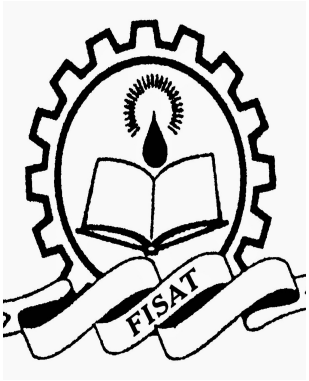
Group 2

AGRICULTURAL DATA ANAYSIS

Federal Institute Of Science And Technology



Group Members

Scrum Master:	Aiswarya Raj
Team Leader:	Don C Alocious
Other Members:	Aneena k Bijy
	Heera T Manomohan
	Simi Jose
	Juhi Jojo

Contents

Abstract

This paper presents a new method of weather forecast presentation, which was developed as a project during the course of postgraduate study. So far, the use of mobile phones in the presentation of weather forecasts was limited andnon-interactive.It has been developed in the Android studio and successfully tested in an emulator and on real mobile devices.

Weather Report project application is a web based application through which you will able to get all the reports related to weather forecasting of any locations. Its geographical locator which will be received through your browser setting and server configuration will automatically identify the location and able to present its weather details such as temperature, direction of wind, rains, humidity etc. To change the location you will just have to select the options provided below to get its details. Its new avatars and feed burner will also allow its users to get the weather reports directly to their mail, when they were not able to access this particular domain or even when the server is down.

Introduction

Weather forecasting is the application of science and technology to predict the state of the atmosphere for a given location. Ancient weather forecasting methods usually relied on observed patterns of events, also termed pattern recognition. For example, it might be observed that if the sunset was particularly red, the following day often brought fair weather. However, not all of these predictions prove reliable. Here this system will predict weather based on parameters such as temperature, humidity and wind.

This system is a web application with effective graphical user interface.Weather forecasting system takes parameters such as temperature, humidity, and wind and will forecast weather based on previous record therefore this prediction will prove reliable.User can easily find out Weather condition by using this system. 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:

a.It helps farmers in providing the historical crop yield record with a forecast reducing the risk management.
b.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.

Existing System

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

Previously built Weather Report project web based application was compatible with system and every time users start this application, they have to set their default location to get weather reports on it. Due to complex coding, system responding time was high and require more memory to get start up. The concept of graphics for geographical region was not implemented in older version. Dynamic concept was not implemented under the existing system, thus theme and color of web page was not changing as per the weather report.

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.Once location selected by the user for its system use, it will make it default location and remembered by the system so that users do not have to change every time they use this system.

Chapter 1

Tasks

1.1 Task No:1

Weather Forcasting Application

1.1.1 Date of the task given:

17 August 2017

1.1.2 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

1.1.3 Algorithm

Input:

Enter the location for weather search

Output:

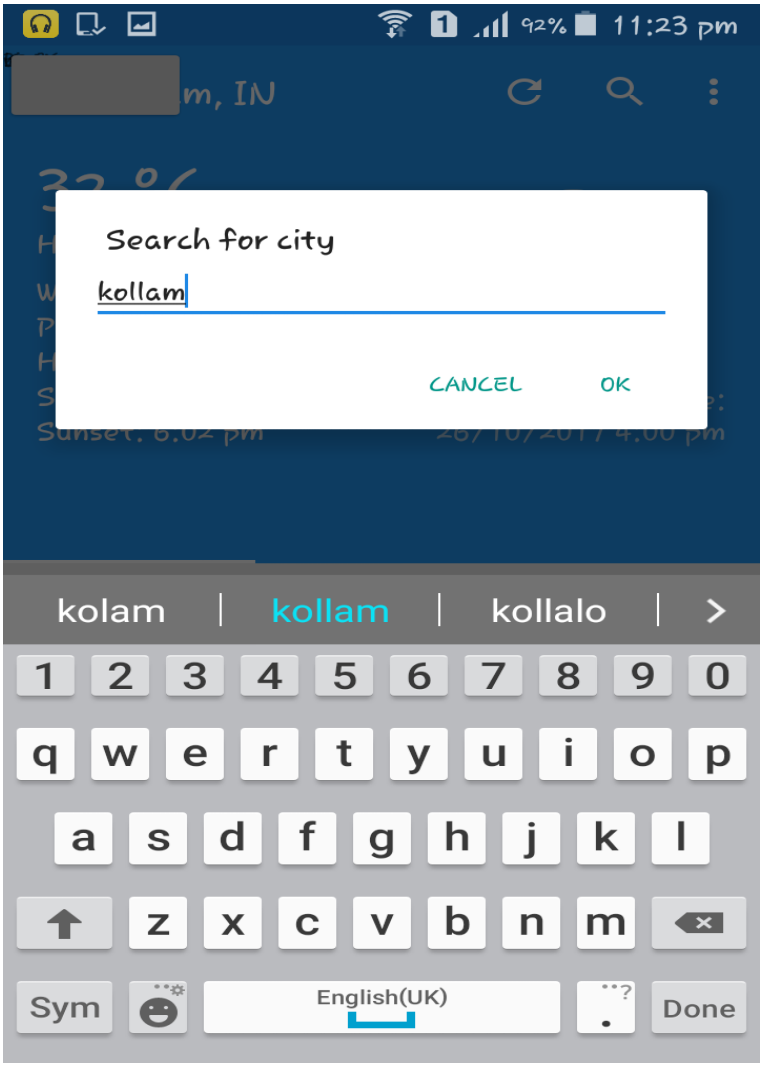
Display the temperature,humidity from Open-WeatherMap API

