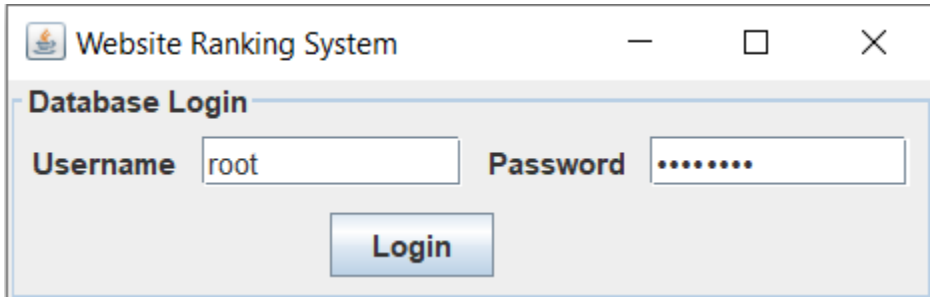
With the amount of information available on the web, finding what you need would be nearly impossible without some help sorting through it. Website ranking systems are designed to do just that: sort through multiple web pages available in our Search index to find the most relevant, useful results in a fraction of a second, and present them in a way that helps you find what you're looking for.

About our project :

Our Project**,WebGrade**, is a basic Website Ranking System, which Ranks URLs on the basis of number of clicks by the user.For easier updation of DB(database), we have even developed a Web Crawler which scrapes an URL to a certain depth.

Functionalities of the Project :

- Firstly we need to enter credentials for our MySQL workbench.



- Then we reach the homescreen, where if we are already registered we can enter credentials to login.Else, we can register easily using the Sign Up option.

- **<u>Admin Side -</u>**
  If you sign in with an Admin's Credential (for the first we have explicitly made an admin, **Username - admin with password - admin**).

  Scraping - You can add an URL for scraping, with a defined depth running a BFS for those number of layers.

Website Ranking System

Admin

Give the URL to start crawling from

https://www.geeksforgeeks.org/ | Depth to Crawl | 3 | Go

Title	Link
Geeks Digest - GeeksforGeeks	https://www.geeksforgeeks.org/geeks-digest/?ref=ndm
Topic wise multiple choice questions in computer science	https://www.geeksforgeeks.org/quiz-corner-gq/?ref=ndm
Practice | GeeksforGeeks | A computer science portal for geeks	https://practice.geeksforgeeks.org/geeks-campus/?ref=ndm
GBlog Archives - GeeksforGeeks	https://www.geeksforgeeks.org/category/guestblogs/?ref=ndm
IDE | GeeksforGeeks | A computer science portal for geeks	https://ide.geeksforgeeks.org/?ref=ndm
Campus Ambassador Program by GeeksforGeeks - GeeksforGeeks	https://www.geeksforgeeks.org/campus-ambassador-program-by-geeksforgeeks/?ref=ndm
GeeksforGeeks | A computer science portal for geeks	https://www.geeksforgeeks.org/?ref=ghm
GBlog Archives - GeeksforGeeks	https://www.geeksforgeeks.org/category/guestblogs/?ref=ghm
Puzzles - GeeksforGeeks	https://www.geeksforgeeks.org/puzzles/?ref=ghm
Course | Geeks Classes	https://www.geeksforgeeks.org/geeks-classes-geeksforgeeks/?ref=ghm
Analysis of Algorithms | Set 1 (Asymptotic Analysis) - GeeksforGeeks	https://www.geeksforgeeks.org/analysis-of-algorithms-set-1-asymptotic-analysis/?ref=lbp
Analysis of Algorithms | Set 2 (Worst, Average and Best Cases) - GeeksforGeeks	https://www.geeksforgeeks.org/analysis-of-algorithms-set-2-asymptotic-analysis/?ref=lbp
Analysis of Algorithms | Set 3 (Asymptotic Notations) - GeeksforGeeks	https://www.geeksforgeeks.org/analysis-of-algorithms-set-3asymptotic-notations/?ref=lbp
Analysis of Algorithms | Set 4 (Analysis of Loops) - GeeksforGeeks	https://www.geeksforgeeks.org/analysis-of-algorithms-set-4-analysis-of-loops/?ref=lbp
Analysis of Algorithm | Set 4 (Solving Recurrences) - GeeksforGeeks	https://www.geeksforgeeks.org/analysis-algorithm-set-4-master-method-solving-recurrences/?ref=lbp
Analysis of Algorithm | Set 5 (Amortized Analysis Introduction) - GeeksforGeeks	https://www.geeksforgeeks.org/analysis-algorithm-set-5-amortized-analysis-introduction/?ref=lbp
What does 'Space Complexity' mean? - GeeksforGeeks	https://www.geeksforgeeks.org/g-fact-86/?ref=lbp
Pseudo-polynomial Algorithms - GeeksforGeeks	https://www.geeksforgeeks.org/pseudo-polynomial-in-algorithms/?ref=lbp
NP-Completeness | Set 1 (Introduction) - GeeksforGeeks	https://www.geeksforgeeks.org/np-completeness-set-1/?ref=lbp
A Time Complexity Question - GeeksforGeeks	https://www.geeksforgeeks.org/a-time-complexity-question/?ref=lbp
Merge Sort - GeeksforGeeks	https://www.geeksforgeeks.org/merge-sort/?ref=lbp
QuickSort - GeeksforGeeks	https://www.geeksforgeeks.org/quick-sort/?ref=lbp
HeapSort - GeeksforGeeks	https://www.geeksforgeeks.org/heap-sort/?ref=lbp
Binary Heap - GeeksforGeeks	https://www.geeksforgeeks.org/binary-heap/?ref=lbp
Time Complexity of building a heap - GeeksforGeeks	https://www.geeksforgeeks.org/time-complexity-of-building-a-heap/?ref=lbp

