**ACCRA TECHNICAL UNIVERSITY**

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**DEVELOPMENT OF AN INFORMATION TECHNOLOGY (I.T)**

**PROFESSIONAL MENTORING WEBSITE,**

**A CASE STUDY OF THE ACCRA TECHNICAL UNIVERSITY COMPUTER SCIENCE DEPARTMENT**

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**FEBRUARY 2023**

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**RESEARCH PROJECT REPORT/ THESIS SUBMITTED TO THE**

**DEPARTMENT OF COMPUTER SCIENCE,**

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**IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE**

**AWARD OF HIGHER NATIONAL DIPLOMA (HND)**

**IN**

**COMPUTER SCIENCE**

**FEBRUARY 2023**

**DECLARATION BY STUDENT(S)**

I hereby declare that this project is a result of our own research work towards the award of Higher National Diploma in Computer Science, unless referenced in the text as a specific work/source. All section of the results which have been obtained from other sources are entirely substantiated. I recognize the fact that plagiarism and cheating amount to violation of Accra Technical University and will be greeted with correspondingly.

**NAME SIGNATURE DATE**

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# DECLARATION BY SUPERVISOR

I hereby confirm that the above students are HND students in the Department of Computer Science under my research supervision in relation to the requirement in Accra Technical University. The above students are in their final year and are expected to complete in 2023.

**NAME SIGNATURE DATE**

**MR. EBENEZER ABABIO TETTEH ……………… ………………**

**DEDICATION**

We dedicate this book to the Most High God, our lovely parents, siblings, friends and all our lecturers for their support assistance throughout our

**ACKNOWLEDGEMENTS**

We will take this opportunity to show our gratitude to everyone who made this project a success. However, it will not have been possible without the kind support and help of my classroom colleagues. We would like to extend my sincere thanks to all of them. We are highly indebted to our supervisor, Mr. Ebenezer Ababio Tetteh. HOD of the computer science department, Mr. Wisdom Torgbey for their guidance and constant supervision providing necessary information regarding the project and also their support in completion. We will like to express our gratitude towards our parents for their kind cooperation and encouragement which helped in the completion of this project.

**ABSTRACT**

A coach's part in an understudy's or alternately mentee's improvement is pivotal. Since it empowers people to gain information about their picked field and foster new abilities to satisfy explicit objectives, tutoring is critical. At the point when we discuss a mentor, a coach is somebody who has information and experience and can help an individual who is less capable (the mentee) get familiar with a subject. Since we know about how significant mentorship is, we chose to take on this venture to fabricate a site that helps the mentor and mentee share information and abilities. Different goals of this undertaking incorporate inspecting existing guide mentee organizations, making mentorship more versatile and supportive, resolving issues with the continuous strategy, and fostering an electronic system to increment coach mentee responsibility. Individuals will actually want to speak with their guide or mentor whenever and from any area on account of the refreshed design's versatility. All things considered, our structure has restrictions, for example, requiring web admittance to get to resources and just being open to Ghanaians. We joined quantitative examination (audit investigation) and collect exploration technique (plan and execution of the proposed system) to foster the structure. To respond to questions like who, how much, what, where, when, and the number of, quantitative assessment involves gathering numerical information and analyzing it utilizing authentic methodologies. Explaining the definition, Bryman, Alan (2012), reports quantitative appraisal as an examination system that splendid lights on surveying the game plan and assessment of information. It is formed by empiricist and positivist ways to deal with thinking from a levelheaded procedure that puts an accentuation on theory testing. A genuine artifact or an item system is made as a feature of the developed procedure to exhibit its believability. The advancement of the valuable collectible should be creative or consolidate novel elements that poor person been shown in past relics for it to be viewed as investigation. This perspective spotlights on fostering an item program that surfaces with a novel, innovative, and effective answer for our recent concern. We found groundbreaking thoughts and disclosures because of get-together data from get-together exploration and choosing the fitting techniques. These incorporate inviting talented and prepared specialists to the stage, raising the stage's level past rookies to recall progressed staff for the innovation business. Moreover, we plan to teach clients in regards to the meaning of these structures and their advantages, making a data pool and frameworks organization opportunity for experts in the business.

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**CHAPTER ONE**

**INTRODUCTION**

* 1. **BACKGROUND OF THE STUDY**

Mentorship expects a critical part in the researcher and master improvement of an individual (mentee/student). As shown by Gathering Lev. Edu (2021, para. 2) saw that "A mentor is someone who helps a student with making instructed decisions at all stages in regards to their scholarly and master lives. They are the lights that illuminate the way forward, whether one is caught in a deep rooted decision or needs support whenever in their life. You could land your astonishing position or start a new business, yet you'll need support from someone you can trust to get to know everything. An aide can give you information that you wouldn't find in a book. These focal points rely upon their master insight and data. Guides have endeavored and attempted various techniques generally through the world and comprehend what works and when. Coaches give mental and personal development to their mentees despite genuine strength and sponsorship". According to Malachowski (2021), J. Loren Norris once said "If you don't have even the remotest clue where you're going, ask someone who has been there already" consequently implies the possibility of mentorship. Exactly when you gain from the refined, you become everything that could be seen.

Mentorship can take a couple of designs including, Customary One-on-one Training: When a mentee is composed with a mentor, either through a program or isolated, the mentee-guide accessories partake in an instructing relationship with a development and timescale that they pick or that is set by a conventional instructing program. Distance training, often known as "virtual/online" mentoring, is an instructing relationship where the two individuals are in different regions. Bundle Mentoring: A lone mentor is coordinated with a social event of mentees, and a fundamental framework structure is offered, with the aide planning headway, speed, and activities. Distance mentoring is the sort of training methodology that has been introduced. The two guides and mentees will really need to in this manner collaborate at their own speed. (Ucdavis, n.d.).

In any case, there are a couple of kinds of on the web/virtual mentoring stages which are; Startup improvement and training stages, Plan instructing stage, Calling training stage, and Tech training stages, as demonstrated by (Farah, 2021, para. 2). Along these lines, the online training model we are pulling out all the stops hybrid that consolidates both occupation and specific mentoring stages.

