



DSS Tools Design Document

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FARM: Fostering Agriculture
Rural Development and Land Management



Executive Summary:

The purpose of this document is to provide a clear understanding to all partner organizations and other interested readers of the designs of the FARM DSS tools.

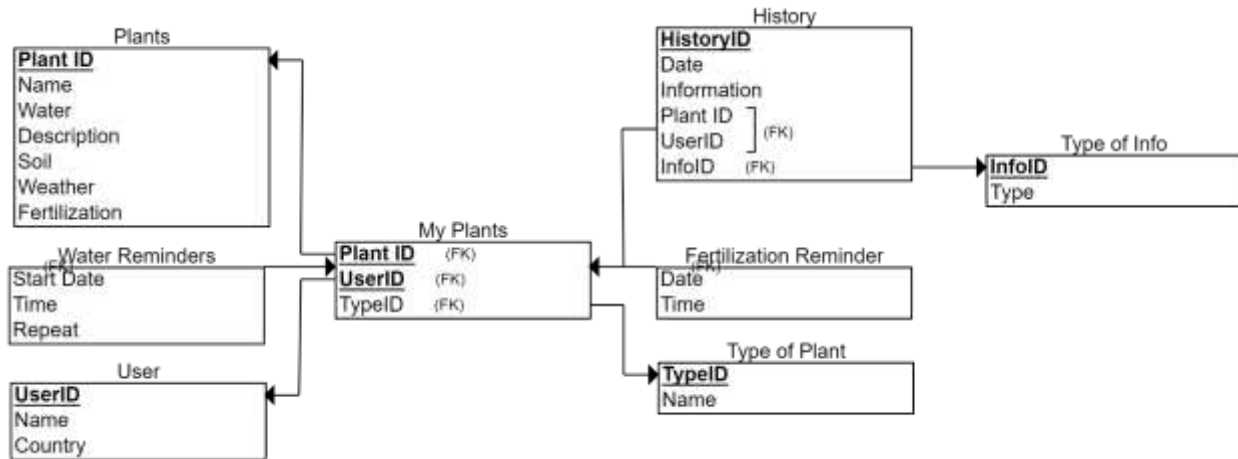


Contents

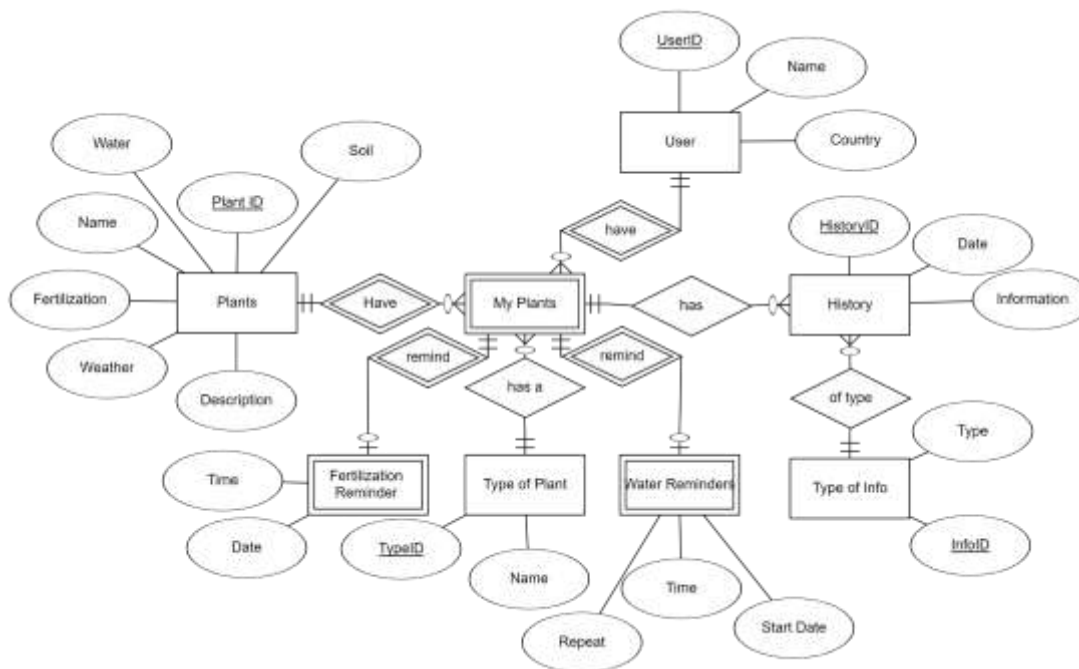
Executive Summary:	2
1. Database	4
2. Architecture of the system	5
3. Screenshots of the DSS tools prototypes	6
4. Technology Architecture	22
4. Flow diagram	23

