

CHAPTER ONE:

INTRODUCTION AND PRESENTATION OF ENTREPRISE

INTRODUCTION

Many schools still make teachers write down attendance information by hand. Teachers have to write each student's name and then mark if they are present or absent. This takes a lot of time and is not a good use of the teacher's time. Because we are in a digital world and use the internet for a variety of activities, my project aims at managing students, their attendance and possible feedback that enables the students have a safe way to tell teachers what is wrong or right with the manner in which they teach lessons.

A good student attendance system is incredibly important for any school. It does much more than just check who's in class. A good system makes it easy to track who's present and absent, helping teachers and parents know what's going on. More importantly, it helps identify students who might be missing class often so the school can provide support and figure out what's wrong. This early help is crucial for students to succeed. Plus, a reliable attendance system keeps parents in the loop, enhances school safety by knowing who's on campus, and ensures schools follow attendance rules. In short, a good attendance system helps create a safer and more supportive learning environment where everyone benefits.

Incorporating an anonymous student feedback system focusing on teaching methods provides a safe and confidential space for students to share their honest perspectives on how teachers deliver lessons. This valuable tool empowers students to actively participate in shaping their learning environment by providing instructors with insights into what teaching strategies are effective and which areas need improvement. The anonymous nature of the system encourages honest feedback, free from fear of repercussions, allowing teachers to gain a clearer understanding of student experiences and make necessary adjustments to their teaching styles to better meet the diverse needs of their students. Ultimately, this feedback loop fosters a more positive and effective learning environment for both students and teachers.

In today's educational landscape, having a reliable and efficient student attendance and anonymous feedback system as part of a student's management system is no longer optional—it's essential. A well-implemented system benefits both teachers and students in numerous ways,

contributing to a more productive and positive learning environment for everyone. Here are some of the advantages of an attendance/feedback system to the

Teachers:

Saves Time: Automated systems streamline attendance tracking, freeing up valuable time for teaching and interacting with students.

Data-Driven Insights: Easily identify students with frequent absences or concerning attendance patterns for early intervention.

Enhanced Classroom Management: Accurate attendance data contributes to a more structured and focused learning environment.

Valuable Insights for Improvement: Anonymous feedback provides unbiased perspectives on teaching strengths and weaknesses, highlighting areas for potential growth.

Increased Self-Awareness: Teachers gain a deeper understanding of how their teaching is perceived by students, allowing for reflective practice and professional development.

Students:

Increased Accountability: Regular attendance is encouraged, promoting a sense of responsibility and commitment to learning.

Improved Academic Performance: Consistent attendance is strongly linked to better grades and overall academic success. Regular attendance instills habits of punctuality and responsibility, which are valuable in future academic and professional endeavors.

Safe Space for Honest Feedback: Anonymity empowers students to express their opinions and concerns openly, without fear of judgment or negative repercussions.

Evidence-Based Teaching Practices: Analyzing feedback patterns provides concrete data to support instructional decisions, leading to more data-driven and student-centered teaching.

1.1. Background to the study

The historical background, theoretical background, conceptual background, and contextual background of the research are all included in the background.

Historical background.

The historical background covers the background of the study.

1.1.1. Historical background of the study.

The pursuit of effective education has always involved understanding student engagement and incorporating student perspectives. This has led to centuries of evolution in how we track attendance and gather feedback, driven by both societal shifts and technological advancements.

The earliest forms of attendance taking can be traced back to ancient civilizations like Greece and Rome. While rudimentary, their student rosters highlight a fundamental need: to track participation and allocate resources accordingly. However, it was the global push for compulsory education in the 19th and 20th centuries that cemented attendance records as a cornerstone of the education system. Governments demanded accurate data for funding and legal compliance, giving rise to the ubiquitous practice of teachers calling out names from a register – a system still recognizable in classrooms today.

The 20th century brought about technological advancements that trickled down from the business world. Just as factories adopted punch clocks for worker attendance, some schools experimented with similar systems for both teachers and students. However, these early attempts were often plagued by inaccuracies and vulnerabilities to manipulation. The dawn of the digital revolution in the latter part of the century ushered in a new era: computerized attendance systems. What began as simple databases evolved to incorporate barcode scanners and magnetic stripe cards, paving the way for more efficient and reliable tracking. Today, we stand at the cusp of a new frontier with biometric technologies like fingerprint scanning, facial recognition, and RFID tags. These sophisticated systems offer seamless and secure attendance tracking, often integrated with parent communication platforms to provide real-time updates and foster a more connected school community.

Similarly, the pursuit of student feedback has undergone its own transformation. Early attempts were characterized by low-tech solutions, often lacking structure and consistency. Physical suggestion boxes, while symbolizing openness, were easily overlooked and offered no guarantee of anonymity, hindering honest feedback. Mid-20th century efforts led to the standardization of student evaluations of teachers. These formal questionnaires, typically administered at the end of a term, provided valuable insights but lacked the immediacy needed for timely adjustments to teaching strategies.

The digital age, however, ushered in a new era of anonymous feedback systems. Online platforms and dedicated software provided a safe space for students to share their thoughts and concerns without fear of repercussions. The ability to provide feedback continuously throughout a term, rather than just at the end, allowed for more iterative improvement and demonstrated a commitment to incorporating student voices. Modern systems go beyond mere data collection; they leverage sophisticated data analysis tools to identify trends, measure the impact of interventions, and provide actionable insights to teachers. This data-driven approach, combined with the qualitative richness of student feedback, empowers educators to continuously refine their teaching practices and create a truly student-centric learning environment.

1.1.2. Conceptual background

This new system wants to make students a much bigger part of how their classrooms are run. It does this by using two main parts: keeping track of who's in class and giving students a safe way to say what they think about their teachers. Imagine a system where, alongside marking attendance, every student has the opportunity to share their honest opinions about the lessons, the teaching style, and anything else that affects their learning.

The key here is that the feedback is totally anonymous. This means students can speak freely, without worrying about getting in trouble or feeling embarrassed. They can say what they really think is working well and point out things they think could be done better. This direct feedback is incredibly valuable for teachers. It's like getting a secret peek inside the minds of their students! Teachers can see what parts of their lessons are really clicking with the class and which parts might need to be explained differently or made more engaging.

