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State level hackathon : "AZADI KA AMRIT MAHOTSAV 2022"

❖ Problem Statement:

Problem ID:

PID315

Challenge Title :

Digital Profiles Of Farmers With Unique Farmer Id And A common database.

Name of the Office :

Collector Office, Amreli

Challenge Description with context :

The main objective here is to create an individual digital profile of every farmer of the state and to create a common database for advancing agriculture.

❖ Introduction:

➢ Purpose

- The UISF(unique identity system for farmers) provides a platform for government to easily reach out to farmers and vice versa,
- The system also helps in establishing mutual consultation between farmers and government.
- This system also helps in digitalizing the data thus resulting in reduction of paperwork
- Thus increasing transparency of the mechanism of government schemes and its effectiveness.

➢ Problem Description

- Nowadays in these digital world farmers go to government offices for fetching important documents.
- Also farmers have to keep the documentations of very basic info in paper format.
- Due to lack of digitalized advertisement less farmers are aware of new government schemes
- Absence of brisk(quick) weather forecast for farmers.

➢ Solutions/Viability of system

- Farmers are provided with a unique_id which will contain all of the farm related info.
- Some of these problems have digitalized solutions but those are either available on separate websites or the websites are only available for pc,
- Thus our system will provide solution for all these problems under one ecosystem.
- Our ecosystem will make it handy for government to spread awareness of farmer related schemes.
- Farmers will get instant weather forecast through our app.

➢ Future prospects

- A news section can be added for farmer to provide farming related updates and news in a more specific form.
- More languages are to be added as per requirement in different states.
- The app is to be developed for android for now but we will provide the same features on iOS platform in future.