1. Database

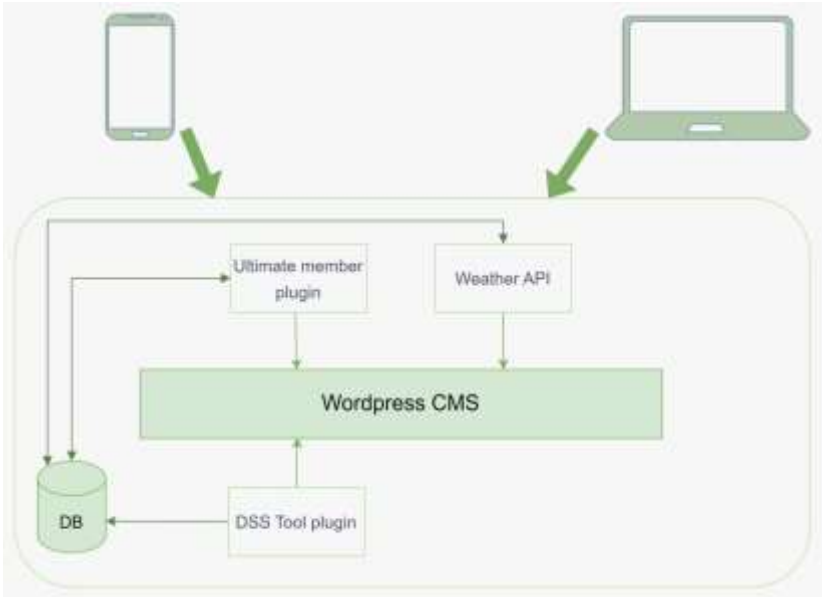
Database Schema



Database Relationships



2. System Architecture

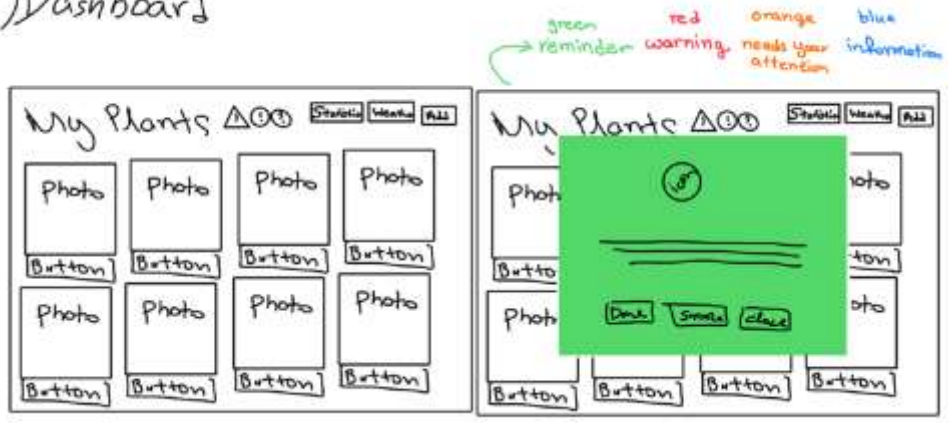


3. Screenshots of the DSS tools prototypes

Low fidelity prototypes



(1) Dashboard



(2) Plants