At the same time, the system keeps a close eye on who's showing up for class. If a student starts missing a lot of school, it could be a sign that something's wrong. Maybe they're having trouble with the material, maybe something's going on at home, or maybe they need extra support. By connecting the dots between attendance and what students are saying anonymously, teachers can get a much better understanding of what's going on in their classrooms and how to help each student thrive.

1.1.3. Theoretical background

An attendance system serves as a vital tool for tracking student presence in class, enabling schools to monitor attendance patterns, assess student engagement, and ensure accurate record-keeping for administrative purposes. Alongside attendance, an anonymous feedback system empowers students to provide honest and constructive feedback on their teachers' performance without fear of repercussions. This feedback, collected anonymously, provides valuable insights for teachers to identify their strengths and weaknesses, tailor their teaching methods, and ultimately enhance the learning experience for their students. By combining attendance and anonymous feedback, schools can gain a holistic understanding of student engagement and teacher effectiveness, promoting a student-centered learning environment where continuous improvement is encouraged. The theoretical foundations for these systems lie in student-centered learning, constructivist theory, and quality improvement principles, highlighting the importance of understanding student needs, encouraging active student participation, and fostering a culture of continuous growth in education.

1.1.4. Contextual background

An attendance system and anonymous feedback system for students are essential components of modern educational institutions aiming to enhance classroom management and teacher effectiveness. These systems leverage technology to streamline administrative processes, gather valuable insights from students, and promote continuous improvement in teaching quality.

- The attendance system is a tool used to track and monitor students' presence in classes, lectures, and other educational activities.
- It helps educational institutions to ensure compliance with attendance policies, identify and address absenteeism issues, and improve student retention rates.
- By automating the attendance tracking process, the system reduces the administrative burden on teachers and allows them to focus more on delivering quality instruction.
- Attendance data captured by the system can be used for performance evaluation, identification of at-risk students, and generation of reports for academic planning and resource allocation.
- The anonymous feedback system empowers students to provide constructive feedback on their teachers' performance without fear of retribution or bias.

- It promotes transparency, accountability, and student involvement in the evaluation and improvement of teaching practices.
- Anonymous feedback can provide valuable insights into teaching effectiveness, classroom dynamics, and areas for professional development.
- Educational institutions can use feedback data to identify trends, assess teaching methodologies, and implement targeted interventions to enhance the overall learning experience.
- Implementing a feedback loop where teachers can review and respond to students' comments fosters a culture of continuous improvement and communication.

By combining an attendance system with an anonymous feedback system, educational institutions can create a comprehensive feedback mechanism that promotes student engagement, accountability, and growth. These systems contribute to building a positive learning environment, fostering constructive relationships between students and teachers, and driving overall educational excellence.

1.2. STATEMENT OF THE PROBLEM

During my internship period at ESCHOSYS TECHNOLOGIES, trainers typed down the trainees names before writing down whether or not they were present. As a result, when analysis where to be taken on trainee's attendance, the trainers had to analyses all the records taken and searching each student's name with was quite a bother as it required the trainers to carry out the analysis themselves. Also, the methods used by some trainers where not understood by all the trainers. Even though trainers toke their time to teach, they just went with the majority and those left behind maybe because the methods used didn't suit them couldn't lay their complaints because of fear of retribution. To address the problem of improving the attendance system and providing anonymous feedback for students concerning their teachers, a solution could be to implement a digital platform or application that integrates both features. This platform could allow students to check in for attendance purposes easily and efficiently, while also providing them with a channel to submit anonymous feedback on their teachers.

1.3. OBJECTIVES OF THE STUDY

The objective of this study is divided into two types, the main and the specific objectives.

1.3.1. Main objectives

The goal of this project is to design an attendance and anonymous feedback system for ESCHOSYS TECHNOLOGIES.

1.3.2. Specific objectives

The specific objectives of this internship study are:

- Track and monitor student attendance accurately.
- Generate automated reports for each student's attendance record.
- Improve communication between faculty and students regarding attendance requirements.
- Identify trends and patterns in attendance data to address at-risk students.
- Provide a confidential platform for students to share feedback on teaching methods.
- Collect constructive criticism and suggestions for improvement from students.
- Facilitate continuous improvement in teaching practices based on student feedback.
- Ensure that feedback is anonymous to encourage open and honest responses from students.

1.4. RESEARCH QUESTIONS

The research question is divided into two, the general research question and the specific research question.

1.4.1. General research question

Will the implementation of an attendance and anonymous system facilitate the analysis of trainee's presence and absence and will it enable trainees comfortably give feedback on teachers.

1.4.2. Specific research questions

- In what ways does the anonymous feedback system facilitate open and honest communication from students regarding teaching methods?
- How do students perceive the value of providing feedback anonymously as opposed to non-anonymous methods?
- What specific improvements or changes have been implemented based on feedback received through the system?
- To what extent does the implementation of the attendance system affect students' attendance rates?
- How does the attendance system impact students' overall academic performance?
- What are students' perceptions of the effectiveness of the attendance system in promoting accountability and engagement?
- How does the use of the attendance system affect students' behavior and attitudes towards attendance and punctuality?

1.5. RESEARCH HYPOTHESIS

The research hypothesis of this study is divided into two types, the main and the specific hypothesis.

1.5.1. General hypothesis

- The implementation of an attendance system will lead to higher overall student retention rates. Providing students with a platform to submit anonymous feedback on teaching methods will lead to increased student satisfaction with the quality of instruction.
- The integration of an attendance system and feedback system will result in enhanced communication between students and instructors, leading to a more positive learning environment overall

1.5.2. Specific hypothesis

- Students who regularly use the attendance system will have higher academic performance compared to those who do not utilize the system.
- There will be a positive correlation between students who attend classes regularly (as indicated by the attendance system) and their engagement in course materials. Students who receive timely feedback on their attendance records will exhibit improved attendance patterns over time.

1.6. SIGNIFICANCE OF THE STUDY

- The significance of a study on an attendance system for students, coupled with an anonymous feedback system on teaching methods, lies in its potential to provide valuable insights for improving educational practices. By implementing an attendance system, educators can track student engagement and identify potential areas for intervention to ensure better student performance.
- Moreover, the feedback system allows students to provide honest and constructive criticisms of the teaching methods and overall learning experience. This feedback can help educators understand what works well and what needs improvement, leading to more effective teaching strategies and a more engaging learning environment.
- Overall, this study could contribute to enhancing the quality of education by fostering a more interactive and responsive approach to teaching and learning based on student feedback and attendance data.

