**BMIS2003 Blockchain Application Development**

**Task Description**

Name : Wong Soon Chee ID : 21WMR13169

Programme : RSW2S3G2 Group : 2

Instruction: Answer **ALL** the questions.

1. Please briefly describe the module(s)/function(s) you engaged in the assignment.

I am responsible for the owner module. In this module, the owner deploys the contract, and assign roles to farmers, distributors, and retailers. Owner can also create farms, create distribution centre and also create retail shops.

1. What are the strengths of the modules/functions created by you?

The strength of this module is user account management. The owner module provides the capability to register accounts for different user roles such as farmers, distributors, and retailers efficiently. The centralised user management streamlines the onboarding process and ensures that all participants have access to the system. Besides, the ability to assign roles to farmers and distributors is a crucial feature in the supply chain management system. It allows administrators to define and control the responsibilities and permissions of each participant, ensuring the right individuals have the appropriate access.

1. What are the weaknesses of the modules/functions created by you?

The weakness of this module is too much dependency on the contract owner since only the contract owner can add administrators could lead to bottlenecks and delays in user management tasks. It's essential to ensure that the contract owner can efficiently handle these responsibilities. In addition, the admin module might lack automated features for role assignment and user verification. For large-scale systems, especially supply chain management systems, automating these processes could improve efficiency and reduce the workload on administrators.

1. What have you learned in doing this assignment?

In this project, I learnt that the admin module underscores the importance of access control and security in decentralized systems. As only the contract owner has the authority to add administrators, it demonstrates the need for robust identity verification and security protocols. Frontend tasks related to this module should prioritize secure authentication mechanisms and user registration processes to prevent unauthorized access or role assignment. Furthermore, the module highlights the need for transparency and accountability within the durian supply chain. The capability to check farm owner, distribution centre owner, and user roles is a powerful feature that fosters trust and traceability. Therefore, frontend tasks should include creating intuitive interfaces that enable users to easily access and understand this information, enhancing the overall user experience and trust in the system.

1. What are the challenges, if any, faced by you while working on this assignment?

The most challenging part for completing this assignment is that I am not familiar with concepts of blockchain, the solidity programming language and the concepts of linking the frontend with the backend in order to provide a complete system. In order to complete this assignment, I have to study a lot of documentation.

Signature: SoonChee Date:26 SEPTEMBER 2023