

# Digital Krishi

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# Requirements

- ▶ Get data form sensors, analysis & process and make suggestions.
  - ▶ Nitrogen
  - ▶ Phosphorus
  - ▶ Potassium
  - ▶ Humidity
  - ▶ Temperature
  - ▶ Crop Image
  - ▶ GIS data for crop diesis detection
- ▶ Farmer can order fertilizer from the app initially it will be sold and processed by us latter 3rd party vendor will be integrated
- ▶ Farmer can sell crop via the mobile app
- ▶ Fertilizer dealer or vendor can also sell their products via the system
- ▶ General public can order a crop (rice or vegetable or mango) via the app in local area or nationally (any where from the country)
- ▶ The sensor data will be identified by the agriculture expert.

# System Users

- ▶ General User
- ▶ Farmer
- ▶ Agriculture Agent
- ▶ Agriculture Expert
- ▶ 3rd Party Vendor
- ▶ Admin

# General User

- ▶ can order a product (rice or vegetable or mange etc.)
- ▶ can track the order progress
- ▶ pay via mobile payment system or internet banking

# Farmer

- ▶ can order a product (rice or vegetable or mange etc.)
- ▶ can track the order progress- pay via mobile payment system or internet banking- can add a crop land
- ▶ can periodically take the sensor data
- ▶ can select a crop based on a crop land and season
- ▶ can ask for the expert suggestion for a crop and crop land
- ▶ also subscribe for a subscription model based on full length of crop season

# Agriculture Agent

- ▶ can order a product (rice or vegetable or mange etc.)
- ▶ can track the order progress
- ▶ pay via mobile payment system or internet banking
- ▶ can add a crop land
- ▶ can periodically take the sensor data
- ▶ can select a crop based on a crop land and season
- ▶ can ask for the expert suggestion for a crop and crop land
- ▶ also subscribe for a subscription model based on full length of crop season
- ▶ can add other farmer land and crop on behave of the company
- ▶ the may be company paid employee or a individual works for the commission
- ▶ take the GIS data for a certain are via drone or some other method.

# Agriculture Expert

- ▶ can order a product (rice or vegetable or mange etc.)
- ▶ can track the order progress
- ▶ pay via mobile payment system or internet banking- can add a crop land
- ▶ can periodically take the sensor data
- ▶ can select a crop based on a crop land and season
- ▶ can ask for the expert suggestion for a crop and crop land
- ▶ also subscribe for a subscription model based on full length of crop season
- ▶ can add other farmer land and crop on behave of the company
- ▶ the may be company paid employee or a individual works for the commission
- ▶ take the GIS data for a certain are via drone or some other method
- ▶ give suggestion on behave of company for a crop season or a crop field
- ▶ the person must have agriculture background.

# 3rd Party Vendor

- ▶ add fertilizer to the app
- ▶ sell the fertilizer from the app.



# Admin

- ▶ manage Agriculture Expert, Agriculture Agent, 3rd Party Vendor Account
- ▶ assign a Agriculture Agent to a particular area
- ▶ assign a Agriculture Expert to a group of farms
- ▶ active employee of the company.

# Module List

- ▶ crop\_listing\_module
- ▶ crop\_trade\_module
- ▶ money\_transaction\_module
- ▶ crop\_transfer\_module
- ▶ address\_module
- ▶ sensor\_logging\_module
- ▶ gis\_module
- ▶ crop\_module
- ▶ field\_module
- ▶ super\_crop\_module
- ▶ super\_field\_module
- ▶ faritilizer\_module
- ▶ vendor\_module
- ▶ ai\_suggestion\_module
- ▶ expart\_suggestion\_module
- ▶ admin\_module
- ▶ permssion\_module
- ▶ auth\_module
- ▶ user\_module

# General User Module

- ▶ crop\_trade\_module
- ▶ money\_transaction\_module
- ▶ address\_module
- ▶ auth\_module
- ▶ permssion\_module
- ▶ user\_module

# Agriculture Agent Module Farmer Module

- ▶ crop\_listing\_module
- ▶ crop\_trade\_module
- ▶ money\_transaction\_module
- ▶ address\_module
- ▶ sensor\_logging\_module
- ▶ crop\_module- field\_module
- ▶ faritilizer\_module- auth\_module
- ▶ permssion\_module- user\_module