Focuses on in West Africa on Information Advancement (I.T) Capable Training (IPM), no matter what the creating and propelling interest in getting into development or pursuing programming related programs in Ghana, remain tragically, trying for people need to get into tech, to get adequate heading on what work method for taking, how significant that calling way would be, and accepting it's an optimal decision for the individual to pursue according to (Zachary, 2004). There are less individuals in West Africa, expressly Ghana, who have specific considerations and setting or who are tech-related. Subsequently, this audit attempts to equip programming students with industry-arranged scopes of capacities beginning from their most vital year in school. Coaching is depicted as a painstakingly pre-arranged ace coordinating a novice, and it is the most settled kind of getting ready. Through this stage, we are focusing in on additional creating how students team up and focus on under industry experts to get capable capacities. This will help students, especially those in their most significant years, gain setting and encounters into what the future holds after their computer programming program, what to understand, how to manage their time, how to create a specialist profile, and how to track down their most essential work in tech, as well as being overall serious hands on market. According to Dzidonu (2002), "Your abilities ought to be generally serious. If you can essentially work in Ghana, you are not overall serious concerning your job." The site has three clients: a director, a mentor (an I.T capable), and a mentee (student). The structure is administered by the chief, who makes it natural for training practices and populates the site with learning resources like video informative activities, books, work, and brief position open entryways that will help both the aide and the mentee. The coach will make a record and update their profile dependent upon their industry expertise. The aide can then search for and coordinate with mentees who share their capacity, as well as work with various mentors. The mentee will make a record, search for and contact anticipated directs, and talk with other mentees.

This stage's impact will help and outfit mentees with the correct way and capacities as a tech capable, influencing students' thought process of good errand considerations and foster steady solutions for further develop society. "Online training programs interface delegates, business visionaries, and other industry first year recruits looking for help with arranged specialists who have been there and done that," according to Mentor Cruise (2021, para 7 and 8), studies have exhibited that as per the mentees' viewpoint working, individuals who partake in mentorship programs are on various occasions bound to get progressed than the people who don't have an aide. They are less disposed to commit mistakes, get higher-ups' trust, and are equipped with the data on a painstakingly pre-arranged ace all of which help them with flourishing speedier at a beginner level.

As demonstrated by Guhan et al. (2020, para 4), "Clearly, the mentorship program chips away at the insightful execution of youngsters, particularly not so great performers who require more thought and help," as demonstrated by the report. To address the "why" this audit was guided, it was done to engage quality learning, outfit students with present day developments like online learning and remote working, and make a specialist profile as a student after regular timetable in school, which was completely made possible by making these resources open to everyone. Mentorcruise, Mentor pass, I Mentor, Mentor Monkey, and Small Aide are occurrences of productive systems at this point set up. According to their estimations, one of the weights of these web training stages is that the aides on these stages are from big-time specialists at 500 associations, so their rates will commonly be higher and can be extreme to mentees just start Subsequently, our Information Improvement (I.T.) Capable Planning site will reach out to specialists who are energetic about altogether affecting Ghanaians who are normally perceived and serious in the gig market. Beginning with Accra Unequivocal School Programming, this assessment is being finished to assist students with working on their scholastic execution by permitting them to meet and gain from industry pioneers.

* 1. **STATEMENT OF THE PROBLEM**

While picking a programming project, obliviousness and absence of heading are truly significant. The issue is that understudies who sign up for programming programs much of the time have no clue about what's to come or what vocation and business open doors lie ahead. Since it will affect both the understudy's and the scholastic establishment's possibilities, this issue should be maneuvered carefully, beginning with the understudy's life improvement. Tutoring that is convincing aides the understudy's general mindfulness as well as brings down the pace of scholastic disappointment. The continuous coaching structure concurs with one another. Additionally, it is a successful educational technique. Obviously, standard, in-person coaching has various deficiencies. Time is one of these. For students, travel time might be a significant variable. Thus, extra expenses, like transportation, emerge.

Versatility: Understudies have no choices for extremely close educating. Understudies should stick unequivocally to the arrangement's timing necessities. Students battle to adjust their inclinations, temporary work, and timetables simultaneously. Subsequently, the legitimization behind this stage is to raise information on the different programming disciplines, what the future holds from standard readiness, and how to get a well-established in the field. The deficiency of the understudies to pick their undertaking contemplations is another massive issue. An incredibly clear, reasonable, and powerful training strategy is given by the suggested system, an online mentoring structure. The shine additionally shed light on the advantages of mentoring's mechanical part. The shine additionally uncovered the benefits of the creative part of training. Research backs up some of them, similar to how e-mentoring assists close the status with gapping between the mentor and mentee and how it can squeeze into a bustling timetable. The capacity to manage mentees' suspicions, target explicit students without vilifying them, and the ability to contact more students are among different outcomes that are not referenced in the past examination. Incorporating on the web guidance into a hurried undergrad plan. The examination shows that the versatility of e-training's mentoring hours is a benefit for mentors. One of the variables that pulled in different educators to the course of action was its versatility, especially the people who worked part time and teamed up with respondents.

**1.2.1 Research Questions**

* What progressing strategies could a tutor and mentor at any point grant?
* What limitations does the continuous methodology have?
* What could be a decent option in contrast to the ongoing structure?

## 1.2.2 General Research Objectives

A portion of the principal targets that will direct our exploration are as per the following:

* To decide whether guides and mentees favor the customary method of mentorship
* To make tutoring adaptable and helpful for coaches and mentees

## OBJECTIVES OF THE STUDY

## The principal goals of this examination work are as per the following:

## To explore what is going on of tutor mentee connections.

## To explore the challenges related with the ongoing technique.

## To foster a mechanized framework that will let the coach and mentee connect all the more productively.

## 1.4 SIGNIFICANCE OF THE STUDY

## Flexibility will be open with the fruitful and complete sending of the modernized structure. Individuals can talk with their mentor or mentee in every practical sense, at whatever point and from any area. They are not restricted to set get-together regions or days of the week, as they can begin conversation at whatever point and from whichever region suits them best. It's additional beneficial to talk with evolved. It's handier because you will not at any point need to go to a specific spot at a specific time. Taking everything into account, you can begin exchanges whenever it is by and large beneficial for you. Grows the amount of candidates and individuals. More mentors and mentees will need to partake in virtual mentorship since it is more versatile and accommodating. They'll comprehend that zeroing in on a virtual relationship will be more straightforward. Empowers more genuine coordinated efforts. Guides and mentees will view as even more authentic and relaxing procedures to team up with their mentors or mentees when they are not compelled to compromise of between various get-togethers at work continually. They'll be more open to unconstrained and spontaneous contacts, and they'll have the choice to shape associations without the necessity for express assembling times or rooms.

## 1.5 LIMITATION OF THE STUDY

Our survey centers on resolving an issue that students looking for computer programming related programs face. This issue is about how to refresh learning in the PC programming field by presenting an associate mentee relationship. This will urge more individuals to seek after professions in advancement, produce understudies with top notch, reliable abilities, and resolve any struggles among the scholarly community and the innovation business. The survey will be associated with every single individual who is keen on a lifelong in development. The investigation undertaking should be done in two months.

* Coming up next are a piece of our study's obstacles:
* The system will commonly be facilitated web based, requiring web access; Clients will not have the option to get to the resources of the structure without it.
* A client should initially make a record to get to the learning resources of our system completely.
* The structure would simply be accessible to Ghanaians.

