PROJECT ON

**BLOCKCHAIN TECHNOLOGY IN MILITARY APPLICATIONS**

**SUBMITTED TO:**

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INTRODUCTION

**Blockchain** is a technology that is used as a basic structure for operation and control of modern digital transactions. It is a representation of indexing a financial entry in the ledger, and recording a transaction taking place. All the transactions that take place contain a digital signature to ensure its authenticity, so that no one could temper with the data present in Blockchain. This technology allows digital information to be distributed and shared, but not to be copied. This in turn means that each individual possesses a defined portion of data that can only have one owner.

Any new information or data on Blockchain is added into the database, which is stored at multiple locations and updated at regular intervals. It makes the data to be public and verifiable. Since there is no data centralization, it is extremely hard to bruteforce as the information exists simultaneously in millions of places at an instance.

POSSIBLE IMPLEMENTATION IN MILITARY APPLICATIONS

1. Preventing data theft.
2. Secure Government and Battlefield Messaging.
3. Tracking Defence shipments/contracts in real-time.
4. Military Manufacturing and processing.
5. Cyber Warfare Preparedness.
6. Maintaining health record of defence personnel.
7. Coordinated control over sophisticated weapons and ordinances.

OBJECTIVES

Following are the objectives of this project:

1. Implementing this project in order to facilitate a transparent and multi-user controlled database.
2. Brining up a notion of a single data record in order to avoid any redundancy and ambiguity.
3. Distributed Peer-to-peer connection allows sharing of data with all the users at the same time.
4. Data once sent to a Blockchain network, cannot be deleted or removed from all the systems, preventing deletion of data from one source.
5. It will improve the overall data collection by removing any duplicates from the database.
6. Attacking on distributed storage is far more complex and difficult than when compared to centralized databases.
7. It allows users to interact with each other directly without any necessity of a mediating third-party.

OUTCOME

Following are the outcome of this project:

1. Decentralization: Since the data on Blockchain is distributed among all the participating users, it makes data more secure and recoverable.
2. Resilience: It will improve the capability of data to be secure in case of a massive attack.
3. Transparency: This technology allows all the peers to view the detail of transactions taking place on this network.

**Minimum Hardware Requirement**

Following are the Min. Hardware requirement for a Blockchain Machine:

1. Disk Space: <=200 GB
2. Download: 250 MB/day (8 GB/Month)
3. Upload: 5 GB/day (150 GB/Month)
4. Memory (RAM): 512 MB
5. Operating System: Windows, Mac OS X, Linux

**DATA SECURITY**

This platform ensures that your data is encrypted and has not been tempered with as blockchain provides a cryptographic signature of the document or file present on the blockchain network. As the data on blockchain is decentralized in nature, we can always cross check file signature across all the ledgers on all the nodes in the network. If by any chance this document is tempered with, then the signature is rendered invalid.

**DECENTRALISED DATA STORAGE**

As the word decentralized states, Data on blockchain does not rely on one central point of control. Every computer on the network haves a complete copy of data, and with no single authority the system is considered more secure and fairer, also blockchain uses consensus protocols(Equal right and mandatory participation of each node in the network which validate the transaction) to validate transaction and record data in a way that is incorruptible.

PERMANENT AVAILABILITY OF DATA

HEALTH APPLICATION

* EHRs(Electronic health records)
* Prescription traceability
* Data access control

**Individuals and interactions over processes and tools:**

In this project we will be implementing the concept of interaction with each and every individual working on this project over every process and the tools we will be using. Moreover, decisions made during this project will be according to every individual’s perspective.

**Working software over comprehensive documentation:**