



# TEAM BROCODE

## EPITOME'23

DOMAIN - AGROTECH

# TEAM DETAILS

Team Name: Team BroCode

Team Leader: Kanchi Mishra

College Name: GRIET

Team Member 1: Sai Abhinav Goud Patamata

Team Member 2: Nandigum Sowmya Chowdary

Team Member 3: Suhani Sunehra

## PROBLEM STATEMENT:

PSAT03. Come up with innovative solutions to ease the financial burden on farmers.

## PROBLEM DESCRIPTION:

Farmers are under a lot of stress due to the various financial burdens placed on them. They lack funds for developing their farms. They are stuck in a back-breaking loop of poverty which they struggle to get out of. Develop an innovative solution to improve the conditions of farmers.

# Issues Faced by Farmers

1

LACK OF FUNDS

Do not have enough capital for farm resources

2

LACK OF RETURNS

Lack stable income and have a low profit margin

3

VICTIM OF MALPRACTICES

They are often scammed of their profits due to meddling middlemen

4

UNPREDICTED WEATHER

Cannot predict climate change and struggle to cope with it.

## Statistics:



86.2 - Small Farmers (0-2 Hectares)

13.3 - Medium Farmers (2-10 Hectares)

0.6 - Large Farmers (10 Hectares+)

# What makes our solution unique?

- Improving the supply chain:
  - The company is the sole distributor
  - Removes intermediaries that hinder the supply process
  - Reducing the time of transportation
  - Ensuring that it stays fresh
- The farmer can become an individual investor himself and help transform agricultural sector.
- Creating a network of farmers that can support each other and grow

# What makes our solution unique?

## Implementing Blockchain for Authenticity and Transparency:

Blockchain is an immutable ledger of records that are stored. User Registration Details are saved on the blockchain after they are verified by validators. This ensures that there are no fraudulent entities on the platform.

# Why should people trust us?

- We provide transparency about all the information about farmers and our team as well, including background information
- We try to protect user data to make the security infrastructure more robust
- We also provide email query response for efficient customer relationships

