



Guru Ghasidas Vishwavidyalaya, Bilaspur

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Department of Computer Science and Information Technology

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Title: Scholars Vault

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➤ Course : **B. Sc. Hons. Computer Science**
➤ Semester : **6th**

Submitted to:

Prof. A. K. Saxena

Declaration

I, Aman Yadav, hereby declare that the mini project report titled "Scholars Vault" is my original work and has been prepared in partial fulfillment of the requirements for B. SC. Hons. in Computer Science at Guru Ghasidas Vishwavidyalaya, Bilaspur.

I affirm that all the information presented in this synopsis is accurate and based on my research, analysis, and findings. Any external sources used for reference or citation have been duly acknowledged through proper citation and referencing techniques.

I further declare that this synopsis has not been submitted in whole or in part for any other academic purpose or examination. It is solely prepared for this mini-project as per the guidelines and requirements provided.

I take full responsibility for the content and presentation of this synopsis and understand that any act of plagiarism or academic dishonesty will result in appropriate consequences as per the rules and regulations of the institution.

I acknowledge that my project work and its findings are subject to evaluation by the designated faculty or examination board, and I am open to any constructive feedback or suggestions for improvement.

Date:

Place: Bilaspur, Chhattishgarh

Signature: _____

Name: Aman Yadav

Certificate

This is to certify that the mini project report titled "Scholars Vault" prepared by **Aman Yadav**, bearing enrolment number **GGV/20/05105**, has been examined and evaluated as a partial fulfillment of the requirements for the degree of **B. SC. Hons. in Computer Science** at Guru Ghasidas Vishwavidyalaya, Bilaspur.

Based on our evaluation, we certify that the project report is the student's original work and meets the university's standards. The project demonstrates a commendable level of research, analysis, and understanding of the subject matter.

We also confirm that the student has followed the guidelines and requirements provided by the university for the preparation of the mini-project report. The project report showcases accurate information, proper citation of external sources, and adherence to academic integrity.

We commend the student, Aman Yadav, for their dedication and effort in completing this mini-project. Their commitment to academic excellence is evident in the quality of work presented.

This certificate is issued on _____ based on our evaluation and recommendation.

Signature: _____

Prof. A. K. Saxena

Designation: **Head of the department**

Department: **Computer Science and information technology**

Guru Ghasidas Vishwavidyalaya, Bilaspur.

Acknowledgment

I would like to express my heartfelt gratitude and appreciation to all those who have contributed to the successful completion of the mini-project report titled "Scholars Vault." It is with immense pleasure that I acknowledge their support and assistance throughout this endeavor.

First and foremost, I would like to thank my esteemed faculty members at Guru Ghasidas Vishwavidyalaya, Bilaspur, for their guidance and expertise. Their valuable insights, constructive feedback, and encouragement played a crucial role in shaping the project and refining its content.

I sincerely thank Prof. A. K. Saxena, my project supervisor, for their constant support, mentorship, and supervision. Their expertise, timely guidance, and continuous encouragement have been invaluable in every step of the project. I am grateful for their dedication and commitment to my academic growth.

I am also grateful to my friends who have provided assistance and support during the course of this project. Their collaborative efforts, discussions, and feedback have been instrumental in enhancing the quality of the work.

Furthermore, I would like to express my appreciation to the authors and creators of the reference materials, study resources, and question papers that formed the foundation of this project. Their contributions have enriched the project and provided valuable insights into the subject matter.

In conclusion, I am deeply grateful to everyone who has contributed to the successful completion of this mini-project report. Your support and encouragement have been invaluable, and I am truly honored to have had the opportunity to work on this project.

Thank you all.

Aman Yadav

Date:

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Abstract

The website " **Scholars-Vault**" is an online platform dedicated to providing students with a repository of notes, study materials, question papers, and book references. Its main objective is to support students in their academic pursuits by offering a centralized hub for accessing valuable resources.

The website serves as a comprehensive library where students can find a wide range of study materials to supplement their coursework. It includes notes that cover various subjects, allowing students to enhance their understanding and reinforce key concepts. Additionally, the website offers a collection of study materials curated to support different academic levels and disciplines.

Another valuable feature of the website is its extensive collection of question papers. Students can access a variety of past papers or sample questions, which are essential resources for exam preparation. These question papers allow students to practice and familiarize themselves with the exam format, aiding in their overall performance.

