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***Leader in Innovative Technology***

ATTACHMENT REPORT

FACULTY OF COMPUTING AND INFORMATION TECHNOLOGY

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# 1.0 Executive Summary

During my Industrial Attachment period, I had the privilege to work with the Africa Blockchain Youth Ambassadors (ABYA), an organization situated in Rongai, Crystal Plaza. ABYA focuses on engaging university students to promote the adoption and proliferation of blockchain, web3, and cryptocurrencies across the African continent. This opportunity allowed me to be part of a dynamic team engaged in various impactful activities.

The selection of ABYA as my Industrial Attachment(IA) organization was based on my interest in blockchain technology and its potential to transform various industries in Africa. I submitted an application detailing my enthusiasm for the field and my willingness to contribute to the organization's goals.

The frame conditions agreed upon before my attachment were outlined in a contract. While the IA was unpaid, the invaluable experience I would gain overshadowed the lack of compensation. My working time mirrored standard office hours, and I was required to adhere to the organization's policies and guidelines.

My primary task during this period was to research and contribute to the development of a Learning Management System (LMS) tailored for the organization. The LMS aimed to provide a platform where individuals could subscribe to blockchain-related courses and make payments seamlessly. Each team member was assigned a specific research topic to enhance the LMS's overall functionality.

I was specifically assigned the task of researching version control systems and open-source hosting platforms. Successfully completing this task was a significant achievement, as it contributed to the overall technical foundation of the LMS. Moreover, I was entrusted with the responsibility of managing the organization's GitHub account throughout the development phase.

In addition to the technical aspects, we incorporated various features into the LMS. One noteworthy feature was the integration of 'blockcerts,' which facilitated the issuance and verification of blockchain-based certificates upon course completion. This innovation aligned perfectly with ABYA's vision of leveraging blockchain for educational purposes.

In conclusion, my time with Africa Blockchain Youth Ambassadors was both enriching and enlightening. I had the opportunity to contribute to the development of a groundbreaking Learning Management System while gaining hands-on experience in the world of blockchain technology. The exposure to a collaborative and forward-thinking environment further solidified my passion for this field and my commitment to its advancement in Africa.

# 2.0 Introduction of the IA Organization

### 2.0.1 Full Title, History, Mailing Address, and Web Links

The organization I was attached to is the "Africa Blockchain Youth Ambassadors (ABYA)." Established in 2021, ABYA is located at Rongai, Crystal Plaza, and its official website is https://abya.africa/. ABYA was founded with the goal of promoting the widespread adoption and understanding of blockchain technology, web3, and cryptocurrencies across the African continent.

### 2.0.2 Type of Ownership

ABYA operates as a non-profit organization, driven by the commitment to educate and empower young individuals in the field of blockchain technology.

### 2.0.3 Sector and Products/Services

ABYA operates in the technology and education sector, specifically focusing on blockchain and cryptocurrency education. The organization offers a range of educational services, including workshops, training programs, and online courses, aimed at enhancing the knowledge and skills of students and young professionals in the African region.

### 2.0.4 Customers/Beneficiaries

The primary beneficiaries of ABYA's initiatives are university students, young professionals, and anyone interested in understanding and leveraging blockchain technology. ABYA's efforts aim to equip individuals with the necessary knowledge to navigate the evolving landscape of blockchain and its applications, thereby contributing to their personal growth and potential career opportunities.

### 2.0.5 Organization Chart

Below is a simplified organization chart of Africa Blockchain Youth Ambassadors (ABYA):

- Founders and Board of Directors

- Mr Paul Mcolaka

ABYA Board of Directors is made up of a group of individuals elected to represent the interests of the broader stakeholders – beneficiaries, employees, donors/funders, volunteers and partners.

