

# DIGIMANDI

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**Abstract:** *It is an electronic produce market making the crop market more accessible for the use of everyday user and even to keep the clarity in the whole system from retailer to the dealer. Also collects the current market price of the product and notify the civilian. The main goal of this project is to build a website which will help the user, retailer, whole seller and even the farmer to get the best output from his inputs. With the help of this, a farmer will be able to know the best price/value for his vegetable and will not be fooled by the industry marketers. It will help in keeping the clarity between the whole seller and retailer and also the selection of the user for his daily requirement become easy. So this will help in eradicating black marketing and inflation in the market.*

**Keywords:** E-commerce

## I. INTRODUCTION

Agriculture in India has a significant history. Today, India ranks second worldwide in farm output. Agricultural marketing involves in its simplest form the buying and selling of agricultural produce. In olden days when the village economy was more or less self-sufficient the marketing of agricultural produce presented no difficulty as the farmer sold his produce to the insufficient consumer on a cash or barter system basis. No confirmation details whether request of farmers to buyers or Buyers to farmers has been submitted or not.

As it has no government touch it might have the tie up between others businesses too without displaying the clarity which is the most demanded need have now.

The main goal of this project is to build a website that is more helpful for the use of civilian and even to keep the clarity in the whole market system from retailer to the whole seller and even farmers to get the best from his inputs. This will help out all four pillars of this market rather than focusing on only farmer's i.e.

- Farmers
- Retailers
- Whole Seller
- Civilians

A farmer will be able to know the best value/amount of his product and not fooled by marketers. Help in keeping the clarity between the whole seller and retailer, removing the black market trade and inflation in the market. Have facility of viewing the price between different regions and the inflation rate as well. A large number of whole sellers and retailers are being registered so with that facilitates farmers would have many options for their goods to get stored somewhere rather than keeping it hoarded to the local house due to improper planning and management. Thereby reducing the risk of under-selling. The enterprise entities in the supply chain can be summarized as suppliers, manufacturers, distributors, and retailers. And the functions and specific roles of each network node are described below.

- **Suppliers:** The supplier is the owner of the raw materials and provides raw materials to the manufacturer. Raw materials as the source of products should be registered in the system by the supplier so that the consumer can trace back to the source of the raw materials of a specific product. Similar to the product, each raw material should also have a unique code.
- **Manufacturers:** The manufacturer purchases raw materials from the supplier and processes the raw materials to. At the same time, the manufacturer supplies products to the distributor, which are sold all over the world by the distributor. As the owner of the product, the manufacturer is responsible for encapsulating the product

information and registering it in the system. In the design of this paper, we use the international coding standard EAN/UCC-13 to encode the product, and the product has a unique code. We assume that in the process of product production, the products produced in the same batch are identical in quality and structure, and the difference can be ignored. Products that are produced in different batches need to be re-registered. Therefore, this design updates the product transfer process in batches, and each batch of products uniquely corresponds to a production batch number. For mass produced products, they have the same batch number; for non-mass-produced products, the batch number represents the individual product.

- **Distributors:** As the middleman in the process of transferring goods from the manufacturer to the end consumer, the main role of the distributor is to update the direction of the product flow in this process so that the product information remains uninterrupted during the traceability process.
- **Retailers:** The retailer purchases products from the distributor in batches and sells them to consumers in retail, which is a participant that has direct trading relationships with consumers.
- **Consumers:** The consumer is the individual who finally buys and uses the product. He can choose to participate in the network as a lightweight node, realizes the product traceability process by querying the data permanently stored in the block, or as a full node to jointly maintain the blockchain ledger data.
- **Regulatory Departments:** Since the blockchain data is exposed to all nodes, it is highly transparent. Therefore, the regulatory department as a blockchain node can monitor product dynamics in real-time and can recall in time when safety or quality problems occur in the product and deal with issues quickly and efficiently. To better show consumers the source traceability data of the product, when the product is transferred from one party to the other, we record the process by initiating a blockchain transaction. And add the product code and batch number to the transaction when the product is first transferred, and then in each subsequent transaction, by referring to the previous transaction hash to form a hash chain that traces the source of the product.

## II. MATERIALS AND METHODS

A platform that allows farmers to sell their produce directly to buyers. It also allows buyers to bid for the best price for the product. Government aims to provide an option to farmers to make contracts (of their produce) directly with the buyer, without the involvement of any middleman. Often, farmers find it difficult to sell their produce without the involvement of these middleman, which in turn leads farmers to sell their produce at an unfair price. DigiMandi aims to provide an option to buyers to bid for buying the produce, so that the farmers get best price for their produce.