1.7. JUSTIFICATIONS OF THE STUDY

The justification for implementing an attendance system for students and an anonymous feedback system where students can comment on teaching methods can be multi-faceted:

- **Enhancing Student Engagement:** An attendance system helps ensure that students are attending classes regularly, which can lead to better learning outcomes. Additionally, providing students with a platform to give feedback on teaching methods can increase their engagement in the learning process and make them feel heard.

- **Quality Improvement:** The feedback provided by students can offer valuable insights into the effectiveness of teaching methods, helping instructors identify areas for improvement. This can ultimately lead to an enhanced learning experience for students.
- **Accountability and Transparency:** An attendance system can promote accountability among students to attend classes, while an anonymous feedback system allows students to express their opinions freely without fear of repercussions. This promotes transparency in the teaching and learning process.
- **Continuous Improvement:** By collecting feedback from students on an ongoing basis, instructors can continuously improve their teaching methods and adapt to the needs and preferences of their students. This can contribute to a more dynamic and effective learning environment.
- **Student Satisfaction:** Implementing systems that allow for student feedback demonstrates a commitment to student-centered education. Addressing student concerns and making improvements based on their feedback can lead to increased satisfaction and engagement among students.

1.8. DELIMITATION OF THE STUDY

- The study will focus solely on student attendance and feedback systems within a specific educational institution or program.
- The study will not explore other factors that could influence student attendance or feedback, such as personal traits, external circumstances, or institutional policies.
- The study will not consider the perspectives of other stakeholders, such as parents, or external evaluators.
- The study will not have other features of a student management system like the fee management, given that attendance and feedback are part of a student management system.

1.8.1. Thematic Scope

The goal of this project, DESIGN AND IMPLEMENTATION OF AN ATTENDANCE/ANONYMOUS FEEDBACK SYSTEM, case study ESCHOSYS TECHNOLOGIES, is to assist ESCHOSYS manage their trainee's attendance and provide a platform where students can comfortably give their feed on trainers methods of teaching.

1.8.2. Geographical scope

The internship place is located opposite Hotel Mendjang at ACACIA, Yaoundé Center region.

1.8.3. Time scope

The internship period took place within three months from June 03rd 2024, until August 31st, 2024. The idea of this project came to me when I noticed how attendance was taken. For the feedback system, I got the idea when I needed to lay a complaint but felt uncomfortable telling the teachers because I didn't want them knowing it came from me.

1.9. ORGANIZATION OF THE STUDY

This study is organized in five chapters;

- Chapter one provides an introduction to the study and discusses the scope of the study.
- Chapter two that presents the literature of the study.
- Chapter three, we have details of the methodology used in the study.
- Chapter four shows the result of the study, we see the different interfaces of the designed system.
- Chapter five, we have a summary, findings and recommendations on our study.

CHAPTER TWO: LITERATURE REVIEW

INTRODUCTION

A literature review is a critical analysis of existing literature on a particular topic this case, an Attendance/Anonymous feedback system or research question. This chapter provides presentations of the internship activities as well as examining the review by theories, reviews by concepts and review by objective.

2.1. THEORETICAL REVIEW

This system integrates a student attendance system with an anonymous teacher feedback mechanism, which recognises the connection between presence, engagement, and student voice in fostering a positive learning environment. The system has several key educational theories:

1. Student Attendance as Engagement Indicator:

Theory: While attendance alone doesn't guarantee learning, consistent presence is often correlated with active participation and a stronger sense of belonging, factors known to influence academic outcomes (**Fredricks et al., 2004**).

Application: Automated attendance tracking provides real-time data, enabling early identification of potential disengagement or issues hindering student presence.

2. Student Empowerment and Feedback:

Theory: Student-centered learning emphasizes student agency. Empowering students to provide feedback on their learning experiences fosters a sense of ownership and values their perspectives in shaping teaching practices (**McCombs & Whisler, 1997**).

Application: The anonymous feedback system gives students a voice without fear of reprisal, encouraging honest reflections on teaching methodologies and their impact on learning.

3. Constructive Feedback for Improvement:

Theory: Constructivism views feedback as crucial for active learning and knowledge construction. Timely, specific, and actionable feedback helps students identify areas for growth and adjust their learning strategies (**Hattie & Timperley, 2007**).

Application: The feedback system allows students to articulate their understanding, identify areas needing clarification, and participate in shaping a more responsive learning environment.

4. Data-Driven Insights & Interventions:

Theory: Data-driven decision making leverages data to inform and improve practices. Analyzing attendance patterns in conjunction with student feedback provides a more holistic understanding of student engagement and potential areas for intervention (**Mandlawitz, 2019**).

Application: The system generates both quantitative (attendance) and qualitative (feedback) data, allowing educators to identify trends, target support, and adapt teaching to better meet student needs.

5. Ethical Data Use:

Theory: Ethical considerations, including privacy, anonymity, and informed consent, are paramount when collecting and utilizing student data (**FERPA, 1974**).

Application: The system prioritizes student privacy through anonymous feedback and transparent data practices.

Expected Outcomes:

This integrated system aims to:

- **Improve Teacher Effectiveness:** Providing actionable feedback allows teachers to adjust their methodologies, fostering a more student-centered learning environment.
- **Enhance Student Engagement:** Addressing attendance barriers and giving students a voice can increase motivation, ownership, and active participation in learning.
- **Promote Data-Driven Culture:** The system encourages data-informed decision-making for continuous improvement in teaching practices and student support.

2.2. CONCEPTUAL REVIEW

Overall, this conceptual review will provide a comprehensive overview of the key concepts and theories related to an Integrated Student Attendance and Anonymous Teacher Feedback System, and will highlight core components of a system designed to enhance education through automated attendance tracking and confidential student feedback. We shall define various components of the study:

1. Attendance:

- **Attendance Tracking:** The process of recording and monitoring student presence in class, usually by marking them as present or absent. This data can be collected manually (e.g., roll call) or electronically (using attendance systems).
- **Attendance Rate:** The percentage of classes a student attends compared to the total number of classes scheduled. It's a key indicator of student engagement and academic success.