This organization chart reflects the hierarchical structure of ABYA, with key individuals leading various departments to achieve the organization's objectives in promoting blockchain education and awareness throughout Africa. Fully mandated with corporate governance, they define the rules, processes, and procedures designed to guide the way the organization make decisions and operate. In addition, ABYA Board has three levers through which it exerts its role as stakeholder fiduciaries, including: (1) the internal rules, processes, and policies it designates to guide secretariat’s behavior; (2) its choice of secretariat; and (3) the major resource allocation decisions it approves.

# 3.0 Description of Attachment

## 3.1 Weekly timetable

**Week 1 Report: Exploration of Open Source Version Control Systems and Hosting Platforms**

**Week at a Glance:**

Day 1 (5 Hours) - Introduction to DVCS:

- Researched Distributed Version Control Systems (DVCS) like Git and Mercurial.

- Explored the advantages and disadvantages of each system to understand their suitability for version control.

Day 2 (5 Hours) - Deep Dive into Git/GitHub:

- Focused on Git and its popular hosting platform, GitHub.

- Studied the implementation and practical applications of Git/GitHub in version control workflows.

- Enhanced my GitHub profile/portfolio by creating an impressive and descriptive README.md.

Day 3 (5 Hours) - Exploration of Other Hosting Platforms:

- Explored alternative hosting platforms, including GitLab and Bitbucket, to understand their features and benefits.

- Researched the various applications of each platform in the development ecosystem.

Day 4 (4 Hours) - Cloud-Based Hosting Solutions:

- Investigated cloud hosting providers such as AWS and Heroku.

- Analyzed the feasibility and integration options of hosting Git repositories on private servers.

Day 5 (Recap Day) - Team Bonding and Knowledge Sharing:

- Held a recap session with the team to share our research findings.

- Discussed the potential applications of different version control systems and hosting platforms in our development projects.

**Conclusion:**

Throughout this week, I immersed myself in exploring open source version control systems and hosting platforms, recognizing their indispensable role in modern development practices. My in-depth study of Distributed Version Control Systems (DVCS), particularly Git, solidified my understanding of version control principles and its essential collaboration capabilities. GitHub emerged as a powerful platform for hosting Git repositories, facilitating seamless collaboration and project management.

In addition to Git/GitHub, I also examined alternative hosting platforms like GitLab and Bitbucket, acknowledging their diverse applications in specific development scenarios. My research further extended to cloud-based hosting providers like AWS and Heroku, offering insights into scalable and flexible hosting options for projects.

By bonding with my team and sharing our research outcomes, we collectively enhanced our knowledge and awareness of version control and hosting solutions. This week's journey has reinforced the importance of cementing Git skills, leveraging open-source hosting platforms, and embracing a collaborative approach to elevate our development projects in an era of immersive collaboration.

**Week 2 Report: Introduction to Blockchain Basics, Web3, and Smart Contracts**

**Week at a Glance:**

Day 1 (6 Hours) - Introduction to Blockchain Basics:

- Started learning the basics of blockchain, comprehending its decentralized nature and how it functions.

- Gained insights into blockchain's core components, such as blocks, hashes, and consensus mechanisms.

Day 2 (5 Hours) - Solidity and Smart Contract Development:

- Dived into Solidity, a programming language specifically designed for creating smart contracts on the Ethereum platform.

- Utilized the browser IDE, Redux, to practice coding smart contracts.

Day 3 (5 Hours) - Building Basic Smart Contracts:

- Applied my knowledge of Solidity to develop a basic token contract, providing a foundational understanding of creating smart contracts.

Day 4 (5 Hours) - Enhanced Smart Contract:

- Developed a simple smart contract for student details, demonstrating how to store and retrieve information on the blockchain.

- Expanded the student details contract to accept transactions from other student accounts, enhancing its functionality.

Day 5 (5 Hours) - Improving Smart Contract Functionality:

- Enhanced the token contract with additional functionality, gaining further proficiency in creating versatile and dynamic smart contracts.

Day 6 (Recap Day) - Challenges and Discussions:

- Held a recap session to discuss the challenges encountered during the week's smart contract development.

