A WEB –BASED STUDENT ACADEMIC RESOURCE HUB

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CERTIFICATION

This is to certify that this project was carried out **by IZEVBIZUA ESOHE ANGEL** with the matriculation number PSC2105348 under my supervision. It is adequate and satisfactory, both in scope and content, for the award of Bachelor of Science (B.sc) Degree in Computer Science of the University

Mr. Obasohan Edward . Date

Project Supervisor

APPROVAL

This project work is hereby approved in partial fulfilment of the requirements for the award of Bachelor of Science (B.Sc.) Degree in Computer Science from the University of Benin.

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DEDICATION

This project is dedicated to God Almighty for his infinite grace and mercy that He has shown me during my academic pursuits in the University of Benin. This project is also dedicated to my parents Dr. Izevbizua Orobosa and Mrs Izevbizua Maryrita, my siblings Izevbizua Oghosa Paul and Izevbizua Orobosa Rhema for their unwavering love and support during this academic journey.

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ABSTRACT

Access to academic materials is one of the main key factors that can affect the academic performance of a student. The traditional method of accessing materials such as handwritten lecture notes, printed handouts, and textbooks are still useful but all have their own challenges in trying to use them. These challenges can lead to loss of material and accessibility.

This project highlights the need for a digital and centralized approach to academic resource management. The proposed system in this work is the Student Academic Resource Hub (SARH) which is designed to serve as a digital repository for students and lecturers where they can upload, access, and download academic materials such as lecture notes, past questions and other study resources according to their academic levels or courses.

The design of the Student Academic Resource Hub is focused on creating a simple user-friendly web platform that uploading and accessing materials easy for students and lecturers. The SARH was built with the frontend and the backend. The database is used for storing users' data and uploaded resources. Certain implementation libraries were integrated to handle secure authentication and data protection. The result of this project is a developed system which is capable of providing an efficient, secure, and scalable alternative to the manual methods currently in use.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND STUDY

The rise of digital technology has made a significant impact on how students access study materials globally. Although traditional methods such as printed books, handouts, and access to physical libraries were the primary sources for study materials, digital resources are now an integral part of education. These digital tools enable learning institutions to enhance teaching, learning, and overall academic achievement.

However, many Nigerian universities are still slow in adopting these digital methods. Most students still rely on photocopies, handwritten notes, or informal groups on WhatsApp to get materials. These approaches are unreliable, time-consuming, and often create unequal access since not all students receive the same resources.

The problem of poor academic performance among Nigerian undergraduates has been a cause of concern to most education stakeholders. Most tertiary institutions in Nigeria are not suited for quality education in this era of digitization, which may explain students' poor academic achievement.

Many universities face problems such as over-crowded lecture halls, poorly equipped laboratories, and insufficient ICT facilities. The occurrence of regular strike action by university staff disrupts the academic calendar and this has a negative effect on students' studying habits. The reliance on paper-based technologies and underfunded libraries limits student access to textbooks, journals, and computerized resources, with little opportunities for peer collaboration and independent learning. These challenges signal the need for technology-based solutions, such as the Student Academic Resource Hub, that provide instant access to academic resources and support individual study and collaborative learning.

Taken together, these problems demand creative technology-based solutions like online student resource centers, as a means of improving access, efficiency, and overall quality of Nigerian university education.

1.2 STATEMENT OF PROBLEM

In today's academic setup, where knowledge is constantly changing, access to advanced resources in an efficient manner is imperative to avoid being left behind in following current trends and maintaining competitive academic achievement.

Availability of learning materials is important in higher education because it has a direct effect on students' ability. In most Nigerian universities, lecture notes, textbooks, and past questions are either scattered across different places, outdated, or available only in hard copy. This makes it difficult for students to study effectively and prepare for exams. The major challenges faced by students include:

The majority of Nigerian universities still heavily rely on printed or hand written lecture notes, textbooks, handouts, and past questions. These printed lecture notes are hard to update, as a result, students may end up learning outdated or inaccurate information, which negatively affects students' performance.

Undergraduate students can only access academic materials at physical locations, such as lecture halls or libraries. As a result, students who are absent from classes, students who live off-campus or those with inadequate mobility will be excluded from course content. In addition, these physical materials deteriorate and are lost or destroyed over time.

Most institutions do not have adequate ICT and internet infrastructures, with under-equipped computer laboratories that cannot sustain the vast majority of the student population. In addition, internet connectivity is largely unreliable with frequent disconnections and slow internet speed makes access to online resources difficult. The problem of high data costs discourages regular use of digital learning platforms. These infrastructure problems leave students at a disadvantage.

External disruptions such as strikes and pandemics can affect the ability of students to learn on a continuous basis. Academic Staff Union of Universities (ASUU) strikes tend to last for long periods. During these strikes, students are unable to access lecture notes, libraries, and one-on-one guidance from lecturers. When academic activities resume afterward, students have to rush through topics without adequate understanding. Similarly, during the COVID-19 pandemic in 2020, most students lacked access to learning materials, as most institutions in Nigeria do not have online learning systems. These breaks create gaps in learning and leave Nigerian students at a disadvantage when compared to their peers in developed countries, who have digital platforms that allow remote and flexible access to learning materials.

In conclusion, these problems make learning stressful but also limit students from reaching their full academic potential.

1.3 AIMS AND OBJECTIVES

The goal of this project is to design and implement a Student Academic Resource Hub (SARH) that makes academic resources easier to access for students by providing a centralized digital platform for students. The objectives include:

1. The system will serve as a single point of access where students can easily retrieve essential resources such as lecture notes, past exam questions, course outlines and departmental announcements. This will help to ensure students are better informed and prepared.
2. It will help to enhance collaboration and academic support among students through peer-to-peer content sharing and discussion features.
3. **Real world Usefulness:** It is a web-based application that can be deployed in any department or school.
4. It will help to improve communication between students and lecturers in school.
5. It aims to provide a positive impact on students' study habits and academic performance.
6. This project will enable students to have access to their course work from any location and at any time.

1.4 SIGNIFICANCE OF THE STUDY

This study is important because it addresses one of the biggest problems faced by Nigerian students; limited and scattered access to learning materials. The Student Academic Resource Hub offers several benefits:

The Student Academic Resource Hub (SARH) surmounts the problem of academic disruptions by providing continuous and centralized access to notes, slides, past questions, and other resources. Even when students cannot physically attend classes, they can access the materials online, minimizing academic loss and disruption.

The SARH offers a structured repository where materials are organized according to courses and levels. This system will give students easy access to the right resources to assist their preparations for examinations, assignments, and even research projects, which directly reflects on better academic performance.

This SARH encourages active participation among students, creates a more scholarly environment, and enables weaker students to learn from their stronger peers. Conversely, it

encourages collaborative abilities, analytical thinking, and knowledge sharing, all of which are vital in academic and professional growth.

The implementation of the SARH can help lecturers minimize reliance on paper through digitalization of course materials and assignments. It also helps in keeping records as virtual materials can be sorted, extracted, and archived more conveniently than paper documents. The SARH also helps lecturers to integrate digital materials into their teaching to allow students learn beyond the classroom

This also raises competitiveness in the recruitment of prospective students, as the majority of potential students desire institutions to be able to provide modern facilities for learning. In addition, it assists in bringing Nigerian universities in line with international trends in education, promoting institutional development.

In conclusion, Student Academic Resource Hub (SARH) will make learning more flexible, reduce reliance on paper-based methods, and help Nigerian universities gradually align with global best practices in digital learning.

1.5 SCOPE OF THE STUDY

The study is interested in the deployment and design of the Student Academic Resource Hub (SARH) as an online platform to increase learning material availability at Nigerian universities. The project is limited to creating a web-based platform for managing academic resources. The hub will allow students and lecturers to upload, organize, and access materials such as lecture notes, assignments, and past examination questions. It does not include the entire range of e-learning activities such as online tests or live lectures.

Access to the platform will be limited to the university's registered students and staff. Although additional features like course announcements and discussion forums may be included, the core function of the system is to make resources available in a centralized and organized way.

The study is focused on undergraduate students and lecturers of the selected institution. It will be tested within one semester to evaluate its usefulness and challenges.

1.6 LIMITATIONS OF THE STUDY

Although the system is expected to solve many challenges, it has some limitations:
1. It is not a full e-learning platform and does not support live video classes, online tests, or

auto-grading.

2. The success of the hub depends on internet availability, which may be a challenge in some areas.

3. The focus is only on essential academic resources such as notes, past questions, and assignments.

4. The hub is designed to be used by undergraduate students and lecturers in a single institution.

5. More advanced features such as AI-driven recommendations and complex data analysis are not included in this project.

1.7 DEFINITION OF TERMS

1. **Student Academic Resource Hub**: This is a web based application that acts as a repository for students and lecturers to upload, share and retrieve academic content such as notes, timetables, class timetables and a discussion forum to improve students. Academic performance.
2. **E-Learning:** E-learning is an educational approach that utilizes information and communication technologies (ICT) to deliver educational content and resources via online platforms
3. **Traditional Learning**: The system of education is largely composed of classroom setting with face-to-face mode of instruction, strict adherence to timetable, tests, end-of-year examinations and under full guidance and encouragement of teachers.

CHAPTER TWO

LITERATURE REVIEW

This chapter will review university resource centers and online learning environments from a global perspective. It also fixes the scope on Nigerian universities, highlighting the challenges faced by students and lecturers in accessing learning materials. The chapter further sets out traditional paper-based learning, its drawbacks, the emergence of online learning hubs, and the benefits of embracing such learning platforms in academic resource access and student engagement enhancement.

2.1 CONCEPT OF DIGITAL RESOURCE HUBS

The concept of digital libraries can be traced to the early writings of scientists such as Vannevar Bush and J. C. R. Licklider, who imagined how technology could improve access to knowledge.

In his famous essay *As We May Think*, Bush (1945) introduced the concept of the Memex, a machine that could store books, records, and communications in one place and allow fast, flexible retrieval. Although technology was not advanced at the time, his idea laid the foundation for what we know today as digital libraries. Licklider (1965) eventually built on this vision in his book *Libraries of the Future*, where he explained how computers could support automated libraries and allow multiple users to access shared databases remotely.

These early ideas paved the way for modern digital libraries, which gained more attention in the 1990s with the rise of the internet. The internet made it possible to store, organize, and share knowledge on a global scale, which eventually led to the development of digital resource hubs, as we know them today.