## 1.5 ORGANIZATION OF THE STUDY

The whole examination project is partitioned into five sections; an outline of the substance contained in every part is momentarily portrayed underneath:

## Chapter One – Introduction:

The underpinning of the examination, the exploration question, the objectives of the examination, the examination questions, the meaning of the examination, and the association between the examinations are undeniably canvassed in this part.

## Chapter Two – Literature Review:

Most of the composition regarding the matter is checked on in this part. Speculations and models make up the underpinning of your assessment point. Business related to this survey is additionally remembered for this segment.

## Chapter Three – Research Methodology

He examination technique and ideal models are underlined in this segment, which portrays the assessment reasoning. There is a portrayal of the taking a gander at techniques and test size that were utilized. The instrument and technique for get-together data, as well as data the executives and show, are examined in this segment.

## Chapter Four – System Implementation:

This part moves toward the stages attracted with making and finishing the proposed framework, as well as the method for doing subsequently.

## Chapter Five – Conclusion and Recommendation:

This part closes this examination project with an end and ideas for what's to come.

**CHAPTER TWO**

**LITERATURE REVIEW**

**2.0 INTRODUCTION**

This chapter recognizes so many requirements for developing a mentorship website for academic usage and advancement. It also require reviewing and explaining previous studies on mentoring platforms. This chapter is split up into ten parts. The first part, the introduction gives an outline of the topic stated in this chapter. The second to sixth part discuss what mentoring is, how it is used in the field of education, the value of mentoring, the various types and advantages of mentoring. The seventh part discusses virtual mentoring including its importance and disadvantages, also an outline of the upcoming Information Technology Professional Mentoring Website and research into already built platforms.

**2.1 CONCEPT OF LITERATURE REVIEW.**

**Education** also means helping people to learn how to do things and encouraging them to think about what they learn. It is also important for educators to teach ways to find and use information. Through education, the knowledge of society, country, and of the world is passed on from generation to generation. In democracies, through education, children and adults are supposed to learn how to be active and effective citizens. More specific, education helps and guide individuals to transform from one class to another. Empowered individuals, societies, countries by education are taking an edge over individuals stand on the bottom pyramid of growth. There are three types of education which are Formal, Informal and Non-formal education.

Exampling ( n.d.), **Formal education** usually takes place in the premises of the school, where a person may learn basic, academic, or trade skills. Small children often attend a nursery or kindergarten but often formal education begins in elementary school and continues with secondary school. Higher education is usually at a college or university which may grant an academic degree. It is associated with a specific or stage and is provided under a certain set of rules and regulations. The formal education is given by specially qualified teachers they are supposed to be efficient in the art of instruction. It also observes strict discipline. The student and the teacher both are aware of the facts and engage themselves in the process of education.

**Informal education** is not imparted by an institution such as school or college. Informal education is not given according to any fixed timetable. There is no set curriculum required. Informal education consists of experiences and actually living in the family or community. Informal education may be a parent teaching a child how to prepare a meal or ride a bicycle.

**Non-formal** learning takes place outside formal learning environments but within some kind of organisational framework. It arises from the learner's conscious decision to master a particular activity, skill or area of knowledge and is thus the result of intentional effort. Non-formal learning typically takes place in community settings: swimming classes for small children, sports clubs of various kinds for all ages, reading groups, debating societies, amateur choirs and orchestras, and so on.

**2.2 MENTORING**

Mentoring is a relationship between two people with the goal of professional and personal development. The "mentor" is usually an experienced individual who shares knowledge, experience, and advice with a less experienced person, or "mentee” by YinYang (2019). According to Cullingford (2016), mentoring has become a hot topic in a number of professional spheres in recent years, but its most important and longest-established location is in education.

**2.3 MENTORING IN EDUCATION**

The role of training as an educational strategy used in workplace endeavors (Gay, 1995). According to a 1995 study conducted by Aubrey et al (1997) of mentoring techniques most in the education system, mentoring is a complex and multidimensional process for guiding, teaching, influencing, and assisting students and new teachers (Bey and Holmes, 1992). Therefore, the effect may be different between the mentor and the recipient. To the proper application of mentoring during education is create interests in education and to make a special contribution to society as an educated entity essential. Teachers and mentors are in most cases an integral entity; because mentoring is one of the qualities that an ideal teacher has. However, mentoring has the commonly used in education and others, mentoring has become an important part of non-formal education because it helps facilitate the transmission of the knowledge with proper guidance from a skilled or experienced individual. There are various forms or techniques used in mentoring:

1. **Accompanying***:* The mentor helps and participates in the learning process with the learner.
2. **Showing***:* the mentor gives initially unclear or unacceptable advice to the learner that has value in a given situation.
3. **Catalyzing***:* To inspire a different way of thinking, a shift in identity, or a re-ordering of values, the mentor chooses to plunge the student immediately into change.
4. **Showing***:* The mentor demonstrates a skill or activity to the learner.
5. **Harvesting***:* The mentor evaluates and defines the learner's skill utility and value.

**2.3TYPES OF MENTORING**

### 2.3.1 Group Mentoring

Group Mentoring is done when one mentor can be teamed with several mentees who meet at the same time. As the mentor poses questions, listens and reflects he or she engages all members of the group into the conversation. Each one has their own experience and insight to share and can draw their own learning from the discussion. Group mentoring is limited by the difficulty of regularly scheduling meetings for the entire group. It also lacks the personal relationship that most people prefer in mentoring. For this reason, it is often combined with the one-on-one model.

### 2.3.2 One-On-One Mentoring

The most common mentoring model, one-on one mentoring matches’ one mentor with one mentee. Most people prefer this model because it allows both mentor and mentee to develop a personal relationship and provides individual support for the mentee. The availability of mentors is the only limitation.

### 2.3.3Resource-Based Mentoring

Resource-based mentoring offers some of the same features as one-on-one mentoring. The main difference is that mentors and mentees are not interviewed and matched by a Mentoring Program Manager. Instead, mentors agree to add their names to a list of available mentors from which a mentee can choose.

It is up to the mentee to initiate the process by asking one of the volunteer mentors for assistance. This model typically has limited support within the organization and may result in mismatched mentor-mentee pairing.

### 2.3.4Training-Based Mentoring

This model is tied directly to a training program. A mentor is assigned to a mentee to help that person develop the specific skills being taught in the program. Training-based mentoring is limited because it focuses on the subject at hand and doesn’t help the mentee develop a broader skillset.

### 2.3.5Reverse Mentoring

Reverse Mentoring is the mentoring of a senior person (in terms of age, experience or position) by a junior (in terms of age, experience or position) individual. Reverse mentoring aims to help older, more senior people learn from the knowledge of younger people, usually in the field of information technology, computing, and Internet communications.

