Savitribai Phule Pune Univesity

Sinhgad Academy of Engineering Society's

Sinhagad Academy of Engineering, Kondhwa, Pune

Certificate

This is to certify that 1) Sagar Jadhav, 2) Sushant Akhade, 3) Omkar Jadhav, 4) Sarthak Somani,5) Ayaan Sayyad of F.E. have successfully completed the PBL report work entitled on "e-Library"under my supervision in the partial fulfillment of bachelor of engineering by Savitribai Phule Pune University.

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DEVELOPMENT OF e-LIBRARY WEBSITE

FIRST YEAR ENGINEERING

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ABSTRACT

Online Library Management System is a system which maintains the information about the books present in the library , their authors , the members of library to whom books are issued, library staff and all. This is very difficult to organize manually. Maintenance of all this information manually is a very complex task. Owing to the advancement of technology, organization of an Online Library becomes much simple. The Online Library Management has been designed to computerize and automate the operations performed over the information about the members, book issues and returns and all other operations. This computerization of library helps in many instances of its maintenances. It reduces the workload of management as most of the manual work done is reduced.

A digital library (or e-Library) is an online collection of digital objects. These object include text, visual, audio, and video material stored in electronic media formats. A library system also provide means for organizing,storing,and retrieving the information contain in the library collection.

INRODUCTION

Libraries, together with archives, have always been the primary institutions delegated to manage -collect, preserve and diffuse-human knowledge. and culture. When advances in computer science allowed dealing with digital representation of documents dedicated tocapture human knowledge and culture rather than printed ones, libraries were particularly involved in exploiting the potential of thedigital revolution. Thus "digital libraries" soon became the term to indicate thedigital counterpart of traditional libraries. However, digital library systems have greatly evolved since their early appearance. Today they have become complex networked systems able to support communication and collaboration among different worldwide distributed communities, dealing with "digital objects" comprising not only the digital coun terpart of printed documents, but also images, video, programs and any other kind of multimedia objects a community may define as appropriate to its working and communication needs.

Libraries form a vital part of the world's systems of education and information storage and retrieval. They make available through books, films, recordings, and other media- Knowledge that has been accumulated through the ages. People in all walks of life- including students, teachers, business executives, government officials, scholars, and scientists- use library resources for their research. Large number of people also turn to library to satisfy a desire for knowledge or to obtain material for some kind of leisure-time activity. In addition, many people enjoy book discussions, and other activities that are provided by their Libraries.

PURPOSE OF DIGITAL LIBRARY:

Purposes & need of Digital Library Success of the digital libraries in developed countries has drawn the our attention towards the digital library. While going for a digital library many questions come to our mind such as why we are digitizing. Will it fulfill our needs & many other questions? Answers of some of these are mentioned below: -

- To improve the quality & quantity of library services,
- To promote the economical and efficient delivery of information,
- To encourage the resource sharing,
- To make lifelong depository,
- For the sake of democracy, education etc,
- For the sake of "Good Life",
- To encourage the communication & collaboration between and among? government, research, academic and special libraries,
- Open access to users,
- Knowledge dissemination,
- To put the digital material online. So, these materials can? be found and used easily,
- To make digital material more broadly, quickly and efficiently accessible,
- Portability of documents,
- Accessible on World Wide Web (www).

MAIN COMPONENTS OF DIGITAL LIBRARIES:

Digital Library is the collection of the multimedia objects which are linked together and are available online for use and these digital objects form a digital library.

Main Components of a digital library:

- Information in text on paper,
- Video pictures/clippings,
- Graphics,
- Images,
- Photographs,
- Audio (Sound),
- Information in Digital form,

In simple words we can say that Digital Libraries are based on Multimedia Technology. Therefore some expert calls it High Speed Network of Multimedia Systems.

LITERATURE SURVEY

According to the survey from various study material websites, following is the information concluded-

Bartleby.com

Bartleby.com was an electronic text archive, headquartered in Los Angeles and named after Herman Melville's story "Bartleby, the Scrivener." It was founded under the name "Project Bartleby" in January 1993 as a collection of classic literature on the website of Columbia University. In February 1994, they published the first classic book in HTML, Walt Whitman's Leaves of Grass. It is now a commercial website operated by Barnes & Noble,though its repository of texts can still be accessed. There are four main categories to the repository: Reference, Verse, Fiction, and Nonfiction.