2.2 EVOLUTION OF DIGITAL LIBRARIES

The early digital libraries began in the 1960s and 1970s as computerized indexes that replaced traditional card catalog systems used in libraries. With the rise of the internet in the 1990s, these systems grew into large-scale digital libraries that allowed universities and research institutions to organize, store, and provide remote access to academic content. One of the most notable efforts was the Digital Library Initiative (DLI) in the United States, funded by the National Science Foundation (NSF), DARPA, and NASA. The leading universities such as Stanford, the University of Michigan, and Carnegie Mellon were able to develop digital systems for information storage and retrieval through this project. The DLI pioneered tools

such as advanced search algorithms, metadata standards, and distributed storage systems, many of which later influenced modern search engines and academic platforms

The DLI demonstrated that large digital systems were both possible and useful, helping universities become not just consumers but also creators of digital content. It bridged the gap between traditional library practices and emerging computer technologies, showing how digital libraries could evolve into dynamic spaces for knowledge sharing rather than just storage. The outcomes of this initiative provided the foundation for today's institutional repositories, academic databases, and digital resource hubs, which are now widely used to support teaching.

Most modern digital resource hubs take different forms, but they all aim to make academic materials easier to access. The common types of digital resource hubs include institutional repositories that preserve the intellectual work of staff and students. An Institutional Repository (IR) is a digital archive that provides the platform where the universities can archive their intellectual output. (Alegbeleye et al., 2017) and also online learning platforms like Moodle, Blackboard, and Google Classroom, which deliver course content and support interactive learning. Together, these systems have transformed how academic resources are shared and accessed globally.

2.3 TRADITIONAL METHODS OF ACCESSING ACADEMIC MATERIALS IN NIGERIAN UNIVERSITIES

Before the introduction of computerized systems, students in Nigerian universities relied heavily on traditional methods of accessing academic content. These traditional methods were founded on the use of physical libraries, lecturer-prepared notes, and photocopying facilities. These methods are still in use in most universities in Nigeria. However, these methods have huge limitations in terms of accessibility, large student crowds, amongst other issues.

The university library has always been the central hub for gaining access to academic papers. In general, libraries have played a pivotal role in preserving and providing access to information, learning, and promotion of culture exchange (Onunka et al., 2023). Libraries contain textbooks, reference books, newspapers, government publications, and research journals that support learning and research in various subjects and provide a suitable environment for study. However, the use of libraries in Nigerian schools has limitations such as overcrowding, inadequate seating capacity and insufficient copies of textbooks.

Another traditional method is the utilization of lecture notes provided by lecturers. The students often rely on their own handwritten notes or shared notes from friends to review and prepare

for examinations. These notes guide students by helping them to highlight important points, summarize important concepts, and focus on the content that is most important for examinations. It is easy for students to read their notes and it saves time. Students also like lecture notes because they are the lecturer's version of a course material, providing assurance of what will be seen in the examinations. This method requires effective listening on the students' part. Good listening is indispensable in having good notes, a good summary, correct and wise responses to questions, and sharing acquired knowledge to others (Ferit, 2009). However, this method has several weaknesses. Lecture notes may present a biased or limited representation of the subject in question. They also discourage students from exploring other sources of information, thus depriving them of critical thinking and independent research skills.

A third common method is the utilization of photocopying facilities, which allow students to photocopy textbooks, handouts, and past papers at low prices. This method is very useful in a situation where many students cannot afford original textbooks, and thus photocopying offers a good and economical alternative. It also allows students to have copies of scarce materials for flexible study. However, photocopying creates a variety of problems. Photocopied materials are often incomplete, poorly copied, or outdated, thus becoming less effective for substantive learning. Further, excessive reliance on photocopied notes enables shortcuts in academic activity and contributes to copyright infringement. These issues, mixed with the general ills of traditional methods, illustrate the growing need for innovative digital alternatives that can provide more reliable, complete, and equal access to academic material.

2.3.1 ADVANTAGES OF TRADITIONAL METHODS OF ACCESSING MATERIALS

The traditional method of learning has been with us for ages. This conventional mode of teaching has many benefits; both in the past and in the current dispensation that still make it very useful.

One of the major advantages of traditional methods is that they are easily accessible and available. Accessibility to resources and conducive environments makes learning very easy for students and staff (Oyewusi & Oyeboade, 2009). University libraries, class notes, and photocopied materials can be utilized without having expert technical skills, rendering them easily available for use by students, irrespective of their level of digital literacy. These practices have been established and utilized for decades so lecturers and students already know how they work. This long-term exposure minimizes the learning curve to use them and encourages consistency in scholarly interaction.

Traditional methods can also be viewed as cost-effective in different ways. University libraries are largely free for students, hence saving on the price of acquiring textbooks and other study resources. Photocopy facilities also provide a relatively affordable way of duplicating important resources, enabling students to access study documents at a fraction of the book purchase price. Lecture notes distributed by professors are also brief and focused study guides to course content, thereby eliminating the need for students to utilize many sources and decreasing the cost of studying overall. Although photocopying is also a common means through which students in Nigerian universities access academic materials, it comes with some serious consequences regarding copyright infringement and intellectual property rights. The cost of photocopying academic materials is also unsustainable and the practice does not meet international best practices in managing academic resources.

Classroom lectures and interactions with lecturers provides the potential for interactive learning and immediate feedback. A positive relationship between lecturers and students can build the students' motivation and improve the overall academic performance (Oduh & Agboola, 2019). Questions can be posed in the classroom in real time, doubtful ideas explained, and advice tailored to meet personal requirements. This facilitates comprehension and ensures immediate correction of misconceptions. The personal nature of direct contact facilitates more intimate student-lecturer relationships, which are usually necessary for advice and academic growth.

Traditional methods also provide a structured and systematic manner of learning. In libraries, books are organized according to established cataloguing systems, and lecture notes and class timetables follow a course outline. This structure guides students in progressing through academic material in a logical and orderly manner, minimizes distractions, and ensures that the foundational objectives of the course are covered. These rigid approaches are particularly useful for pupils who require discipline and extra guidance, as they supply a clear set of boundaries within which academic success can be achieved.

2.3.2 DISADVANTAGES OF TRADITIONAL METHODS OF ACCESSING MATERIALS

The traditional methods of accessing academic materials have always been physical libraries, lecturers' notes, and photocopying services. These were the common practices before digital platforms became more popular. However, these methods have their limitations. .

University libraries work according to schedules, which restricts access to students who need to use the resources beyond stipulated hours or after weekends. In addition, books and journals

in hard copy form are in limited copies, which can lead to competition among students for the same copies. These limitations reduce flexibility, limit continuous learning, and makes it difficult for students to meet academic demands, particularly during times of intense activity like exams.

Another significant disadvantage of traditional methods is that students need to be physically present in specific locations such as libraries or lecture rooms to receive lectures and access academic materials. This presents restrictions in terms of time, transport cost, and convenience for off-campus or remote students. The unavailability of resources outside the university's physical campus makes traditional methods less accessible and less responsive to the nature of the modern student.

In most fields of study, information is continuously evolving at a rapid pace, and new research findings and theories are being published regularly. The traditional methods, which rely on hardcopy books and static materials, cannot match such constant dynamic change in information. This can lead to the use of outdated information by students. This limitation makes the traditional learning materials obsolete and keeps learners away from recent research and developments.

Traditional methods also tend to reinforce a teacher-focused model of learning. In teacher-centered learning, the lecturers provide the knowledge while the students are passive recipients of information (Muganga & Ssenkusu, 2019). This method allows the lecturers to use assessments to determine what areas the students are weak in or did not understand during teaching in order to find a way of simplifying the points for students (Ahmad Fayez Mutlaq Al-Zu’be, 2013). This method might limit innovation, independent thinking, and problem solving, since students have been conditioned to depend on the lecturer's explanation and not explore knowledge on their own. Besides, it reduces interactive and group learning experiences, which are essential to achieve thorough understanding and long-term retention of learning.

The traditional model of accessing academic resources is not very effective in addressing students with learning disabilities. A learning disability is a neurological disorder which affects one or more of the basic psychological operations involved in understanding or in the use of verbal or written language which they conclude (Emmanuel Chidiadi Onwubiko, 2022). There are students who are physically unable to access a library, and other students may have to use written resources that cannot meet their needs. In addition to this, students have different ways

of learning, visual, auditory, or kinesthetic approaches and lectures and written resources may not cater to these varying learning patterns. This exclusion highlights a major limitation of the traditional system in creating an equal learning experience for all students.

2.4 DIGITAL RESOURCE HUBS

A digital resource hub is a unified digital storage facility that organizes, stores, and provides access to a wide range of academic content. These contents can include lecture notes, textbooks, research papers, past examination papers, and other academic materials. Unlike traditional libraries, digital resource centers allow one to search, access, and interact with content remotely and at any time. The hub serves as both an archive and a learning space, making academic content easily accessible, well organized, and updated periodically to reflect current knowledge and research trends. By consolidating multiple resources in one place, digital resource hubs enhance efficiency, support research, and facilitate more student-centered education.

2.4.1 ADVANTAGES OF DIGITAL RESOURCE HUBS

One of the biggest advantages of digital resource hubs is the convenience they provide for access. Digital hubs, in contrast to traditional methods, are not limited by time and space restrictions, such as opening and closing times. They can be accessed remotely, at any time of the day. This is especially convenient for students who have varying schedules, as it provides them with access to study and access information independently. For Nigerian universities, where students usually struggle with congested libraries and a lack of physical materials, online hubs act as a fundamental solution by providing constant access to necessary learning materials.

Digital resource hubs consolidate an enormous collection of academic content into one platform. Instead of students searching everywhere in and out of departments or physical locations for lecture notes, textbooks, past questions, or journals, a digital hub organizes these resources in a systematic way within one point of access. This ensures greater efficiency in accessing study materials and reduces the exasperation of disjointed resource distribution, which is typical of most Nigerian universities. It also ensures equal availability of resources to all faculties, bridging academic gaps between departments with different levels of funding.

Unlike traditional teaching, digital resource hubs provide the flexibility required for self-paced learning. This means students can study according to their individual schedules, revisiting complex topics as often as needed, pausing or accelerating their progress based on personal

comprehension levels. Within Nigerian universities, where class sizes may not allow for lecturer-student interaction, self-paced learning from a hub provides students with a greater degree of control over their work. They can rewind lecture notes, practice past exam questions and study more in the areas where they are lacking. This tactic not only embraces the diversity and ability of learning, but also encourages autonomous study behaviors, enabling students to master the material more deeply prior to being tested. The hubs helps to improve students' studying practices by creating a platform upon which students can learn at their own pace without restriction by the limitations of scheduled class time.

Another major benefit of digital resource hubs is the long-term cost-effectiveness. Students save money through reduced spending on photocopying or purchasing expensive textbooks, and institutions benefit through saved storage and reduced cost of maintenance. Additionally, digital hubs can be updated regularly to ensure the most recent academic and research material is readily accessible. This is an essential feature especially in rapidly evolving disciplines such as computer science, medicine, and engineering, where reliance on outdated materials could be a limitation to academic performance and research imagination.