The key to success in reverse mentoring is the ability to create and maintain an attitude of openness to the experience and dissolve the barriers of status, power and position.

### 2.3.6Virtual Mentoring

Videoconferencing, Internet, and e-mail is used for virtual mentoring. This is beneficial for those who are unable to leave their workplace and for those who live in remote communities. Virtual mentoring is usually less expensive compared to face-to-face mentoring and provides an individual with more choices for mentors.

Even with virtual mentoring, it is recommended the mentor and mentee meet face to face at least once.

**2.4 BENEFITS OF MENTORING**

Indeed Editorial Team (2021), some benefits of mentorship are as follows:

**2.4.1 Mentoring serve as a trusted ally**

Trust represents a core element of mentoring relationships. The mentee must trust that the mentor has their best interests in mind and will provide accurate and honest guidance. The business world can also be competitive, so they need to rely on one another to keep confidential information private when necessary. Communicating regularly and following through on their promises demonstrate two methods of establishing trust in these relationships.

**2.4.2 Mentoring can serve as a foundation for experience**

When possible, individuals should choose mentors who have the experience relevant to their profession or goals. When mentors convey their successes, the mentee can use them as an example to strive toward and copy the steps they took. Mentors can also share the mistakes they made along their journeys. The mentee benefits because they learn lessons about the mistakes' negative impacts but do not have to suffer the consequences themselves. Learning about these experiences can also help prepare the mentee for the challenges they can expect to face and provide demonstrable advice on how to overcome them.

**2.4.3Mentoring provide guidelines**

For individuals just starting their career, a mentor can help set guidelines on professional expectations. For example, they may clarify the priorities of the role and proper workplace behaviors. These guidelines can help the mentee establish appropriate work habits that enable them to focus and perform their job successfully. These effective work habits can help them be more productive and impress their supervisors.

**2.4.5 Mentoring can serve as a source of constructive feedback**

A trusting mentorship relationship enables honest feedback. By establishing trust, the mentee understands that constructive criticism aims to build their professional growth rather than make them feel bad. Mentors can identify weaknesses and advise them on ways to improve. Because this is a professional relationship, the mentor plays an objective role. Meanwhile, a friend may hesitate to identify the mentee's weaknesses because they do not want to appear critical.

**2.4.6Mentoring help make connections**

A mentor can help build their mentee's professional network. When the mentee identifies professional or personal goals, the mentor can connect them to potential opportunities or individuals who can help them. As the mentor typically has more industry experience or a higher-level career, these connections can be valuable for career advancement.

**2.5 ‬Virtual**

Virtual

processes are similar

relationship, although

tor

or

not,

cost-effective

needs

requirements

Coaching, Kogan Page, London.

**2.5.1 Benefits of Virtual Mentoring**

A virtual mentorship program helps organizations not only save time and resources but also improve the integration of new and valuable employees by providing them with valuable networks and connections from day one. (Schnieders, 2020) These are some benefits of virtual mentoring:

**Flexibility and Convenience**

Virtual mentoring programs are especially beneficial for mentors and mentees when it comes to flexibility and convenience. With the help of technology, participants in a mentorship program can easily meet online at a time convenient for those involved. This is helpful for team members and employees who are taking care of family members, pets and responsibilities at home.

It’s no secret that parents are struggling to balance heavy workloads and at-home schooling for their families. With childcare and school schedules still precarious at times, employees will be grateful for the flexibility and support afforded by a virtual program.

**Larger Pool of Mentors**

The existence of a virtual mentorship program might, in fact, encourage more mentors to participate. The existence of a virtual mentorship program might, in fact, encourage more mentors to participate.

In order to stay connected to colleagues and their organization, mentors may find more time to engage with a mentee. The program provides an opportunity for both mentor and mentee to connect and for the mentor to learn more about the employee experience. The virtual space allows programs to invite more people to be involved, especially demographics and employee populations who might not choose to participate in a more traditional mentoring program.

**Higher Number of Participants**

In the hybrid workplace, virtual mentoring allows participants to connect whenever, wherever. Mentors and mentees are not restricted to just those individuals in the cubes and offices usually around them. Mentees can connect to preferred mentors with desired skill sets whether they’re in New York, LA or Dubai. Employees are likely desiring more guidance and structure while working from home, currently substituting the interactions they became accustomed to at work.The nature of a virtual mentorship can open up new possibilities and offer fresh perspectives for the mentee.

**Inspires Authentic Relationships**

The most profound benefit of virtual mentoring programs is the ability to inspire authentic relationships between participants. A mentee can find it easier to communicate with openness and honesty in a remote setting rather than in the workplace. Secure in the comfort of their homes, the mentor and mentee may establish a feeling of mutual trust sooner than if the mentoring were occurring onsite. This necessary element of trust between the participants will lead the way to an authentic mentoring relationship.

**2.5.2 Advantages of virtual mentoring**

These are some advantages and disadvantages by (Griffiths, M., & Miller H., 2005 )

Flexibility in pace and scheduling as communication between mentor and mentee is asynchronous

Mentoring process can be remote—does not have physical or geographical boundaries

Mentoring environment may be more comfortable for the mentee, whether at home or in a comfortable environment

Provides a written record of discussion and progress for later review and reflection

Mentee may be more open to someone whom they do not see at work

May reduce mentee's feelings of intimidation or discomfort

**2.5.3 Disadvantages of virtual mentoring**

Mentees and mentors need internet access.

Cost (if new software and hardware have to be purchased).

Both must have basic information technology skills.

Establishing a rapport may be difficult (particularly with someone you have not met before).

Loss of visual cues and non-verbal communication.

Must be able to express coherently feelings and thoughts on paper or screen.

**2.6 OVERVIEW OF INFORMATION TECHNOLOGY (I.T) MENTORING WEBSITE**

In order to provide long-term mentoring in a range of technology-related fields, including web development, mobile app development, data science, cyber security, software testing, UI/UX, software management, and machine learning, this website pairs up potential tech enthusiasts with industry specialists. You can connect with the top mentors and advisers through this mentoring website to ensure your success. The two users of the website are a mentee (a student) and a mentor (an I.T. professional). The mentor will create an account and edit his or her profile based on their knowledge of the business. The mentor can then look for and communicate with mentees who have similar skills and work with other mentors. The mentee will sign up, look for and get in touch with potential mentors, and interact with other mentees.