Plants

option 1 option 2 option 3

Photo

Photo

Photo

Plants

option 1 option 2 option 3

check 1 check 2 check 3

Photo

Photo

Photo

(3) Specific Plant Info

Plant 1

Photo

Water reminder

Fertilizers

Weather preference

Plant 1

Photo

W F Weather preference

calendar

time

repeat

(4) History

History

(5) Add Info

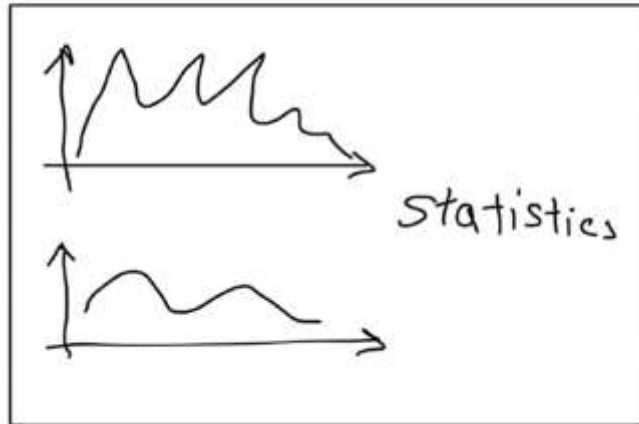
Add Info

calendar

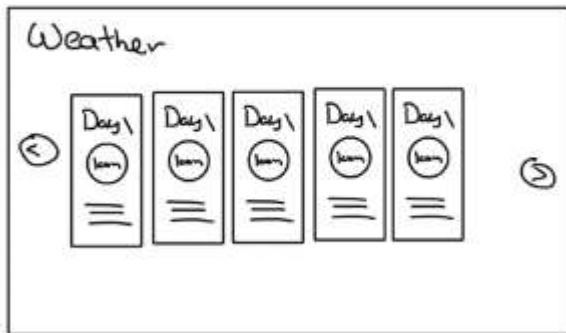
Extra 1

Extra 2

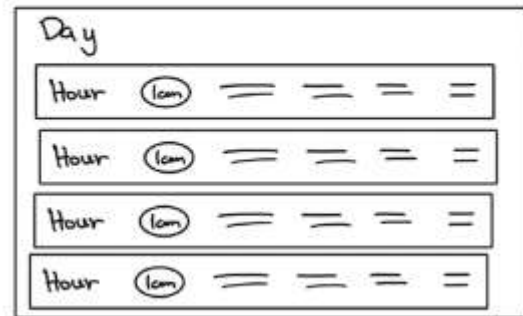
(6) Statistics



(7) Weather



