

# **AGRICULTURAL DATA ANALYSIS**

Group 2

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# GROUP MEMBERS :

1. Aiswarya Raj (SCRUM MASTER)
2. Don C Alocious (GROUP LEADER)
3. Aneena K Bijy
4. Heera T Mohan
5. Juhi Jojo
6. Simi Jose

# INTRODUCTION

Today, India ranks second worldwide in the farm output. Agriculture is demographically the broadest economic sector and plays a significant role in the overall socio-economic fabric of India. Agriculture is a unique business crop production which is dependent on many climate and economy factors. Some of the factors on which agriculture is dependent are soil, climate, cultivation, irrigation, fertilizers, temperature, rainfall, harvesting, pesticide weeds and other factors. Historical crop yield information is also important for supply chain operation of companies engaged in industries.

There are 2 factors which are helpful for the farmers and the government in decision making namely:

- ▶ It helps farmers in providing the historical crop yield record with a forecast reducing the risk management.
- ▶ It helps the government in making crop insurance policies and policies for supply chain operation. Data mining technique plays a vital role in the analysis of data. Data mining is the computing process of discovering patterns in large data sets involving methods at the intersection of artificial intelligence, machine learning, statistics, and database system.

# THE TASKS GIVEN

- ▶ Task1-Weather Forecasting Application
- ▶ Task2-Saving displayed weather details of each place to a server
- ▶ Task3-Rainfall Prediction Using Decision Tree Algorithm

# Task1-Objectives

- ▶ What is the main goal of this app?  
To predict the conditions of the atmosphere for a given location
- ▶ Is it track climatic conditions of any location?  
Using this app we can get the full atmospheric details of any place in this world
- ▶ How can we get the weather details of a particular location?  
We can connect our app with an OpenWeatherMap API

# Task1-Algorithm

- ▶ Input:  
Enter the location for weather search
- ▶ Output:  
Display corresponding weather details for the city from openweather map

# Task1-Algorithm

- 1.Start
- 2.Set User permission to access internet
- 3.Create the Text field for entering the location
- 4.Create the Button for Search
- 5.Use an API for retrieving the weather details
- 6.Display the Weather details in report
- 7.Store the displayed details to the database
- 8.Stop.



# Task2-Objectives

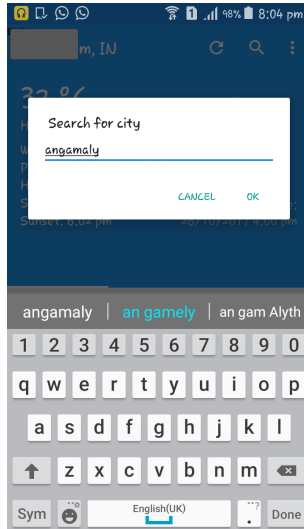
- ▶ How the displayed data can be stored into a database?
- ▶ How the stored datas can be displayed on screen?

# Task2-Algorithm

- ▶ Input: Displayed data about the given city
- ▶ Output: Save the data displayed on the screen in to sqlite database

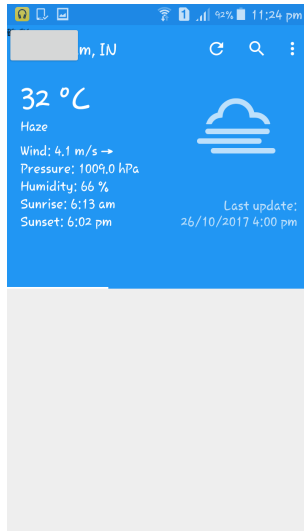
# TASK 1

## Output



# TASK 1

## Output



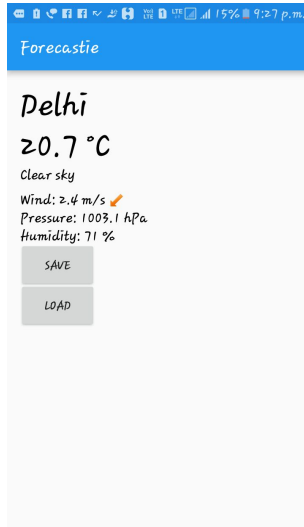
# Task2

## -Algorithm

1. Start
2. Load the searched weather datas in to a new activity
3. Create the Button for save and display
4. Fetch the values and save the contents into a database using queries
5. Display the Weather details in to a report
6. Stop