**2.7 REVIEW OF RELATED WORKS**

**2.7.1 An Online Mentoring System for Higher Learning Institutions**

(Strathmore University, 2021 ):Mentoring is the process whereby an experienced person guides and supports a younger or less experienced person in an educational institution. Mentoring in higher learning institutions helps learners acclimate to new academic topics, increases likelihood of academic support, and reduces weakness. The current practice used by many higher learning institutions for example Strathmore University is that upon joining a mentor is assigned to each student. The student then schedules a session and has a meeting with the mentor. This hinders an effective mentoring process as students lack information on mentoring, difficult to have a follow up on the mentoring sessions, analysis and report on mentoring program. These challenges can be overcome by developing an online mentoring system. The system allows mentors and mentees to schedule meetings and set milestones that will track the progress of the mentee to ensure confidentiality and provide reports on the mentoring sessions. The system is however not meant to completely get rid of face-to-face mentoring sessions but to complement the face-to-face mentoring as in some instances people would want to meet their mentor. An object-oriented approach has been used to develop a system to improve the mentoring process. The approach that has been used is the prototyping framework to ensure the system was developed iteratively

**2.7.2 Online Mentoring System(An Online Mentor-Student System)**

(Thakare,et al.,2019) : Mentoring is a conventional method of transferring knowledge and ideas from a confirmed professional in an society to an inexperienced member in the sector. Education sector has found mentoring as quite effective tool since long back and with the advent of new technologies, comes an idea of online mentoring, which is also referred to as ementoring. Instead of face-to-face meetings, Online Mentoring System (OMS) uses asynchronous, electronic communications to establish and support the relationship between mentor and the student using virtual mode. E-Mentoring uses computerized medium to transfer knowledge and skills from teacher to student. It basically focuses on student and faculty relationship. Online Mentoring System is a Client Server model, which acts as an Interface between Teacher and Student. OMS strives to reduce the work load of students in entering their details and at the same time enable the Mentors to assess their students more efficiently. E-Mentoring is fundamentally developed to improve the performance of students by assisting mentors to understand the problems of students more effectively and easily. In order to achieve this, a rating system is also included using which mentors can easily evaluate and sort the performance of the students and concentrate on those who need there guidance. Matching algorithm is used in this system.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.0 INTRODUCTION**   
  
This chapter goes into further detail on the methods used in the research project to produce and/or collect pertinent data for effective analysis. This chapter provides information about the study's history, demographic, research methodology, data, and conclusions. This section also goes into greater detail about our data analysis, giving insight into the study's conclusions and backing it with tables relevant to information on received response and results clarification. A problem can be solved systematically using research technique. It is the science of learning how to conduct research. According to Clifford Woody research comprises   
defining and redefining problems, formulating hypothesis or suggested solutions; collecting, organizing and evaluating data, making deductions and reaching conclusions; and at last  
carefully testing the conclusions to determine whether they fit the formulating hypothesis.  
Shanti Bhushan Mishra, Shashi Alok 2022   
Handbook of research methodology  
  
  
**3.1 RESEARCH METHODOLOGY AND DATA COLLECTION METHOD**   
  
Based on careful consideration and the theory of approach, the research design used in this study was a combination of quantitative research (survey research) and build research (design and implementation of proposed system). Quantitative research is appropriate and matches the approach for data collection. The overall approach you select to integrate the many study components in a logical and cohesive manner, so addressing the research topic, is known as research design. It serves as the guide for the collection, measurement, and analysis of data. (Hunziker, et al.,2012) We define research design as a combination of decisions within a research process. These decisions enable us to make a specific type of argument by answering the research question. It is the implementation plan for the research study that allows reaching the desired (type of) conclusion. Different research designs make it possible to draw different conclusions. These conclusions produce various kinds of intellectual contributions. As all kinds of intellectual contributions are necessary to increase the body of knowledge, no research design is inherently better than another, only more appropriate to answer a specific question. Students enrolled in computer-related studies, of which the computer science department at Accra Technical University is one, appear to be the population from which a sample can be drawn. This sample size was chosen in order to collect data in a way that was morally reliable. The term "quantitative research" refers to a variety of techniques used to systematically examine social phenomena using statistical or numerical data. As a result, quantitative research relies on measurement and makes the assumption that the phenomena being studied can be quantified.

It sets out to analyses data for trends and relationships and to verify the measurements made (Watson 2015).  
  
  
 **3.1.1 Quantitative Research Methodology**  
Quantitative research is regarded as the organized inquiry about phenomenon through collection of numerical data and execution of statistical, mathematical or computational techniques. The source of quantitative research is positivism paradigm that advocates for approaches embedded in statistical breakdown that involves other strategies like

inferential statistics, testing of hypothesis, mathematical exposition, experimental and quasi-experimental design randomization, blinding, structured protocols, and questionnaires with restricted variety of prearranged answers (Lee, as cited in Slevitch, 2011). Quantitative research objectives are measurable and cannot be separated from variables and hypothesis; variables are concepts that have variations that can take numerous values while hypothesis are untested assumptions or propositions of relationship between variables. According to Hakansson (2013), survey, ex-post facto, case study and experimental research, are the most frequently used research strategies under quantitative research. When conducting a study, we are always attempting to explain a certain occurrence, like the proportion of college students who are aware of mentorship. How many students are pursuing careers in computer technology and related fields? Several quantitative research methodologies include:  
1. Descriptive   
2. Experimental   
3. Survey research   
4. Quasi-experimental   
5. Correlation   
  
**3.1.2 Why quantitative method?**Prior to starting, the study's design is decided, and research is performed to test a theory before deciding whether to accept or reject it.  
**It is more scientific:** A significant amount of data is gathered and then statistically examined.  
**Control-sensitive:** The researcher is further away from the experiment and has more influence over how the data is collected. This approach provides a fresh viewpoint.  
**Less biased/objective:** The research aims for objectivity i.e., without bias, and is separated from the data. The researcher has outlined the research questions that need to have objective responses.  
**Most structured:** Researcher uses tools, such as questionnaires or equipment to collect numerical data.  
**Helps in decision making:** Data from quantitative research such as market size, demographics, and user preferences provides important information for business decisions.  
  
  
**3.2 POPULATION OF STUDY**   
  
Polit and Hungler (1999:37) refer to the population as an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. In this study the population was South African women of all races, age groups, educational status, socio-economic status and residential areas, who requested TOP services in the Gert Sibande District during August and September 2003.  
According to Showkat R. W. (2017), A population refers to any collection of specified group of human beings or of non-human entities such as objects, educational institutions, time units, geographical areas, prices of wheat or salaries drawn by individuals. Some statisticians call it universe.  
A population containing a finite number of individuals, members or units is a class. A population with infinite number of members is known as infinite population. The population of pressures at various points in the atmosphere is an example of infinite population. The population of concrete individuals is called as existent population, while as the collection of all possible ways in which an event can materialize as the hypothetical population. All the 400 students of 10th class of particular school is an example of existent type of population and the population of heads and tails obtained by tossing a coin on infinite number of times is an example of hypothetical population.  
  