Furthermore, the website acts as a reference platform, providing students with recommended books and additional reading materials. This feature assists students in finding relevant and reliable sources to deepen their knowledge and gain further insights into various subjects.

By offering a user-friendly interface and easy accessibility, the website ensures that students can conveniently access notes, study materials, question papers, and book references anytime and anywhere, using their preferred devices.

In summary, the website " **Scholars-Vault**" serves as a valuable resource for students, offering a comprehensive collection of notes, study materials, question papers, and book references. It aims to support students in their academic journey by providing them with the necessary tools to excel in their studies.

Introduction-

The website scholars-vault is a comprehensive online platform designed to assist scholars in their academic journey by providing notes, study materials, question papers, and book references. With a mission to empower students to excel in their academic pursuits, the website serves as a centralized hub where students can access a wide range of resources to enhance their learning experience.

The website aims to address common challenges faced by students, such as the need for comprehensive study materials and organized resources. By offering a diverse collection of notes, study materials, and question papers, students can find valuable resources to supplement their coursework, prepare for exams, and deepen their understanding of various subjects.

The site also provides a platform for referencing and recommending books and reading materials, further expanding the resources available to students. By suggesting relevant texts and references, the website helps students explore additional sources that can contribute to their academic development.

With its user-friendly interface and convenient accessibility, scholars-vault ensures that students can access these valuable resources anytime and anywhere. The website offers a seamless and convenient online experience, eliminating the need for physical copies and providing flexibility in studying and reviewing materials according to each student's schedule and preferences.

In conclusion, scholars-vault is a valuable online resource that caters to the needs of scholars by providing a wide range of notes, study materials, question papers, and book references. By leveraging the power of collaboration and offering a user-friendly platform, the website aims to support scholars in excelling in their academic pursuits and fostering a vibrant community of knowledge-sharing.

Problem Statement

Students often face challenges while searching for notes, study materials, and previous year's question papers (PYQs) online. These challenges include:

1. **Lack of Centralized Resources:** The absence of a centralized platform makes it difficult for students to locate and access comprehensive notes, study materials, and PYQs. The resources are scattered across different websites, forums, or platforms, leading to time-consuming and inefficient searches.
2. **Inconsistent Quality and Reliability:** Students encounter varying levels of quality and reliability when searching for notes, study materials, and PYQs online. The available resources may lack accuracy, proper referencing, or relevant content, making it challenging for students to rely on them for their academic needs.
3. **Limited Subject Coverage:** Students often face a limited range of subject coverage in the available online resources. Some subjects or specific topics may be inadequately represented, making it difficult for students to find the materials they require for their studies.
4. **Difficulty in Locating PYQs:** Locating previous year's question papers (PYQs) can be particularly challenging for students. The lack of a centralized repository or clear organization of PYQs across different academic levels, courses, or examination boards hinders students' access to valuable practice materials.
5. **Time Constraints and Overwhelming Search Process:** Searching for notes, study materials, and PYQs individually across various sources can be time-consuming and overwhelming for students. It requires significant effort to browse through multiple websites, download files, and determine the relevance and quality of each resource.

Addressing these challenges by providing a centralized platform with comprehensive, reliable, and well-organized notes, study materials, and PYQs can greatly benefit students in their academic pursuits. Such a platform would streamline the search process, ensure resource quality, enhance subject coverage, and facilitate easy access to the materials students need for effective studying and exam preparation.

Methodology

Tools Required:

Any web development IDE such as Visual Studio Code, Visual Studio, or WebStorm will be sufficient to create a web development project. I used Visual Studio Code.



WebStorm



Visual Studio



Visual Studio Code

Why I used Visual Studio Code:

1. **Lightweight and Fast:** VS Code is known for its lightweight nature, allowing for quick startup and efficient performance. It doesn't consume excessive system resources, ensuring a smooth coding experience even on less powerful machines.
2. **Highly Customizable:** VS Code provides extensive customization options to tailor the editor to individual preferences. Users can choose from a wide range of themes, extensions, and settings to create a personalized coding environment that enhances productivity and comfort.
3. **Integrated Terminal:** VS Code includes a built-in terminal, allowing developers to run commands, execute scripts, and interact with the project's environment without needing to switch to a separate terminal application. This streamlines the development workflow and eliminates the need for additional tools.
4. **Rich Extension Ecosystem:** VS Code has a vast collection of extensions developed by the community, covering various aspects of web development. These extensions enhance the functionality of the editor, providing features like linting, code formatting, debugging tools, version control integration, and support for different programming languages and frameworks.
5. **IntelliSense and Code Completion:** VS Code offers intelligent code completion and suggestions through its IntelliSense feature. It analyzes the code context and provides real-time recommendations, auto-completion, and parameter information, enhancing coding speed and accuracy.
6. **Version Control Integration:** VS Code seamlessly integrates with popular version control systems like Git. It provides built-in support for managing repositories, tracking changes, and resolving conflicts, simplifying collaborative development and ensuring efficient code management.