The basic steps of how this extension works:

- Seller adds their products on the website.
- Buyer searches for a product on the website.
- The buyer can get the latest current rates of commodities from Mandis all around the country.
- There's a live trading feature on the website where seller gets the best price.
- The seller gets a suggestion on price whenever they set the price of their commodity up for sale which is done on daily basis.
- Buyers get confirmation of the purchase after the seller confirms it.

## III. RESULTS AND DISCUSSIONS

The primary purpose of this project is to create a website that is more user-friendly for civilians. A farmer will be able to determine the greatest price for his goods. It also allows you to compare prices between different places as well as the rate of inflation. Farmers will have a greater number of possibilities for selling their commodities because a significant number of whole-sellers and retailers have been registered. It enables purchasers to compete for the best product pricing. It also displays the product's current pricing.

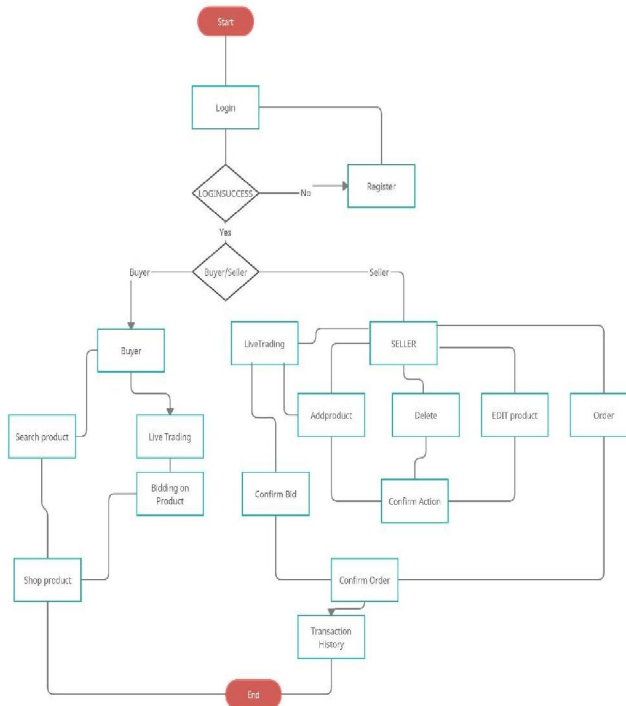


FIG.1 DIGIMANDI ER DIAGRAM

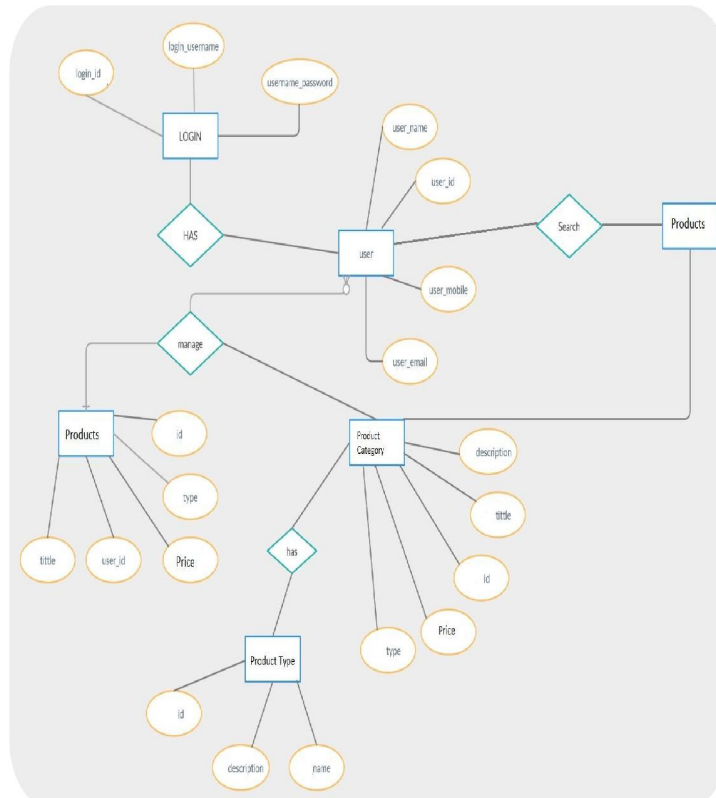


FIG.2 DIGIMANDI FLOW CHART

#### IV. CONCLUSION

- There are trends to indicate that the transformation of agricultural information systems in India is occurring.
- This application provides availability of rates in various Mandis help to give good rates to farmers.
- Transportation losses reduced after e- agriculture marketing.
- This is vital for the transformation of agriculture in India. .

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