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Traditionally using IOT we can get the data of field and fulfil the requirement of that

But problems with traditional approach:

- It can't be implemented with varying crop field
- Implementing this will be expensive and require individual water supply management for each field

## Motivation

- Here our large feild is divided into small plots based on the varitey of crops in the feild.
- Now we need to collect the data from each plot and fulfill the requirements.
- The main motto is to do this in the best way so that the overall cost of hardware and power consumption is reduced.

## Solution

#### Solution consists of two major steps:

- ► Data Collection:
  - Each node determines water requirement based on gathered data
  - Nodes send data to root node through their immediate parent.
- ▶ Water supply
  - Main hub will keep the water motor on until all node meet their requirement

#### Motivation Proposed Methodology

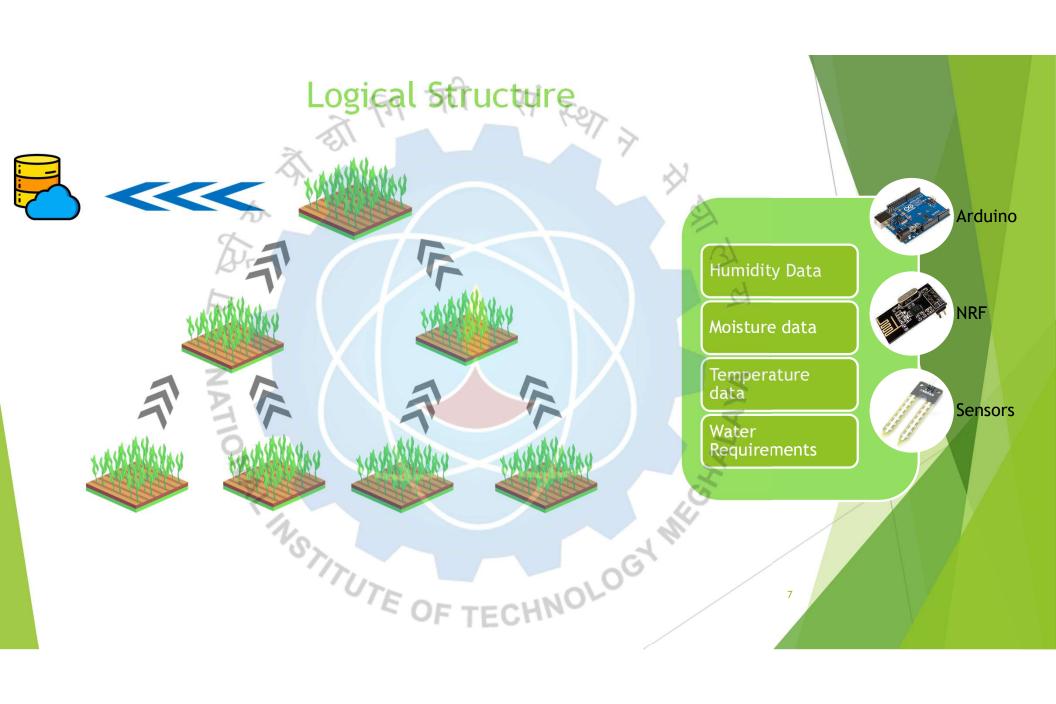
Data collection by each field nodes in regular intervals

Sending child node requirement to the immediate parent

Repeat this till you reach the root hub

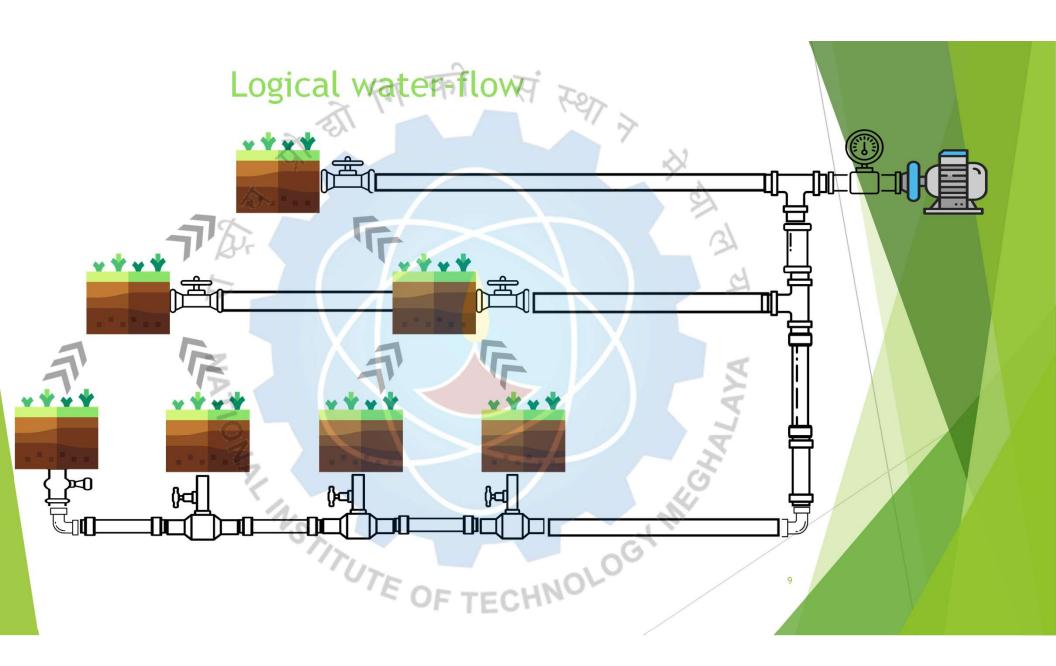
Pump water until all node meet their requirement