  
**3.3SAMPLING**   
  
A sample is a subset of the population, selected to be representative of the larger population. (Acharya, 2013) Since we cannot study the entire population of students offering computer science/or related programs, we need to take a sample. Sampling consists of selecting some part of a population to observe so that one may estimate something about the whole population. We made the decision to request the use of a Simple Random Sampling method and to choose students at random from the various classes in the computer science department to complete the questionnaire since the population of students studying computer science or related programs relatively huge.

**3.4 DATA COLLECTION AND ANALYSIS**In our study, we advocated the use of a quantitative approach and developed the use of Google Forms as a research instrument. We used survey research as a data gathering

technique. For this study, we used questionnaires, which were given out to the participants we chose at random.  
  
**Data filtering:** Filtering simply evaluates each record separately and decides, based on some condition, whether it should stay or go (Verma et al, 2015). Data filtering is the process of examining a dataset to exclude, rearrange, or apportion data according to certain criteria. For example, data filtering may involve finding out the total number of sales per quarter and excluding records from last month.  
The above process was employed to help clean our data received from the survey. This process was used based on some responses that were part of the data set which was not necessary to be included due to human error or misunderstanding or questionnaire.  
  
**3.5 QUESTIONARIES**   
  
For this study, structured questionnaires contain multiple-choice questions. Questionnaires are a quantitative tool for collecting and analyzing data from a huge population. They are also easier to respond to and more objective.  
**Table 3.1: Responses of The Study**

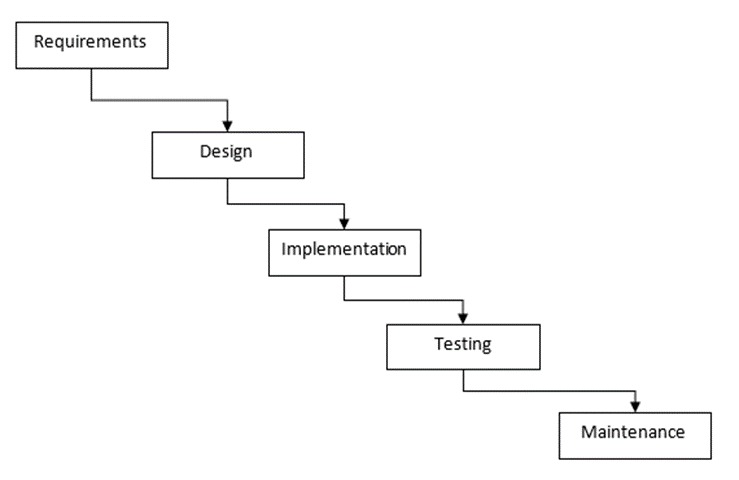
|  |  |  |  |
| --- | --- | --- | --- |
| **QUESTIONS** | **RESPONSES** | | |
| **CATEGORY** | **NUMBER** | **PERCENTAGE (%)** |
| Gender | Male |  |  |
| Female |  |  |
| **Total** |  |  |
| What is your program of study or program studied? (mentee/mentor) | Computer Science |  |  |
| Computer Engineering |  |  |
| Information Systems |  |  |
| Information Technology |  |  |
| Telecommunication Engineering |  |  |
| Electrical Engineering |  |  |
| Statistics |  |  |
| Other (Incorrect) |  |  |
| **Total** |  |  |
| Name of Institution (mentee/mentor) | Accra Technical University (ATU) |  |  |
| Kwame Nkrumah University of Technology (KNUST) |  |  |
| University of Cape Coat (UCC) |  |  |
| University of Education Winneba (UEW) |  |  |
| University of Ghana |  |  |
| All Nations University |  |  |
| Dominion University |  |  |
| Ghana Communication Technology University (GCTU) |  |  |
| Blue Crest |  |  |
| Other (Incorrect) |  |  |
| **Total** |  |  |
| What is your level of interest in mentorship? | Very interested |  |  |
| Slightly interested |  |  |
| Slightly disinterested |  |  |
| Not interested at all |  |  |
| **Total** |  |  |
| What is your experience with mentoring? | Served as a mentor to someone |  |  |
| Served as a mentee |  |  |
| Participated in peer mentoring |  |  |
| Participated in virtual mentoring |  |  |
| No experience with mentoring/mentorship |  |  |
| **Total** |  |  |
| How do you currently engage with your mentee/mentor? | Virtually/Online |  |  |
| Traditional in person (face to face) |  |  |
| I don’t have a mentee/mentor |  |  |
| **Total** |  |  |
| How would you prefer to interact with your mentor/mentee with flexibility on both sides? | Virtually/Online |  |  |
| Traditional in-person (face-to-face) |  |  |
| **Total** |  |  |
| As a mentee, "Virtually/Online" would you like to be mentored by an industry expert on a mentorship platform where you can get mentorship on preferred relevant skills. | Yes |  |  |
| No |  |  |
| Other (Unanswered) |  |  |
| **Total** |  |  |
| As a mentor, "Virtually/Online" would you like to be on a platform where mentees can find you based on your skills set to be mentored? | Yes |  |  |
| No |  |  |
| Other (Unanswered) |  |  |
| **Total** |  |  |

**3.7 BUILD METHODOLOGY**   
  
It is a methodology that consists of building either a physical artifact or a software system to demonstrate that it is possible. For the building of the artifact to be considered as research, the construction of the artifact must be new, or it must include new features that have not been 16 demonstrated before in other artifacts. We chose the build methodology to build a real-time online voting system to prove our study. This methodology focuses on creating a software program to solve our current issue. This leads to an original, fresh, and creative solution. We decided to employ the build process in light of this.  
  
**3.7.1 Agile Approach**  
  
Agile software development is a recursive and incremental evolutionary process that generates timely, cost-effective, and high-quality solutions that satisfy stakeholders' changing needs in an effective collaborative framework of self-organizing teams, with a highly collaborative approach, and with sufficient formalities. Agile methodologies have evolved as alternatives to traditional approaches that are thought to be insufficient for some problems. 94% of firms utilize agile methods, according to a report by Agile Turkey (Göksu, 2018).

**3.7.1.1 Benefits of agile approach**  
  
The very first advantage is that the company get to see with the Agile Methodology is the saving of time and money. There is less documentation required, the ones which are used for quick design and development along with the necessary test data. This helps to a great deal in verifying and validating the requirements, also focus more on the application rather than documentation. Since it is iterative in its form, it tends to have a regular feedback from the end user so that the same can be implemented as early as possible.   
  
  
**3.7.1.2 Limitations of agile approach**   
  
Since the processes in agile methods are communication centered, the fact that the project staff is not in the same environment with each other or with the customer adversely affects project development.The uncertain and variable environment of agile methods can adversely affect the business processes of the subcontractor. Large and complex systems that require functional integrity may not be split into appropriate parts for replications. When the rate of customer or end-users being in the project is low, business processes may not be correctly defined..