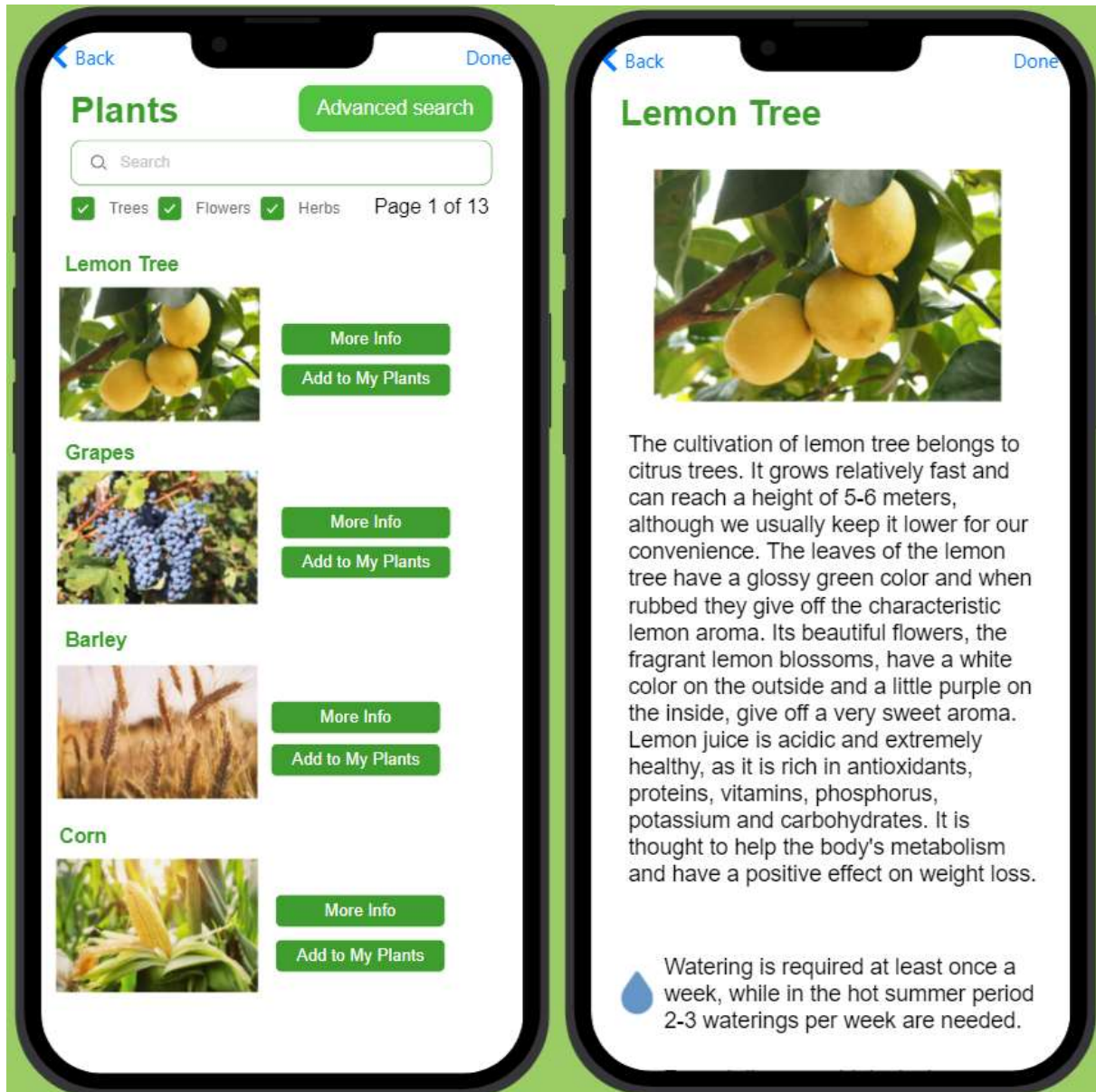
(8) Day

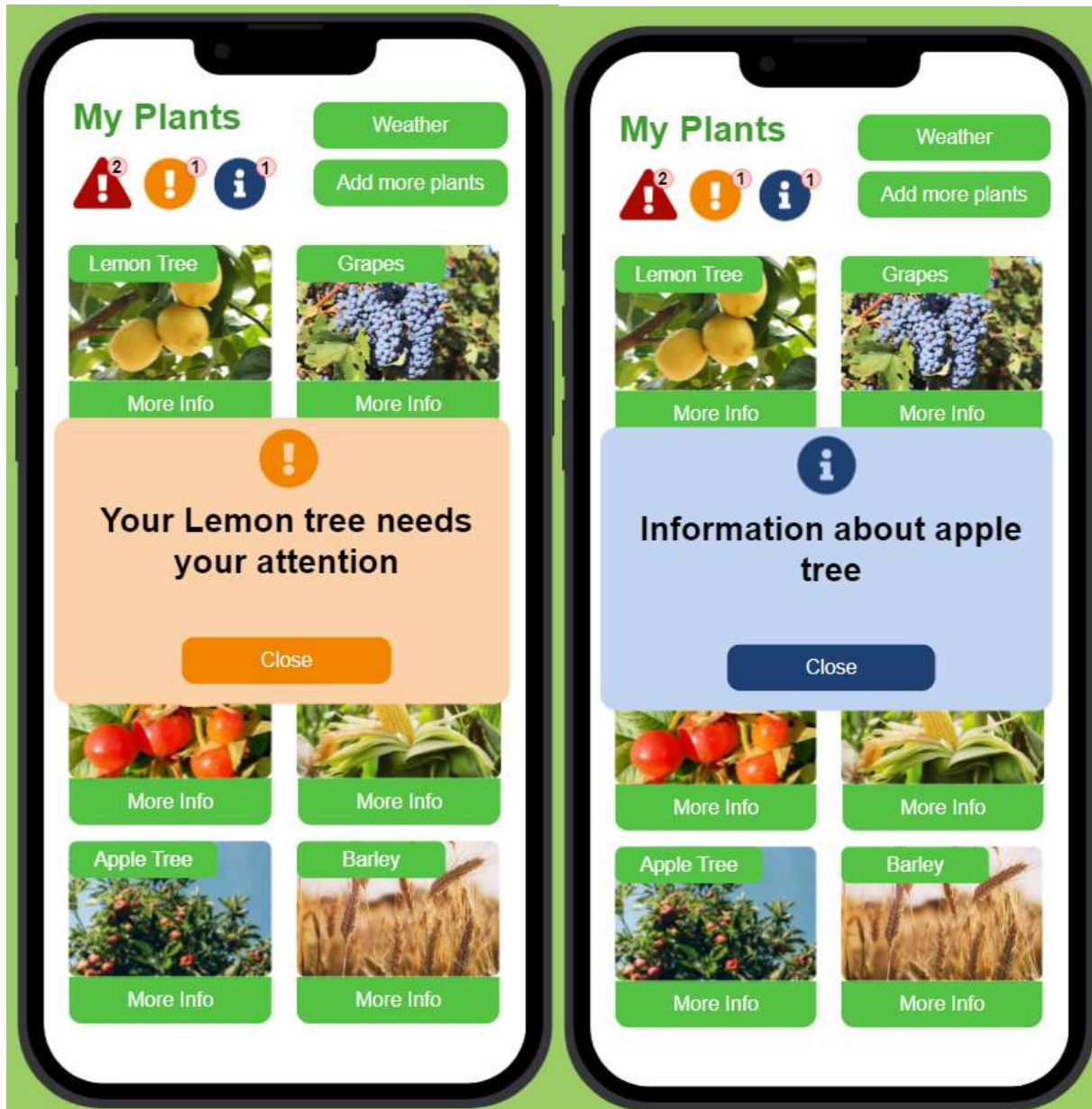


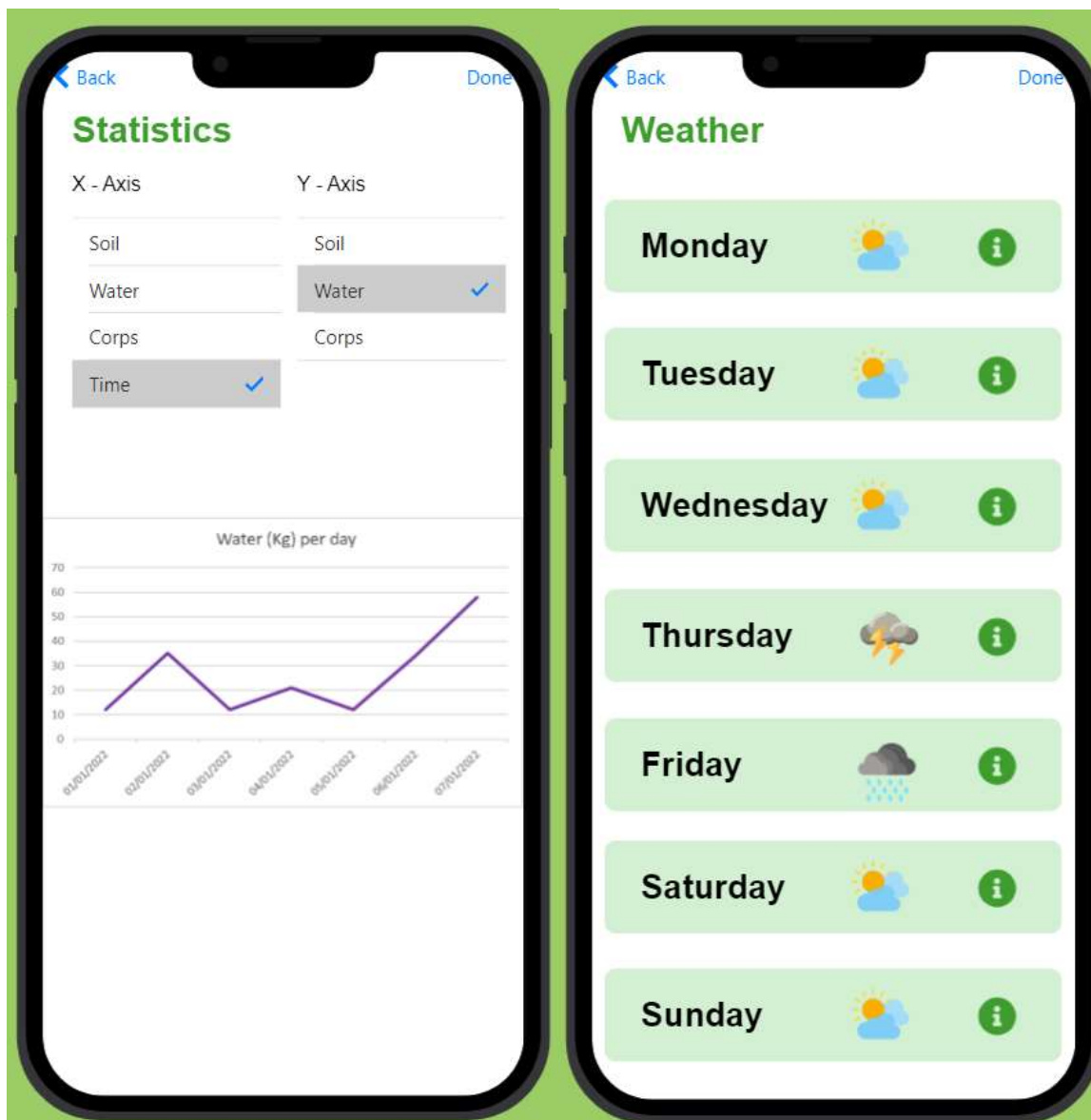
High Fidelity prototypes

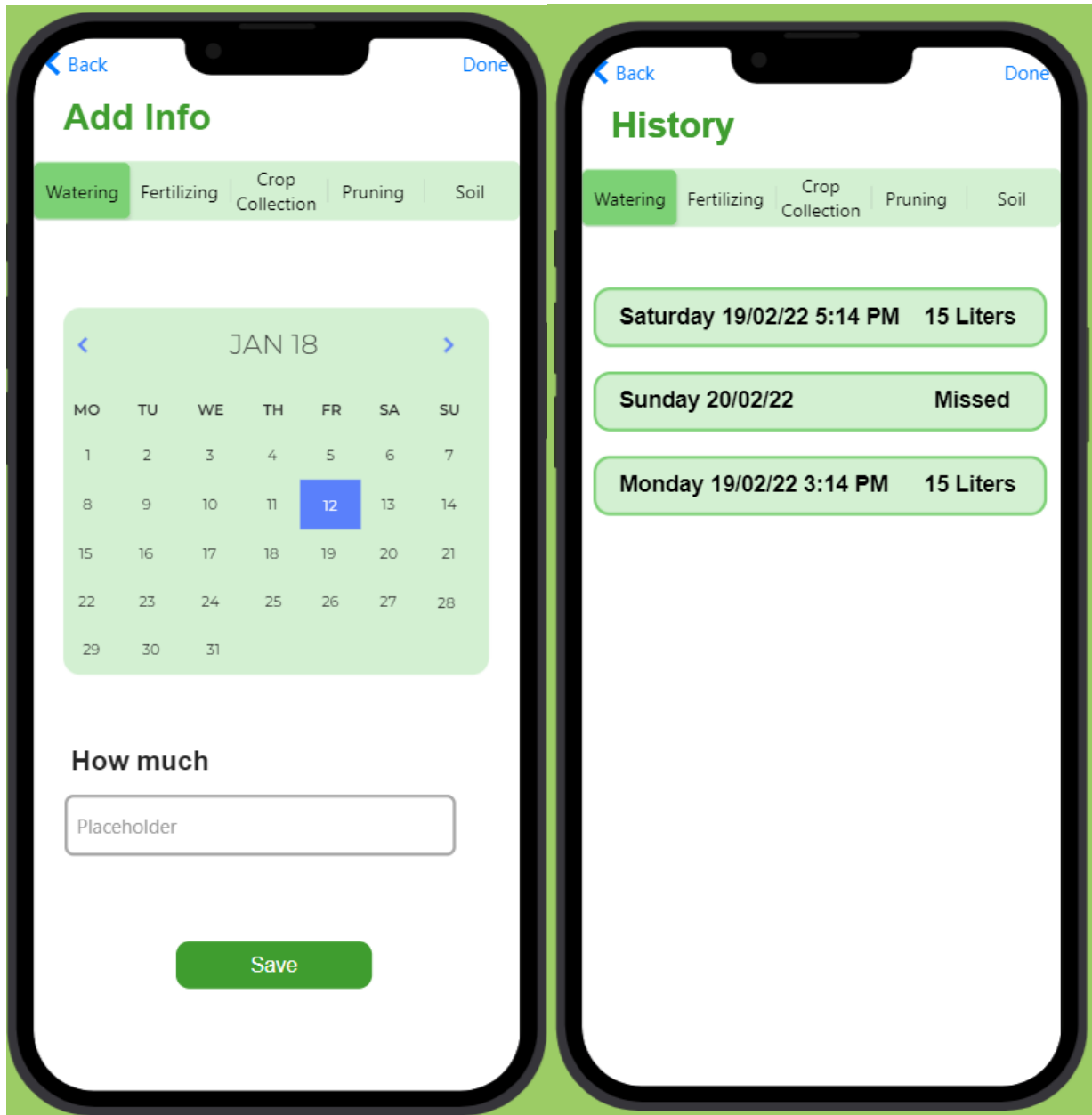


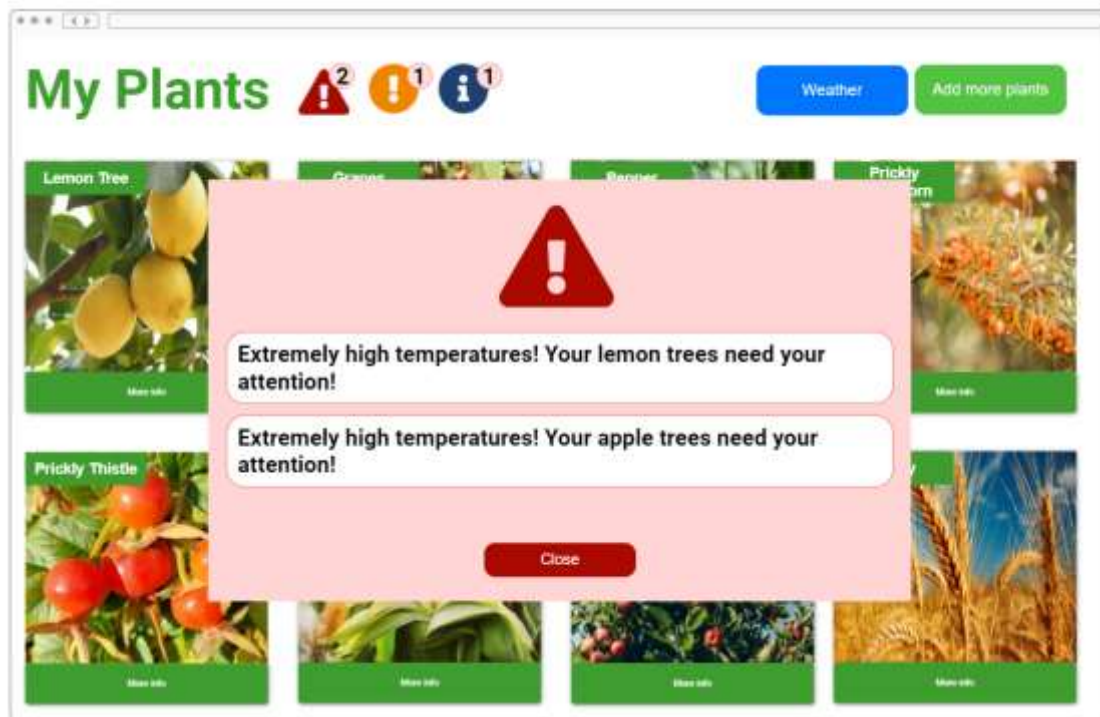
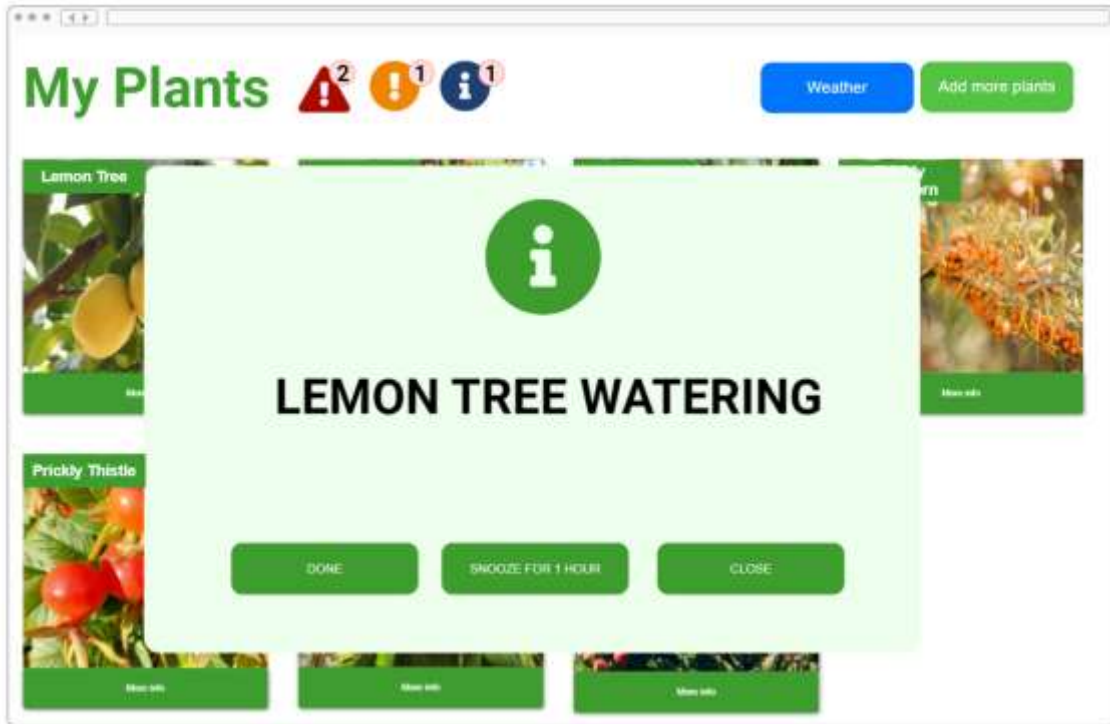