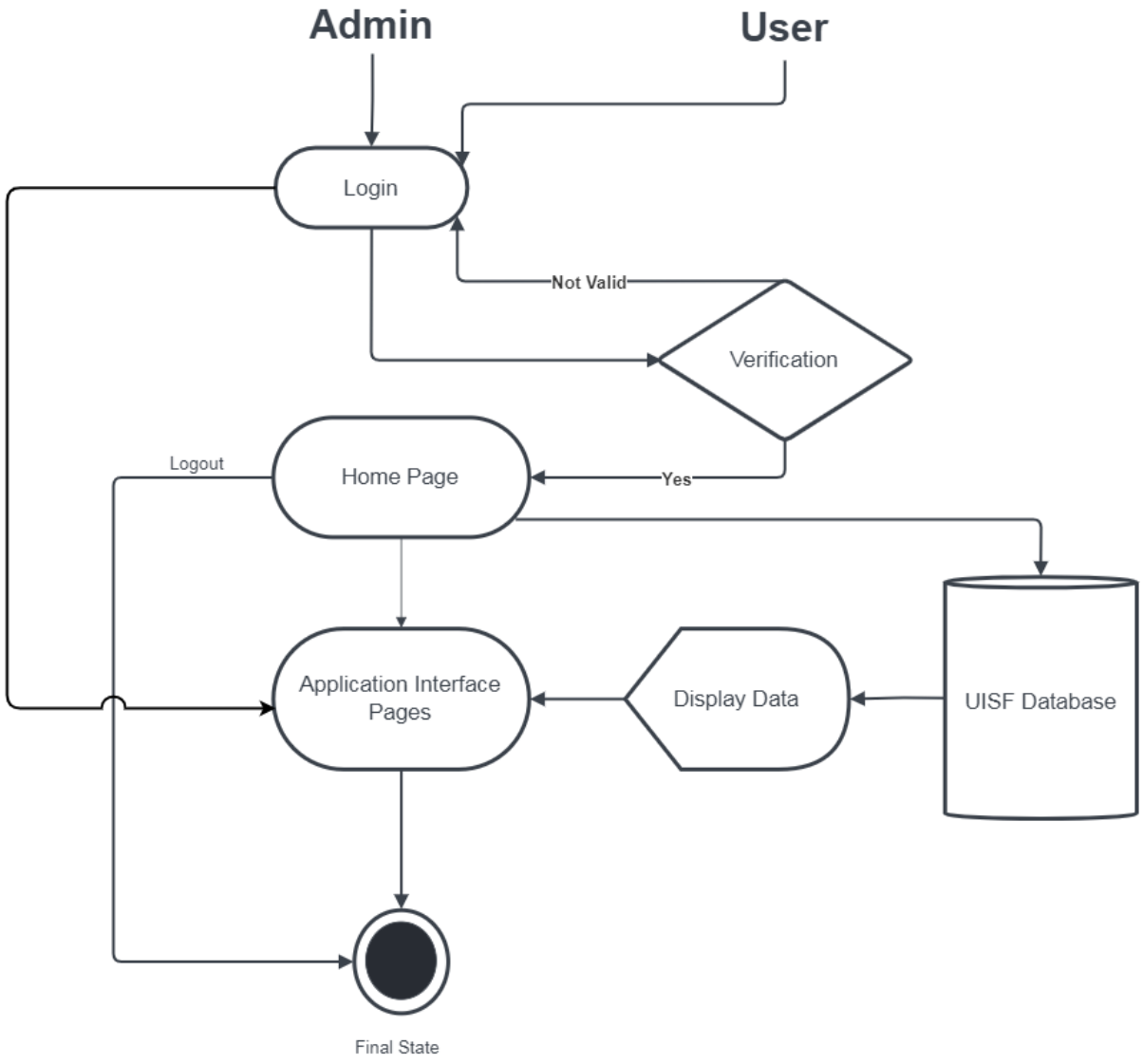
➢ Require analysis

- The system will generate a unique farmer id for each registered farmer.
- The system will provide an interface for farmers where they can directly retrieve, provide and update their farm related info.
- This system will also help government to analyse and manage data accordingly.
- This system will enhance government's efficiency for providing productive farm related schemes.

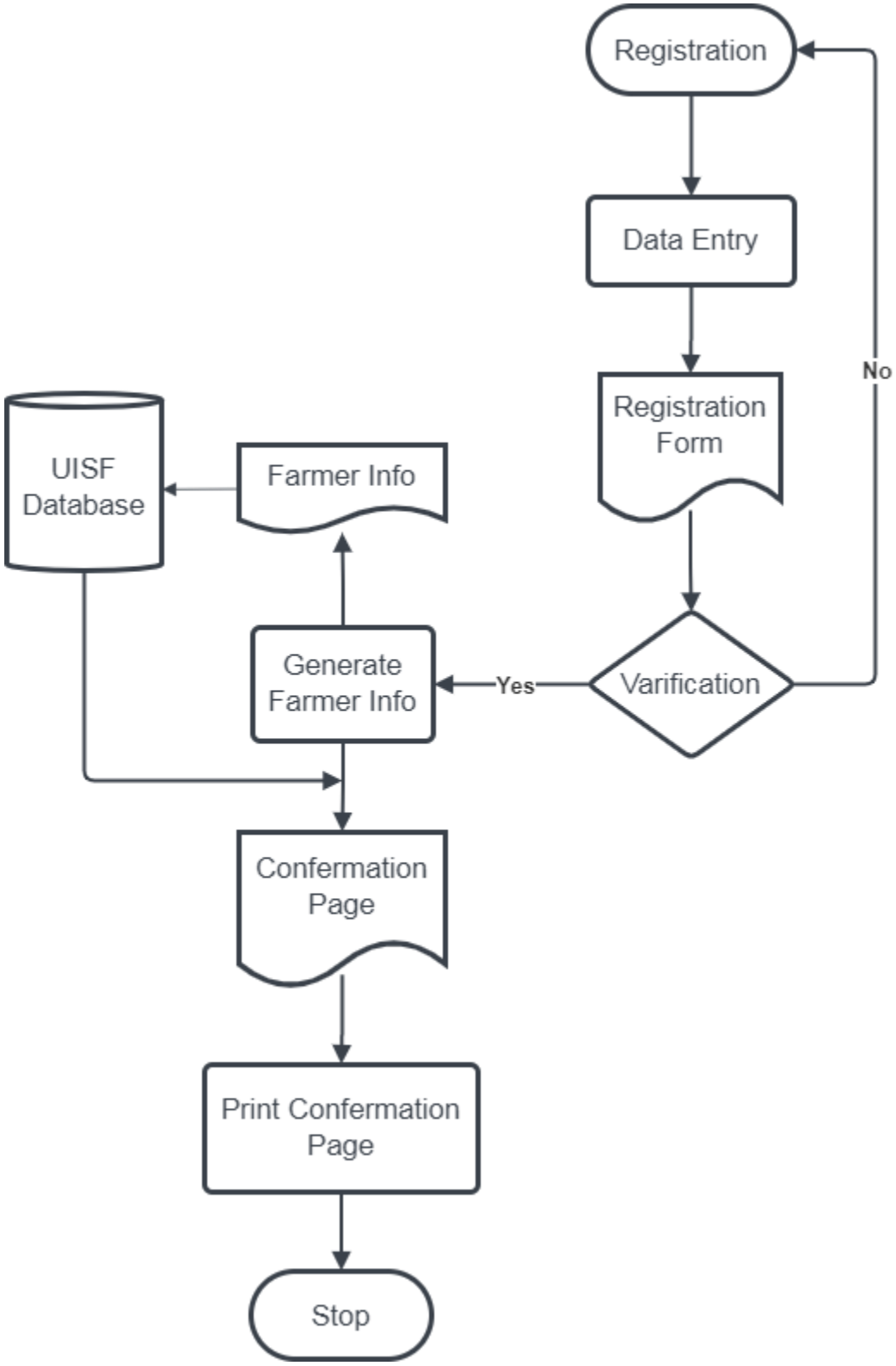
❖ Symbols used in flowcharts:

	The terminator symbol marks the starting or ending point of the system. It usually contains the word "Start" or "End."
	A box can represent a single step ("add two cups of flour"), or an entire sub-process ("make bread") within a larger process.
	A printed document or report.
	A decision or branching point. Lines representing different decisions emerge from different points of the diamond.
	Indicates a step that displays information.
	Indicates a list of information with a standard structure that allows for searching and sorting.
	Represents the Final State of the application.

❖Flowchart of Application:

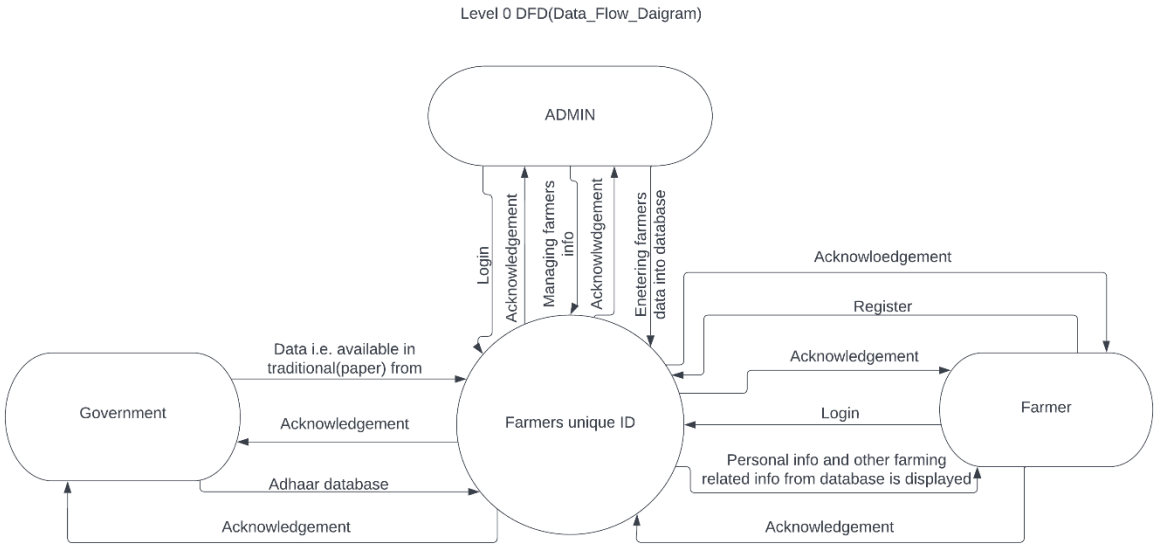


❖Flowchart of Farmer's Registration:



❖Data Flow Diagram:

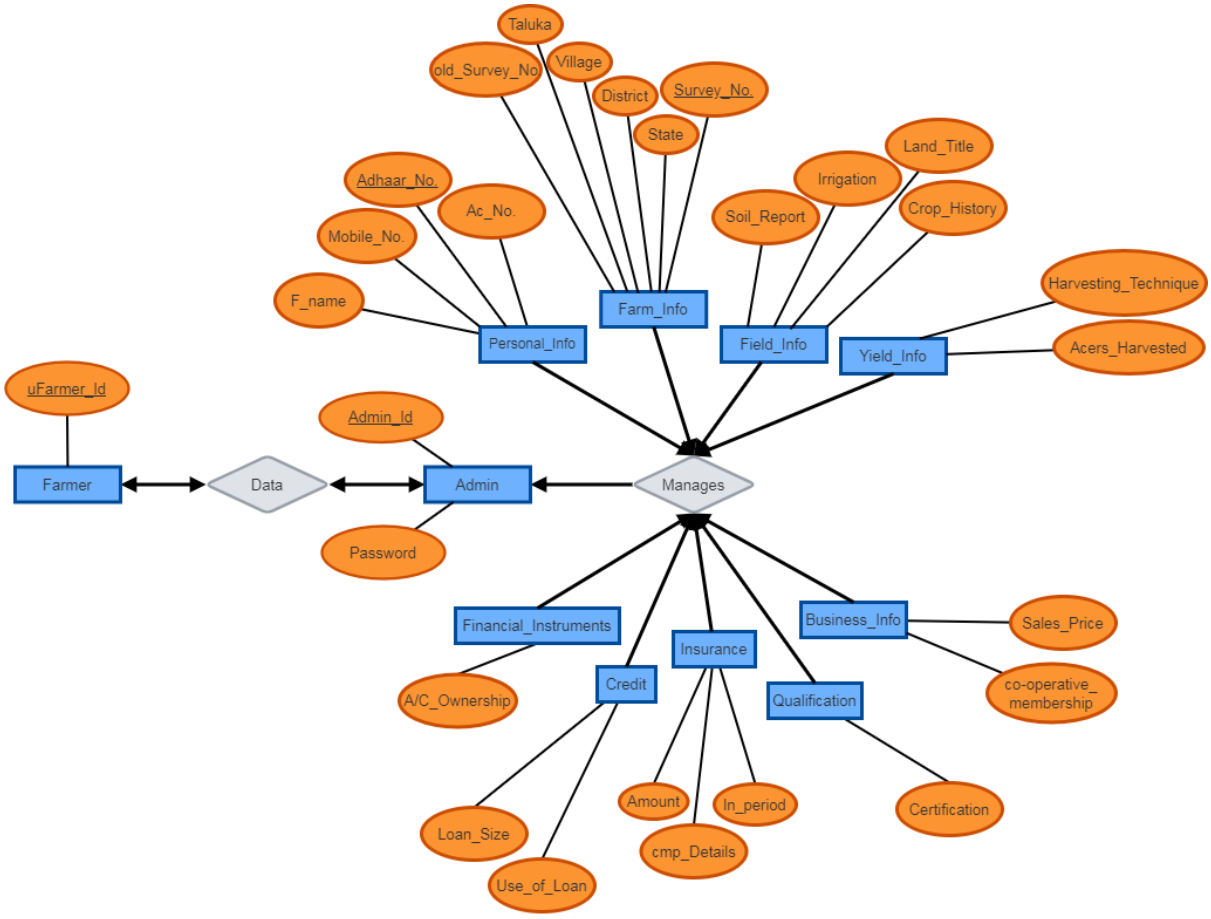
-Level 0 Data Flow Diagram: -



❖ Symbols used in E-R diagram:

	A **data object** is a real-world entity or thing. Data object is a fundamental composite information system. It can be external entity, a thing, an organization, a place or an event.
	An **attribute** is a property or characteristic of an entity. Attribute provide meaning to the objects. Attributes must be defined as an identifier, and that become key to find an instance of object.
	Entities are connected to each other via the **relations**. Generally, relationship is binary because there are two entities are related to each other. Relationship illustrates how two entities share information in the database structure. Relationship of objects is bidirectional, so they can be read in either side.
	**One to One**: An instance of entity A can relate to one only instance of B and instance of B can relate to only one instance of A.
	**One to Many**: One instance of entity A can relate to one or many instances of B, but an instance of B can relate to only one instance of entity A.