## COMPANY INTERFACE

### Farmer Interface

Register and fill  
details

Update and  
maintain  
profile

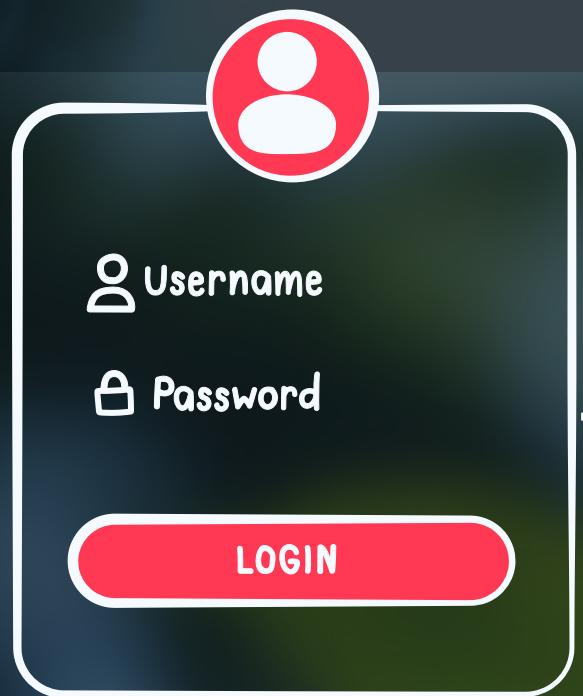
### Investor Interface

Create an account

Invest in chosen crop

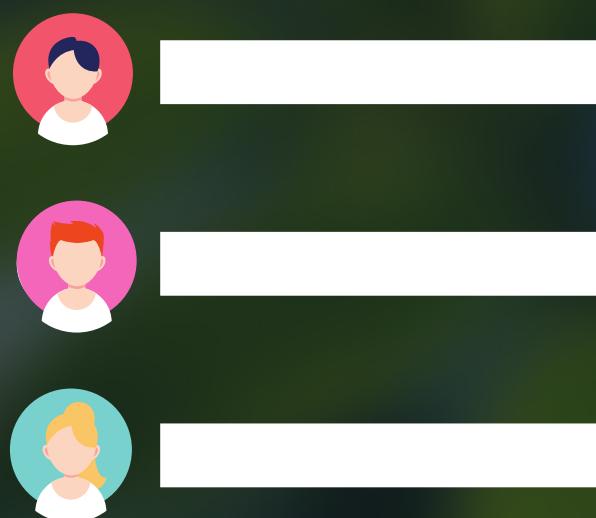
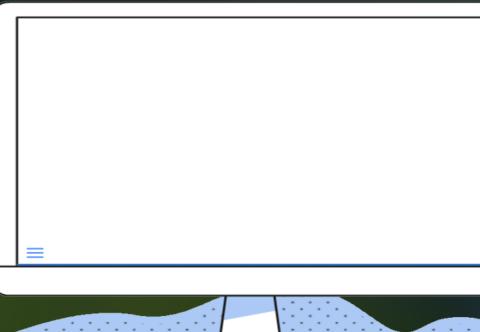
Receive fixed returns over time intervals

Maintain profile



A user login form with a red header containing a person icon. It includes fields for 'Username' (with a person icon) and 'Password' (with a lock icon). A large red 'LOGIN' button is at the bottom.

VERIFY  
CREDENTIALS

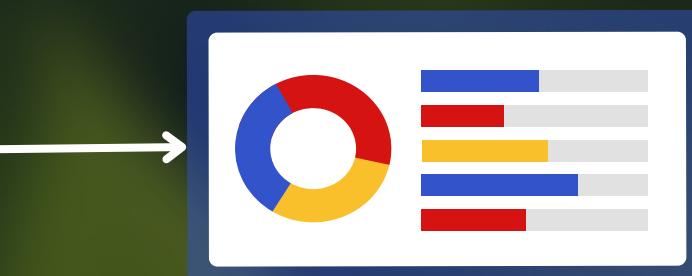


Dashboard showing  
farmers profiles to  
select and invest in  
farmers land

Investor invests according to  
the profile



Dashboard for  
farmer's details  
and his profile view



Investment  
Tracker

- Yield prediction by using ML
- New farming Techquies



# Business Model:

1

- FARMER CAN LEASE THE LAND AND GET
  - A STABLE INCOME EVERY MONTH
  - GET GUIDANCE USING LATEST TECHNOLOGIES.
  - GET YIELD PREDICTION
  - GET INVESTMENTS FOR HIS LAND