- Shared insights and experiences with the team, fostering collaborative learning.

Conclusion:

This week has been an enthralling exploration of blockchain technology, Web3, and smart contracts. From grasping blockchain's decentralized essence to diving into Solidity for smart contract development, I've built simple contracts like tokens and student details. Enriching these contracts showcased their versatility. The recap session emphasized collaborative learning, motivating me to further delve into blockchain's potential to reshape industries. This week's insights drive my excitement to continue the journey in blockchain and smart contract development.

**Week 3 Report: Web3 Development, GitHub Organization Setup, and Git Exploration**

**Week at a Glance:**

Day 1 (6 Hours) - Web3 Development and Lottery Concept:

- Developed a Web3 website connected to Metamask, implementing a simple lottery machine concept.

- Achieved success in this guided example, laying a strong foundation for understanding blockchain development.

Day 2 (5 Hours) - Independent Web3 Implementation:

- Attempted an unguided implementation of the lottery concept from the previous day.

- Overcame challenges and completed the task, adding valuable experience to my skill set.

Day 3 (6 Hours) - GitHub Organization Setup:

- Created a GitHub organization account for our team.

- Configured the organization and invited team members to join, enhancing collaboration and version control practices.

Day 4 (6 Hours) - Deep Dive into Git:

- Continued research on version control systems, with a focus on Git.

- Explored the significance of decentralized version control systems in the development process.

Day 5 (4 Hours) - Git Commands and Detailed Report:\*

- Studied and documented the basic commands of Git and their practical implementations.

- Compiled a comprehensive report on my findings to solidify my knowledge of version control.

Day 6 (Recap Day) - Team Catch-Up and Progress Discussion:

- Met with the supervisor and team members for a recap session.

- Shared progress and ensured everyone was aligned and on the same page with our research work.

**Conclusion:**

This week's endeavors have been an incredible voyage of discovery encompassing blockchain development, Git version control, and collaborative teamwork. From crafting a Web3 website to independently executing a lottery machine concept, I've gained hands-on insight into blockchain and smart contracts.

Setting up a GitHub organization account streamlined our collaborative efforts, enhancing development practices. Immersing myself in Git's fundamental commands and decentralized version control enriched my understanding.

As the week concluded with a team catch-up, a sense of achievement fueled my eagerness to build upon these foundations. Armed with newfound insights, I'm excited to channel this experience into future projects, amplifying collaboration and innovation within our team.

**Week 4 Report: GitHub Workflows and Feature Branch Implementation**

**Week at a Glance:**

Day 1 (4 Hours) - Research on GitHub Workflows:

- Explored different GitHub workflows, including Centralized Workflow, Feature Branch Workflow, and Gitflow Workflow.

- Analyzed the advantages and disadvantages of each workflow to determine the best fit for our team's LMS development process.

Day 2 (9 Hours) - Feature Branch Workflow Implementation:

- Familiarized myself more with Git DVCS and its core functionalities.

- Dived deeper into the Feature Branch Workflow, ensuring a comprehensive understanding of its concepts.

- Tested and successfully implemented the Feature Branch Workflow, further cementing my decision to adopt it for our team.

Day 3 (5 Hours) - Pull Requests and Repository README:

- Discovered the importance of pull requests in the Feature Branch Workflow.

- Conducted research on pull requests and their practical applications.

- Created a repository README to document my findings on pull requests and shared it on our organization's GitHub account.

Day 4 (6 Hours) - Emphasis on Feature Branch Workflow:

- Affirmed that Feature Branch Workflow suited our team's needs as it encourages individual branches, collaborative discussions, and pull requests for merging changes.

- Took a break to recharge and refresh.

Day 5 (7 Hours) - Job Search and Team Meeting:

- Initiated a search for job opportunities while practicing pull requests on my personal projects.

- Met with the supervisor and team members, discussing my discoveries and updates.

- The team unanimously agreed on the adoption of the Feature Branch Workflow.