Apart from storage and access, digital hubs can also be employed for collaborative and interactive learning. The existence of features like discussion boards, peer-to-peer resource sharing, and integrated communication tools allows students to exchange ideas and help one another intellectually. This produces a community feeling in learning and is in accordance with modern pedagogical approaches centered on learning in groups, problem solving, and collaboration.

2.4.2 DISADVANTAGES OF DIGITAL RESOURCE HUBS

Digital resource hubs rely heavily on stable technological infrastructure such as internet connection, power supply, and current hardware. All these are unreliable and the absence of these infrastructural facilities has negative impacts on the teaching and learning of students (Ayoko et al., 2023). For example, frequent power outages or poor network reception can prevent students from accessing digital hubs such as the SARH, especially during important periods such as exams or project submission deadlines. Frequent power outages and low broadband penetration are also significant hindrances to the maximum utilization of online hubs. As long as these infrastructural challenges persist, the advantages of such a system cannot be fully utilized, particularly in rural or less endowed institutions.

The second drawback is the risk of exclusion caused by the digital divide. Digital divide refers to those who possess and those who lack access to computers and the Internet (Van Dijk, 2006). There are students who own laptops, mobile phones, and have access to uninterrupted internet, while others may not. Students without these devices will be at a disadvantage compared to students with unlimited access, which widens the digital gap. The usage of personal technology widens disparities among students, especially in underprivileged or rural institutions. It also creates differences in the ability to utilize digital hubs. This difference breaks the inclusivity expected for digital hubs. As a result, digital hubs have the potential to only serve digitally literate or wealthier students if it is not properly planned.

Another drawback of digital resource hubs in Nigerian universities is the gap in digital literacy among students. Digital literacy skills are valuable in accessing and obtaining digital information resources (Inemesit Udom Udoh Mr et al., 2020). Although digital platforms hold the prospect of wider access to academic materials, a significant number of students do not possess the technical skills to use the digital hubs effectively. This lack of skills contributes to the misuse and underutilization of digital hubs. It also reduces the benefits of digital hubs. The students who are more technologically skilled gain a lot more from the platforms, but their classmates who are less skilled are left behind and this creates a digital inequality among students. Without training and user support, the potential of digital hubs will not be fully utilized.

Another major challenge of digital resource hubs is maintaining data security. These websites hold various kinds of sensitive data like student information, research papers, and academic materials. As a result, they are exposed to cyberattacks and data breaches. Illegal access might infringe on user privacy, undermine academic operations, and harm institutional reputation. If digital hubs do not have strong authentication, encryption, and regular security audits, they can be exposed to threats that deter the trust of users.

Another limitation involves intellectual property and copyright control. Copyright is applicable to most contents of academic material, particularly textbooks, research papers, and journals. Therefore, sharing or posting such materials without permission may result in legal action against the institution. Plagiarism is also made easy through digital distribution of materials because students can replicate materials with no credit given. To combat this problem, open copyright guidelines, publishers' permissions, and plagiarism-check tools must be made available for moral and legal usage of the hub.

Long-term sustainability of digital resource hubs is also an important concern. The process of stablishing such a platform requires not only initial development funds but also long-term investment in technical upkeep, server maintenance, and employee training. If the hub does not receive regular institutional support, it can quickly become outdated, uneconomical, or abandoned. For Nigerian universities, where limited budgets are the rule, making digital hubs financially and technologically viable is crucial to its long-term effectiveness.

2.5 PURPOSE OF THE STUDENT ACADEMIC RESOURCE HUB

The Student Academic Resource Hub (SARH) is a web-based application specifically designed to address the academic resource needs of both students and lecturers within the Nigerian university context. It is primarily aimed at overcoming the limitations of traditional resource methods like restricted library hours, limited numbers of physical copies of textbooks, and outdated materials—through the provision of a centralized, easily accessed collection. The hub is designed to improve learning, support research activities, and complement teaching through content availability and organization of academic material. SARH encompasses all courses at the undergraduate level in the university, offering materials such as lecture notes, materials, past examination questions, course outlines, and research reports. It is designed to be inclusive, accessible via web platforms, and capable of supporting expansion as more resources and users are added.

2.6 COMPARISON BETWEEN TRADITIONAL METHODS DIGITAL RESOURCE HUBS

Physical libraries, printed materials, and classroom-based instruction are examples of traditional teaching and learning approaches that have long been vital educational resources. Conversely, digital resource hubs are a contemporary strategy that makes use of technology to offer adaptable, easily accessible, and engaging educational opportunities. Every approach caters to various educational requirements and preferences and has unique advantages and disadvantages. In terms of accessibility, cost, efficiency, diversity, and user experience, we may better grasp how traditional approaches and digital resource centers differ and complement each other.

S/N		TRADITIONAL METHODS	DIGITAL RESOURCE HUBS
1	Accessibility and Availaility	Traditional teaching methods and libraries naturally limit	Online resource hubs eliminate these limitations by offering 24/7

		access to resources due to time and location constraints. Students must physically go to libraries, and access is generally confined to library hours, thus making it hard for students who live far away or who have other obligations to utilize the facilities.	online access to scholarly content from any internet-enabled location. This enhances flexibility and fairness in learning, especially in Nigerian universities where high numbers of students can strain physical libraries. Through online hubs, even those in distant locations can have the same access as students on campus , thereby bridging the learning gap brought about by distance and scarcity of physical resources.
2	Self-paced Learning	There is little opportunity for students to learn at their own pace because traditional learning is frequently organized around a set schedule set by lecturers. Slower learners or those juggling jobs and family obligations may be harmed by this rigidity.	With the help of digital resource centers, students can study whenever it is most convenient for them. A student can, for instance, go over lecture notes, e-books, or tutorials several times until they grasp the material completely without feeling behind. The self-paced methodology promotes inclusivity and guarantees that all students, regardless of speed or past exposure, can advance successfully in the Nigerian environment, where a variety of student backgrounds and skills coexist in the same classroom.
3	Structured Organization	Obtaining academic resources in traditional libraries frequently requires a laborious	By offering well-structured databases with sophisticated search features like filters,

		manual search of the shelves or speaking with library staff.	keywords, and subject or departmental categorization, digital hubs address this problem. For researchers and students, this greatly increases productivity and saves time. Instead of sifting through unrelated content, a student of computer science, for example, might quickly obtain programming tutorials, project reports, or previous research that is relevant to their subject. Access to academic knowledge is streamlined by digital organization and searchability in Nigerian universities with limited resources, where physical libraries are frequently overcrowded and understaffed.
4	Modern Research	Traditional methods rely heavily on written words and static lecture presentations, which are not always indicative of up-to-date research directions or interactive learning mechanisms.	Digital centers, on the other hand, can integrate multimedia resources, open-access journals, web-based guides, and interactive features like discussion forums and collaborative facilities. This offers students updated research and engages them actively in the generation of knowledge rather than passive reception. For Nigerian universities, whose publication output will determine international exposure, digital

			hubs open doors to publications internationally, enhance students' involvement, and provide learners with competencies for current academic and professional needs.
5	Cost and Sustainability	Maintaining traditional resource systems is expensive, in terms of physical infrastructure, printing, book procurement, and periodic updating expenses. Nigerian universities mostly face budget limitations, which cannot match growing or keeping up with periodic updates in physical libraries.	Digital hubs, while they are expensive upfront in terms of infrastructure and internet access, are cheaper in the long run. E-books, online journals, and open-source materials can be updated at lower costs compared to regularly purchasing new copies of books. Furthermore, online sites reduce paper usage, encouraging eco-friendly practices. Thus, digital centers are an inexpensive model for the development of academic materials in environments that lack adequate resources.
6	Inclusivity and Diverse Learning Needs	The traditional methods often require the same cookie-cutter formula, which can be discriminatory to the students with exceptional learning needs, like students with disability or exceptional learning styles.	The digital hubs can incorporate features like text-to-speech, variable fonts, video content captions, and interactive media that address visual, auditory, and kinesthetic learners. This makes it possible for students who would otherwise be marginalized in a mainstream system to be fully included in learning. In Nigeria, where physical accessibility to libraries might be difficult for students with disabilities and

			where there are diverse linguistic and educational backgrounds, the digital hubs provide a more accessible setting which tips the scale towards equal opportunity in education.

2.7 THE NEED FOR DIGITAL HUBS IN NIGERIAN UNIVERSITIES

Nigerian universities face challenges such as limited textbooks, underfunded libraries, poor ICT infrastructure, and disruptions caused by strikes or pandemics. These issues often prevent students from accessing materials when they need them.
These challenges can be tackled with the use of a digital resource hub that offers staff and students a consolidated, user-friendly platform that facilitates ongoing learning outside of the classroom. The digital resource hubs enable continuous access to learning materials even during school closures. They also offer updated and organized course resources in one place. It lowers the cost and stress of printing and photocopying materials for the lecturer and students

Digital resource hubs are essential for increasing research productivity and learning effectiveness. Students can retrieve materials faster than they normally would with manual methods. The hubs make it easier for researchers and lecturers to share academic papers, instructional materials, and institutional updates. As a result, universities are able to improve the quality of teaching, learning, and research in an enriched academic environment where knowledge flows more quickly and efficiently.

Digital resource hubs have the potential to become revolutionary and sustainable tools for higher education in Nigeria if these difficulties are handled effectively.

2.8 RELATED WORKS

The Massachusetts Institute of Technology (MIT) launched the OpenCourseWare (OCW) initiative in 2001 as a revolutionary attempt to make its course materials available online to the general public. All MIT undergraduate and graduate course materials were to be made publicly accessible online for long-term, global access (Abelson, 2008). In just a few years, OCW grew rapidly, offering data for more than 1,600 subjects across numerous disciplines.
The initiative's impact was evident from its reach. By January 2007, the OCW website had over 1.5 million monthly visitors; when linked mirror and translation sites are included, the figure

increases (Abelson, 2008). OCW has become a global leader in open education due to its extensive acceptance, which has encouraged similar online learning.

The U.S. Library of Congress and UNESCO, along with 32 partner institutions, established the World Digital Library on April 21, 2009, making it one of the foremost worldwide digital preservation project(Nasreen et al., 2019). Unique cultural materials from libraries, archives, museums, educational institutions, and international organizations in 193 nations are archived and made accessible through the World Digital Library. In order to foster global and intercultural understanding, the WDL seeks to increase the amount and diversity of cultural content available online. Through capacity building in partner institutions, the WDL offers resources to educators, scholars, and public audiences to help close the information gap both within and across nations. (Murillo, 2010)

With partners from leading universities and organizations worldwide, Coursera is an online distance learning platform that provides online courses to anybody who wants to study. Its goal is to develop cooperative programs. These initiatives work to ensure that everyone has access to education as a fundamental right. Stanford University computer science professors Daphne Kollar and Andrew Ng founded it in 2012, and it was formally introduced in April of the same year (Shafiq et al., 2017).