HERE THE FARMER IS OUR EMPLOYEE

2

INVESTORS CAN INVEST TO OBTAIN FIXED RETURNS OVER A PERIOD OF TIME

4

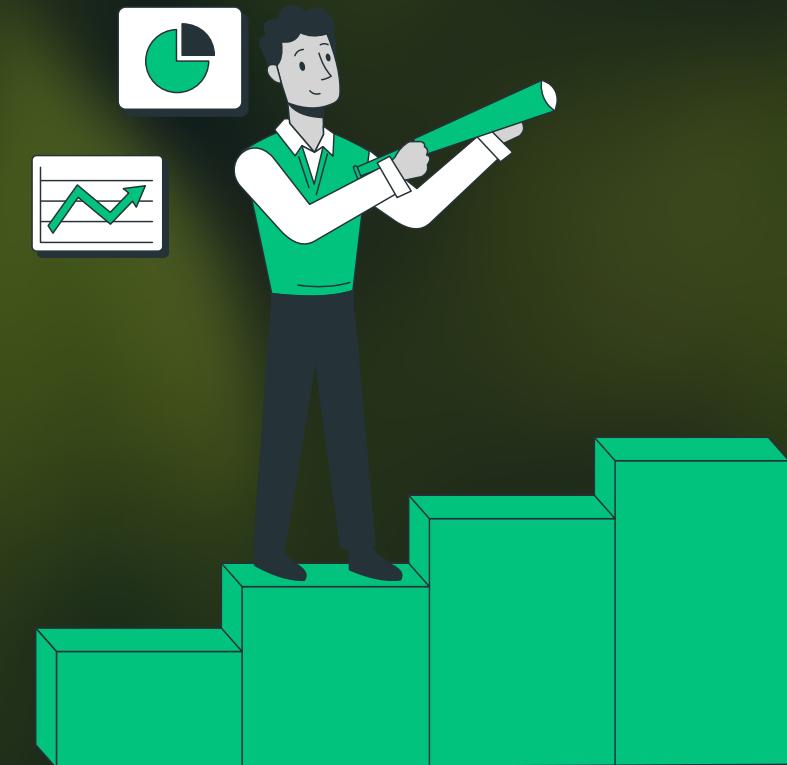
THE SALE PROCEEDS ARE DISTRIBUTED ACCORDINGLY. THE FARMER RECIEVES HIS SHARE OF PROFITS

3

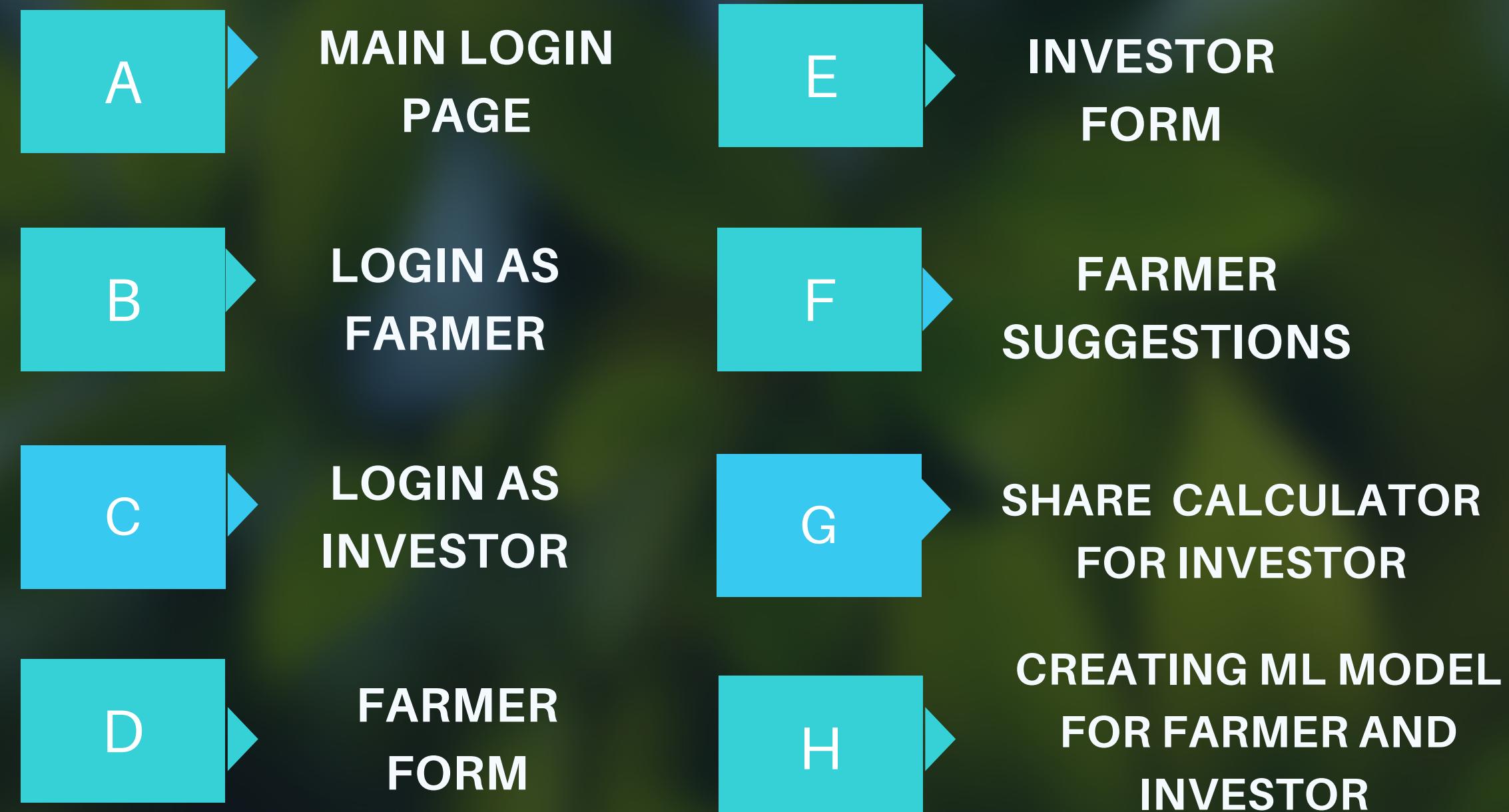
WE DIRECTLY OBTAIN THE CROPS WITHOUT ANY MIDDLEMEN AND HAVE AN 8% INCREASE IN PROFITS