**Conclusion:**

This week's exploration of GitHub workflows and Git DVCS has been an enlightening journey. Through thorough research and hands-on practice, I've gained a deep understanding of various workflows, ultimately selecting the Feature Branch Workflow for our team's LMS development. Its emphasis on individual branches and collaborative pull requests promises to enhance our development efficiency. Delving into pull requests provided valuable insights, documented in a repository README for effective knowledge sharing. Applying Git skills in personal projects and job searches has solidified my command over Git commands. The team's enthusiastic adoption of the chosen workflow in our recap meeting strengthens our collaborative spirit. With the Feature Branch Workflow and refined Git skills, our team looks forward to successful LMS development and future projects with confidence and cohesion.

**Week 5 Report: Docker Learning and Tutor LMS Implementation**

**Week at a Glance:**

Day 1 (4 Hours) - Introduction to Docker:

- Initiated the learning process for Docker and Docker Compose, understanding their importance in the development ecosystem.

- Recognized the significance of Docker for the ABYA LMS project, particularly with the utilization of the Docker-based tutor distribution for Open edX.

Day 2 (9 Hours) - Docker Setup and Minor Implementations:

- Installed the latest versions of Docker and Docker Compose on my local machine.

- Created a private Docker Hub account to join the community of developers.

- Successfully pulled official images from Docker Hub and ran them locally, gaining practical experience with Docker.

Day 3 (5 Hours) - Docker Progress and Milestones:

- Celebrated reaching a significant milestone by becoming part of the Docker Hub developer community.

- Made minor adjustments to the tutor image and re-built it, leading to a successful local run.

Day 4 (6 Hours) - Challenges and Debugging:

- Encountered errors during the image rebuilding process, leading to frustration and hours of debugging.

- Identified that changes to tutor had to be made directly in the official Open edX repository, as tutor relied on it for references.

Day 5 (7 Hours) - Lessons Learned and Team Collaboration:

- Embraced the valuable lessons learned from the day's challenges and frustrations.

- Met with the team and supervisor for a recap session, discussing the hurdles faced during tutor installation and local setup.

- Explored potential solutions to overcome the challenges together.

**Conclusion:**

This week encompassed an intensive journey of Docker education and the initial stages of implementing the tutor-based LMS project at ABYA. Gaining a crucial grasp of Docker and its applications has streamlined our development, aiding efficient application deployment. Despite encountering challenges in customizing the tutor image, we recognized the necessity to modify the official Open edX repository directly. A collaborative recap session reinforced our shared determination to surmount obstacles. Moving forward, armed with Docker expertise, we are poised to overcome complexities and ensure the triumph of the ABYA LMS project.

**Week 6 Report: Exploring Tutor LMS and Tutor-Indigo for Customization**

**Week at a Glance:**

Day 1 (5 Hours) - Tutor Customization Exploration:

- Explored the Tutor repository to assess its customization capabilities for our LMS project.

- Found that Tutor was somewhat rigid in terms of customization options, offering only minor adjustments.

Day 2 (9 Hours) - Cloning Open edX Repository:

- Cloned the official Open edX repository from GitHub in pursuit of more customization options.

- Encountered technical challenges during the installation process, as it involved complex individual scripts.

Day 3 (5 Hours) - Tutor-Indigo Plugin Discovery:

- Discovered the Tutor-Indigo plugin, which appeared to be a potential breakthrough in terms of customization.

- Explored the capabilities of Tutor-Indigo, focusing on UI, logo, and content customization.

- Grasped the themefication concept and advanced concepts related to Tutor-Indigo.

Day 4 (5 Hours) - Learning Tutor-Indigo in Detail:

- Deepened understanding of Tutor-Indigo and its customization features.

- Took a break to refresh and recharge.

Day 5 (6 Hours) - Recap and Decision Making:

Met with team members and supervisors for a recap and catch-up session.