2. Anonymous Teacher Feedback:

- **Anonymity:** The concept that student feedback is provided without revealing the student's identity to the teacher(s). This is critical for fostering honesty, as students are more likely to express their true opinions and concerns without fear of reprisal.
- **Feedback Analysis:** The interpretation of feedback data to identify patterns, themes, and insights that can guide teacher development and improvement.

3. Integration:

- **System Integration:** The process of combining the attendance tracking and anonymous feedback systems into a single platform or application. This allows for data sharing, streamlined user experience, and a holistic view of student engagement.

4. Security and Privacy:

- **Data Encryption:** Protecting sensitive data, like student names and feedback responses, using encryption techniques to prevent unauthorized access.
- **Access Control:** Limiting access to data based on user roles and permissions, so only authorized individuals can view and modify information.
- **Anonymity Protection:** Ensuring that student identities are never revealed in the feedback system, even to the teacher.

2.3. EMPIRICAL REVIEW

This empirical review aims to analyse and evaluate existing research studies related to student attendance and teacher anonymous feedback systems. Specifically, this review will examine the design and implementation of student attendance and teacher anonymous feedback systems, their impact on student performance, and the challenges and opportunities associated with these systems. By synthesizing existing research, this review will provide insights into best practices for student attendance and teacher anonymous feedback system design and implementation, as well as identify areas for future research and development. Below are some reviews on inventory management:

It is likely that many students hold back from answering or responding through peer pressure or the potential embarrassment of publicly giving the wrong answer. This in turn may mean that only the more confident or able student respond, when they are least in need of instructor attention (**Durbin & Durbin, 2006; Fies & Marshall, 2006; Kay, 2009**).

"The Impact of Attendance on Student Achievement" (2018) - National Center for Education Statistics (NCES) - Highlights attendance as a critical factor in student achievement.

"Automated Attendance Systems: A Review" (2020) - Journal of Educational Technology Development and Exchange (JETDE) - Examines effectiveness and challenges of automated attendance systems.

"The Effects of Attendance on Student Engagement" (2019) - Journal of Educational Psychology (JEP) - Investigates relationship between attendance and student engagement.

"School Attendance and Student Performance" (2017) - Education Economics (EE) - Analyzes attendance impact on student performance.

"Attendance and Academic Achievement" (2016) - Journal of Educational Research (JER) - Explores attendance-academic achievement correlation.

"Anonymous Feedback Systems: A Study of Student Perceptions" (2020) - Journal of Educational Technology Development and Exchange (JETDE)
- Explores student attitudes toward anonymous feedback systems.

"The Impact of Anonymous Feedback on Teaching Practices" (2019) - Journal of Educational Psychology (JEP)
- Investigates how anonymous feedback influences teaching methods.

"Student Anonymous Feedback: A Tool for Improvement" (2018) - Education and Urban Society (EUS)
- Examines the potential of anonymous feedback for school improvement.

"Anonymous Online Feedback: A Study of Student Engagement" (2017) - Journal of Educational Multimedia and Hypermedia (JEMH)
- Analyzes the relationship between anonymous feedback and student engagement.

"The Effectiveness of Anonymous Feedback Systems" (2016) - Journal of Educational Research (JER)
- Evaluates the effectiveness of anonymous feedback systems.

2.4. PRESENTATION OF THE ENTERPRISE (INTERNSHIP)

The description of the internship site and the internship activities are included in this section of the study.

2.4.1. PRESENTATION OF THE INTERSHIP

ESCHOSYS TECHNOLOGIES is a tech company that is geared towards leveraging tech services, solutions and training to the Cameroonian population and those abroad. The company is founded by Lwanga Anslem Fomonyuy a tech-preneur whose passion is aimed at encouraging young Cameroonians to embrace tech and use technology in generating income for sustainable living standards. He founded ESCHOSYS in 2022 and it started its timid operations in the early days of 2023 and became fully operational in as from the 3rd of June 2024.

It is found in Cameroon, the nation's political capital Yaounde precisely in the Nfundi division (Yaounde IV). It is located at Accassia neighbourhood behind Mendjang Restaurant (20 metres from Mendjang Restaurant).

ESCHOSYS TECHNOLOGIES is a tech company which is highly involved in different tech activities like: software development (frontend and backend), android application development, data analysis, data analytics, installation and configuration of cameras (CCTV and I.P cameras), installation and configuration of solar panels, installation and configuration of satellite antennas, graphic design (Adobe photoshop, Adobe illustrator, Indesign etc), writing of scientific articles and assistance in project writing, assembling and flying of drones, computer hardware maintenance, installation and configuration of computer networks, digital marketing (running of facebook ads, google ads), search engine optimisation (SEO), cyber security and ethical hacking services (reverse engineering), installation and configuration of GPS, setting up smart homes, embedded system services and desktop application development.

2.4.1.1. PRESENTATION OF THE DIFFERENT DEPARTMENT OF THE COMPANY

ESCHOSYS TECHNOLOGIES is a sun rising Tech Company that is made up of few but active departments. Some of the functional departments in ESCHOSYS are:

a. The I.T (Information technology) department

This department serves as the live wire of ESCHOSYS. This is so because ESCHOSYS is a tech company that most deal with tech solutions, services or products and all the tech personnels are highly involved in all the tech activities

b. The marketing department

This is a very important department at ESCHOSYS because it is responsible for marketing the company products, creating awareness of internship opportunities, available training programs and courses and making available prominent services of the company like a learning management system (LMS) that serves as an e-learning platform for customers (schools) and for the company in particular

c. The public relationship department

This department ensures that contracts and partnership agreement between ESCHOSYS and her customers is materialized and effectively executed

d. The human resource management department

This department is in charge of recruiting new trainers/professionals are recruited into the company based on severe recruitment procedures

e. The management department

This department oversees all the different activities of the company and ensures that management is at its peak performance to guarantee the wellbeing and sustainability of the company.