ASTRIA DIGITAL LIBRARY:

Astria Digital Library founded in Jan 2018 in Florida United States.There is 17200 e-BOOKS on the variety of topic such as Business,Politics,Technology and many others.This benefit for student in such a way that they can acces and read uninterrupted access to study materials without any interruption.

OPEN LIBRARY :

Open Library is an online project intended to create "one web page for every book ever published". Created by Aaron Swartz, Brewster Kahle, Alexis Rossi, Anand Chitipothu, and Rebecca Malamud. Open Library is a project of the Internet Archive, a nonprofit organization. It has been funded in part by grants from the California State Library and the Kahle/Austin Foundation. Open Library provides online digital copies in multiple formats, created from images of many public domain, out-of-print, and in-print books.

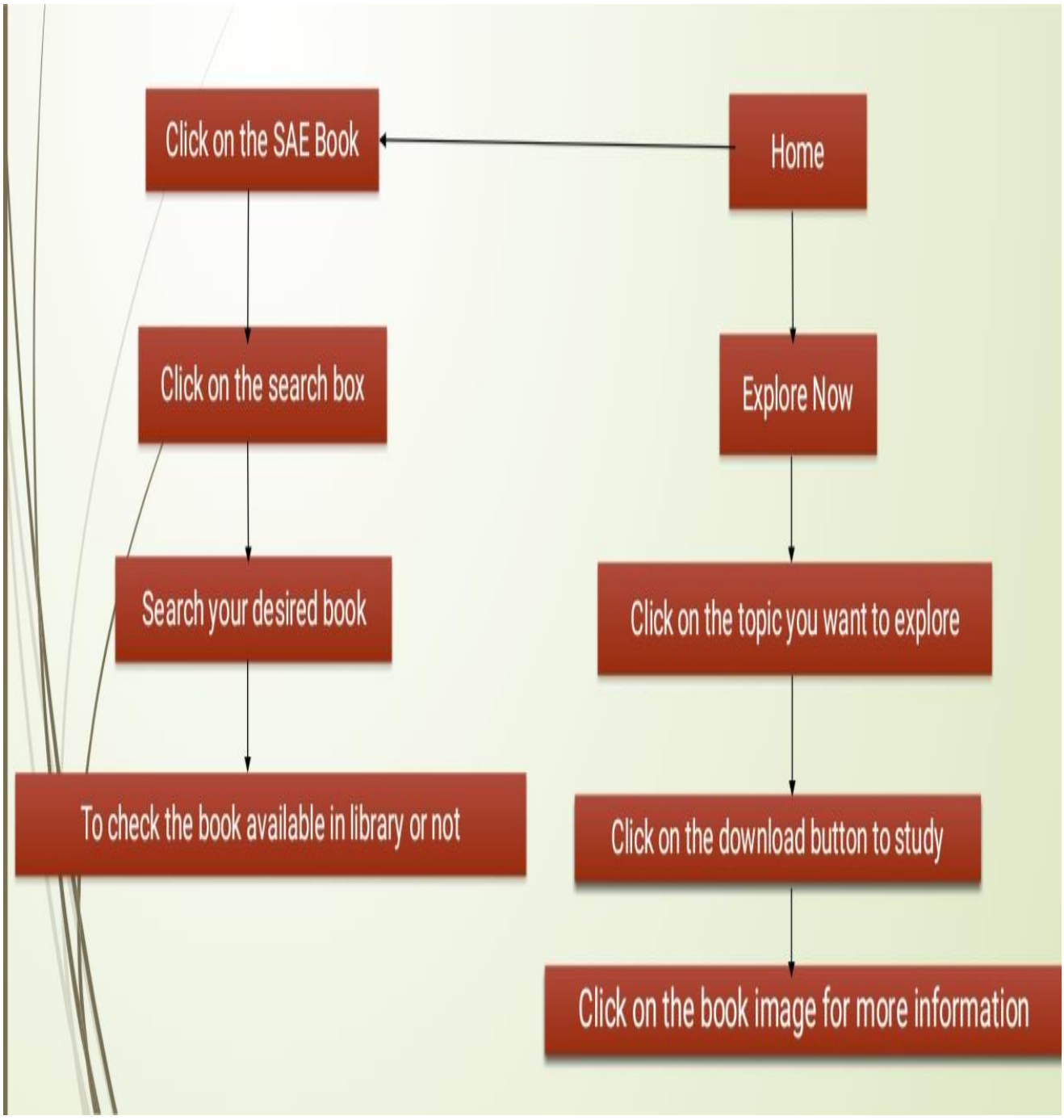
GUTENBERG-

In gutenberg website works are available in plain text, using simple ASCII characters with limited typography and no images, though versions in HTML (hypertext markup language) or Adobe Systems Incorporated's PDF (portable document format) exist for some works.