View Feedbacks | Manage Users | Log out

/stem

WebGrade

Show Users | Delete User | Make Admin | Remove from Admin

S.no	Username	Type
1	admin	SuperAdmin
2	abcd	User
3	acde	Admin
4	aaaa	Admin

Back

Manage Users - An admin can either Delete an existing user, update role for user to Admin or Superadmin can remove an Admin back to an user.

Read Reviews - Admin can read reviews.

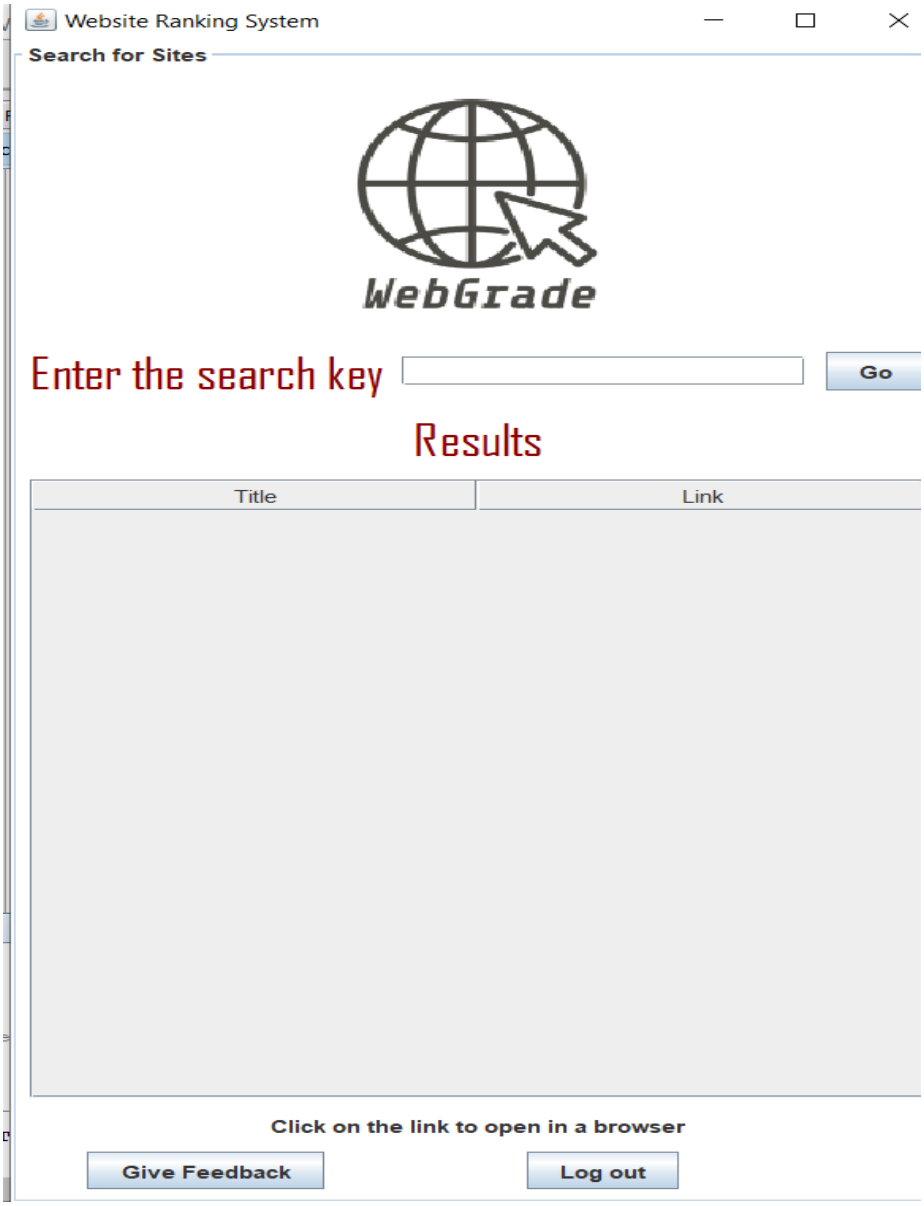
Log Out - Admin can logout and yet if he has started some scraping it would continue until the depth of the search is completed.