- Unanimously decided to pursue the Tutor-Indigo route for customizing Tutor LMS due to its promising capabilities.

**Conclusion:**

This week marked an explorative journey as we sought the ideal solution for our Learning Management System. Initially, Tutor LMS presented limitations in customization, leading us to venture into the official Open edX repository. A turning point arrived with the discovery of Tutor-Indigo, a plugin offering enhanced customization. Despite complexities, our focus on UI, logo, and content customization affirmed its potential. The team's unanimous decision to embrace Tutor-Indigo during our recap session positions us confidently to achieve our ABYA Learning Management System goals.

**Week 7 Report: Exploration and Customization of Learning Management Systems**

**Week at a Glance:**

Day 1 (6 Hours) - Exploring Tutor LMS:

- Installed and activated the "tutor-indigo" plugin for Tutor LMS.

- Made UI changes, including updating the logo and modifying some content.

- Successfully rebuilt the Docker image, with the changes being reflected in the system.

Day 2 (7 Hours) - Discovering django-lms:

- Came across the "django-lms" repository, which offered ease of understanding, Django-based framework, and almost all the necessary LMS functionalities.

- Ran the dockerized django-lms locally and explored its customization capabilities.

- Upgraded the django-lms to the latest libraries and Django versions, and configured django-tailwind for easier styling.

Day 3 (8 Hours) - Full Customization with django-lms:

- Explored and utilized the extensive customization options provided by django-lms.

- Presented the findings to the team and supervisor, and the consensus was to adopt django-lms.

- Forked the django-lms repository into our organization's GitHub account to enable collaborative development.

Day 4 (6 Hours) - Team Adoption and Skills Enhancement:

- Assisted team members in cloning, configuring, and running django-lms locally on their machines.

- The team unanimously agreed on using django-lms due to its flexibility and customization capabilities.

- Began learning Figma to enhance UI modification skills and improve user experience design.

Day 5 (8 Hours) - UI Modification with Figma:

- Utilized Figma to create detailed, visually appealing landing pages for django-lms.

- Implemented clear navigations and enhanced the overall look and feel of the LMS.

- Leveraged Tailwind CSS for efficient styling during the modification process.

Day 6 (5 Hours) - Recap and Team Collaboration:

- Conducted a recap meeting with the team and supervisor to ensure everyone was proficient in setting up the local environment for django-lms.

- Strengthened team bonds by sharing thoughts, challenges, and lessons learned.

**Conclusion:**

This week has been an exciting journey of exploration and customization in the world of Learning Management Systems. Starting with Tutor LMS, we encountered limitations in terms of customization, leading us to discover the more customizable and user-friendly django-lms. By leveraging Figma and Tailwind CSS, we successfully modified the UI, resulting in an eye-catching and user-friendly web3 landing page for our organization's LMS. The entire team is now aligned and enthusiastic about utilizing django-lms as the foundation for integrating and building various features to meet our diverse needs.

Overall, this week's efforts have not only brought us closer to achieving our LMS objectives but also fostered team collaboration and skill development, making us better-equipped for future challenges.

**Week 8 Report: LMS UI Modification, Chatbot Integration, Project Management, and Solidity Development**

**Week at a Glance:**

Day 1 (5 Hours) - LMS UI Modification and Chatbot Integration:

- Continued with the LMS UI modification, focusing on tailwind-css for improved aesthetics and user-friendliness.

- Integrated a Chatbot using the ChatGPT API to provide learning assistance for students.

- Initially faced challenges in API configuration, leading to hard-coded responses.

Day 2 (6 Hours) - API Configuration and Projects Management:

- Successfully configured the ChatGPT API endpoint to dynamically render responses based on user input.

- Reviewed project tasks, divided them into manageable tickets, and updated the organization's GitHub projects for effective management.

Day 3 (6 Hours) - Solidity Development:

- Implemented the blockcerts logic using Solidity, enabling certificate issuance and verification with unique IDs and status controls.

