



DATA ACQUISITION AND INTEGRATION

# My little Farm

PRESENTED BY: TBD

# Members



Thanida Chaiwongnon  
6410545444



Napasakorn Boonkerd  
6410545487



Tanabodee Yambangyang  
6410545754

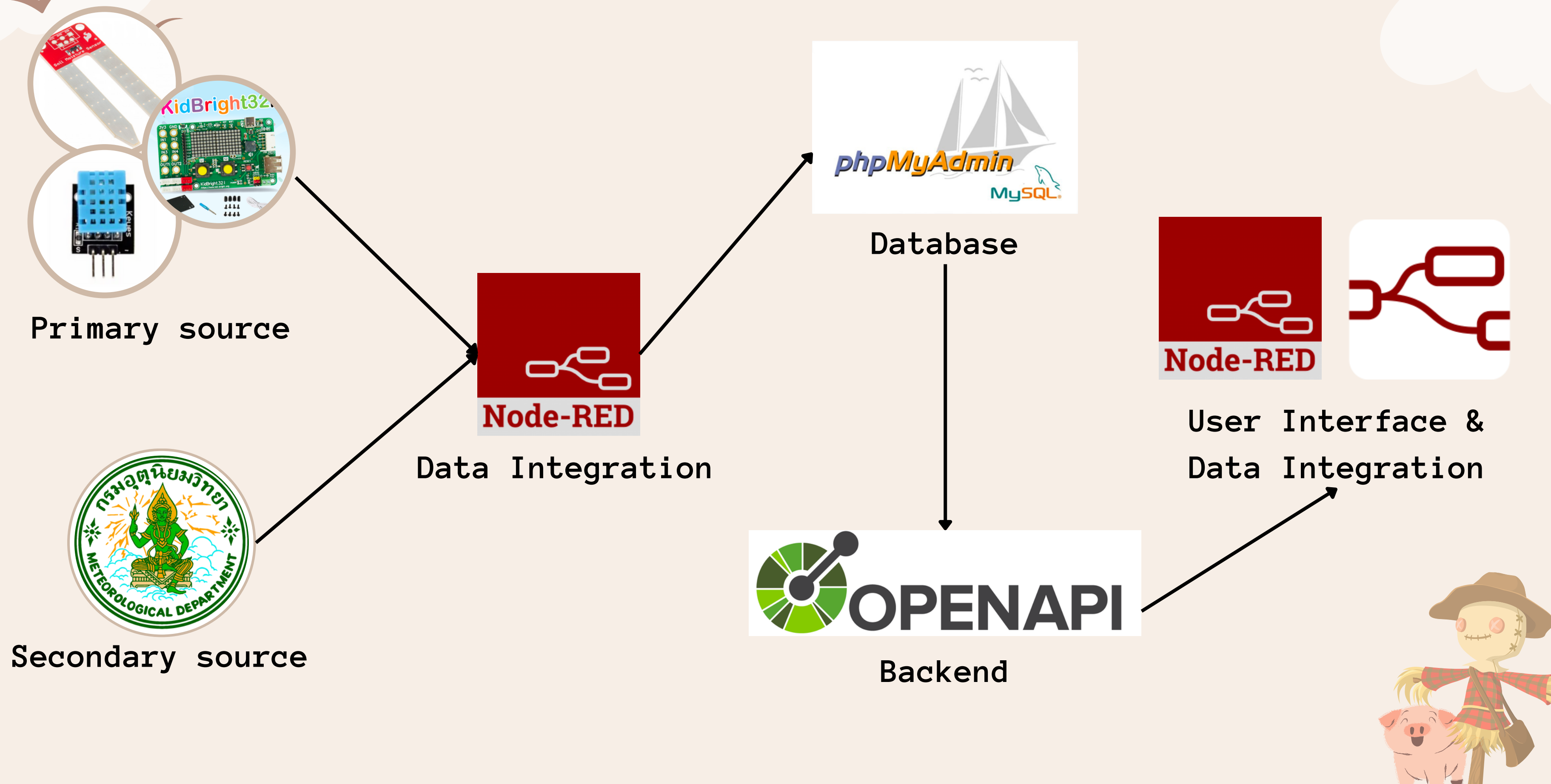


Maroj Thangthong  
6410546238



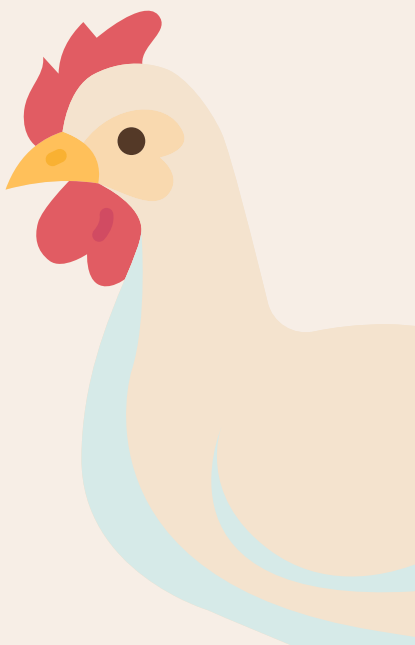
Siravich Termvadsayanon  
6410546297

# Overall Architecture



# Background & Motivation

Our Smart Farming System utilizes IoT devices and external APIs to transform agriculture, resource optimization, and sustainability. By integrating on-board sensors and external data, our approach offers real-time insights and recommendation controls, empowering farmers with actionable information. The user-friendly web API streamlines data access, contributing to the advancement of agriculture by promoting efficiency through smart farming technologies.



# Datasource

## Primary source


1. LDR from board
2. Temperature from board
3. Soil moisture sensor
4. Temperature and humidity sensor

## Secondary source


1. Hourly rain volume from TMD API
2. Hourly weather condition from TMD API

# Database schema used for data integration

hcp\_tmd

Name	Type	Collation	Attributes	Null	Default	Comments	Extra
id 	int(11)			No	None		AUTO_INCREMENT
ts	timestamp			No	None		
lat	float			No	None		
lon	float			No	None		
cond	int(11)			No	None		
rain	float			No	None		
tc	float			No	None		
rh	float			No	None		

kidbright\_indoor/  
kidbright\_outdoor