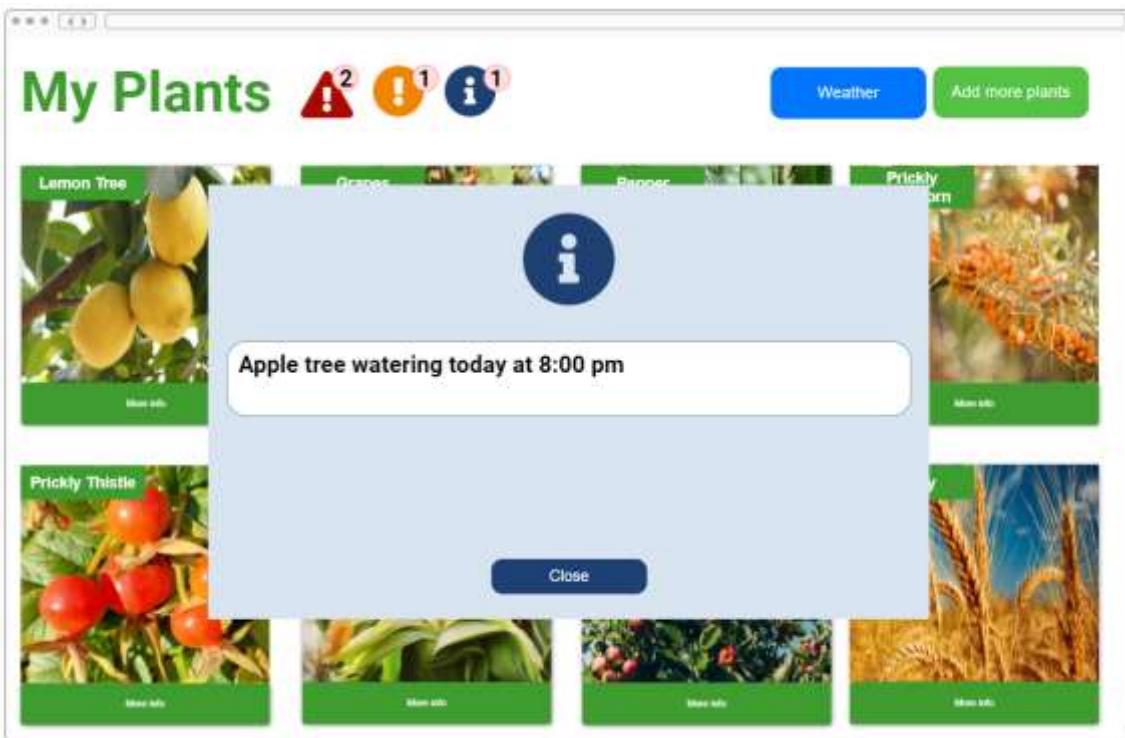
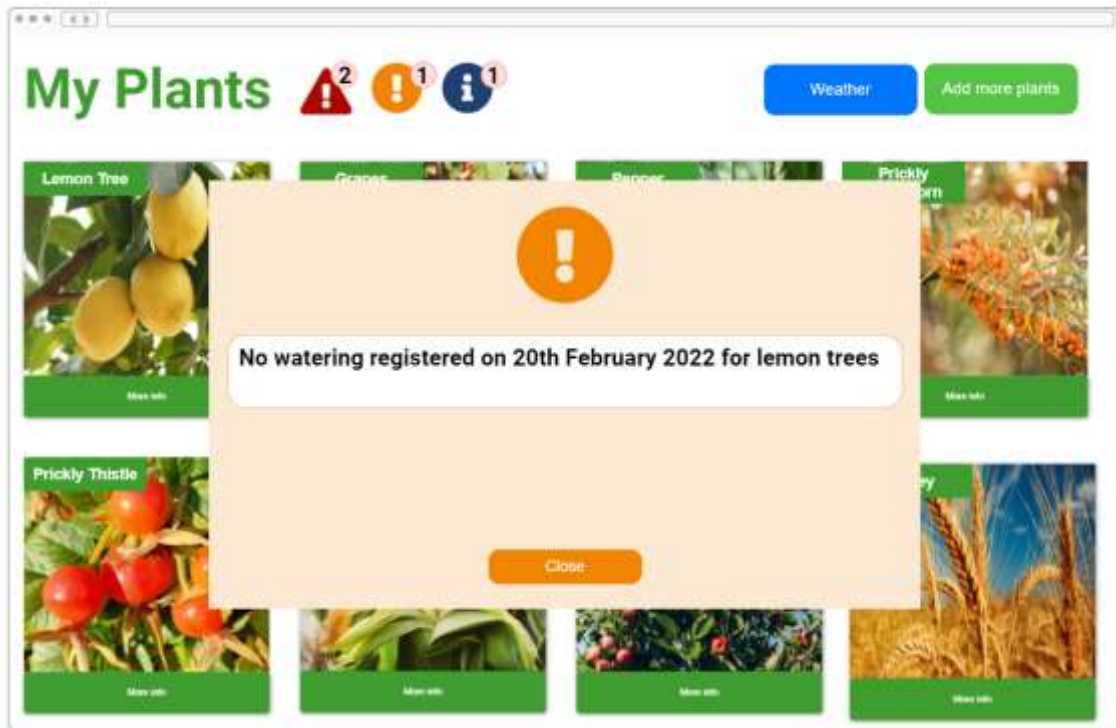