CHAPTER THREE

SYSTEM ANALYSIS AND DESIGN

System analysis is a crucial stage in the software development life cycle that involves a detailed examination of an existing system or the requirements for a new system. The goal of this analysis is to understand the needs of users and define the ways that the SARH can enhance the storage, retrieval and accessibility of digital academic materials in a university environment.

3.1 ANALYSIS OF THE EXISTING SYSTEM

The conventional method of distributing and accessing learning materials is still in use today. It is done through unofficial class groups on social media platforms such as WhatsApp. The students rely on their lecturers to give lecture notes, past questions and other materials in class. Some students even collect past course materials from their senior colleagues. Hence, there is no specific platform where students can view all these materials at once.

This method is time consuming and disorganized. The students may miss important materials because these materials are scattered across different platforms. It is also stressful for lecturers to resend new materials to old and new students every semester.

3.2 PROBLEMS OF THE EXISTING SYSTEM

As stated in the previous chapter, here are some problems associated with the conventional methods of accessing academic resources.

1) The materials in libraries are not always readily accessible to students because they work according to time schedules.
2) Students have to be physically present in schools at all times to attend lectures and take notes. This can cause inconveniencies for off-campus students who live far away from schools and remote learners.
3) Knowledge is constantly changing. As such, the use of paper-based methods to store information is costly.
4) Students with physical or learning disabilities face challenges when trying to access study materials from physical locations such as the libraries and lecture theaters.

3.3 OVERVIEW OF THE PROPOSED SYSTEM

The proposed system is the Student Academic Resource Hub. It is a web application that will allow students of any level within a department to access the learning materials needed for their various courses on a single platform. The system will allow lecturers to upload, delete and edit academic materials such as lecture notes on the platform. It will be able to perform the following sections:

1) The software will allow new users (students and lecturers) to create new accounts.
2) The software will allow students to view the lists of all available materials and allow them to download the materials they need.
3) The software will allow lecturers and course representatives to upload approved academic materials.
4) The software will have a search bar that allows students to search for specific materials according to their course code.

5) The software will group all the available resources under different categories such as course codes.
6) The software will ensure that users' and uploaded files are protected from unauthorized access.

3.4 PROPOSED SYSTEM ARCHITECTURE

The Student Academic Resource Hub is a web application. Its system architecture consists of three main layers, the Front end, the Backend and the Database. These three layers perform specific functions, which are complementary to ensure that the system runs smoothly.

3.4.1 THE FRONTEND

The Front-end consists of all the visual elements that the user can see, use and interact with. The SARH frontend was designed using HTML, CSS and JavaScript. HTML was used to create the structure of all the webpages. CSS was used to design the styles and layout of the webpages to make them visually appealing. JavaScript was used to make the webpages more interactive and responsive to the user. This layer focuses on making the system user-friendly so that lecturers and students can navigate between webpages without difficulty.

3.4.2 THE BACKEND

The Back end manages the logic, responds to user input and makes sure the data presented to the user is accurate. The back-end of the SARH was designed using the Node.js runtime environment and Express.js framework. The server was built on Node,js because it allows JavaScript to be used to develop the server side of the application. The Express.js is a very popular Node.js web application framework that is used for designing web applications and APIs. It was used to manage the routes in the backend of the SARH. These routes were connected to RESTful APIs in the backend.

3.4.2.1 APPLICATION PROGRAM INTERFACE DESIGN

The Student Academic Resource Hub consists of RESTful APIs that ensure smooth communication between the frontend and backend. The RESTful API is a type of Application Programming Interface that allows different systems to communicate over the internet in a flexible and lightweight manner. The APIs send user requests and receive responses from the server. The requests and responses are usually in JSON format. The RESTful APIs use HTTP methods to perform CRUD (Create, Read, Update and Delete) operations on resources. These HTTP methods include GET, POST, DELETE, PUT etc. The CRUD operations manage how the data in the system is created, uploaded, stored and retrieved within the system.

i. **Create**: This operation is used when the lecturer wants to add a new resource to the system.

ii. **Read**: this allows the system to retrieve data from the database to display to the user.

iii. **Update**: This operation allows the lecturer to modify existing resources in the system

iv. **Delete:** This operation is used to remove a resource from the database permanently.

The four operations represent the main actions that can be performed on the data in the system with the RESTful API endpoints.

3.4.2.2 USER AUTHENTICATION

User Authentication is the process of verifying the identity of an individual before granting them access to the system. There are two main users in the Student Academic Resource Hub. They are the students and lecturers. The students must create accounts to access academic materials. The lecturers can log in to the system to post, update and delete materials. They also act as administrators to monitor platform activity and ensure that the system is running smoothly.

In order to ensure that only verified users can access the SARH, JWT, Bcrypt and Dotenv. When a user registers, bycrpt hashes the password before it is saved in the database. Hashing is a process of storing user passwords in the database by scrambling the password. When the user logs in later on and enters their password, bcrypt hashes the password again and compares it to the initial hashed password saved in the database. If the hashed passwords match, a JSON web token is issued to the user. The token acts as a means of verification and allows the user to access all the materials in the system.

Dotenv is a popular Node Package Manager (npm) package used in node.js applications to manage environment variables. These variables are external values that can be accessed by the application during runtime such as JWT secret key and database connection string. These values are securely stored in an ".env" file.

3.4.2.3 THE DATABASE

The Database was created using SQLite3. The SQLite3 is a light weight and severless relational database management system that stores data in a single file on the local system. It is severless. The SQLite3 database stores users' data in tables with rows and columns. The Structured Query Language (SQL) is used to query and manage the data stored in the tables. The structure of the SQLite3 database ensures that the data entered in the system is organized, secure and retrievable at any time. This ensures that information is secure and available when needed. The SQLite3 database is compatible with the Nodejs environment. In the SARH database, there are different tables for storing the users' data and all the resources uploaded into the system.

The main goal of the proposed architecture is to ensure materials are readily available to students at all times. The seamless interaction of the three layers makes the SARH system

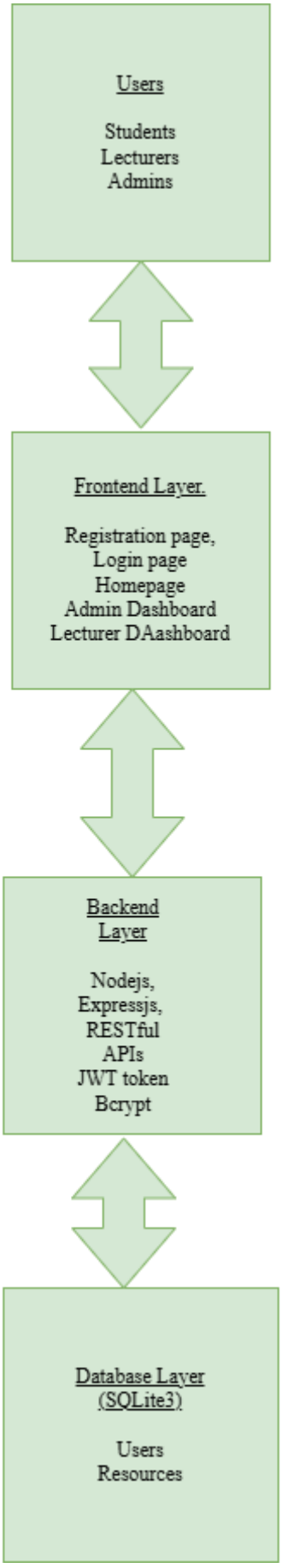

Users
Students
Lecturers
Admins
Frontend Layer.
Registration page,
Login page
Homepage
Admin Dashboard
Lecturer DAashboard
Backend
Layer
Nodejs,
Expressjs,
RESTful
APIs
JWT token
Bcrypt
Database Layer
(SQLite3)
Users
Resources

Figure 3.1

3.5 SYSTEM DESIGN

System Design is the process of planning, defining and structuring the architecture, interfaces, and data for a system to ensure that it meets user requirements. This section highlights how the Student Academic Resource Hub system was designed to handle user activities, data and the communication between the frontend, backend and database.

3.6 SYSTEM DESIGN TOOLS

System Design Tools are used in the process of planning, structuring and defining the architecture of a software system. These tools are used to graphically represent system architectures, components and other design features. Some common types of system design tools include Data Flow Diagram, Flowchart and Unified Modeling Language.

3.7 UNIFIED MODELING LANGUAGE (UML)

The Unified Modeling Language (UML) is a visual language that is used to model the structure and the behavior of a software system. The UML helps to communicate the essential requirements, functionalities, and processes of the system to stakeholders or customers. The following UML models give both the structural and functional architecture of the suggested system.

3.8 UML – USE CASE DIAGRAM

A Use Case Diagram is a type of diagram in UML that is used to show the interactions between actors (users or external systems) and a software system. Use case diagrams are used to define the high-level overview of a system's behavior for the stakeholders, customers or business analyst to show how the software system is intended to operate from the user's perspective.

OBJECTS	SYMBOLS	DESCRIPTION

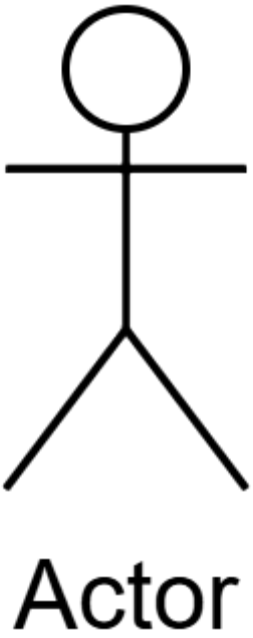
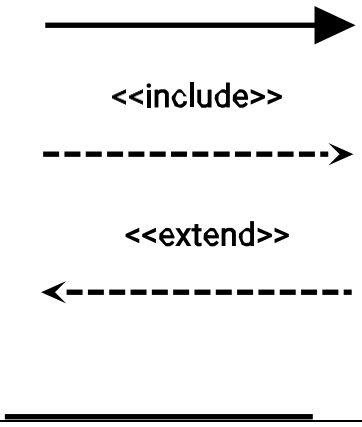
Actors		The actors are the people who interact with a software system that is under development. An actor can be a person, group of persons or external entities.
Use Case		The Use Case is a detailed description of how the actors interact with a software system to perform a specific task.
System		The System is the software or application that is under development.
Relationship		The relationship determines the association between different elements in the system.

Table 3.1 The elements of a Use Case diagram

Below are two use case diagrams users showing how the student and lecturer (Admin) interact with the SARH system through different use cases..