7. Live Server and Debugging: VS Code has extensions that enable live server functionality, allowing developers to instantly preview website changes in a web browser without manual refreshes. Additionally, it provides debugging capabilities with breakpoints and step-by-step code execution, making it easier to identify and fix issues during development.

8. Cross-Platform Support: VS Code is available for Windows, macOS, and Linux, ensuring a consistent development experience across different operating systems. Developers can seamlessly switch between platforms without sacrificing functionality or workflow.

Languages, Scripts, and Frameworks used in this project:

HTML5:

- HTML (Hypertext Markup Language) is a fundamental language for creating web pages.
- It uses tags or elements to structure and mark up content on web pages.
- HTML documents consist of a head section (metadata) and a body section (visible content).
- HTML works together with CSS (Cascading Style Sheets) for styling and presentation.
- It allows hierarchical structuring of information, creation of hyperlinks, and embedding of multimedia.
- HTML forms enable interactive data input, and semantic elements enhance accessibility and SEO.
- HTML is supported by major web browsers and constantly evolves (the latest version is HTML5).

CSS3:

- CSS stands for Cascading Style Sheets and is used for styling web pages.
- It controls the visual aspects of HTML elements, such as colors, fonts, layouts, and positioning.
- CSS allows for consistent and uniform styling across multiple web pages within a website.
- It separates the presentation layer from the content layer, enhancing code organization and maintainability.
- CSS uses selectors to target specific HTML elements and apply styles to them.
- It supports various styling techniques, including setting background images, creating gradients, and applying animations.
- CSS offers flexibility and customization options, allowing developers to create visually appealing and responsive web designs.
- It enables the creation of media queries to apply different styles based on the device or screen size.
- CSS frameworks and libraries, such as Bootstrap and Bulma, provide pre-designed styles and layouts to expedite web development.

- CSS preprocessors, like Sass and Less, offer advanced features like variables, nesting, and mixings to enhance CSS authoring.
- CSS is constantly evolving, with new features and modules being added to modernize web design and layout capabilities.

Javascript:

- JavaScript is a scripting language that runs in the web browser, providing interactivity and dynamic functionality.
- It is primarily used for manipulating web page elements, handling events, and responding to user actions.
- JavaScript can be embedded directly into HTML documents using script tags or included in external files.
- It supports a wide range of data types, including numbers, strings, arrays, objects, and booleans.
- JavaScript provides powerful built-in functions and methods for manipulating strings, performing mathematical operations, and manipulating arrays.
- It supports programming constructs like conditionals (if statements), loops (for and while loops), and functions for creating reusable blocks of code.
- JavaScript allows for DOM manipulation, enabling the modification of HTML elements, attributes, and styles dynamically.
- It supports asynchronous programming through features like callbacks, promises, and async/await, allowing for smooth and efficient handling of network requests and time-consuming operations.
- JavaScript can interact with server-side technologies through APIs, making it possible to fetch data, send form submissions, and update web content dynamically.
- It has a vast ecosystem of libraries and frameworks such as React, Angular, and Vue.js, which provide additional functionality and simplify the development process.
- JavaScript is supported by all modern web browsers and has become an essential language for web development, enabling rich and interactive user experiences.

Bootstrap:

- Bootstrap is a CSS framework that streamlines web development by offering pre-designed styles and components.
- It allows developers to create responsive, mobile-first web pages with minimal effort.
- Bootstrap provides a grid system that helps in creating responsive layouts and aligning content.
- The framework includes a wide range of customizable components such as navigation bars, buttons, forms, cards, and modals.
- It offers a set of CSS classes that can be applied to HTML elements to apply predefined styles and functionality.

