Project Title

Blockchain-Based Trade Management System for Nepal Stock Exchange

Profile Photo

https://drive.google.com/file/d/1M69G3YO9FMibHXdUyHveFAtCwx_IUWIh/view?usp=sharing

Name

Kalyan Ghimire

Gitlab link

https://github.com/kalyanghimire/Blockchain-Aided-TMS

Linkedin Profile

https://www.linkedin.com/in/kalyan-ghimire-b97990197/

Project Description (at least 500 words)

Nepal Stock Exchange is the only stock exchange of Nepal that has a market capitalization. Daily on average, more than 10 billion worth of transactions are seen with a record of 19.55 billion seen on 13 June 2021. As the number of people being involved in the stock market grows daily, more and more fraud and scam cases can be heard. To tackle this problem it is necessary to make a decentralized system where the transparency, stability, and trustful transactions of shares occur. With this vision of a good stock exchange, I had come up with the idea of making a mock-up version of what a good stock exchange in the context of Nepal might look like. With the aid of blockchain technology which has already started to revolutionize the world with its Dapp technology and its incoming influence over the fintech area, the world should brace itself for a revolution the blockchain technology has to offer in the way stock is exchanged.

Nepal has always seen evils in NEPSE like insider trading, pump and dump scheme, and stock cornering which glow in the dark shadow of its own. This has always affected small investors who have still yet to understand these parts of the market who make innocent mistakes jumping into the never-ending hole of persuasion and influence of the stock exchange. For this purpose, this project Blockchain-Based Trade Management System for Nepal Stock Exchange might change the way an investor views stock trading. Blockchain contracts are the governing bodies that look after the transaction of investors and ensure that no one will escape after trying to defraud the system.

A platform for share exchange is created where the users can exchange the shares they possess. For the sake of simplicity, the dynamic nature of stocks has been avoided along with the bid and ask for the shares. The transaction takes place between the broker who is the admin and the client. A client can apply for IPO and after he has been allocated the IPO he can sell it on the market. The Apply button is disabled once used such that he/she cant use the Apply button furthermore. After the transaction takes place it is shown on the floor sheet. Ones with a high volume of transactions are shown on a different tab, under "Suspected transactions". Under close observations, we might find someone who might be doing a pump and dump scheme from this list of transactions as they are the ones with a huge volume of shares exchanged.

The technologies used are truffle, web3, bootstrap, jquery, hd-wallet-provider, remix-IDE, npm, ganache,infura, and various libraries to support truffle in the compilation and deployment of the contract in the web application created. The transaction was done locally and also on the rinkeby test net, accounts with test ethers available were used to deploy the contract and be a client on the web app.

The project is done in collaboration with eSatya, a leading Nepal-based company that excels in blockchain technology while on a Blockchain fellowship session that took place from April to July 2021.

Video Demo Link (1-2min long)

https://www.youtube.com/watch?v=gukGy6OynA0&feature=youtu.be

Screenshots of the project

https://drive.google.com/file/d/1s1SX_CjHo5TDNC8WJXe9s5RM4QqwGxxe/view?usp=sharing