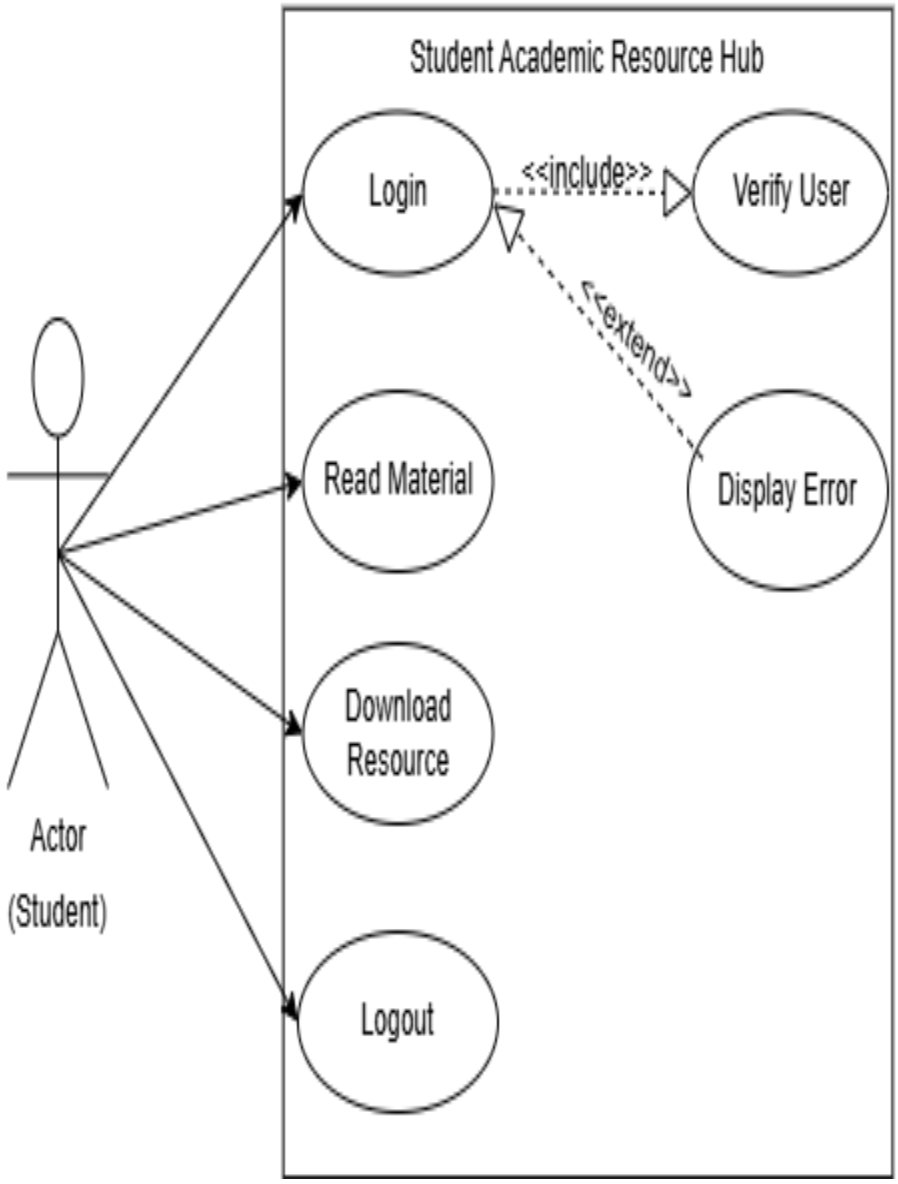


Figure 3.2 The Use Case diagram for Students.

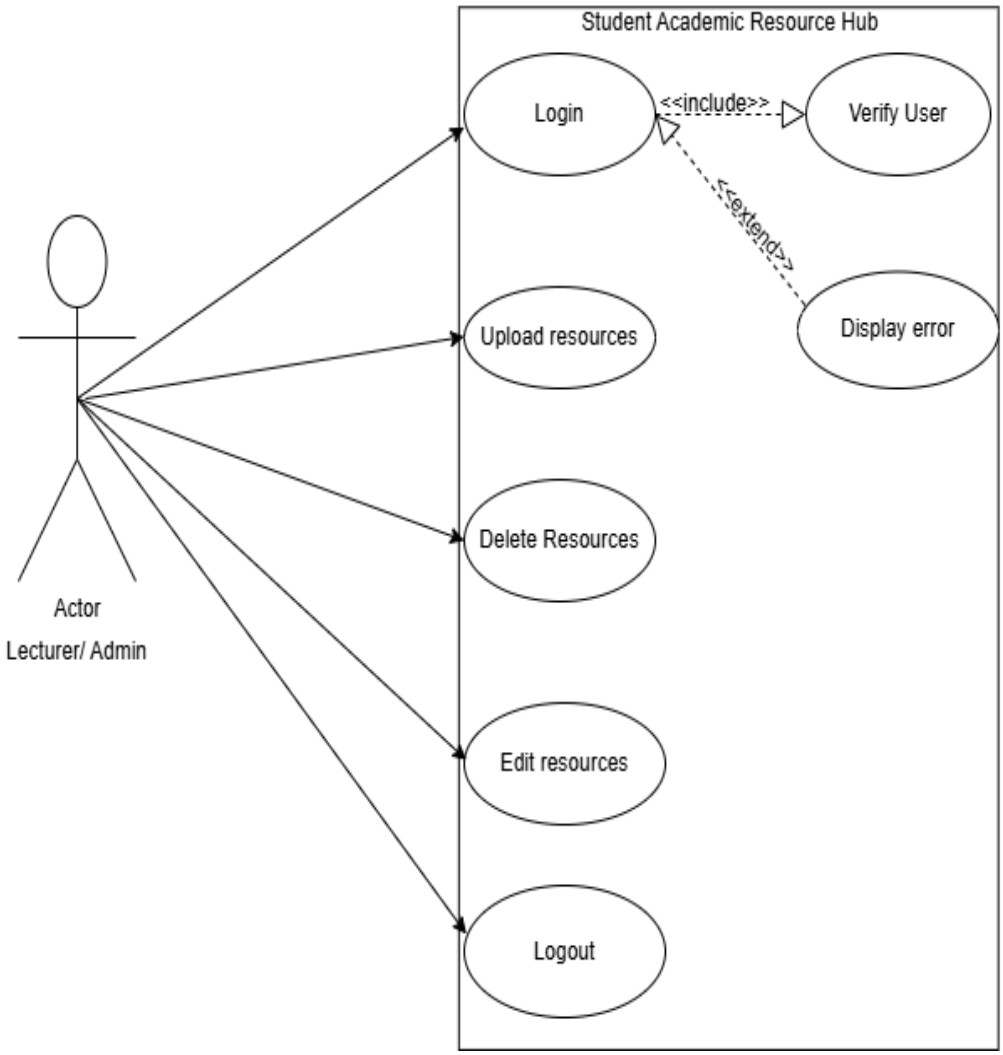


Figure 3.3 The Use Case diagram for Lecturers

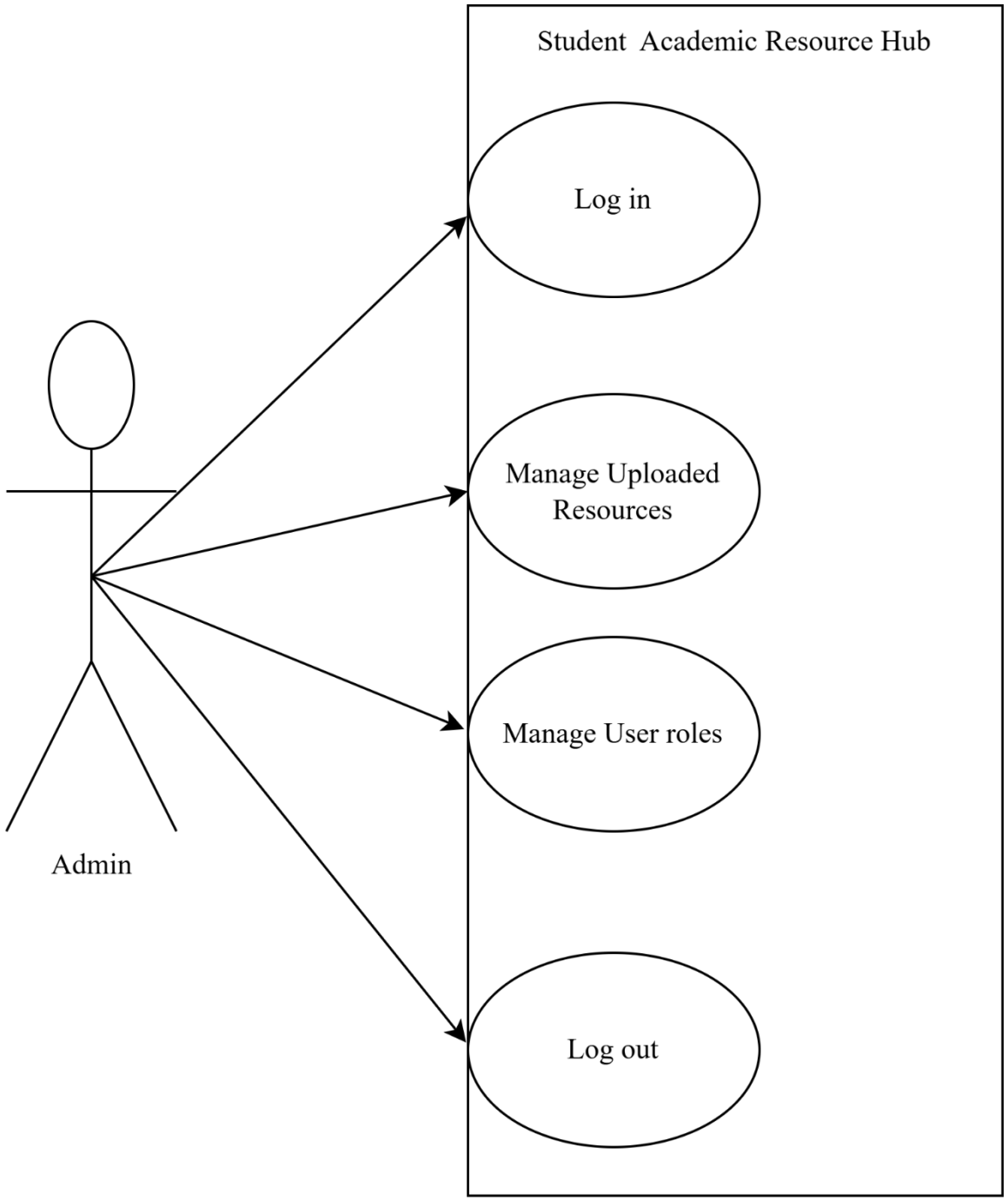


Figure 3.4 The Use Case diagram of an Admin

CHAPTER FOUR

IMPLEMENTATION

4.1 SOFTWARE IMPLEMENTATION TOOLS

This chapter focuses on all the software tools used in the design of the Student Academic Resource Hub (SARH). The Student Academic Resource Hub is a web application with frontend and backend components. Each section in this chapter explains each software tool used in the development of the SARH.