2.4.2. ACTIVITIES CARRIED OUT DURING THE INTERNSHIP

WEEK	ACTIVITIES
Week 1 and 2	<ul style="list-style-type: none">• Presentation of the internship place and various fields to be taught• Design of logos using Adobe illustrator• Design of flyers using Adobe Photoshop• Html and CSS basics
Week 3 and 4	<ul style="list-style-type: none">• Building of web pages using Html, CSS and Javascript• Introduction to Cyber security
Week 5 and 6	<ul style="list-style-type: none">• Building of web pages using Wordpress• Building web pages using frameworks like Bootstrap and Tailwindcss
Week 7 and 8	<ul style="list-style-type: none">• Introduction to php and linking databases• Introduction to Visual studio (.NET framework)
Week 9 and 10	<ul style="list-style-type: none">• Building websites and how to host them on the internet and push to github account• Basics on Node.js
Week 11 and 12	<ul style="list-style-type: none">• Assessment and evaluation

2.4.3. INTERNSHIP EXPERIENCE

My internship experience was a good one. I had the privilege to learn a lot of things which include;

- Building of web pages and hosting using Html, CSS, Javascript and PHP

- Building of webpages using Wordpress, Bootstrap and Tailwindcss
- Cyber security
- Visual studio (.NET framework)
- Adobe photoshop and Illustrator.

2.4.4. STRENGTH AND WEAKNESS

This part of the work contains the strengths and weaknesses of the internship place.

2.4.4.1. STRENGTHS

Though ESCHOSYS TECHNOLOGIES is a sun rising Tech Company, there exist many merits that makes ESCHOSYS outweigh other tech companies. Some of these advantages that make the company powerful are:

1. Innovation and Cutting-Edge Technology

Unlike other tech companies, ESCHOSYS has embraced technology and deal with licensed software and purchase software product without solely relying on null resources which can fail at any given time. Also ESCHOSYS has good soft skills that permit IoT services to be integrated in their services.

2. Quality and Reliability

- High-Quality Standards: Ensuring that products and services meet the highest quality standards, ESCHOSYS also ensure that training offered to trainees and services rendered are of quality based on feedback and testimonies from customers.
- Reliability and Performance: they offer reliable and high-performance solutions that customers can depend on.

3. Customer-Centric Approach (customer satisfaction)

- The tech team of ESCHOSYS are always on the fact that when the customers are satisfied, they will also be satisfied. By so doing, the customers turn to get the best from ESCHOSYS team

4. Skilled and Experienced Team

- Expertise: ESCHOSYS has a team of highly skilled and experienced professionals who are experts in their respective fields.
- Continuous Learning: Encouraging ongoing training and professional development to keep the team updated with the latest technologies is a sole responsibility of the management of ESCHOSYS.

5. Strategic Partnerships and Alliances

ESCHOSYS via their public relation offer is aimed at ensuring that the company secures good partnership deals which end up benefiting the company as compared to other tech companies

6. Feedback

A survey is regularly conducted at ESCHOSYS by the management to get feedback from trainees, customers and what would be customer will desire to have. With all of these, mistakes are quickly correct on time before the escalate to severe irreparable problems

7. Free services/Customer service

ESCHOSYS render some services like computer maintenance to her customers especially interns who are in the company. Also, ESCHOSYS is flexible in her payment policies and constant follow up of trainees and customers to ensure the best of what they wanted is gotten.

2.4.4.2. WEAKNESSES

Though there might be so many positive aspects about ESCHOSYS, there are also some few drawbacks that need adjustments. Some of these drawbacks are:

1. Marketing

At times the marketing team is very lax and this goes a long way to retard the visibility of the company and the services offered by the company as a whole.

2. Punctuality of trainers/Tech professionals

Provided that most of the tech professionals of ESCHOSYS develop software into the late hours of the night, they mostly come late to the company. This goes a long way to affect the stipulated objectives and the company objectives as whole and expected outcomes.

2.4.5. Problems encountered

Though ESCHOSYS was best of an internship place, there are also challenges encountered carrying out internship. Some of the challenges encountered are:

- **Lack of a safe and confidential platform to lay my worries an intern**

During the internship period, I had difficulties in sharing my concerns, suggestions and feedback regarding the methods used by the instructors to educate us. This was due to a fear of retaliation or judgment from the instructors or from other students. Hence, there were many unaddressed concerns which limited my rate of grasping knowledge and personal satisfaction.

- **Transportation**

It was not very easy to continuously carry out internship for all working internship days at ESCHOSYS. They were days that I as the trainee could not make it at the internship place because of taxi fare since I was living relatively far from the internship place.

- **Internship fee**

With the aim to purchase the necessary material needed by the trainers to transmit skills, there was need for a minimal amount as internship fee. This was still a problem to the

intern as at given moments raising transport and raising the internship fee was a bit difficult

- **Language challenges**

Helping out fellow internship mates and friends with some difficulties because they could not master the language (English or French) some of the software were installed or the trainers were teaching is another challenge. This ending up with a good experience because modern AI tools that have aided translation and configuring of software. Communicating fluently with those of purely French background was also a challenge

2.4.6. RECOMMENDATIONS

Some of the few recommendations as regards the various challenges and weaknesses encountered at ESCHOSYS TECHNOLOGIES are:

Provision of an anonymous platform where students can lay their complaints

Doing this will help students comfortably talk of their difficulties and maybe give the reasons for those difficulties (which could be the method used to educate them).

Assiduity

Trainers should always endeavour to be on time at the company. This will go a long way to meet company objectives and the internship program scheduled for the period available

Marketing

The management of ESCHOSYS should cease from giving a blind eye to the laxity of the marketing department. If serious measures are not taken, the might loss popularity and visibility to the entire world provided is just a sun rising company

2.5. PRESENTATION OF THE PROJECT MANAGEMENT PLAN

The goal of this project is to create a simple and effective system that helps teachers track student attendance and allows students to give anonymous feedback about their classes. The project will be divided into several key steps to ensure everything runs smoothly.

1. Planning and Analysis Phase: In the beginning, I will gather information about what students and teachers need from the system. This will involve surveys and meetings with both groups to understand their requirements and expectations. I will define the project's goals, what features are necessary, and how the system should work.

2. Design Phase: Once I have a clear understanding of the requirements, I will move on to designing the system. This includes creating sketches of how the application will look (wireframes) and outlining how different parts of the system will connect (system architecture). I want to ensure that the design is user-friendly and meets the needs identified in the planning phase.