- Bootstrap includes JavaScript plugins that enhance interactivity and functionality, such as carousels, dropdowns, and tooltips.
- The framework supports responsive design, allowing web pages to adapt and display optimally on different devices and screen sizes.



Question Paper, Answer sheets, PYQ, and Reference:

I used Microsoft Word to make question papers, notes are in PDF format and some books and question papers are in PDF format also.

Hosting and version control:

I used Git for version control.

Git is a widely used distributed version control system that offers numerous benefits for managing code and collaborative development. Here are the reasons why Git is preferred for version control, along with some alternative substitutes:

1. **Git's Distributed Nature:** Git allows every developer to have a local copy of the entire code repository, including the complete history. This enables offline work, quick branching, and merging, making it well-suited for distributed and collaborative development.
2. **Branching and Merging:** Git provides efficient and flexible branching and merging capabilities. Developers can create separate branches to work on specific features or bug fixes and then merge them back into the main codebase, maintaining a clean and organized history.
3. **Versioning and History:** Git tracks and stores the complete history of changes made to the codebase, including who made the changes and when. This allows for easy navigation through different versions, rollbacks to previous states, and identification of introduced issues or bugs.
4. **Collaboration and Teamwork:** Git facilitates seamless collaboration among team members. Multiple developers can work on the same project concurrently, making independent changes on separate branches, and later merge their work. Git also supports conflict resolution to handle simultaneous changes made to the same code.

5. **Staging and Committing:** Git offers a staging area where developers can selectively choose which changes to include in a commit. This allows for granular control over commits, ensuring that only relevant changes are recorded.

6. **Integration and Ecosystem:** Git has a vast ecosystem with a wide range of tools, services, and integrations. It integrates well with popular code hosting platforms like GitHub, GitLab, and Bitbucket, providing seamless collaboration and code review workflows.

Alternative substitutes for Git include:

1. **Subversion (SVN):** SVN is a centralized version control system that functions differently from Git. It has a client-server architecture and does not provide the same distributed capabilities as Git. SVN may be preferred in certain scenarios or legacy systems where centralized control is desired.

2. **Mercurial:** Mercurial is another distributed version control system similar to Git. It offers comparable functionality and features, including branching and merging. Mercurial is known for its ease of use and user-friendly interface.

3. **Perforce:** Perforce is a commercial version control system commonly used in enterprise environments. It provides advanced features such as fine-grained access control, support for large-scale projects, and high-performance capabilities.

4. **Team Foundation Version Control (TFVC):** TFVC is a centralized version control system developed by Microsoft. It is often used in conjunction with Microsoft's Team Foundation Server (TFS) or Azure DevOps for managing source code and collaborating on projects.

Hosting:

I used GitHub pages and Netlify to host the sites. Because Git works better with GitHub so it's easier to deploy sites on GitHub pages.

GitHub Pages:

1. Free web hosting service provided by GitHub.
2. Enables publishing of static websites directly from GitHub repositories.
3. Integrates with Git and leverages version control capabilities.
4. Supports custom domains and offers easy setup and deployment.
5. Ideal for showcasing projects, documentation, or personal websites.

Netlify:

1. Hosting platform specializing in static website hosting and deployment.
2. Offers continuous deployment with seamless integration with version control systems.
3. Provides build automation, asset optimization, and global CDN for improved website performance.
4. Supports custom domains, SSL, and branch deployments for collaboration and testing.
5. Offers additional features like form handling, serverless functions, analytics, and A/B testing.



Netlify



GitBash



GitHub

Source Code:

Since the source code has a lot of LOC (line of code) therefore I am providing a GitHub link to the source code where the repository is made to access the code.