# Features of Solution

- A website inviting people and companies to invest in the farmer
- A share calculator for division transparency
- Increasing Profitability:
  - Predicting the percentage yield of crops to increase profitability
  - Tips and information about better farming techniques and practices
- A dashboard to track all of the users investments
- Web App Portals:
  - Portal for the farmer to register
  - Portal for the farmer to update the status of crops .
  - Portal for users to login
- Simple to implement while having a large reach



# Features of Solution: Evaluation - 1



# Features of Solution: Evaluation - 2:

A

LOGIN AUTHENTICATION  
VIA BLOCKCHAIN

B

REGISTRATION VALIDATION  
ON BLOCKCHAIN

C

INVESTOR PORTFOLIO  
PAYMENT - PAYPAL API

H

SERVICE CENTRE DETAILS

I

FARMER COMMUNITIES

D

EMAIL QUERY SOLUTIONS  
- INVESTOR AND FARMER

E

YIELD PREDICTION WITH  
MACHINE LEARNING

F

HUMIDITY  
FORECASTING WITH  
ML

G

CROP RECOMMENDATION  
WITH ML

# Future Developments

## COMMUNITY

We can build a community of farmers and help them achieve resources at a lower price

## CONTROLLING LOSSES DUE TO UNPREDICTABLE WEATHER

Selling produce to countries with low agricultural production like Japan and USA through farmer communities that are able to support each other

## RESOURCES

We can supply the various resources to farmers depending upon requirement

Thank You!

# Our Approach

- Our company liaisons investments for farmlands.
- Land is leased from a farmer to create a stable monthly income for him.
- Farmers are also advised about yield percentage of different crops along with the profits gained by him and advised to grow the crops depending upon the crop yield and profit percentage.
- Additional funding is given depending upon the investments in their land.
- The company obtains the entire produce of the farmer which they will then distribute as suppliers.



# Our Approach

- The profits obtained are then divided and distributed accordingly.
- An individual or company can invest in a farmer's land based on their profile to get fixed returns over a while.
- Farmers can also invest in other farmers' land within a threshold value to regulate the prices.
- Transparency of division in shares is maintained throughout.
- The profits gained if all assets are liquified.



# What makes our solution unique?

- A user-friendly interface with multiple farmer-oriented features
- Farmer: The Best Beneficiary:
  - Creating a stable income
  - Gaining sufficient capital
  - Ensuring higher profits
  - Suggesting Advanced techniques for better production
- Any common man, not just an investor can also invest.
- Complete transparency of shares motivating the farmer.
- Guidelines on what are the best crops to plant to optimize profits