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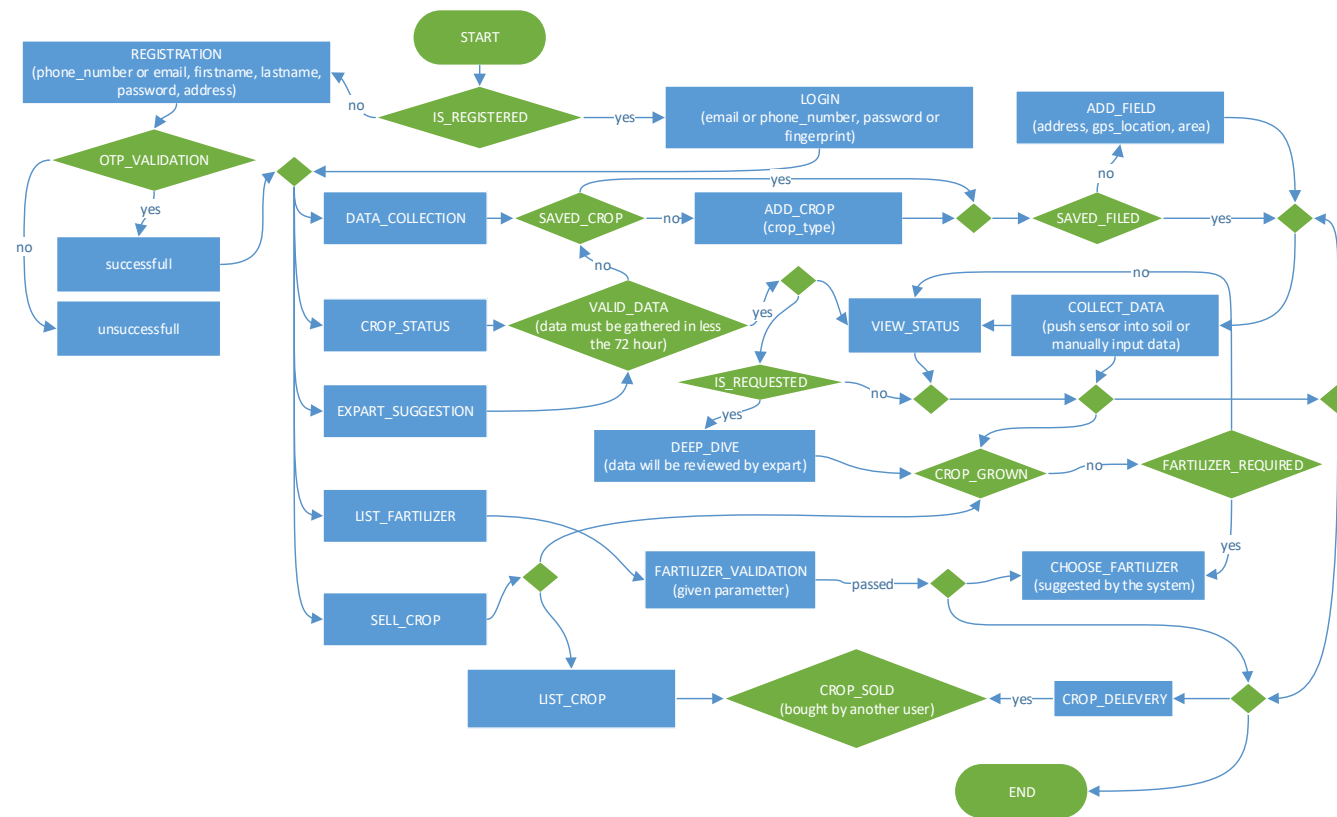
# Agriculture Expert Module

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# Admin Module

- ▶ permssion\_module
- ▶ admin\_module
- ▶ auth\_module
- ▶ user\_module

# Android App Workflow





# Proposed Database Design



# Estimated Module Development Timeline

module_name	estimated_time (weeks)	depedency_modules
crop_listing_module	2	crop_module
crop_trade_module	2	crop_listing_module
money_transaction_module	2	crop_trade_module
crop_transfer_module	2	crop_trade_module
address_module	2	
sensor_logging_module	2	field_module
gis_module	2	user_module, address_module

# Estimated Module Development Timeline

module_name	estimated_time (weeks)	depedency_modules
crop_module	2	user_module, address_module
field_module	2	crop_module, address_module
super_crop_module	2	crop_module
super_field_module	2	field_module
faritilizer_module	2	user_module
vendor_module	2	user_module
ai_suggestion_module	2	field_module, crop_module

# Estimated Module Development Timeline

module_name	estimated_time (weeks)	depedency_modules
expart_suggestion_module	2	ai_suggestion_module, field_module, crop_module
admin_module	2	user_module, address_module, auth_module, permssion_module
auth_module	2	permsion_module
user_module	2	address_module, auth_module, permssion_module
permssion_module	2	

# Estimated Timeline

Part	estimated_time (weeks)
Agriculture Requirement Finalizing	2
Requirement Finalizing	1
UI/UX Design Finalizing	2
Development	36
Initial Trail	2
Field Trail	4
This development timeline is calculated for two android developer one web developer, one backend developer, one quality testing developer & one DevOps Engineer.	

Thank you ... 😊