**Waterfall approach**

The Waterfall approach was introduced by Winston Royce in 1970, adopted by software project managers and further developed through lessons learned from software projects (Ruël, 2010). The waterfall technique is a structured procedure, with a list of specific tasks, supporting documentation, and exit criteria for each phase. The waterfall was decided upon because of the project's constrained scope. The simplicity, concision, and manageability of the features and criteria suggest that no further revisions are envisaged. It is therefore the most practical option for developing this project (Sherman, 2015).

Below is an image diagram of a systematic approach to using the waterfall model:  
  
  
  
  
**Figure 3.1: Waterfall Approach**

**3.7.2.1 Requirements**   
During this phase, every potential requirement for the system under development is gathered and recorded in a requirement specification document.  
**3.7.2.2 Design**   
This phase studies the first phase's required specifications and prepares the system design. This system design aids in determining the overall system architecture as well as the hardware and system requirements.  
**3.7.2.3 Implementation**   
The system is initially built as small programs known as units, which are then incorporated into the following phase, using inputs from the system design. The process of developing and testing each unit for functionality is known as unit testing.  
**3.7.2.4Testing**   
All the units developed in the implementation phase are integrated into a system after testing of each unit. Post-integration the entire system is tested for any faults and failures.

**3.7.2.5 Maintenance**

Once the product has undergone functional and non-functional testing, it is either published to the market or deployed in the customer's environment.

**3.7.3 Reasons Why We Chose Waterfall**

Beginning with a clear and detailed specification of the project's needs decreases project uncertainty by allowing for more precise time and cost estimation. Typically, because it is a commonly used, theoretically sound strategy. As they are carefully defined and followed when and what they should do, it is great for project workers, project managers, and performance-down project teams who lack the expertise and experience to conduct business on their own. Since the end of one phase precedes the beginning of the next, it is simple to track the project's development. Furthermore, the lack of a progressive phase makes resource monitoring easier.

**3.7.4 Advantages of Waterfall Approach**This method makes it simple to oversee and control the software development process. From concept to design, implementation, testing, installation, and troubleshooting, development leads to operation and maintenance. Each stage of development must be completed in a specific order. It's easier to stick to deadlines because each phase is finished and processed before moving on to the next. The waterfall approach also has the following benefits:  
● The project status is measured based on a complete schedule and resource plan.

● Works well for smaller projects where requirements are clearly understood

# CHAPTER FOUR

# PROPOSED SYSTEM IMPLEMENTATION

## 4.0 **INTRODUCTION**

This chapter describes the implementation of the Information Technology (I.T) professional mentoring website. This chapter entails the system requirements, a flowchart diagram, database elements, an entity relationship diagram (ERD), and system interfaces for to welcome new users of the platform. This chapter further talks about how to access the platform and make the most out of it as mentor or a mentee, from login to sign up and searching for mentors and view mentor recommendations by mentees.

The proposed system has two users:

* Mentee
* Mentor
* Admin

Each user of the system must register then after registration, a user will be authorized/authenticated to have access to the platform. The mentee will have the opportunity to search for mentors as well as be presented with recommended mentors based on the choice of interests. Mentee will have the opportunity to choose mentors of their preference. It is required of the users to have an internet connection and the latest version of a web browser (Chrome, Opera, Edge, Firefox, etc.).

## 4.1 SYSTEM IMPLEMENTATION TOOLS

The system is developed with the following software technologies:

* Bootstrap
* HTML5
* CSS3
* JavaScript
* Laravel
* MySQL
* VSCODE
* XAMPP

### 4.1.1 Overview of System Implementation with Software Technologies.

The system is being programmed/ developed with VSCODE which is an Integrated Development Environment (IDE). VSCODE provides with the luxury of connecting data objects, functions, and logic for the application to be developed in a programmable environment. Bootstrap, HTML5, CSS3, and JavaScript are frontend technologies which gives the look and feel of the website where users can click on interactive buttons to communicate with mentors and provides the programmer with the authority to add graphics, texts, and designs to communicate information about the platform for successful usage of the website. Furthermore, Laravel is a PHP framework that comes with predefined authentication, routing, form validation and security that help programmers built efficient and scalable applications fast. XAMPP is a web server solution pack that helps the programmer to run web applications via the browser locally on a dedicated local server.

### 4.1.2 Logic Behind Proposed System

A mentee and a mentor can both use the system because of its logic or functionality. The mentee will register the information that is necessary of them at registration, and the mentor will register with the facts that are expected of them. The mentee will be provided with recommendations of mentors based on the interests they have indicated, and the mentee can select one of these mentors according to their preferences. The mentor will be able to determine whether the mentee is a novice, has some experience, or has sufficient knowledge with the job field the mentee is studying. The mentor will also be able to determine why the mentee needs a mentor. The mentee will have a range of options to pick from, including paired programming, data science, machine learning, web development, mobile app development, UI/UX, cyber security, software testing, cloud computing, and augmented reality. As well as allowing registered users to edit their personal information, the system also gives guest users access to the platform's mentor search function.

## 4.2 DATABASE IMPLEMENTATION

The following shows the relationship between the type of users we have in the database and how they are stored in the database using one database table

**Table 4.1: Users Table for Database**

|  |  |  |  |
| --- | --- | --- | --- |
| **Column Name** | **Data Type** | **Size** | **Constraint** |
| Id | Bigint | 20 | AUTO\_INCREMENT |
| first\_name | Varchar | 255 | None |
| last\_name | Varchar | 255 | None |
| Email | Varchar | 255 | UNIQUE |
| Contact | Int | 10 | None |
| Gender | Varchar | 255 | None |
| Password | Varchar | 255 | None |
| Picture | Varchar | 255 | None |
| Institution | Varchar | 255 | None |
| Address | Varchar | 255 | None |
| level\_of\_experience | Varchar | 255 | NULL |
| Category | Varchar | 255 | NULL |
| Interests | Varchar | 255 | NULL |
| Skills | Varchar | 255 | NULL |
| user\_type | Boolean | 255 | None |
| mentee\_message | Varchar | 255 | NULL |
| mentor\_bio | Varchar | 255 | NULL |
| email\_verified\_at | Timestamp | 255 | NULL |
| rememberToken | Timestamp | 255 | NULL |
| Timestamps | Timestamp |  | NULL |

## 4.2.1 Logic for Inserting Users into Database (Entity Relation Diagram ( ERD))

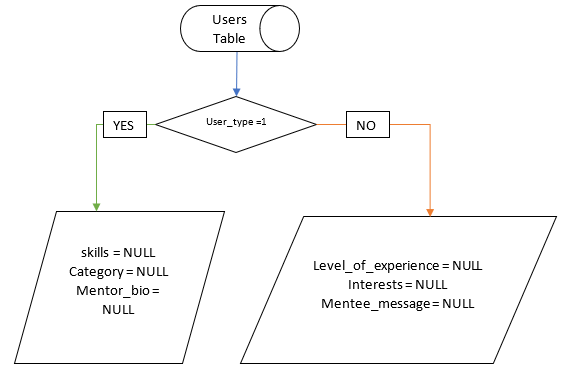


Figure 4. : Logic for Inserting Users into Database.