4.1.1 IMPLEMENTATION TOOLS

The programming languages used in the development of the SARH are HTML, CSS and JavaScript.

1. **Hyper Text Markup Language:** It is a markup language that is used to define the structure of web pages. HTML was used to create the different elements on the SARH website that will be displayed on the browser. All the HTML elements are enclosed in tags.
2. **Cascading Style Sheet**: This is a stylesheet language used to describe the visual presentation and styling of HTML elements on a webpage. CSS was used to control the layout and design of all the SARH webpages with the use of external stylesheets.
3. **JavaScript**: It is a lightweight programming language. JavaScript is used to build interactive webpages. JavaScript was used to develop the frontend and backend of the SARH because it integrates efficiently with the HTML and CSS. JavaScript was used to handle all the server side operations in the SARH such as processing form submissions and user requests from the frontend, user authentication and storage and retrieval of data from the database.

4.1.2 BACKEND TECHNOLOGIES

1. **NodeJS**: NodeJS is a free, open source JavaScript runtime environment that allows developers to execute JavaScript code outside the web browser. The SARH server was built on Node,js because it allows JavaScript to be used to develop the server side of the application.
2. **ExpressJS**: ExpressJS is a nodeJS framework that provides the features used to build web applications and APIs. ExpressJS was used to build the SARH backend in the NodeJS environment. It manages the server routes, API endpoints, connects the frontend and backend and handles all HTTP requests and responses in the NodeJS environment.

4.1.3 DATABASE TECHNOLOGIES

1. **SQLITE 3:** SQLite3 is the current major version of the SQLite database software. It is a lightweight database system that does not require a server because it provides developers with a means to create, manage, and query their database. SQLite3 is used to store and retrieve data in the efficiently.

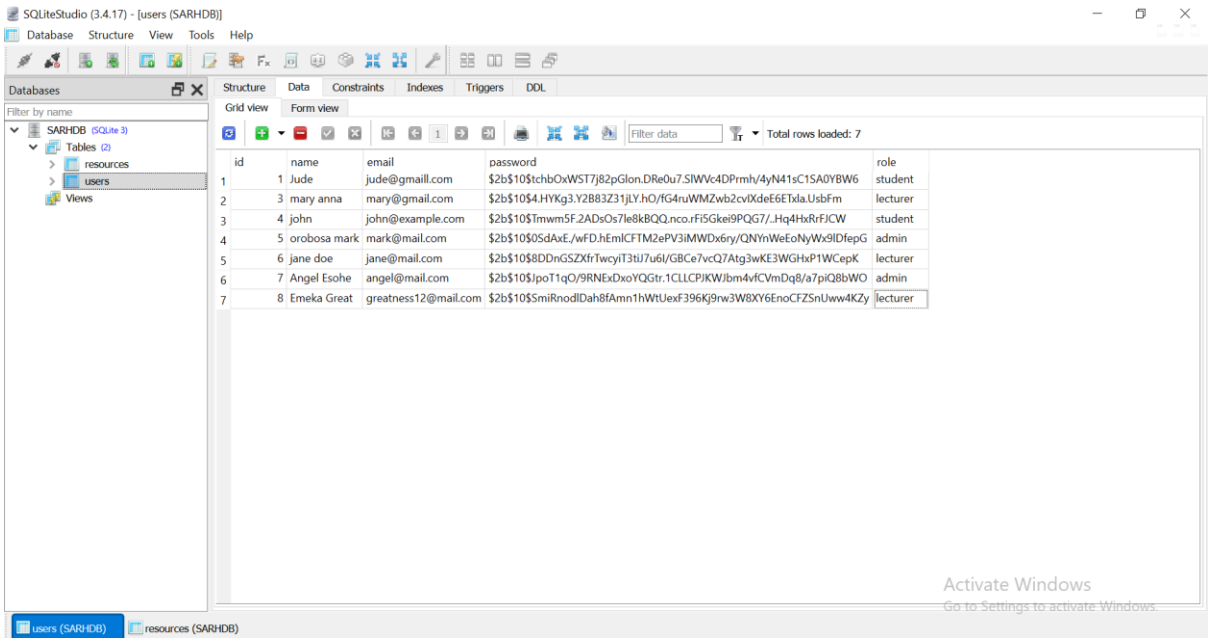


Figure 4.1

Figure 4.1 shows the table in the SQLite3 database that contains users' name, email, hashed password and role.

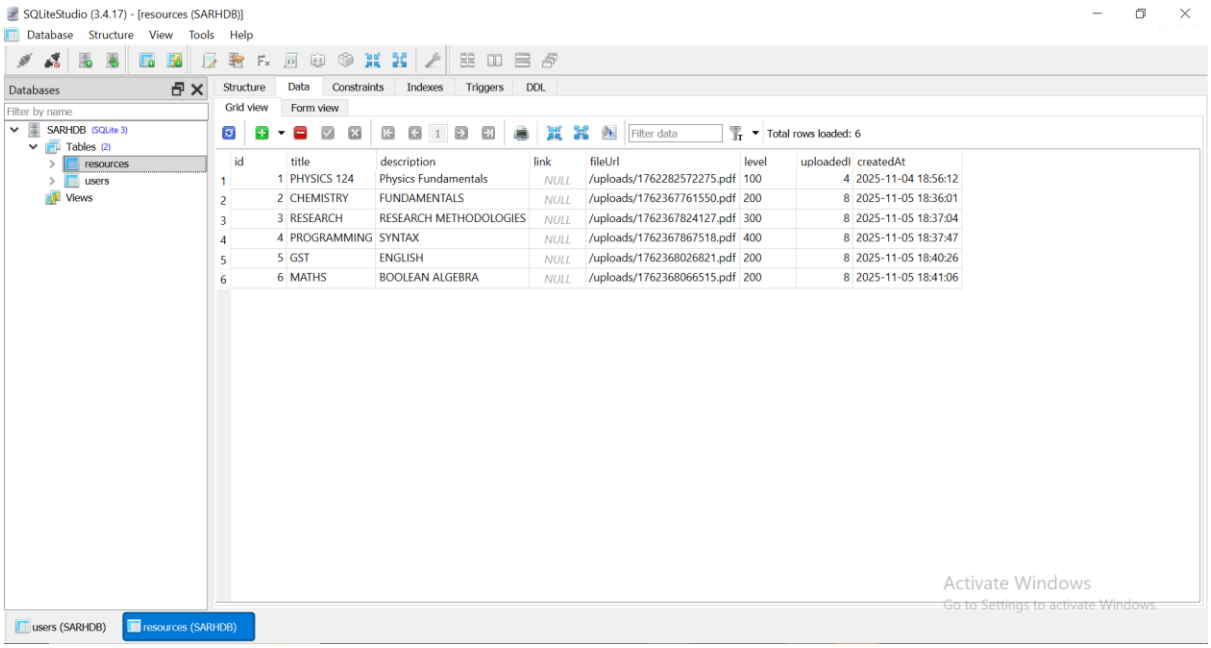


Figure 4.2

Figure 4.2 shows the table in the SQLite3 database that contains the title and description of all uploaded resources.

4.1.4 IMPLEMENTATION LIBRARIES

1. **Bcrypt:** This is a popular npm package that is used for password hashing. It uses a bcrypt hashing algorithm for security purposes because it can resist attacks from hackers. In the SARH, the bcrypt hashes the user password and stores it in the database. Whenever the user logs in, the bcrypt hashes the user's password and compares it to the hashed password in the system.
2. **Dotenv**: This is a popular npm package that is used to manage environment variables in a NodeJS environment. The environment variables are external values that are can be accessed by the application code during runtime. The Dotenv was used in the SARH backend to store and manage sensitive configuration information like token credentials and secret keys in a separate .env file.
3. **JSON Web Token (JWT):** The JWT is a secure method used to transfer information as a JSON object between a server and a client. It is used in web applications and APIs to identify and validate users. In the SARH, when a user logins to the system successfully, the backend generates a special token using the secret key stored in the ".env". The token is stored in the frontend temporarily. When the user makes a request, the backend verifies the token and grants the user access to specific parts of the application.

4.1.5 IMPLEMENTATION PLATFORM

Visual Studio Code: This is a free open source code editor developed by Microsoft. It is used for building web applications. VS Code was used as the main coding environment for developing the frontend and backend of the SARH.

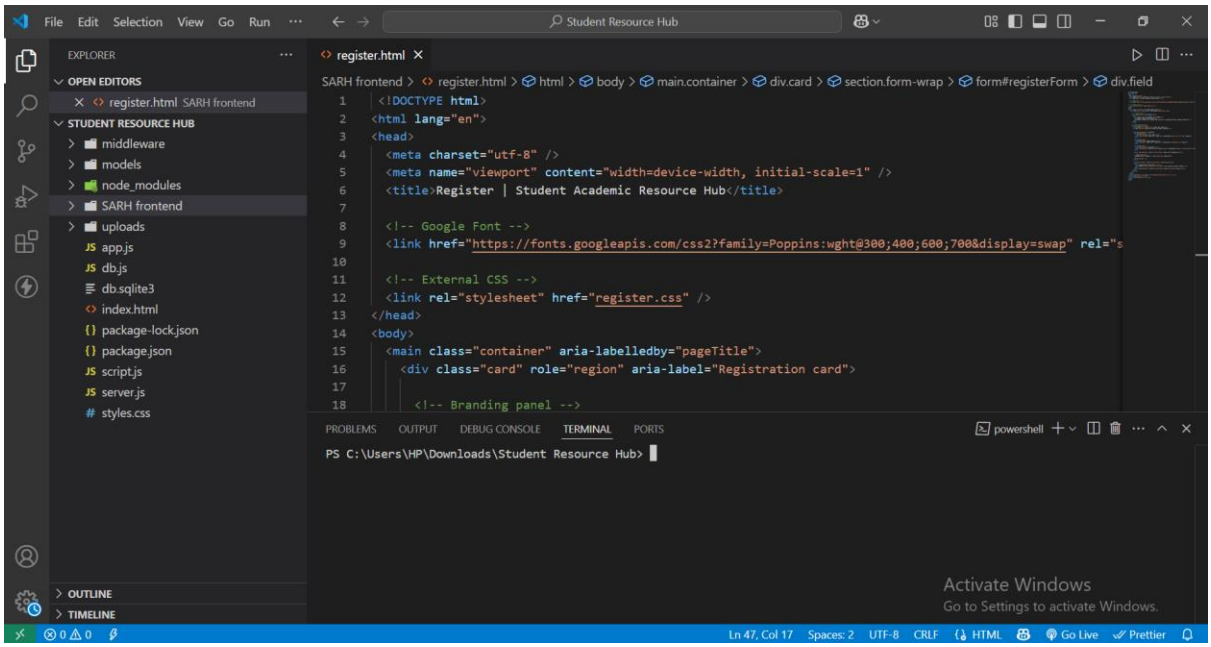


Figure 4.3

Figure 4.3 shows the Visual Studio Code environment used for the frontend and backend development.