- Managed access control, granting specific rights to modify certificate statuses.

Day 4 (4 Hours) - Introduction to GraphQL:

- Learned about GraphQL as an alternative to RESTAPIs, highlighting its efficiency in retrieving specific data through a single request.

- Recognized the potential for optimization and better development practices with GraphQL.

Day 5 (4 Hours) - Team Meeting and Progress Discussion:

- Met with the supervisor and team to discuss the LMS development progress and achievements.

- Shared insights and updates, fostering a cohesive and informed team.

**Conclusion:**

This week's activities have been a blend of practical implementations, project management, and explorations of innovative technologies. The modification of the LMS UI and integration of the Chatbot showcased my dedication to enhancing the user experience and providing valuable learning assistance. Overcoming API configuration challenges highlighted my problem-solving skills and persistence in achieving successful outcomes.

In addition, mastering Solidity for implementing the blockcerts logic marked a significant milestone, adding valuable functionality to our LMS. Exploring GraphQL as an alternative to RESTAPIs broadened my understanding of modern development practices and optimization strategies.

The team meeting fostered collaboration and shared knowledge, further strengthening our development process. As we move forward, I look forward to applying my newfound skills and knowledge in LMS development, optimizing our projects through efficient management practices and embracing cutting-edge technologies to drive innovation and excellence.

## 3.2 Description of work station

During my Industrial Attachment period at Africa Blockchain Youth Ambassadors (ABYA), I was assigned to the Education and Training Department, which played a crucial role in developing and delivering blockchain-related courses and workshops. This department was an integral part of ABYA's organizational structure, contributing directly to its mission of spreading blockchain knowledge across the African continent.

### 3.2.1 Department Overview:

The Education and Training Department was composed of a dedicated team of professionals who shared a passion for blockchain education. Led by the department head, the team included education officers responsible for course content creation, curriculum development, and conducting training sessions.

### 3.2.2 Familiarization Phase:

Upon joining the department, I underwent a thorough familiarization phase. I was introduced to the team members and provided with an overview of the ongoing projects and the department's objectives. Mentoring played a significant role during this phase, as senior members of the team guided me through the organization's operations and helped me integrate into the team seamlessly.

### 3.2.3 Workstation and Tasks:

My workstation was equipped with a computer and the necessary software tools for conducting research, development, and collaboration. My main task revolved around researching version control systems and open-source hosting platforms for integration into the Learning Management System (LMS). I collaborated closely with the Research and Development Department to ensure the technical feasibility and smooth implementation of these systems.

My responsibilities included:

1. Conducting in-depth research on version control systems and open-source hosting platforms.

2. Assessing the compatibility and advantages of different systems for integration.

3. Collaborating with the development team to implement the chosen systems into the LMS.

4. Managing the organization's GitHub account, overseeing repositories, and ensuring version control.

5. Participating in team meetings to discuss progress, challenges, and future directions.

### 3.2.4 Typical Working Day:

A typical working day started with checking emails and attending the department's morning briefing. I would then proceed to research, gather information, and collaborate with team members on technical aspects of the LMS. The day often included meetings for progress updates, brainstorming sessions, and discussions regarding integration strategies. As I made progress, I documented my findings and provided regular updates to the team.

### 3.2.5 Mentoring Situation:

Mentoring played a pivotal role throughout my attachment period. The experienced team members provided guidance, answered questions, and shared insights into the field of blockchain technology. Regular one-on-one meetings with my mentor allowed me to seek advice, discuss challenges, and receive constructive feedback on my work. This mentoring relationship greatly enhanced my learning experience and contributed to my professional growth.

In summary, my work station at Africa Blockchain Youth Ambassadors offered a collaborative and supportive environment within the Education and Training Department. The tasks I undertook, the interactions with colleagues, and the mentoring situation collectively contributed to a valuable and enriching Industrial Attachment experience.