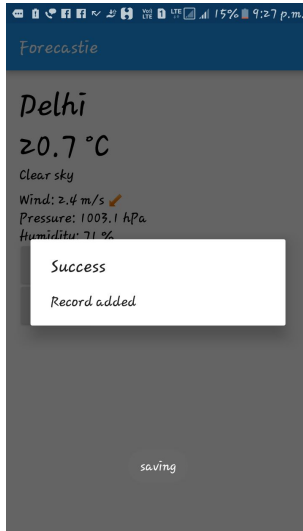
# TASK 2

## Output



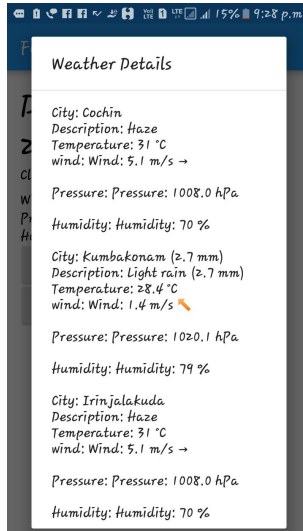
# TASK 2

## Output



# TASK 2

## Output





# Task3-Objectives

- ▶ What is the main goal of this algorithm?  
To predict the conditions of the atmosphere for a given location
- ▶ Is it for classify the given dataset?  
Using this algorithm it can classify the given dataset into multiple class
- ▶ How can we classify?  
Can classify the datasets as moderate rainfall , medium and high rain- fall locations

# Task3-algorithm

- ▶ Input: Weather Data set from Data.gov website
- ▶ Output: Predicting class rain or not for given dataset using decision tree algorithm

# Task3-algorithm

1. Start
2. Read the csv data frame
3. Encode categorical values to integer value
4. Fit the decision tree with target and feature set
5. Producing pseudocode that represent the learned decision tree
6. Stop

# EXISTING SYSTEM

- ▶ The available weather forecasting applications are mainly used for getting weather informations about a place such as Temperature, pressure, Wind , Humidity etc.
- ▶ It does not show the deatils we previously saw
- ▶ Not directly applicable in agricultural areas.

# PROPOSED SYSTEM

- ▶ Proposed system study very well the existing system and make ideas for develop a new one,
- ▶ Proposed system is applicable in Agriculturel areas.
- ▶ It helps farmers in providing the historical crop yield record with a forecast reducing the risk management.
- ▶ it helps the Government in makin crop insurance policies and policies for supply chain operation.
- ▶ DataBase conectivity is establish here. So the previous searching details are shown from a Server.
- ▶ It is used for predicting which crop is suitable for the given weather attributes.

# PROOF OF CONCEPT

As we know there are several applications available in mobile phones showing the current weather conditions. The weather conditions including the temperature, humidity, speed of wind etc... The limit is that it can only be used for showing the climatic conditions at that moment. In our Agricultural data analysis application we are saving the data into a server so that it can be used for the future references. This data is useful when we want some crops to be cultivated in a particular region. According to farmers' mindset he/she wants his/her crop to be cultivated at the best time, so these data can show how appropriate the present condition is so as to get his crop at high yield.

# CONCLUSION

Data mining techniques are implemented on the input data to assess the best performance yielding method. The present work used data mining technique such as Decision tree Algorithm. We are here predicting the rainfall that helps the farmers for cultivating their crops according to the type of the crop. The proposed work can also be extended to analyse the soil and other factors for the crop and to increase the crop production under the different climatic conditions.

# BIBLIOGRAPHY

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**THANKS TO ALL**