4.2 SYSTEM TEST: SCREENSHOTS OF THE RUNNING SYSTEM

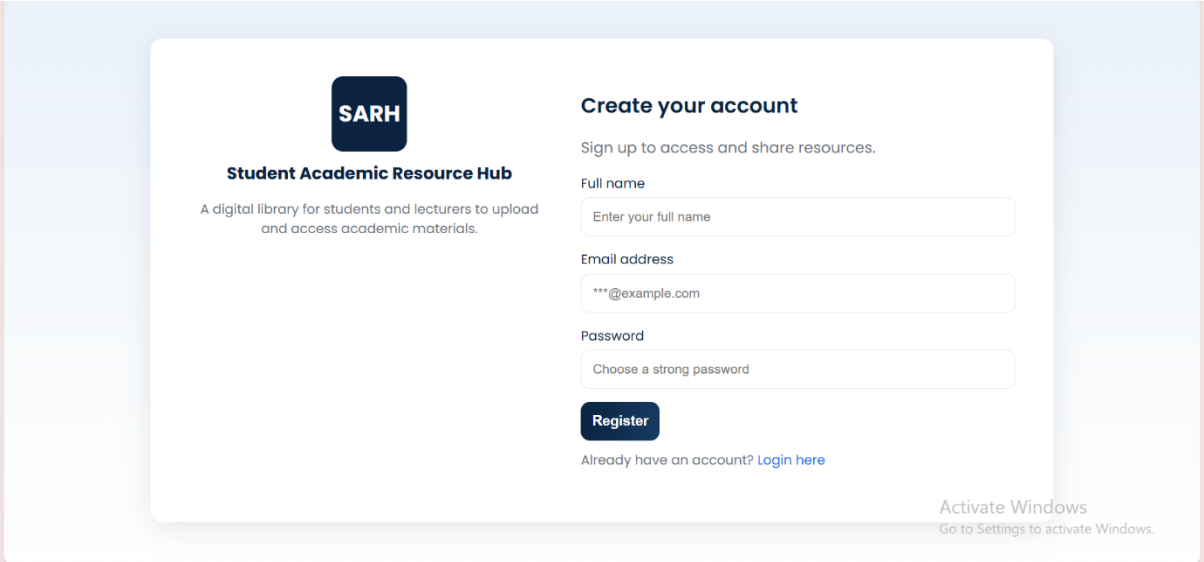


Figure 4.4

Figure 4.4 is showing the registration page of the Student Academic Resource Hub. This is where lecturers and students create their accounts with the registration form. The users register with their full name, an email address and a password.

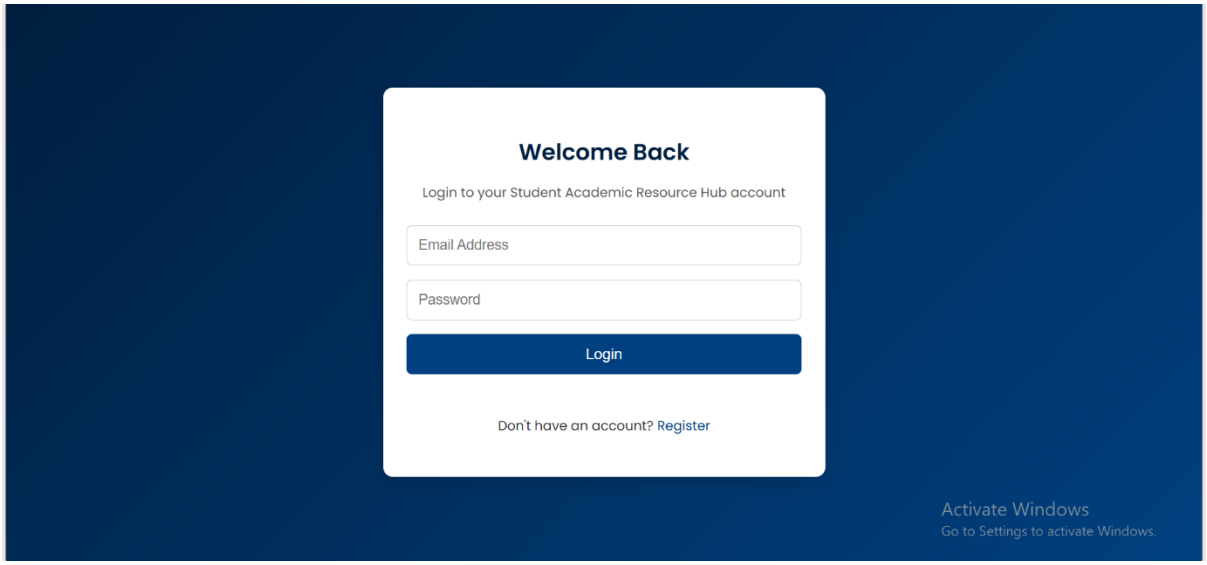


Figure 4.5

Fig 4.5 shows the Login page. Lecturers, Admins and Students can login to the system with their email address and password to access the system

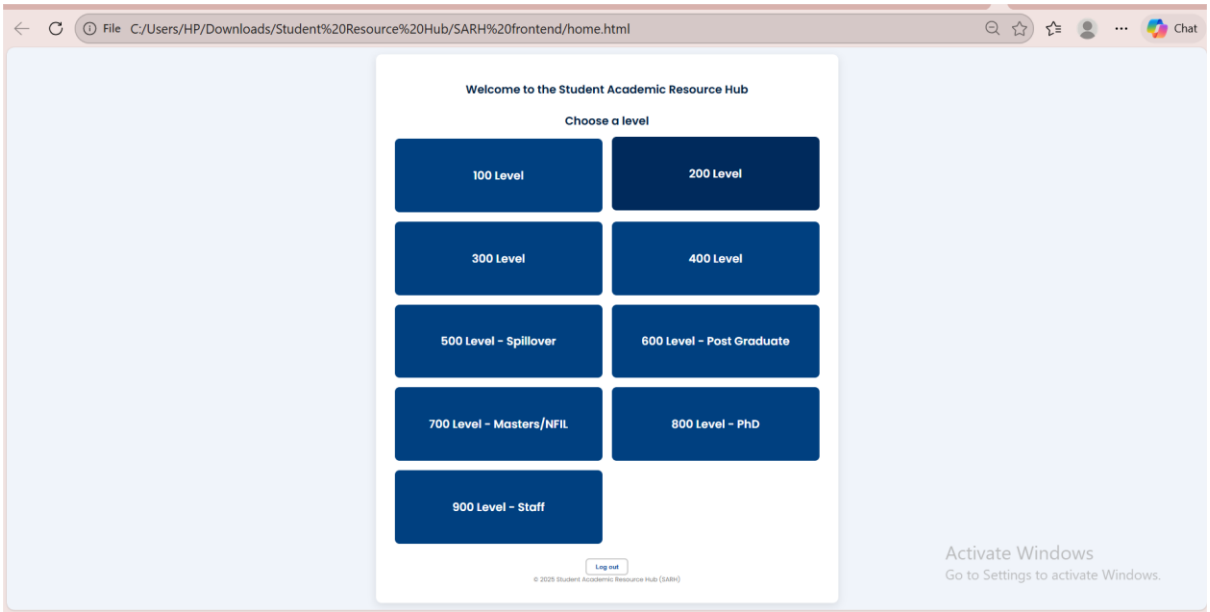


Figure 4.6

Figure 4.6 shows the homepage of the Student Academic Resource Hub where students can access materials by their academic level.

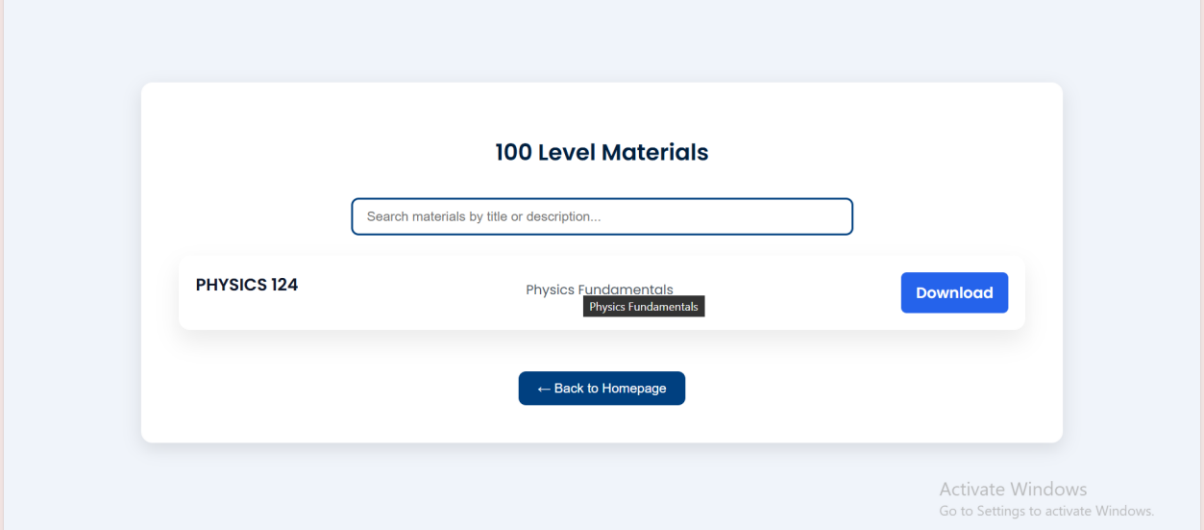


Figure 4.7

Figure 4.7 shows an instance where a student decides to choose the “100 Level” on the homepage. The student is redirected to a page that contains the list of all 100 level materials. There is a search bar above where the student can search for a particular material without going through the whole list of available materials. There is a download button that allows the students to download any material of their choice.