The releases are available in plain text as well as other format, such as HTML, PDF, EPUB, MOBI,and Plucker wherever possible

Most of the items in its collection are the full texts of books or individual stories in the public domain. All files can be accessed for free under an open format layout, available on almost any computer.

FLOWCHART


Click on the SAE Book
Home
Click on the search box
Explore Now
Search your desired book
Click on the topic you want to explore
To check the book available in library or not
Click on the download button to study
Click on the book image for more information

WORK CARRIED OUT

Digital Library Processes

1. Content selection:
The content selection for the Dl is depends on the utility, value and rarity of collection. It may be Internal or external, free or commercial, owned or licensed, print or electronic formats. The content may includes Staff publications, e-mail archive, news, reports, policies and plan documents, drawings, software, press releases, presentations, courseware, lectures, best practices, etc. for education and corporate purpose.

2. Content acquisition:
Digital Library acquired contents already in digital form as well as to be converted and they may be loaded in central or distributed sites. The format (PDF, TIFF, postscript, html, xml) of the digital content may selected as those supported subsequent presentations today & tomorrow and It should not needs special access mechanism.

3. Content organization:
The concept of content management has been around in intellectual organization and physical organization. Intellectual organization consist object description, categorization, indexing control and automatic content extraction. Physical organization includes databases, indexes, storage, content granularity (full text tagging or hierarchical browsing support), search and retrieval. Digital object identity fire also paying important role in content organization. The content organization needs special attention in DL because it is the base of the DL services and products.

4.Content access and delivery :
DL is changing landscape for access and delivery of digital contents globally. This allows various type search such as Structured search (metadata-driven), Object search (full-text, multi-media object search), Search at finer granularity (tables, figures, paragraphs, section headings), Global search and resource type search (e.g. bibliographic databases, e-journals, reports, experts). The searching features includes Relevance ranking, Search refinement, search history, search set combination, Personalization, customization. It also facilitates structured presentation (display), Hierarchical browsing (subject schemes/ topic directory). Access and delivery area of Digital library are developing new innovative technologies and processes in these areas that will capitalize upon the digitized status of DL content, and allow quicker, easier and cheaper access to content, which in turn will be a powerful justification for your digitization effort. Access and delivery process are aided by conversion to digital mass storage.

5. Access management:

Access management consist various operations such as access control, content security, object identification, ownership establishment, License metering, user Id and password management, Proxy/IP authentication management, etc. All the above operations have been controlled by the various software's and techniques which facilitate to DL has access control over the owned and licensed contents.

6.Usage and monitory:
DL have integrated usage and monitory system that gives answers of such question like what digital sources are being used, how much and by whom. Those answers may help you to evaluate system performance and information services.

7.Networking and interoperation:
Networking enhances digital information services and resource sharing. Metadata and Open access initiative allows federated access to different collection within and across DL. Interoperation allows to DL users to find out desired information from different system across the word.
4.8. Preservation:
Digital preservation involves quite different methods, skills, and outcomes and can complement traditional preservation services, while simultaneously providing unique and dynamic new uses of information. Digital Library ensures perpetuity and long-term access through time and changing technologies

Challenges:

1. Economical :
There is always a cost in its creation, its production, and its dissemination. Digital libraries introduce new and uncertain economic realities and relationships into libraries. Where the costs of accessing information were once hidden to patrons, the digital era is likely to require customers who will be required to pay fees for access to digital services and collections. The major obstacle is digitization. Digitization is very cost intensive. Especially when one goes single handed toward digitization. For digitization to succeed in the developing countries, the socio-economic conditions have to strong to a digital library.

2. Technological obsolescence :
The digital storage media such as hard disk, tapes and floppy disk have a very short life–span due to rapid technology obsolescence. The computer hardware and software which used for storage and retrieval become obsolete and they are replaced by batter technologies.

3. Administrative:
For building and working with Digital Library the long-term organizational, fiscal, and institutional commitments will be necessary. Management of the technical infrastructure for "digital library" services will be a significant obstacle for most libraries, especially as budgets continue to shrink

and the costs of developing and maintaining collections increases. Administration of the digital collections locally, is harder and more expensive than managing a comparable print collection.