## 4.3 SYSTEM REQUIREMENTS

System requirements specify the functionality that a system must have in order to satisfy a client's needs. System requirements are a large and detailed issue that can be applied to many distinct items, according to (Bahill & Dean, 2009). No matter if we're talking about standard company operations or the system requirements for certain PCs, programs, or enterprise apps. examining the specific software or coding that was utilized to run it. System requirements are the most effective strategy to meet user expectations and reduce implementation costs. System requirements, according to Mumford (1985), can save enterprises a significant amount of time and money, but they can also cost a business money and time. They are the most important part of any project since without them, it cannot be said to be finished. In this study the system requirements were defined and interpreted as the functional and non-functional requirements.

## 4.3.1 User Requirements

A user requirement is a detailed documentation of how a software system should behave taken into consideration the usability for the user the system is expected to provide to system users and the constraints under which it must operate. The following outlines the user requirements for our suggested system:

The proposed I.T professional mentoring website to accepts mentees and mentors’ information. The proposed system will recommend mentors to mentees and mentees would be able to view mentees and their interests. Mentees can contact mentors via email or via telephone.

## 4.3.1 Functional Requirements

Functional requirements outline the goal that the system must complete as well as the procedures involved, the kinds of data that the system will employ, and the user interfaces that will be available. The following outlines the functional requirements for our suggested system:

* **Registration**

Mentees and mentors must be registered to have full access and privileges to the system.

* **Login**

Mentees and mentors must be authenticated to have access to the system.

* **Search**

Mentees and guest users must be able to search for registered mentors in the system.

* **Recommendations**

The system after mentee registration must be able to suggest mentors to mentees.

* **Logout**

Users must be able to logout from the system.

## 4.3.2 Non-Functional Requirements

Non-Functional Requirements are requirements that describe criteria rather than specific actions that can be used to evaluate how a system performs, in contrast to Functional Requirements. The non-functional needs of a system are represented by qualities of software quality such as precision, performance, cost, security, and to make changes, as well as usability for the intended users. Additionally, it covers system components that relate to how the system fulfills functional criteria. They are:

* **Security:** the system does not permit access to unauthorized users. One must register or login to have access to the system.
* **Usability:** the system can be accessed by everyone who is interested in mentorship.
* **User friendly:** the user interface for the system is simple and can be used by every user without any technical skills.

**4.3.3 Requirements for System Implementation**

The objective is to create a platform where students and mentees can easily find mentors and experts, as well as to ensure that the mentee and mentor have better communication. for the suggested system to be truly accessible. Some hardware and software prerequisites exist. These requirements are as follows.

Hardware requirements include the following:

* 1GB RAM or above
* 40GB Hard Disk

Among the software requirements are:

* Windows 10, Windows XP, Windows 7, or Vista
* Linux Distros
* Mac OS
* Internet Access
* Web browser

## 4.4 FLOW CHART DIAGRAM OF PROPOSED SYSTEM

## 4.4.1 System Architecture

Figure 4. : Flowchart diagram of proposed system

Start

Mentee Register

Mentor Register

Login

Users Database

Users Database

Mentor Page

Mentee Page

Logout

Home Page

Profile Update

Search Page

Book Appointment

Send Confirmation Mail to Mentee

Send Mail to Mentor

### 4.4.2 Mentee Registration Flowchart Diagram

Start

Register Page

Home Page

Checks if user (email) exists in database

YES

NO

User type = 1

Users Database

Login Page

If user exists

Checks if form is of a user type = 1

Figure 4. : Flowchart diagram for mentee registration

### 4.4.3 Mentor Registration Flowchart Diagram

Start

Register Page

Home Page

Checks if user (email) exists in database

YES

NO

User type = 0

Users Database

Login Page

If user exists

Checks if form is of a user type = 0

Figure 4. : Flowchart diagram for mentor registration

### 4.4.3 Login Authentication Flowchart Diagram

Start

Login Page

Home Page

Validates users’ credentials

YES

NO

Users Database

If doesn’t meet validation requirements

Users Database

Mentee Home

Mentor Home

if user type = 1

YES

NO

Figure 4. : Flowchart diagram for login authentication

### 4.4.4 Mentee Home Page Flowchart Diagram

start

Mentee Home

Search Mentor Page

Logout

Update Profile

Users Database

Home Page

Book Appointment

Checks if user’s interests matches with a mentor in database

Users Database

Display match for mentor

Send Selected Mentor Message

Figure 4. : Flowchart diagram for Mentee Home Page

**CHAPTER FIVE**

**CONCULSIONS AND RECOMMENDATIONS**

## 5.0 **INTRODUCTION**

The earlier chapters covered the study's introduction, literature review, methodology, research area, analysis, and discussion of findings. This chapter explains the project's relevance and makes recommendations, all previous chapters have focused on all the steps performed to develop the project, as well as on the main issues that arose during the project's development. This final chapter focuses on the conclusion of this study and review of research questions as outlined in chapter one and how the questions were addressed by this study.

## 5.1 **CONCLUSION**

This research establishes that even though there are other form of mentorship websites and platforms but not most of them are geared towards the field of information and Technology world, the introduction to the tech world, drawing pathways and road maps for interested and upcoming interested personals and sharing new innovation and methodologies to people already in the field.

This study discovered the importance the world of technology in the global society as an whole and how it is important to usher new individuals into the field it also highlighted how many people who are interested in the STEM field don’t have access to mentors who are willing to take them through the beginning and infer knowledge and skills to them along the journey to boost their morale and motivate them enough. The system documented above is an **online mentoring model which is aiming for is a hybrid that includes both career and technical mentoring platforms.**

## **RECOMMENDATIONS**

The following suggestions were made for the proper planning and implementation of I.T professional mentoring website, this portion of the project details additional system enhancements that must be addressed in order for the project to be successful. Therefore, it is suggested that:

* Incorporating machine learning algorithms to recommend mentors to mentees in specific fields and expertise for easier assimilation and better introduction into a field
* Inviting more experienced and expert professionals to the platform to not limit the platform to only beginners but also advance and already experienced people in the tech field.
* Education on the importance of such systems and how beneficial it is to beginners and advanced personnel; it serves as a knowledge pool and networking between people in tech.

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