- **<u>User Side</u>**

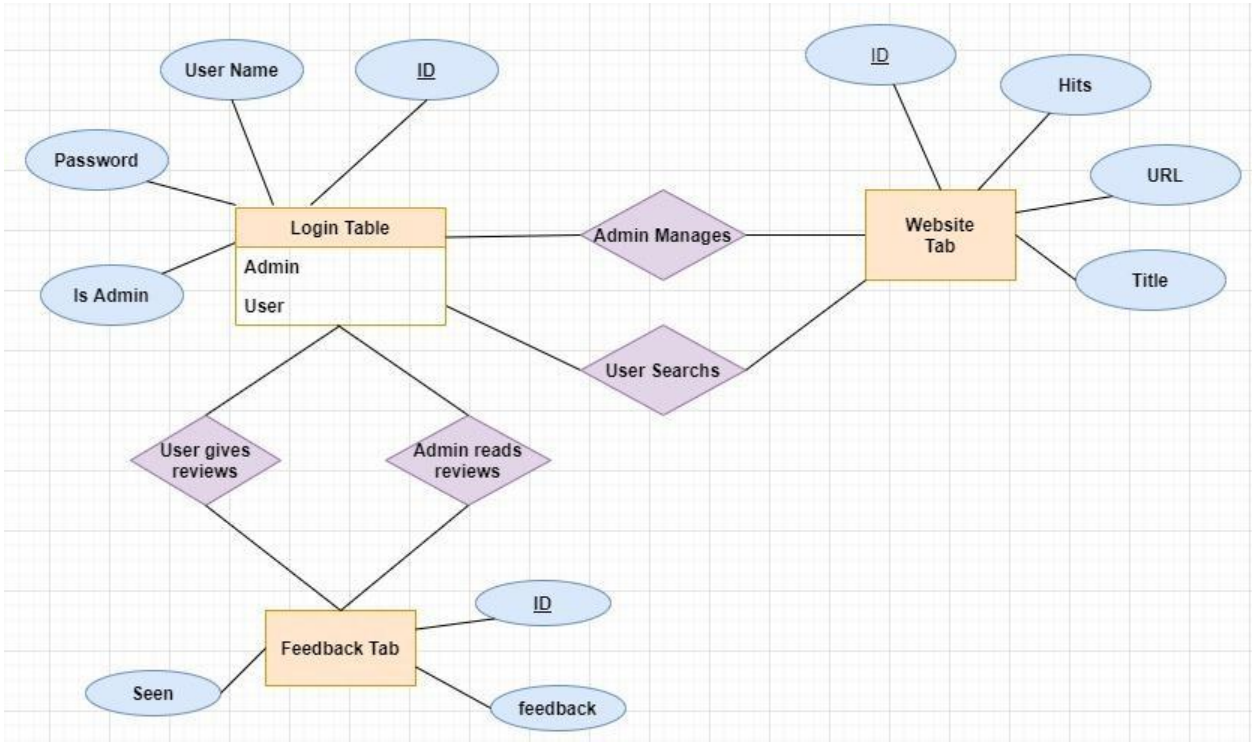
  Search - A user can enter a query he is interested in and the output returned to it is sorted by the number of uses(hits) by the users(most viewed link is shown first).

  Write Reviews - Users can suggest possible improvements may be shared with the admins based on their experiences.

  Log Out - User can log out whenever he wants.


Website Ranking System
Search for Sites
WebGrade
Enter the search key
Go
Results
Title
Link
Click on the link to open in a browser
Give Feedback
Log out

ER Diagram :



Tools and Technology used :

Preferred IDE: NetBeans

Frontend - Java Swing

Swing in Java is a Graphical User Interface (GUI) toolkit that includes the GUI components. Swing provides a rich set of widgets and packages to make sophisticated GUI components for Java applications. It is built on top of the AWT API and entirely written in java. It is platform independent unlike AWT and has lightweight components. It becomes easier to build applications since we already have GUI components like buttons, checkbox etc. This is helpful because we do not have to start from the scratch.

Backend - Java, MySQL (database)

MySQL is the world's most popular open source database as it provides comprehensive support for every application development need.MySQL also provides connectors and drivers (ODBC, JDBC, etc.) that allow all forms of applications to make use of MySQL as a preferred data management server. In our project we are using JDBC Connector.

Step by Step procedure to use this project :

Preferred OS - any (windows, mac, linux)
Preferred JDK version - 14.0.2 or above
Preferred IDE - NetBeans
Preferred MySQL version - 8.0.22

Step 1 - Download the project folder from the zip folder.
Step 2 - Open the project folder in netbeans IDE
Step 3 - Run the project, and after this type your username and password for SQL workbench.
Step 4 - You have reached the home page.Use username - admin and password - admin to login as an Admin, otherwise Create User.