❖The E-R Diagram:



Entity-Relationship Diagram

❖Data tables:

Fields	Data types	Constraints	Description
A_email	Varchar(20)	Primary Key	It is used to keep record and manage the admin Email.
A_password	Varchar (20)	Not Null	It is used to keep record and manages the admin password.

[Table 1 – Admin's master]

Fields	Data types	Constraints	Description
F_id	Number(20)	Primary Key	It is used to keep the record and manage the farmer's identity.
F_name	Varchar(20)	Not Null	It is used to keep the record and manage the farmer's name.
F_Mobile_no.	Number(13)	Not Null	It is used to keep the record and manage the farmer's number.
F_Acc_no.	Varchar(20)	Not Null	It is used to keep the record and manage the farmer's Account no.
F_mail	Varchar(20)	Not Null	It is used to keep record and manage the farmer E-mail.
F_qualification	Varchar(20)	Not Null	It is used to keep record and manage the farmer's qualification.

[Table 2 – Farmer's Personal_info]

Fields	Data types	Constraints	Description
Survey_no.	Number(20)	Primary Key	It is used to keep the record and manage the farm's survey no.
State	Varchar(20)	Not Null	It is used to keep the record and manage the farm's State.
District	Varchar(20)	Not Null	It is used to keep the record and manage the farm's district.
Taluka	Varchar(20)	Not Null	It is used to keep record and manage the farm taluka.

[Table 3 – Farm_info]

Fields	Data types	Constraints	Description
Soil_Report	Varchar(20)	Primary Key	It is used to keep the record and manage the farm's soil report.
Irrigation	Varchar(20)	Not Null	It is used to keep the record and manage the farm's irrigation.
Land_Title	Varchar(20)	Not Null	It is used to keep the record and manage the title of land.
Crop_histroy	Varchar(20)	Not Null	It is used to keep record and manage the crop history of farmer.

[Table 4 – Field_info]

Fields	Data types	Constraints	Description
Acers_Harvested	Varchar(20)	Primary Key	It is used to keep the record and manage the yield produced.
Harvesting_Technique	Varchar(20)	Not null	It is used to keep the record and manage the farmer's harvesting technique

[Table 5 – Yield_info]

Fields	Data types	Constraints	Description
A/C_Ownership	Varchar(20)	Primary Key	It is used to keep the record and manage the ownership of the account.

[Table 6 – Finacial_instruments]

Fields	Data types	Constraints	Description
Loan_Amount	Number(20)	Primary Key	It is used to keep the record and manage the loan of farmer.
Use_of_loan	Varchar(20)	Not null	It is used to keep the record and manage the use of loan that farmer takes.

[Table 7 – Credit]

Fields	Data types	Constraints	Description
Ins_amount	Number(20)	Primary Key	It is used to keep the record and manage the insurance amount.
cmp_details	Varchar(20)	Not Null	It is used to keep the record and manage the details of insurance company.
Ins_period	Varchar(20)	Not Null	It is used to keep the record and manage the insurance limit.

[Table 8 – Insurance]

Fields	Data types	Constraints	Description
Sales_Price	Number(20)	Primary Key	It is used to keep the record and manage the sale price of farmer's business product.
Co_operative_membership	Varchar(20)	Not Null	It is used to keep the record and manage membership of farmer's business info

[Table 9 – Bussiness_Info.]

❖ Tools And Technology Used:

- Languages:

  - PHP, Javascript, CSS, Android, HTML, MY-SQL

- IDE Softwares:

  - VS Code, Oracle express 10g, Android Studio