3. Development Phase: After finalizing the design, I will start building the system. I will write the code for both the attendance tracking feature and the feedback collection feature. This phase involves using programming languages and tools to bring my design to life, ensuring that both parts of the system work well together these programs include; Html, CSS, Javascript, PHP, Bootstrap.

4. Testing Phase: Once the development is complete, I will test the system thoroughly. This includes checking for any bugs or issues and making sure everything functions as intended. I will conduct unit tests (testing individual parts) and user acceptance testing (getting feedback from actual users) to ensure the system is reliable and user-friendly.

5. Deployment Phase: After successful testing, I will launch the system for all students and teachers to use. This includes setting up the necessary hardware and software so that everyone can access it easily. I will also provide training sessions to help users understand how to use the new system effectively.

6. Maintenance Phase: After deployment, I will continue to support the system by monitoring its performance and fixing any issues that arise. I will also gather on-going feedback from users to make improvements over time. Regular updates will be planned to enhance features based on user suggestions.

2.5.1. Purpose of the plan

A comprehensive plan is essential for building a successful integrated student attendance and anonymous teacher feedback system. It provides a roadmap, ensuring everyone involved understands the project's goals, scope, and how it will be achieved. The plan acts as a blueprint, outlining the phases of development, from initial requirements gathering to final implementation and on-going monitoring.

It also helps me anticipate and manage potential risks, such as technical issues, user resistance, or data security concerns. By identifying these challenges upfront, i can develop effective mitigation strategies, ensuring the project stay on track and avoid major setbacks. A well-defined plan facilitates clear communication with all stakeholders, including students, teachers and administrators. This transparency fosters trust and ensures everyone is aligned on expectations and timelines.

The plan also guides the implementation process, ensuring a smooth transition from development to deployment. It includes strategies for user training and on-going support, maximizing the system's effectiveness. Furthermore, it outlines methods for monitoring and evaluating the system's impact, providing valuable data for on-going improvement and ensuring the project achieves its intended outcomes. In essence, a solid plan is the foundation for a successful integrated system, fostering collaboration, managing risks, and maximizing the benefits for students, teachers, and the entire school community.

2.5.1.2. Executive Summary

The proposed system is a multifaceted solution that combines an attendance tracking system with an anonymous feedback platform, designed to enhance communication, accountability, and feedback mechanisms within educational institutions. At its core, the system aims to streamline the process of recording and monitoring student attendance while fostering a culture of constructive feedback through anonymous channels.

Teachers play a pivotal role in the educational ecosystem, and the system simplifies their task of marking attendance by providing an efficient digital platform. Through the system, teachers can easily track student attendance, identify patterns of absenteeism, and monitor class participation. This streamlined process not only saves time but also improves the accuracy of attendance records, enabling teachers to focus more on student engagement and academic delivery.

In addition to attendance tracking, the system incorporates an anonymous feedback feature that empowers students to express their opinions and provide constructive feedback on teaching methods, classroom environment, and overall learning experience. By allowing students to submit feedback without the fear of repercussion, the system encourages candid and honest responses, leading to valuable insights for teachers and administrators to enhance their practices and address concerns effectively.

Administrators play a crucial role in managing the system and ensuring its smooth operation. They have the authority to add or remove users, generate attendance reports, and oversee the feedback submissions. Through robust user management functionalities, administrators can maintain the integrity of the system, safeguard user privacy, and access pertinent data to make informed decisions that support the overall educational goals of the institution.

The system's integration of attendance tracking and anonymous feedback systems offers a holistic approach to improving the educational experience. By leveraging technology to automate routine tasks, the system frees up valuable time for teachers and administrators to focus on strategic initiatives and student engagement. Furthermore, the anonymous nature of the feedback system promotes transparency, trust, and constructive dialogue between students and educators, fostering a culture of continuous improvement and collaboration.

With an emphasis on user-friendly interfaces, data security, and scalability, the system is designed to cater to the diverse needs of educational institutions of varying sizes and complexities. By providing a centralized platform for attendance management and feedback collection, the system offers a comprehensive solution that enhances communication, accountability, and feedback loops within the educational framework.

Overall, the proposed system represents a significant advancement in leveraging technology to optimize educational processes, promote student engagement, and foster a collaborative learning environment. By combining attendance tracking with anonymous feedback mechanisms, the system empowers stakeholders to drive positive change, enhance teaching practices, and create a supportive educational ecosystem that benefits both students and educators alike.

2.5.1.3. Assumptions and Constraints

2.5.1.3.1. Assumptions

In developing the attendance system integrated with an anonymous feedback platform, I made several assumptions to guide the design and implementation process. These assumptions are based on anticipated user behaviours, system requirements, and operational considerations to ensure the system's effectiveness and usability. The most important assumptions I made were:

1. User Participation: It is assumed that both teachers and students will actively engage with the system by regularly updating attendance records and providing feedback. The system's success relies on consistent user participation to generate accurate attendance data and meaningful feedback insights.

2. Data Accuracy: The system assumes that the attendance data entered by teachers is correct and reflects the actual student presence in class. Similarly, the anonymous feedback provided by students is assumed to be genuine and constructive, contributing valuable insights for improvement.

3. System Security: It is assumed that the system employs robust security measures to protect user data, ensure anonymity in feedback submissions, and prevent unauthorized access to sensitive information. Data privacy and confidentiality are paramount considerations in system design.

4. Feedback Quality: The system assumes that the anonymous feedback submitted by students is relevant, respectful, and focused on improving teaching practices and the overall learning experience. Feedback quality is essential for driving positive change and enhancing educational outcomes.

2.5.1.3.2. Constraints

In building the attendance system linked with an anonymous feedback system, I took several constraints into consideration to ensure the system's functionality and effectiveness:

1. Data Privacy: One of the key constraints is the need to maintain strict data privacy standards, particularly when handling sensitive information such as attendance records and anonymous feedback. The system must comply with data protection regulations to safeguard user privacy and prevent unauthorized access to personal data.

2. User Authentication: Ensuring secure and accurate user authentication poses a constraint in developing the system. Implementing robust authentication mechanisms to verify the identity of users accessing the system is crucial for maintaining data integrity and preventing unauthorized access.

3. Scalability: The system must be designed to accommodate potential growth in user base and data volume over time. Scalability constraints require careful planning to ensure that the system can effectively handle increased usage without compromising performance.