4. Copyright:
Copyright is one of the obstacles in the plans to create extensive digital collections. Copyright protects the owner's creative or intellectual work. Digital collections and services will be strongly affected by future copyright and licensing regimes, as well as prohibitive costs for digitization and Support of technical infrastructure. Copyright could become an insurmountable barrier to the development of digital collections. In fact, copyright could end up preventing libraries from providing open access to the digital information they collect.

5. Lack of expertise:
Digital library are considered by many to be a challenging area. The development of an infrastructure for the networked resource discovery and retrieval of highly distributed, autonomously created, and diverse electronic information is required. Above all, this infrastructure will need to be managed by professionals who understand information needs and uses.

Opportunities:

1. Expand services:
DL is added to expand the repertoire of the Pre-existing library services or complementary to existing one. It is also creating new services for a new or changing market. DL has seamless provision of services that are responsive to the needs and interests of the communities served. It is clear that the DL is maintaining an acceptable level of operational service. Effective authentication is the key to delivery of personalized services. There are significant opportunities for products and services emerging from digital libraries to expand their markets beyond the boundaries of the time and geographical location to achieve additional wider benefits.

2. Promote Collections :
Promoting of more widespread use of unique collections is one common aim of DL. Collection is one of rare and expensive materials in library. It includes collections created as digital (i.e. e-books, e-journals, e-databases) or digitized rare books, manuscript, pictures and fragile material. Digitization of collection is depending on the utility, rarity and value. Since the digitization is the major expensive process, it should be done by the expert because it may be painstaking and therefore mindful of the preservation and security needs of the collection. The digital collection has grater visibility and global accessibility with features of searching, browsing and cross-reference linking.

3. Knowledge management/ content management:
Digital library has wider prospective working towards manage and access of work practices, internal information assets and intellectual assets which are to

improve the creativity of the persons, sharing of knowledge and to achieve the objectives of an organization.

4. Scholarly communication:
Digital Libraries support in scholarly communication in the field of education, research and development through the E-journals, e-prints, e-books, data sets, e-learning and e-transformation.

5. Archiving and preservation:
It allows archiving and preserving documents/ digital objects of education, Cultural, heritage, historical & special, museums and biodiversity for long term continued accessibility of the document contents through time and changing technology and reproduce a suitable facsimile of the original document.

Coding:

Coding start of a Web Pages in CSS, HTML, Java scripts and other technologies of https, for drawing of the graphic and text contents, user must look code of web page consistently like as webpage design. Coding of a web page is loading quickly search engine and index give us rank very quickly. Every web page of a website takes a unique title, unique Meta tags as keywords and descriptions. Developer can create links of internal with keywords of website to explore the search engine ranking and navigation. In this way improve the website quality code by using techniques and tools according to website standards.

Research Methodology:

Library Management System (LMS) is a tool to help any libraries which are still using the old way to manage their library. The old way like searching for a book using manual work is hassle, fast report generation is not possible, information about issue/return of the books are not properly maintained, no central database can be created as information is not available in database. But by using the LMS, user can overcome all the problems mentioned above. This system can manage all the happenings of the library. Book transactions including book searching, availability of the book, details and appearance of the book, personal book borrowing history and etc. can be very easily handled by this system. This system is suitable for small to big libraries including medical and legal libraries, colleges, schools, universities, corporate houses and other academic resource centres. However, I would like to focus on LMS for colleges or universities.

LMS has three modules which are Students Module, Staff Module, and Administration Module. First of all, Students Module allows students to search material by title, name/author, subject, publication, series, ISBN/ISSN and etc. it also allows students to find recently arrived material. In Staff Module, staff can issue book and receive book with bar code. Staff also can fine for books received after due date. Lastly, the administration module help administrator to register/reassign shelf and category, change book status, issue library

card, configuration to register users, and database backup/restore. Overall, this system can be very helpful and it can make things easier.

General Approach:

GitHub allows multiple developers to work on a single project at the same time, reduces the risk of duplicative or conflicting work, and can help decrease production time. With GitHub, developers can build code, track changes, and innovate solutions to problems that might arise during the site development process simultaneously. Non-developers can also use it to create, edit, and update website content, which Carpenter demonstrates in her tutorial.