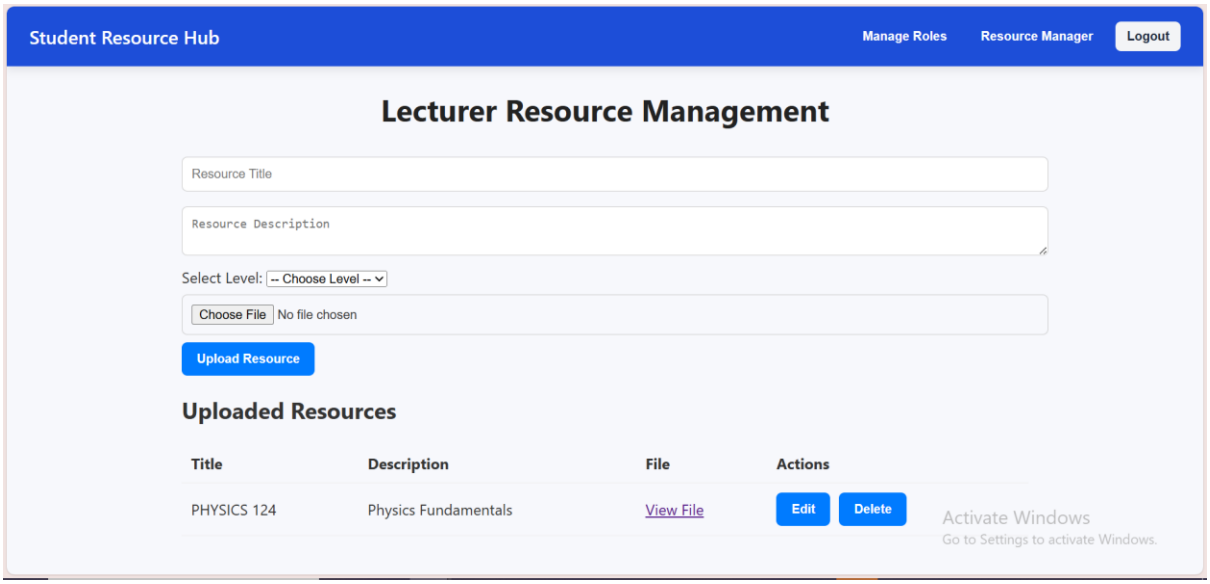


Figure 4.8

Figure 4.8 shows the Lecturer Resource Management page. The lecturer is redirected to this page after a successful log in. The lecturer can upload, edit and delete materials from this page. The **Uploaded Resources** section is the list of all materials that have been uploaded to the system.

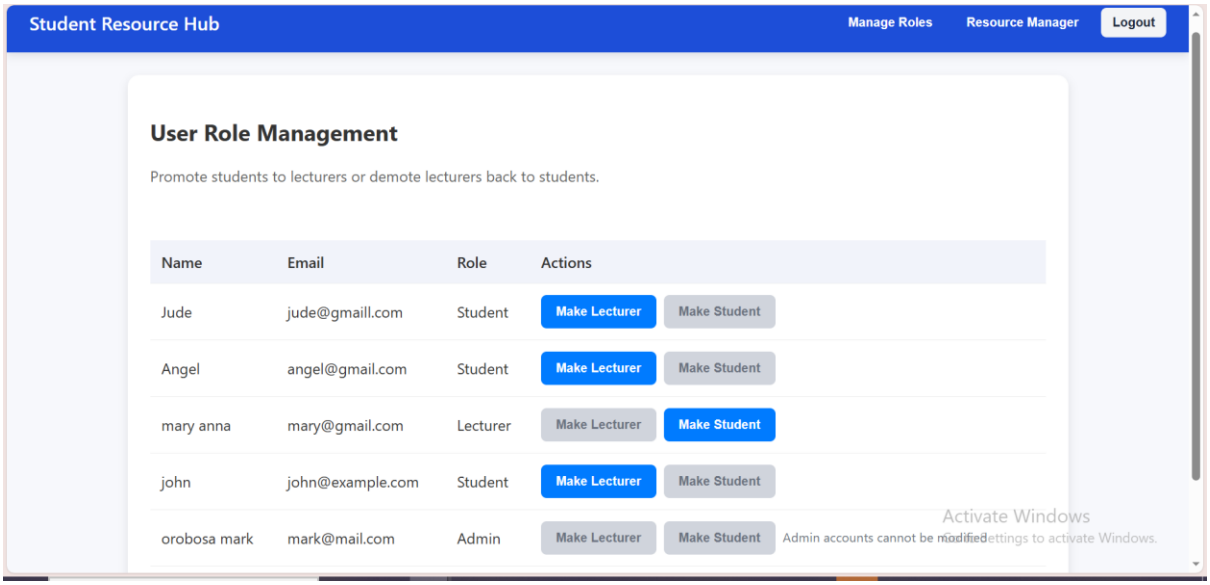


Figure 4.9

Figure 4.9 shows the Admin dashboard. The Admin is redirected to this admin interface after logging in successfully. The Admin can manage the users roles and resources from this admin page.

CHAPTER FIVE

SUMMARY AND CONCLUSION

5.1 SUMMARY

There has been rapid increase in the use of digital learning platforms by students for their academics. As a result, it is important that educational institutions adopt and implement these digital methods and techniques to improve teaching and learning for students and teachers. Although the conventional methods are still in use today, they have their shortcomings. However, there is room for improvement. It is important that we search for modern solutions and technologies to make up for these shortcomings.

The Student Academic Resource Hub uses modern web technologies to create a centralized platform for students and lecturers to share and access academic materials. The lecturers and students create their accounts that allows them to login and access specific parts of the system. The students are able to download any material of their choice. The lecturers can upload, edit and delete materials. The admin handles the user roles, resource management and other administrative tasks.

5.2 CONCLUSION

This project focuses on how academic materials are accessed and shared between lecturers and students in Nigerian universities. The traditional methods of accessing materials are still the most commonly used in Nigerian universities. This project highlights the disadvantages of these methods such as lack of centralization, lack of flexibility, limited accessibility and the importance of finding a way to solve these problems.

The Student Academic Resource Hub is a web application that uses modern web tools and technologies to simplify the process of uploading, managing and editing materials. The Student Academic Resource Hub integrates a simple user interface with SQLite3 for data management. The Student Academic Resource Hub promotes efficiency in accessing and distributing materials.

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APPENDIX

REGISTRATION PAGE

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <title>Register | Student Academic Resource Hub</title>
  <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@300;400;600;700&display=swap" rel="stylesheet">

  <link rel="stylesheet" href="register.css" />
</head>
<body>
  <main class="container" aria-labelledby="pageTitle">
    <div class="card" role="region" aria-label="Registration card">

      <!-- Branding panel -->
      <aside class="brand" aria-hidden="false">
        <div>
          <div class="logo" aria-hidden="true">SARH</div>
          <h2>Student Academic Resource Hub</h2>
          <p>A digital library for students and lecturers to upload and access academic
materials.</p>
        </div>
      </aside>

      <!-- Registration form -->
      <section class="form-wrap">
        <h1 id="pageTitle" class="title">Create your account</h1>
        <p class="subtitle">Sign up to access and share resources.</p>
```

```
<form id="registerForm" novalidate>
  <div class="field">
    <label for="fullName">Full name</label>
    <input id="fullName" name="name" type="text" placeholder="Enter your full name" required />
  </div>

  <div class="field">
    <label for="email">Email address</label>
    <input id="email" name="email" type="email" placeholder="***@example.com" required />
  </div>

  <div class="field">
    <label for="password">Password</label>
    <input id="password" name="password" type="password" placeholder="Choose a strong password" required minlength="6" />
  </div>

  <button id="submitBtn" class="btn btn-primary" type="submit">Register</button>

  <p class="login-text">
    Already have an account? <a href="login.html">Login here</a>
  </p>
   <p id="message"></p>
</form>

 <div id="successBox" class="success-banner" style="display:none">
  <div>
```

```
          <strong>Registration successful.</strong>
          <div style="font-size:13px;color:var(--muted)">Your account has been created.</div>
        </div>
        <button id="goLoginBtn" class="btn btn-primary" type="button">Go to login</button>
      </div>
    </section>
  </div>
 </main>
 <script src="https://cdn.jsdelivr.net/npm/axios/dist/axios.min.js"></script>
<script src="axios.js"></script>
 <script src="register.js"></script>
</body>
</html>
```

LOGIN PAGE

```
<!DOCTYPE html>
<html lang="en">
<head>
 <meta charset="UTF-8" />
 <meta name="viewport" content="width=device-width, initial-scale=1.0" />
 <title>Login | Student Academic Resource Hub</title>
 <link rel="stylesheet" href="login.css" />
 <link href="https://fonts.googleapis.com/css2?family=Poppins:wght@400;600&display=swap" rel="stylesheet">
</head>
<body>
 <div class="container">
  <div class="form-container">
   <h2>Welcome Back</h2>
```

```
    <p class="subtitle">Login to your Student Academic Resource Hub account</p>

    <form id="loginForm">
      <input type="email" id="email" placeholder="Email Address" required />
      <input type="password" id="password" placeholder="Password" required />
      <button type="submit">Login</button>
      <p id="message"></p>
    </form>

    <div class="footer">
      <p>Don't have an account? <a href="register.html">Register</a></p>
    </div>
   </div>
  </div>
  <script src="https://cdn.jsdelivr.net/npm/axios/dist/axios.min.js"></script>
<script src="js/axios.js"></script>

  <script src="login.js"></script>
</body>
</html>
```

HOME PAGE

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1.0" />
  <title>Student Academic Resource Hub</title>
  <link rel="stylesheet" href="home.css" />
```

```
  <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@400;600&display=swap"
rel="stylesheet">
</head>
<body>
  <div class="container">
    <div class="homepage-card">
      <h1 class="welcome">Welcome to the Student Academic Resource Hub</h1>
      <h2 class="choice">Choose a level</h2>

      <div class="levels">
        <div class="level-box" id="level100"><h2>100 Level</h2></div>
        <div class="level-box" id="level200"><h2>200 Level</h2></div>
        <div class="level-box" id="level300"><h2>300 Level</h2></div>
        <div class="level-box" id="level400"><h2>400 Level</h2></div>
        <div class="level-box" id="level500"><h2>500 Level - Spillover</h2></div>
        <div class="level-box" id="level600"><h2>600 Level - Post Graduate</h2></div>
        <div class="level-box" id="level700"><h2>700 Level - Masters/NFIL</h2></div>
        <div class="level-box" id="level800"><h2>800 Level - PhD</h2></div>
        <div class="level-box" id="level900"><h2>900 Level - Staff</h2></div>
      </div>

      <header class="top-bar">
  <button id="logoutBtn" class="logout-btn">Log out</button>
</header>

      <footer>© 2025 Student Academic Resource Hub (SARH)</footer>
    </div>
  </div>
  <script src="https://cdn.jsdelivr.net/npm/axios/dist/axios.min.js"></script>
<script src="js/axios.js"></script>
```

```
  <script src="home.js"></script>
</body>
</html>
```