**BLOCKCHAIN TECHNOLOGY FOR AGRICULTURAL SUPPLY CHAIN**

**Abstract**

In this project we are using IOT network and Blockchain security technology in agriculture food supply chain. In propose work IOT network will be setup in agriculture farms and this IOT will sense food quality growing farms and then report to its nearest cluster head and cluster head will report to base station. Base station will collect food quality data from Cluster Head and then store that data in decentralized Blockchain nodes. This data can be access by various users such as distributors, suppliers, farmers and consumers to know the quality of the food. All existing techniques were using centralized server (single main server) to store data and if this server hack by malicious users, then they can easily alter data on that servers and user’s may get wrong or fake data and there is no proper software to detect that alteration and to overcome from this problem Blockchain technology has been introduced. Blockchain support decentralized (data stores at multiple nodes) storage and each node will store data as block of transaction by associating each block with hash code and whenever new data arrive for storage then all nodes will verify hashcode of existing blocks and if all nodes contains same hashcode then data will be consider as secured and unaltered and then new block will be added. If any node report incorrect hashcode then that node considers as attacked and then collect data from genuine nodes. Above verification of hash code is consider as PROOF OF WORK.

Keywords : Block chain technology , agricultural applications , hash code, Internet of things()

**Existing methods**

* Centralized network uses for IOT data transmission

**Drawbacks /Limitations**

* Less security
* Less efficiency

**Proposed work**

* Decentralized network using blockchain for agricultural field

**Advantages**

* More security
* Better efficiency
* Easy simulation design and analysis

**Application**

-smart agriculture

-smart hospitality

**SOFTWARE AND HARDWARE REQUIRMENT SPECIFICATION**

**Hardware Requirement:**

• Processor Type: Pentium -IV

• RAM: 512 MB RAM

• Hard disk: 20 GB

**Software Requirement:**

• Operating System: Windows 2007

• Script: python IDLE, GUI (TKINTER)