ADVANTAGES AND LIMITATION OF E-LIBRARY

Advantages:

- Nearly unlimited storage space at a much lower cost
- Re-allocate funds from some staff, collection maintenance, and additional books.
- No physical boundary
- Round the clock availability
- Multiple access
- Enhanced information retrieval.
- Preservation for some print material
- Added value
- Universal accessibility

Limitation:

- Lack of screening or validation
- Lack of preservation of a fixed copy (for the record and for duplicating scientific research)
- Lack of preservation of "best in class"
- Difficulty in knowing and locating everything that is available, and differentiating valuable from
- useless information.
- Job loss for traditional publishers and librarians
- Costs are spread and many become hidden

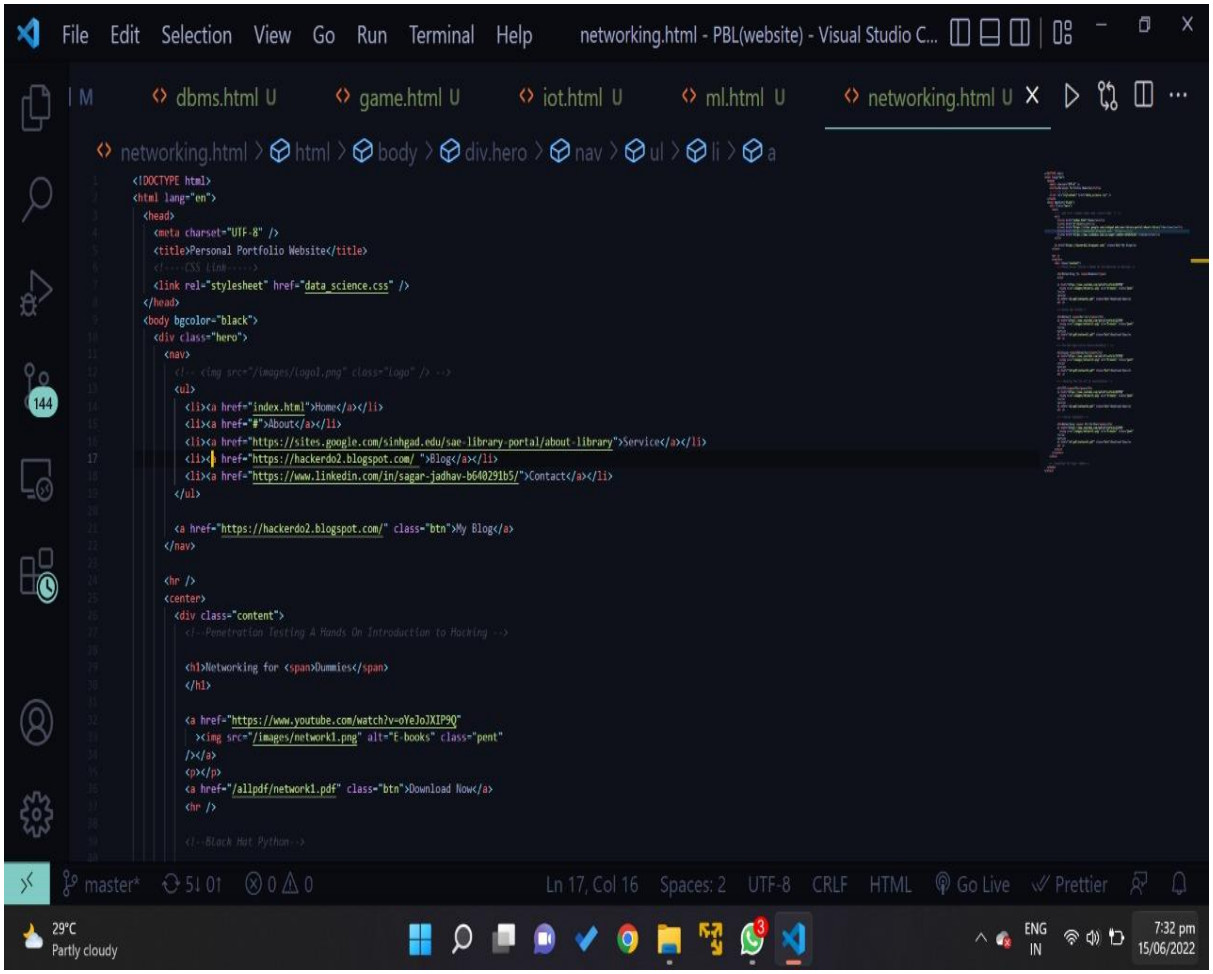
Result

By all this research and analysis we able to create this website . Which is easy to use and quick to use. We can do all this by using java script, html and css. We uploaded our website on local server named Github which is also easy to use for students . So now you can easily access

study related book and other study materials. And this is was our final goal . We tried our best to create this amazing website.