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id 	int(11)			No	None		AUTO_INCREMENT
2	ts	timestamp			No	CURRENT_TIMESTAMP		DEFAULT_GENERATED
3	lat	float			No	None		
4	lon	float			No	None		
5	temp	float			No	None		
6	light	float			No	None		
7	humid	float			No	None		
8	moisture	float			No	None		



# What our API provide

- Weather Condition
- Soil moisture level
- Humidity
- Temperature
- Rainfall
- Light intensity

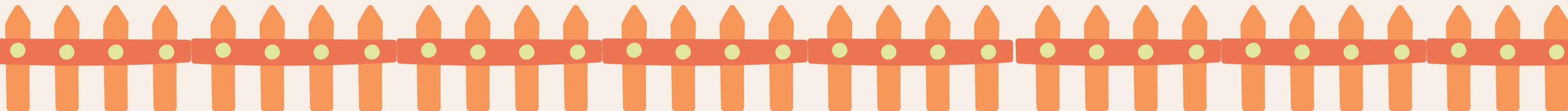


- Forecast weather data
- Current weather data
- Condition to watering the plant
- Condition to open/close roof
- Condition to open/close sun shade



The top of the slide features a light beige background with three stylized clouds. On the left and right are white clouds, each with two brown birds flying nearby. In the center is a larger, light blue cloud. 

# Data visualization



DEMO TIME



The background is a light beige color. At the top, there are several white, fluffy clouds. Scattered across the sky are several brown birds in flight. In the foreground, there is a field of green grass. On the left side, a brown donkey is shown in profile, facing right. Above its head are three small, white, rectangular shapes with black outlines, arranged in a fan-like pattern. On the right side, a brown horse is shown in profile, facing left. Above its head is a white speech bubble containing a large black question mark.

**Thank you for  
listening!**

**Any Question?**