4. Feedback Moderation: Managing and moderating anonymous feedback submissions presents a constraint in dealing with potentially inappropriate or harmful content. Implementing effective

moderation processes and mechanisms to filter out irrelevant or harmful feedback is essential to maintain a positive feedback environment.

5. Technical Compatibility: Ensuring compatibility with existing hardware, software, and network infrastructure poses a constraint in system development. The system needs to be compatible with various devices and platforms to ensure seamless functionality for all users.

6. User Training and Support: The need to provide adequate user training and support services is a constraint to consider. Ensuring that users, including teachers, students, and administrators, are proficient in using the system and understand its features is essential for successful implementation.

7. Feedback Analysis Tools: Constraints related to the availability of tools for analyzing and interpreting feedback data may impact the system's ability to derive meaningful insights from the feedback received. Access to robust feedback analysis tools is crucial for extracting valuable information from the feedback submissions.

2.5.2. Scope Management

Managing the scope of a student attendance system coupled with an anonymous feedback system involves several key steps to ensure the project's success. These include:

1. Requirements Gathering: The first step is to gather and document the requirements for both the student attendance system and the anonymous feedback system. This involves understanding the needs of users, stakeholders, and any regulatory requirements that need to be met.

2. Scope Definition: Clearly define the scope of the project by outlining the features and functionalities that will be included in the student attendance system and the anonymous feedback system. This includes specifying the attendance tracking methods, reporting capabilities, feedback submission process, and anonymity features.

3. Scope Planning: Develop a scope management plan that details how the scope will be defined, validated, and controlled throughout the project. This plan should outline the roles and responsibilities of team members, the process for handling scope changes, and the criteria for determining project success.

4. Scope Verification: Regularly review the project scope with stakeholders to ensure that it aligns with their expectations and requirements. This involves validating that the deliverables meet the agreed-upon scope and seeking formal acceptance from stakeholders.

5. Scope Control: Implement a robust change control process to manage any changes to the project scope. Evaluate proposed changes against the project objectives, schedule, and budget to determine their impact before approving or rejecting them. This helps prevent scope creep and ensures that the project stays on track.

2.5.2.1. Work breakdown structure

Work breakdown structure includes:

1. Project Initiation: The project initiation phase involves defining the project scope, objectives, and identifying key stakeholders. It sets the foundation for the project and ensures that all stakeholders are aligned on the goals and deliverables.

2. Attendance System Development: The development of the attendance system includes researching various attendance tracking methods, designing a user-friendly interface for recording attendance, developing a backend system for storing attendance data securely, and conducting rigorous testing to ensure the system functions seamlessly.

3. Anonymous Feedback System Implementation: Implementation of the anonymous feedback system involves gathering requirements for feedback submission, creating a platform for users to submit feedback anonymously, implementing features for viewing and analysing feedback, and ensuring data security and anonymity measures are in place to protect user privacy.

4. Integration and Testing: Integrating both systems involves merging the attendance system with the feedback system, conducting user acceptance testing to validate the integrated system's functionality, and resolving any issues or bugs identified during testing to ensure a smooth and cohesive user experience.

5. Training and Deployment: Training materials are developed to educate stakeholders on how to use the integrated system effectively. Training sessions are conducted to ensure users understand the system, and finally, the integrated system is deployed for practical use by students, faculty, and staff members.

6. Monitoring and Maintenance: The project includes establishing monitoring protocols to track system performance, providing ongoing maintenance and support to address any issues that arise post-deployment, and collecting feedback for continuous improvement to enhance the overall user experience.

2.5.2.2. Deployment plan

The deployment plan is as follows

1. System preparation: I will ensure that the attendance system and anonymous feedback system are fully developed, tested, and integrated before deployment to ensure seamless operation. I will make sure that all necessary hardware, software, and network requirements are in place for smooth functionality.

2. User training: I will develop training materials and conduct training sessions for stakeholders, including students, faculty, and staff, on how to use the integrated system effectively. I will provide guidance on recording attendance, submitting anonymous feedback, and navigating the system for optimal user experience.

3. Data migration: I will transfer existing data, such as student information and feedback records, to the new system for continuity and accessibility of historical data for analysis and reporting.

4. Pilot testing: I will conduct a pilot deployment phase with a small group of users to identify any potential issues, collect feedback, and make necessary adjustments before rolling out the system to a larger audience.

5. Full rollout: Once the pilot testing phase is successful, I will proceed with the full deployment of the integrated system across all relevant departments and user groups. I will monitor system performance, user feedback, and address any issues promptly to ensure a smooth transition and optimal user satisfaction.

6. Post deployment support: I will provide on-going maintenance, technical support, and training as needed to address any user queries, system updates, or enhancements for continuous improvement of the attendance and feedback system post-deployment. I will regularly gather feedback from users to optimize system functionality and user experience.

2.5.2.3. Change Control management

Change control management is crucial for maintaining the integrity and functionality of an attendance system coupled with an anonymous feedback system. In simple terms, change control management refers to the process of identifying, evaluating, and implementing changes to the system in a controlled and systematic manner.

Firstly, any proposed changes to the system, such as adding new features, modifying existing functionalities, or fixing issues, need to be documented and assessed for their impact on the system. This includes evaluating the potential benefits, risks, and implications of the proposed changes on system performance and user experience.

Secondly, a formal change control process should be established to review and approve any modifications to the system. This process includes submitting change requests, conducting impact assessments, obtaining approvals from relevant stakeholders, and documenting the changes made to the system.

Thirdly, changes should be implemented in a staged and controlled manner to minimize disruptions to system operations. Testing of the changes in a controlled environment is essential to ensure that they do not introduce any unintended consequences or errors to the system.

Lastly, regular monitoring and evaluation of the implemented changes are necessary to verify their effectiveness and address any issues that may arise post-implementation. Change control management helps ensure that the attendance system and feedback system continue to function effectively and meet the needs of users in a reliable and secure manner

2.5.2.4. Report (Project Summary, milestones, working days etc)

Working on the project alone can be challenging, but it also allows for greater control and flexibility.

Project Summary

The Integrated Attendance and Anonymous Feedback System is a comprehensive solution designed to track student attendance and gather constructive feedback anonymously.