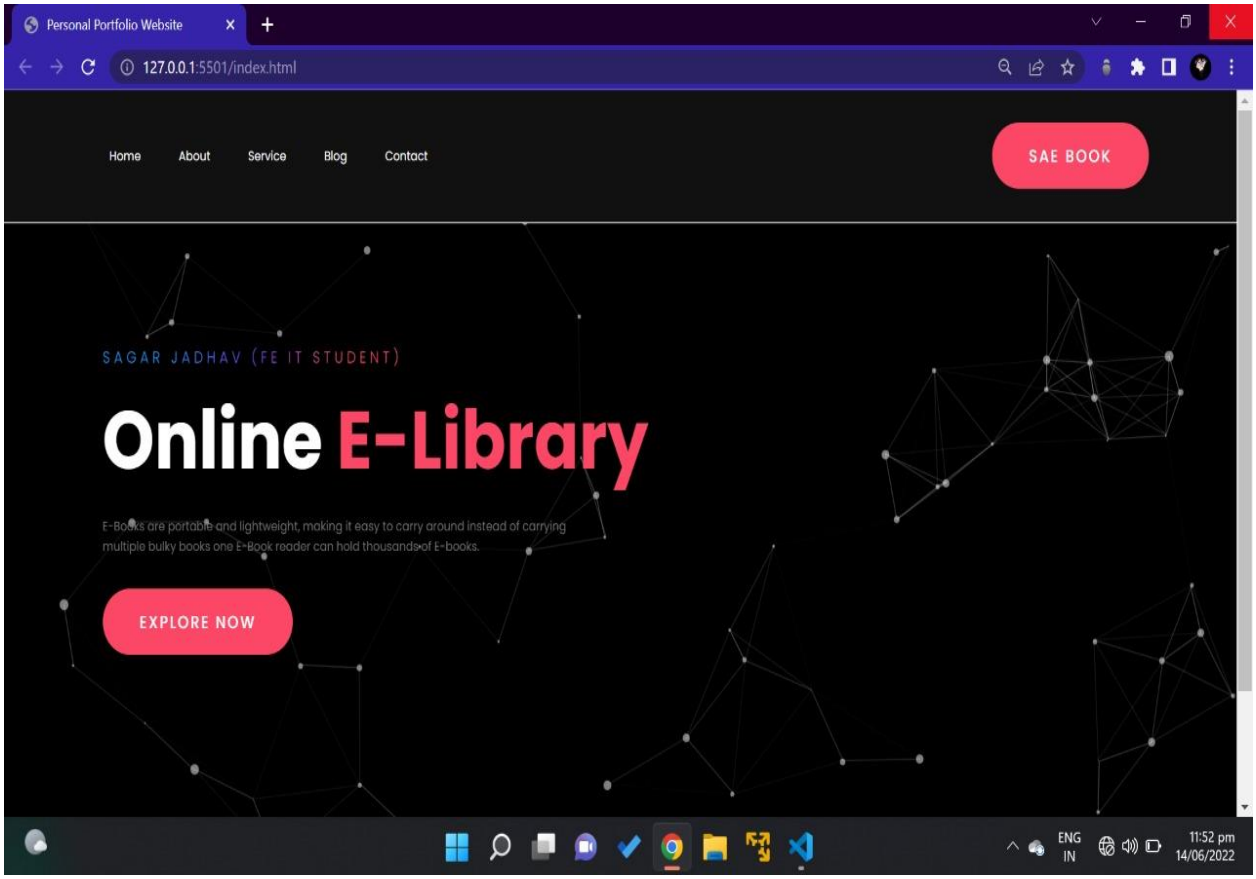
Index Code:

In these index code we use html,java script,CSS programming languages



Outlook of index file:

These is the home page of the Development of e-library website project:



CONCLUSION

This website provides a computerized version of library management system which will benefit the students as well as the staff of the library.It makes entire process online where student can search books, staff can generate reports and do book transactions. It also has a facility for student login where student can login and can see status of books issued as well request for book or give some suggestions. It has a facility of teacher's login where teachers can add lectures notes and also give necessary suggestion to library and also add info about workshops or events happening in our college or nearby college in the online notice board.There is a future scope of this facility that many more features such as online lectures video tutorials can be added by teachers as well as online assignments submission facility , a feature Of group chat where students can discuss various issues of engineering can be added to this project thus making it more interactive more user friendly and project which fulfills each users need in the best way possible.

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