# 4.0 Impact of the internship

My Industrial Attachment at Africa Blockchain Youth Ambassadors (ABYA) has been an invaluable experience, shaping not only my technical skills but also providing insights into the dynamics of the blockchain industry and its potential impact on Africa. This section delves into the social conditions, tasks undertaken, implications for future endeavors, alignment with expectations, and the outlook following the attachment.

### 4.0.1 Social Conditions:

The atmosphere at ABYA was remarkably conducive to learning and collaboration. The work climate was open, encouraging creative thinking and the sharing of ideas among team members. The mentoring situation was particularly supportive, with senior team members providing guidance and regular feedback. This nurturing environment fostered personal and professional growth throughout the attachment period.

### 4.0.2 Evaluation of Assigned Tasks and Work Performance:

The tasks assigned during the attachment were highly relevant to ABYA's mission and objectives. Conducting research on version control systems and open-source hosting platforms provided me with practical insights into software development practices. Managing the organization's GitHub account enhanced my proficiency in using version control tools and collaboration platforms. This hands-on experience significantly contributed to my technical skill set.

### 4.0.3 Implications for Future Study and Career Planning:

The attachment has a profound influence on my future career plans. The exposure to blockchain technology and its applications has ignited a strong interest in pursuing further studies in this field. The experience at ABYA has also opened doors to potential career paths in blockchain development, education, and advocacy. I now aspire to engage in projects that leverage blockchain to drive innovation and positive change in Africa.

### 4.0.4 Comparison of Goals and Expectations with Actual Experience:

My goals and expectations for the attachment were met and exceeded. I anticipated gaining practical knowledge in the blockchain domain, and the tasks I undertook aligned perfectly with this objective. The supportive team, challenging projects, and engaging work environment surpassed my initial expectations, enriching my understanding of blockchain and its potential applications.

### 4.0.5 Outlook:

The attachment has provided a strong foundation for future endeavors. The technical skills acquired, combined with a deeper understanding of blockchain technology, position me well for potential project work and even a degree thesis in this field. The experience has also expanded my network within the industry, offering opportunities for continued learning and collaboration.

Answers to Questions:

1. From the Attachment, I have gained skills in researching, evaluating and implementing technical solutions, project management, version control systems, and effective collaboration within a team.

2. During the Attachment period, I undertook responsibilities such as researching version control systems and open-source hosting platforms, managing the organization's GitHub account, collaborating with the development team, and contributing to the technical foundation of the Learning Management System.

3. The Attachment has greatly influenced my future career plans by solidifying my interest in blockchain technology and prompting me to explore further studies and potential career paths related to blockchain development and education.

4. The Attachment activities I carried out were closely correlated with my classroom knowledge. The theoretical understanding of version control, open-source platforms, and software development methodologies gained through coursework provided a strong basis for practical application during my attachment.

# 5.0 Conclusions

### 5.0.1 Summary of Key Conclusions:

My Industrial Attachment experience at Africa Blockchain Youth Ambassadors (ABYA) has been both enlightening and transformative. Through this journey, I have gained valuable technical skills, practical insights into the blockchain industry, and a deeper appreciation for the potential of technology in driving positive change. The collaborative atmosphere, supportive team, and mentorship have collectively contributed to a holistic learning experience that will shape my academic and professional pursuits.

### 5.0.2General Observations about the Sector:

The blockchain sector, as exemplified by ABYA, is a realm of immense innovation and potential. The increasing adoption of blockchain technology in various industries is evidence of its transformative power. The sector is characterized by rapid developments, constant evolution, and a demand for skilled individuals who can navigate the complexities of blockchain systems. The commitment of organizations like ABYA to educate and empower the youth showcases the sector's dedication to nurturing the next generation of blockchain professionals.

In conclusion, my Industrial Attachment has reinforced my passion for blockchain technology and its role in shaping the future. The experience at ABYA has enriched my skill set, expanded my horizons, and solidified my commitment to contributing to the advancement of technology in Africa and beyond.

# References

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