Objectives

1. Accurately record student attendance.
2. Provide a secure and anonymous feedback mechanism.
3. Enhance student participation and engagement.
4. Foster a culture of transparency and accountability.

Milestones

1. Requirements gathering and system design (Completed)
2. Attendance module development (In progress)
3. Anonymous feedback module development (Next)
4. Integration and testing (Upcoming)
5. Pilot testing and training (Scheduled)
6. Full deployment (TBD)

Working Days

- Project duration: 20 weeks
- Working days: Monday
- Friday (8 hours/day)

2.5.3. Schedule and Time management

Effective schedule and time management are crucial for the successful development and implementation of the Integrated Attendance and Anonymous Feedback System. This project requires careful planning, coordination, and execution to ensure timely completion and meet stakeholder expectations.

2.5.3.1. Milestones management

Managing the Attendance and Feedback System Project

To finish the project quickly, I've made a plan that takes 12 weeks. Here's how it will work:

First, I'll figure out what's needed for the project (2 weeks).

Then, I'll build the attendance tracker (3 weeks).

Next, I'll create the anonymous feedback tool (3 weeks).

After that, I'll make sure everything works together smoothly (2 weeks) and test it (1 week).

Finally, I'll launch the complete system (week 12).

To stay on track, I'll:

- Check progress every 2 weeks
- Use project management tools
- Fix problems quickly

I'll make sure each step is done well, on time, and meets requirements. By following this plan, I'll finish the project in 12 weeks.

2.5.3.2. Schedule management

Weekly Schedule: Mon-Fri (8hrs), Sat-Sun (2hrs) Milestones:

- Weeks 1-2: Requirements
- Weeks 3-5: Attendance Module
- Weeks 6-8: Feedback Module
- Weeks 9-12: Integration, Testing, Deployment

2.5.3.2.1. Dependencies/Activity Sequencing

Dependencies:

1. Attendance Module Development depends on Requirements Gathering.
2. Anonymous Feedback Module Development depends on Requirements Gathering.
3. Integration and Testing depends on completion of both Attendance and Feedback Modules.
4. Pilot Testing and Training depends on successful Integration and Testing.
5. Full System Deployment depends on successful Pilot Testing and Training.

Activity Sequencing:

Sequence 1: Requirements Gathering

Sequence 2: Attendance Module Development

Sequence 3: Anonymous Feedback Module Development

Sequence 4: Integration and Testing

Sequence 5: Pilot Testing and Training

Sequence 6: Full System Deployment

2.5.3.3. Schedule and Time Management Report

Project Schedule

My 12-week project plan includes:

Weeks 1-2: Planning and requirements gathering

Weeks 3-5: Building the attendance tracker

Weeks 6-8: Developing the anonymous feedback tool

Weeks 9-10: Testing and fixing issues

Week 11: User testing

Week 12: Launching the system

Time Management

My daily routine:

- Monday to Friday: 8 hours of focused work
- Saturday and Sunday: 2 hours of review and planning

Weekly tasks:

- Review progress and adjust schedule (Friday)
- Plan tasks for the next week (Sunday)

2.5.3.3.1. Network diagram report

The Integrated Attendance and Anonymous Feedback System's network diagram outlines the project's tasks, dependencies, and timelines. The project consists of six nodes: Requirements Gathering (RG), Attendance Module Development (AMD), Anonymous Feedback Module Development (AFMD), Integration and Testing (IT), Pilot Testing and Training (PTT), and Full System Deployment (FSD).

The dependencies between nodes are as follows: Requirements Gathering feeds into both Attendance Module Development and Anonymous Feedback Module Development. These modules then merge into Integration and Testing, which precedes Pilot Testing and Training. Finally, Pilot Testing and Training leads to Full System Deployment.

The critical path, determining the project's minimum duration, is: Requirements Gathering → Attendance Module Development → Integration and Testing → Pilot Testing and Training → Full System Deployment.

Task timelines are:

- Requirements Gathering (Weeks 1-2)
- Attendance Module Development (Weeks 3-5)
- Anonymous Feedback Module Development (Weeks 3-8)
- Integration and Testing (Weeks 9-10)
- Pilot Testing and Training (Week 11)
- Full System Deployment (Week 12)

Slack time, indicating flexibility in the schedule, is available for Attendance Module Development (1 week) and Anonymous Feedback Module Development (2 weeks). However, other tasks have no slack time, emphasizing their criticality to the project timeline.

This network diagram provides a clear visual representation of the project's workflow, highlighting dependencies and potential bottlenecks to ensure efficient project management.

2.5.3.3.2. To Level task report

The Integrated Attendance and Anonymous Feedback System project is divided into six major tasks. First, Requirements Gathering involves defining the project scope, identifying attendance tracking requirements, and identifying anonymous feedback requirements.

Next, Attendance Module Development entails designing the attendance database, developing attendance tracking features, and testing the attendance module. Similarly, Anonymous Feedback

Module Development includes designing the feedback database, developing anonymous feedback features, and testing the feedback module.

Integration and Testing combines the attendance and feedback modules, conducts unit testing, and performs integration testing. Then, Pilot Testing and Training involves conducting pilot testing with users, gathering feedback, resolving issues, and developing training materials.

Finally, Full System Deployment finalizes system configuration, deploys the system to the production environment, and conducts post-deployment testing.

2.5.3.3.3. Critical Task report

The Integrated Attendance and Anonymous Feedback System project has five critical tasks that determine its minimum duration. These tasks have zero or limited slack time, emphasizing their importance in meeting the project deadline.

Firstly, Requirements Gathering (Weeks 1-2) lays the foundation, defining the project scope, identifying attendance tracking requirements, and identifying anonymous feedback requirements.

Next, Attendance Module Development (Weeks 3-5) designs the attendance database and develops attendance tracking features. This task depends on the successful completion of Requirements Gathering.

Integration and Testing (Weeks 9-10) integrates the attendance and feedback modules and conducts integration testing. This critical task relies on the completion of both Attendance Module Development and Anonymous Feedback Module Development.

Then, Pilot Testing and Training (Week 11) conducts pilot testing with users, gathers feedback, and resolves issues, preparing for deployment.

Finally, Full System Deployment (Week 12) finalizes system configuration and deploys the system to the production environment.