Plants

Search

Advanced Search

Trees Foliage Herbs


Page 1 of 13



Lemon Tree

The cultivation of lemon tree belongs to citrus trees. It grows relatively fast and can reach a height of 3-6 meters, although we usually keep it lower for our convenience. The leaves of the lemon tree have a glossy green color and when rubbed they give off the characteristic lemon aroma. Its beautiful flowers, the fragrant lemon blossoms, have a white color on the outside and a little purple on the inside, give off a very sweet aroma. Lemon juice is acidic and extremely healthy, as it is rich in antioxidants, proteins, vitamins, phosphorus, potassium and carbohydrates. It is thought to help the body's metabolism and have a positive effect on weight loss.


More info Add to My Plants



Grapes

Large and deeply colored berries of grapes used for wine production. The grapevine is strong and gives abundance of fruit. It thrives on dry and warm climate. It is harvested by hand during mid-September. Berries can be damaged due to over-watering, or wasp attack. The over-watering can cause a decrease in the sugar level of the grape juice.


More info Add to My Plants



Barley

Barley belongs to the family of grasses (Poaceae). The plant grows to a height of 0.7-1.2 m. The inflorescence is a spike with long awns. The ears are inclined to drooping when mature. Botanically, the grains are one-seeded closed fruits (caryopses). There are two-rowed and multi-rowed ear forms. Spring barley is usually two-rowed, winter barley four-rowed. Barley grows best on deep, well-moistened soils. However, it also copes well with unfavorable conditions. Its winter hardiness is less pronounced than that of wheat or rye. In cultivation, a distinction is made between winter and spring barley. Winter barley is more productive and is sown in September...

More info Add to My Plants



Corn

Corn is very heat-loving. The minimum growth temperature is at 6 - 8 °C. The optimum growth temperature is around 28 °C. Late and early frosts significantly inhibit growth. Corn requires a certain amount of heat until it is mature. The base is 6 °C. For grain corn, the required heat sum is 1500 - 1900 °C, for silage corn 1250 - 1600 °C. Borderline regions are those where the average temperature from May to September is below approximately 14 °C.

Plants

Search

Advanced Search

Soil

Type of Soil

Sandy Silty Clay Loamy

Humidity of soil

PH of soil

#


Climate


Dry Tropical Temperate Continental Polar


Season


Winter Spring Summer Autumn

Search Cancel










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← Lemon tree


Statistics
History
Add info




The cultivation of lemon tree belongs to citrus trees. It grows relatively fast and can reach a height of 5-6 meters, although we usually keep it lower for our convenience. The leaves of the lemon tree have a glossy green color and when rubbed they give off the characteristic lemon aroma. Its beautiful flowers, the fragrant lemon blossoms, have a white color on the outside and a little purple on the inside, give off a very sweet aroma. Lemon juice is acidic and extremely healthy, as it is rich in antioxidants, proteins, vitamins, phosphorus, potassium and carbohydrates. It is thought to help the body's metabolism and have a positive effect on weight loss.

 Watering is required at least once a week, while in the hot summer period 2-3 waterings per week are needed.