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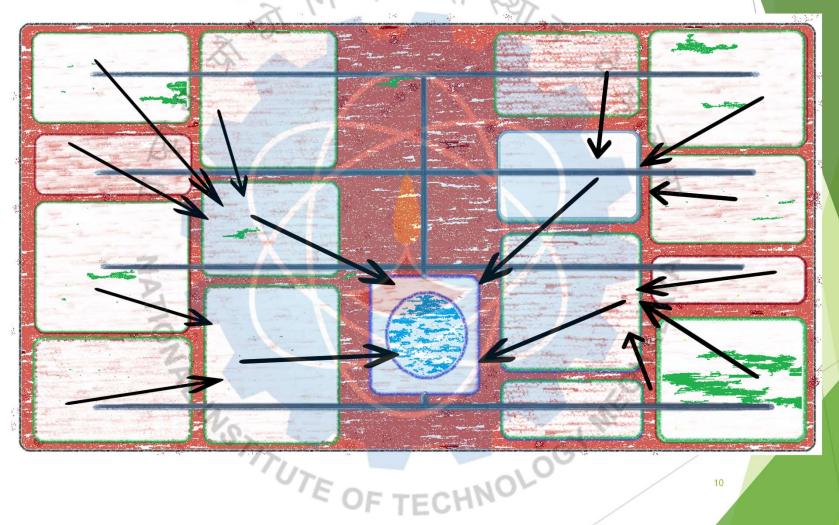


## Comments from last Presentation

- What is some node will fails in network?
- ✓ How the water requirements for each node will actually be fulfilled?
- How will we map the path for sending the water?
- ✓ Is this model sustainable for varying filed shapes?
- How expendable this network is?



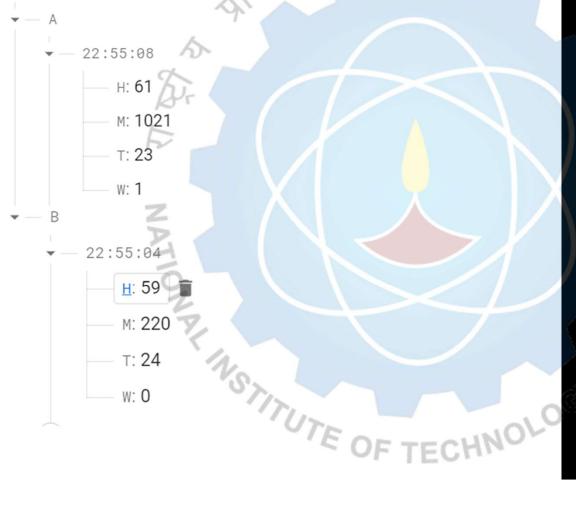
#### Physical Structure

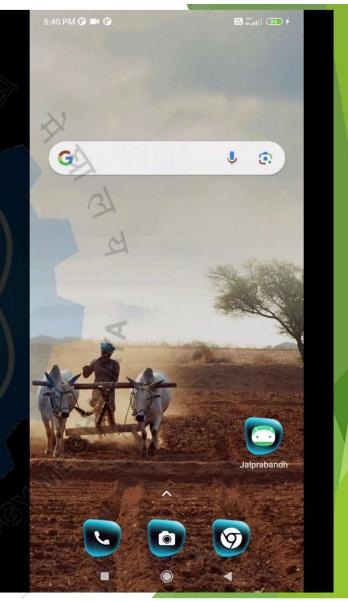




#### Final result की सं

https://smart-irrigation-51dfd-default-rtdb.firebaseio.com/





# Literature survey

Reference	Research Title	Description
1	IoT based smart crop-field monitoring and automation irrigation system.	Understood various IOT features that can be implemented in this project to automate the tasks.
2	Data Structures and Algorithms	Went to various data structures and found the best suited one to implement with algorithm
3	nRF24L01 - How It Works, Arduino Interface, Circuits, Codes	learn about nRF24L01 Arduino interfacing with the help example
4	Proteus PCB Design and Simulation Software - Introduction	Read about simulation and design software tool for simulating the prototype
5	Raspberry Pi as a Low-Cost Learning Platform for Computer Science Education	Connected Raspberry Pi with nrf module and send data to cloud
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## Gantt Chart Hi Ren S

S.No		Z)		Duration In weeks														
	Workflow	, "	1	2 3	4 5 6	7 8	9 10	11 12	1314	15	16	17 1	B 19	20	21 2	22 23		
1	Project Selection										5	7						V
2	Study and project Objective										100							
3	Research about existing met	hods										13	7					
4	Research about optimal strate	egies of doing											-					
5	Research aout the hardware	to implement id	dea										S					
6	Research abou further improv	ement using F	RF mudule															
7	Study the implementation of h	nardware simul	lation						V/									
8	Implemented the connection	between node	to node															
9	Researched the logic to comm	nucicate the in	formation(T,H,I	VI)									$\triangleleft$					
10	Implemented the connection I	b/w node to no	de with actual	data														
11	R & I the connection b/w root	node and Ras	pberry			40	1						*					
12	Sending the realtime data from	m Raspberry P	i to cloud									7	7					\
13	Worked on drawbacks from la	st presentataio	on				VA.					X						
14	R and I for async-manner of c	data collection	and water supp	oly							0	5						
15	Refactored the code and alon	g withsetup									1							
16	Created app to visulize the wa	ater supply for	fileds		71					45								
		F . 5 3	UTEO			~U	N	) L	G	1			/	1	10			

