Blockchain

The current state of database management if not handled properly is frail and we have decided to change that using one of the most revolutionary technologies of the 21st century-Blockchain.

Blockchain is a collection of blocks that are connected by chains and form a series of the immutable ledger. It uses peer to peer network to check and verify the data inside a block. Our team is going to use this fascinating technology for the security of our Army.

Main-

In the past few years, our nation has suffered losses due to data breaches inside the army. We are planning to use Blockchain to prevent such breaches from happening.

The personal, financial and medical data of the personnel is not managed properly and is easily accessible to someone with a good knowledge of Cybersecurity.

Our application aims to change this forever by inserting the data inside a blockchain. A blockchain is made up of blocks and each block is connected to the next through chains.

These blocks contain three things the data, the hash of the data, and the hash of the previous data thus forming an immutable ledger that cannot be exploited.

The hash of the block will change if the data inside the block is altered and the altered block will not be accepted as the previous and the next block will deny the altered block’s new hash and return it back to the original data.

This security is further enhanced by using a 256-bit peer-to-peer hash review system where multiple users who are interconnected inside the blockchain network that verify each other’s blockchain. Suppose the data of personnel got breached, the peer-to-peer hash review system will check the hashes of the connected users and will be rejected and retained immediately.

The personnel will be provided with a decentralized application software system that provides each person with a private and a public key.

The private key will contain the full details of the personnel and will not be shared with anyone except the user.

The public key will contain separate data sets like medical, financial, personal etc. Each of these public keys will be shared with the respective authorities and only they will be able to access the specific data.

The application will be used as a portal for medical, financial and other departments for the data access.

Both the personnel and the authorities will be required to log in using strong passwords user\_Ids and biometrics.

The personnel can access the full data and the authorities their respective part.

The army until 2019 used basic /primitive methods to store the data on physical devices which could be broken into.

They switched to Cloud-based encrypted data storage in June 2019 which is a much secure method. This method however can be attacked by cybercriminals and enemies and use that to exploit the nation. The Blockchain method will ensure no such breaches occur and strengthen our nation's army

Conclusion-

Blockchain technology has been rising the last few years although invented in the late 1990s it certainly is the future and the services it provides prove to be futuristic.

Blockchain will secure the Internet of Things and due to the sheer scale of the Internet of Things, which will include tens of billions of devices by the year 2025, it will be really effective and will have huge implications in the area of security of our nation.