 Fungal diseases: biological copper
Entomological attacks: biological insecticides (summer pulp,potassium salts)

 Need a cool environment, without extreme temperatures


 Thrives on medium composition soils, with good drainage, low salinity and low calcium content

Set Reminders

Set Reminders

← Lemon tree

Statistics
History
Add info



← December →

Mo	Tu	We	Th	Fr	Sa	Su
28	29	30	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	1	2

07

00

AM


Every day


Every week


Every month


Set Reminder
Cancel

and can reach ce. The leaves ce. The leaves the the oms, have a veet aroma. iteins, vitamins, metabolism and

 Wat
wat

 Fun
Ento

 Need

 Thrives on medium composition soils, with good drainage, low salinity and low calcium content

← Add info

Watering
 Fertilizing
 Crop Collection
 Pruning
 Soil

December 2022

Mo	Tu	We	Th	Fr	Sa	Su
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

How much

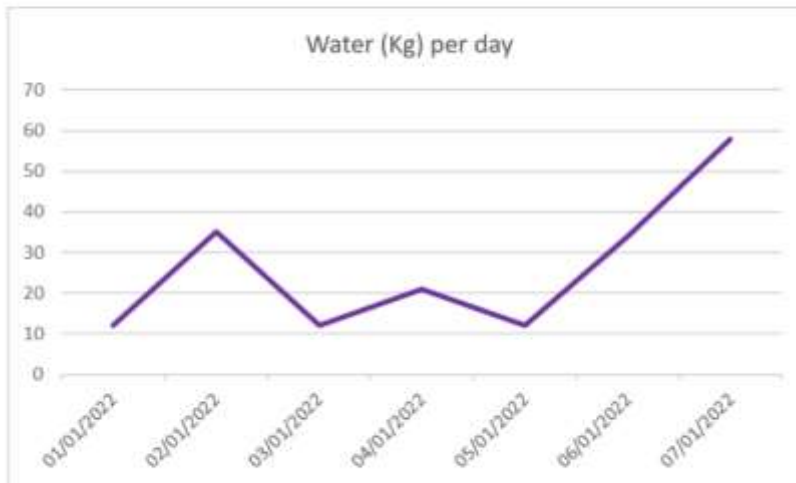
Save

← History

Watering
 Fertilizing
 Crop Collection
 Pruning
 Soil

Saturday 19th February 2022 5:14 PM	15 Liters
Sunday 20th February 2022	Missed
Monday 21th February 2022 3:14 PM	15 Liters

Statistics



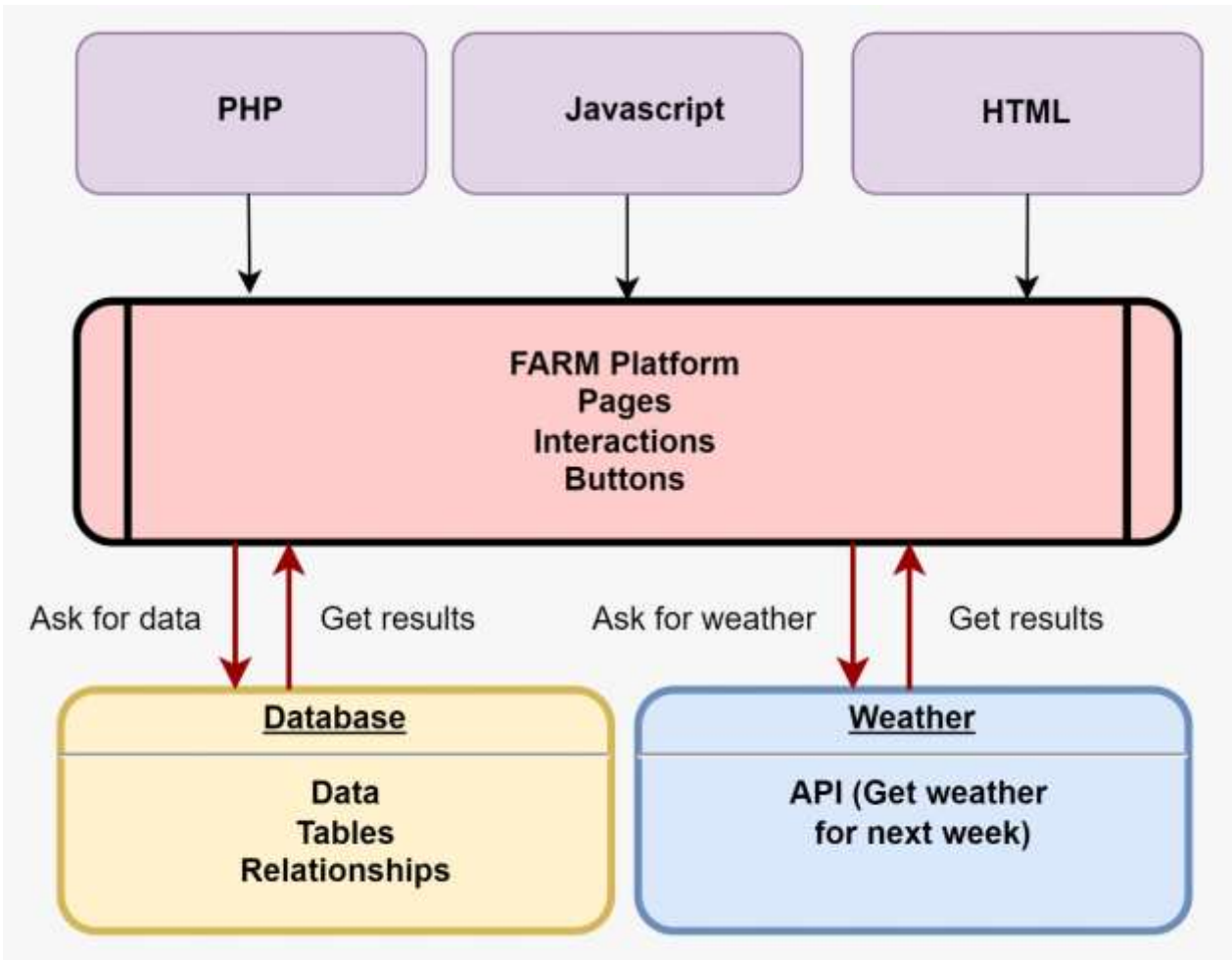
X-axis

 Soil Water Corps Time

Y-axis

 Soil Water Corps

4. Technology Architecture



4. Flow diagram