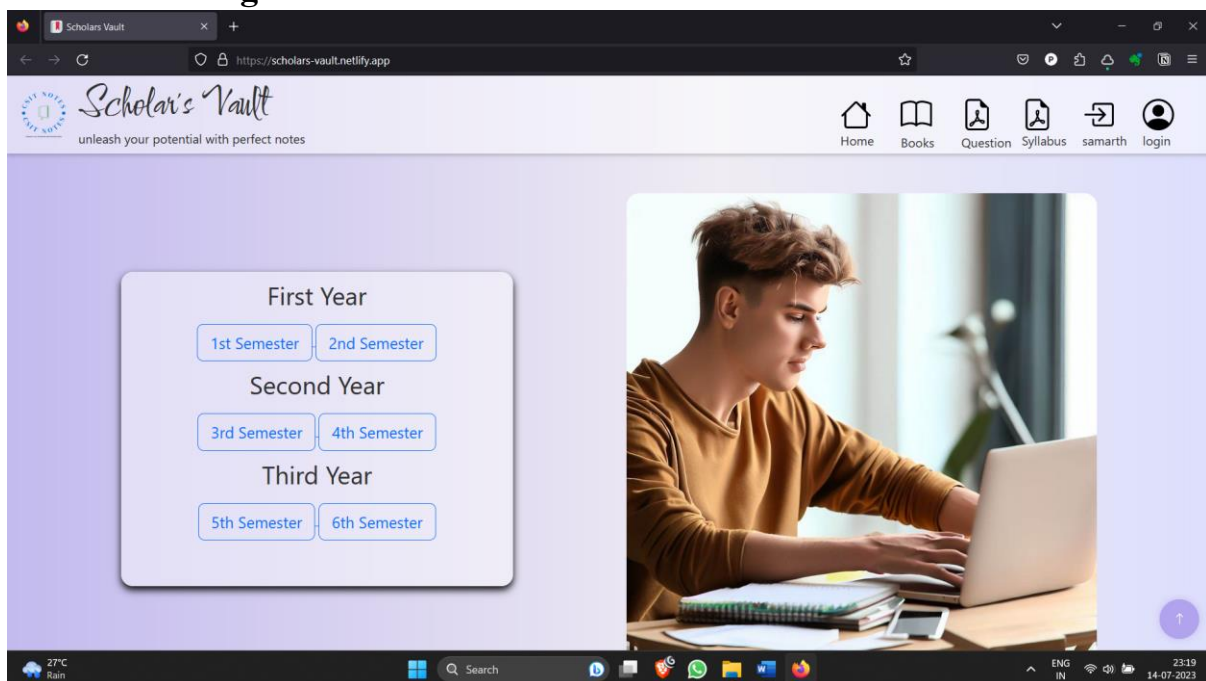
<https://github.com/aman-yadav-05/Scholars-Vault>

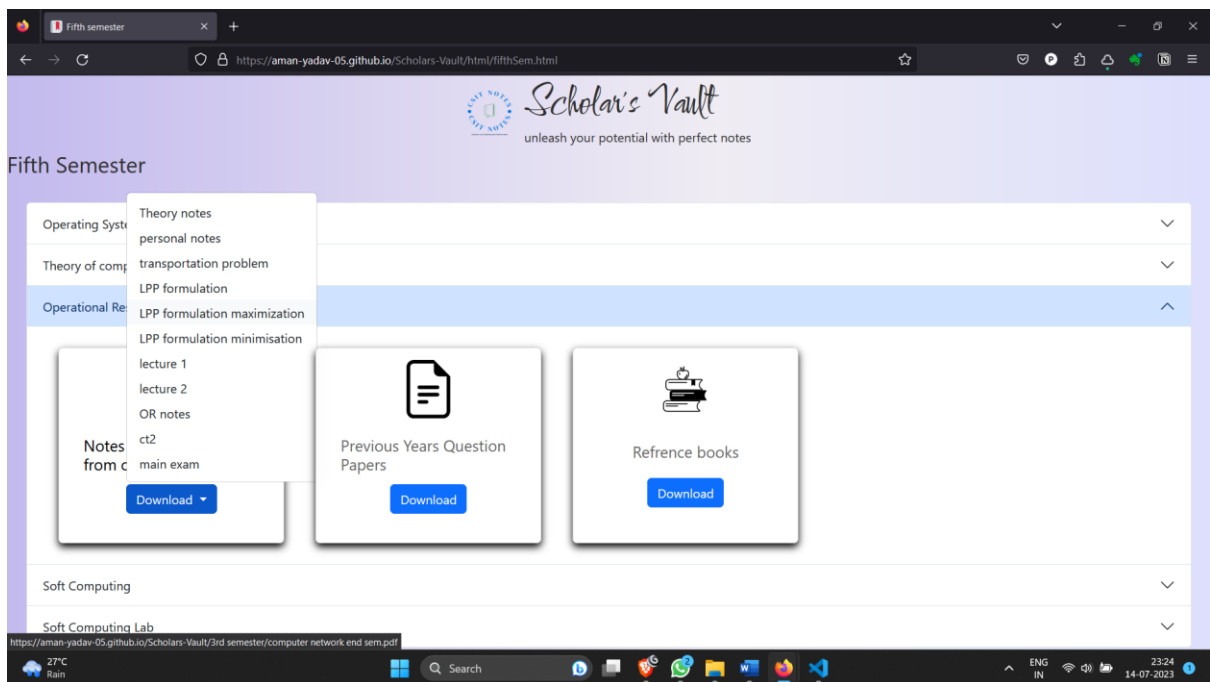
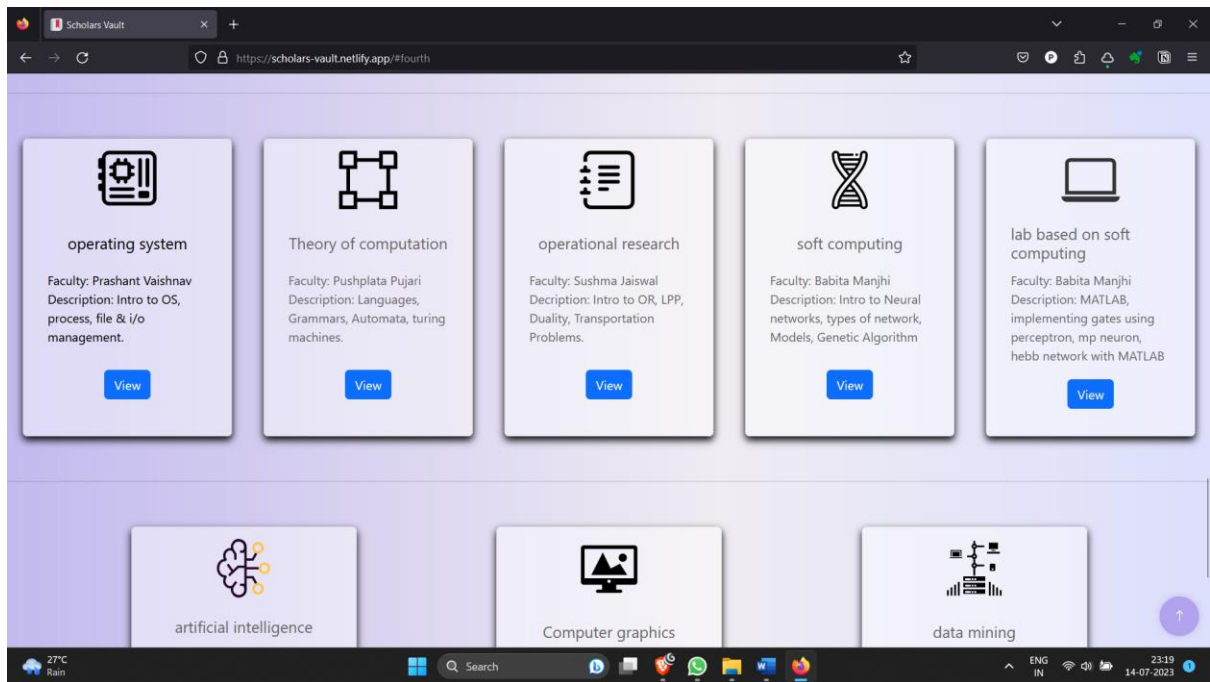
Deployed website links:

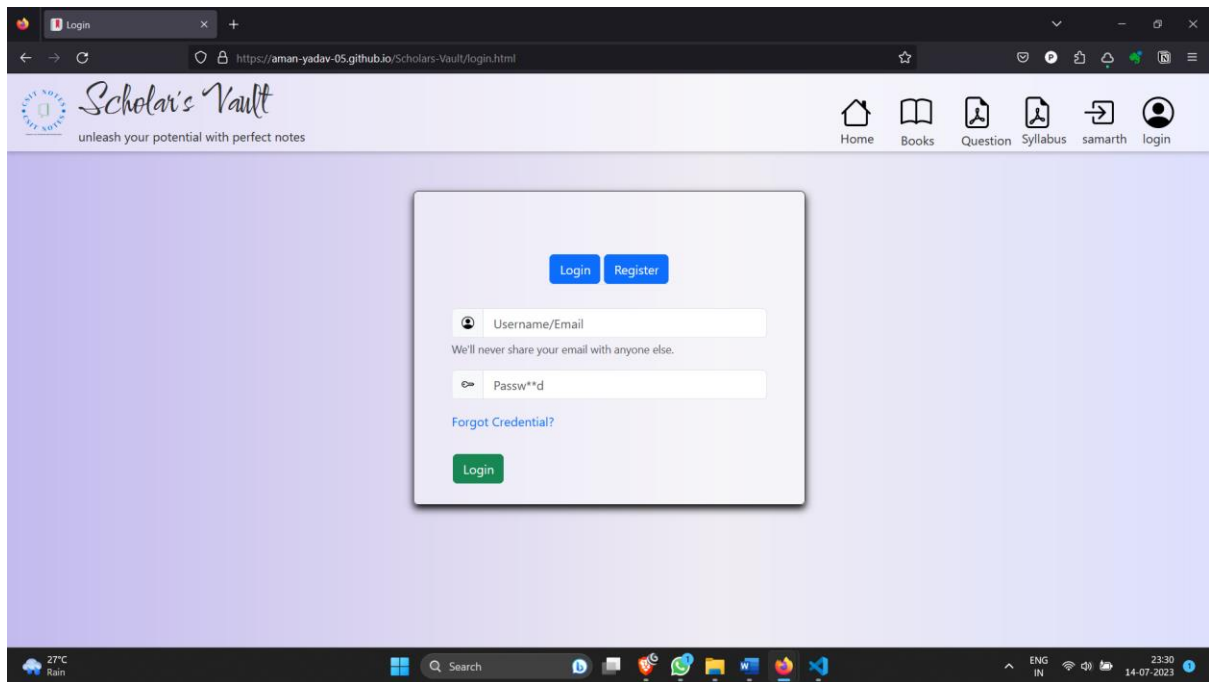
<https://scholars-vault.netlify.app/>

<https://aman-yadav-05.github.io/Scholars-Vault/>

Reference Images of the website:







Future Scope and Updates:

- 1. Expand Content Coverage:** Continuously update and expand the range of study materials, notes, and book references available on the website. Include a diverse collection of subjects, courses, and academic levels to cater to a broader audience.
- 2. User-Generated Content:** Implement features that allow users to contribute their own study materials, notes, and book recommendations. Enable a community-driven platform where students can share their insights and collaborate on creating comprehensive resources.
- 3. Interactive Features:** Introduce interactive features to engage users and enhance the learning experience. Incorporate interactive quizzes, practice exercises, or discussion forums where students can interact, share knowledge, and seek clarification on difficult topics.
- 4. Personalized Recommendations:** Develop algorithms or systems that provide personalized recommendations to users based on their interests, academic level, or past usage. Use machine learning techniques to suggest relevant study materials, notes, and book references tailored to each user's specific needs.
- 5. Mobile App Integration:** Consider developing a mobile app version of the website to increase accessibility and reach a wider audience. The app can

provide offline access to study materials, offer notifications for new updates, and include additional features like progress tracking or study reminders.

6. Social Media Integration: Integrate the website with popular social media platforms to facilitate easy sharing of study materials, notes, and book recommendations. Enable users to share content on their social media profiles or collaborate with peers through social networking features.

7. Gamification Elements: Incorporate gamification elements into the website to make the learning process more engaging and rewarding. Introduce badges, achievements, or leaderboards to motivate users and foster a sense of accomplishment as they progress through their academic journey.

8. Enhanced Search and Filtering: Improve the search functionality to allow users to find specific study materials, notes, or book references more efficiently. Implement advanced filtering options, such as subject, topic, or author, to help users quickly locate relevant resources.

9. Integration with E-Learning Platforms: Explore partnerships or integrations with popular e-learning platforms or learning management systems. This can provide seamless access to study materials and notes within existing e-learning environments, creating a comprehensive and integrated learning experience.

10. Feedback and Rating System: Implement a feedback and rating system where users can provide reviews and ratings for study materials, notes, and book references. This will help other users make informed decisions about the quality and usefulness of the resources.

Conclusion

The website "**Scholars-Vault**" is an online platform dedicated to providing students with a repository of notes, study materials, question papers, and book references. Its main objective is to support students in their academic pursuits by offering a centralized hub for accessing valuable resources.

The website serves as a comprehensive library where students can find a wide range of study materials to supplement their coursework. It includes notes that cover various subjects, allowing students to enhance their understanding and reinforce key concepts. Additionally, the website offers a collection of study materials curated to support different academic levels and disciplines.

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