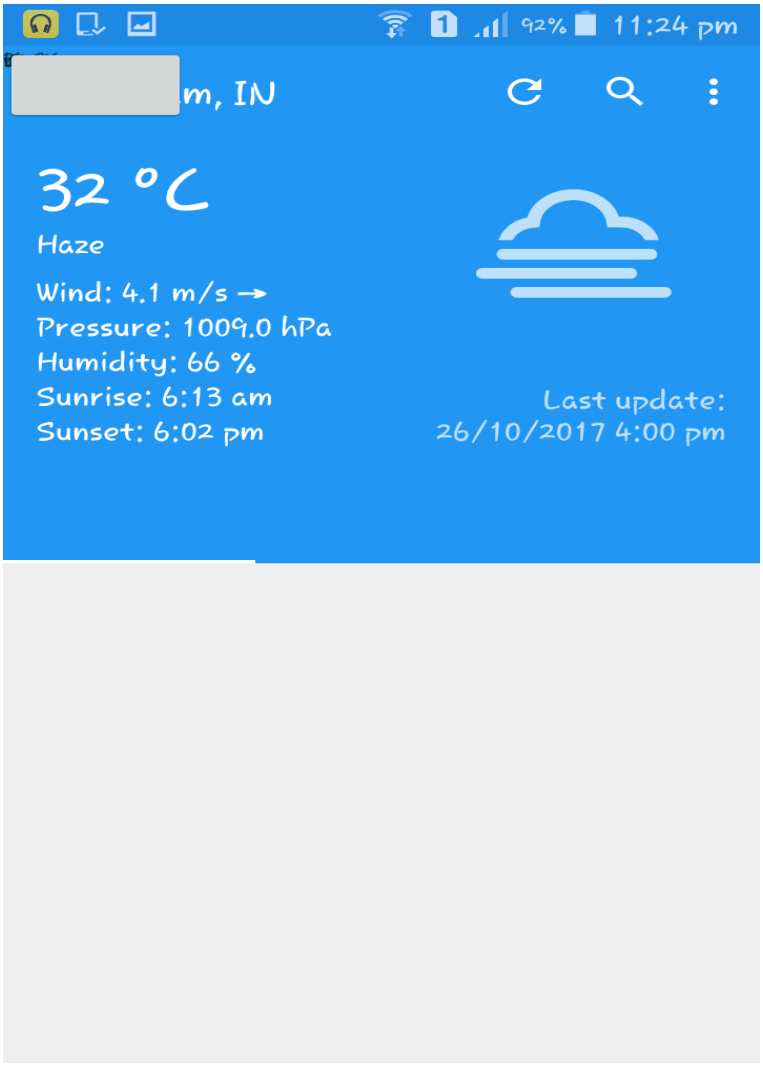
1. Start
2. Set User permission to access internet
3. Create the Text field for entering the location
4. Create five Labels for display the city,temperature,pressure,wind and humidity
5. Create the Button for Search
6. Use an API for retrieving the weather details
7. Display the Weather details on clicking search button
7.1. Search the city from API
7.2. Load corresponding data as JSON
8. Refersh download weather datas while click on refresh button
9. Stop.

1.1.4 Task completed Date

25th August 2017

Output


11:23 pm
Search for city
kollam
CANCEL
OK
kolam
kollam
kollalo
1 2 3 4 5 6 7 8 9 0
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
Sym
English(UK)
Done


92% 11:24 pm
m, IN
32 °C
Haze
Wind: 4.1 m/s →
Pressure: 1009.0 hPa
Humidity: 66 %
Sunrise: 6:13 am
Sunset: 6:02 pm
Last update:
26/10/2017 4:00 pm

1.2 Task No:2

Saving displayed weather details of each place to a server

1.2.1 Date of task given:

25 August 2017

1.2.2 Objectives

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

1.2.3 Algorithm :

Input:

Displayed data about the given city

Output:

Save the data displayed on the screen in to sqlite database

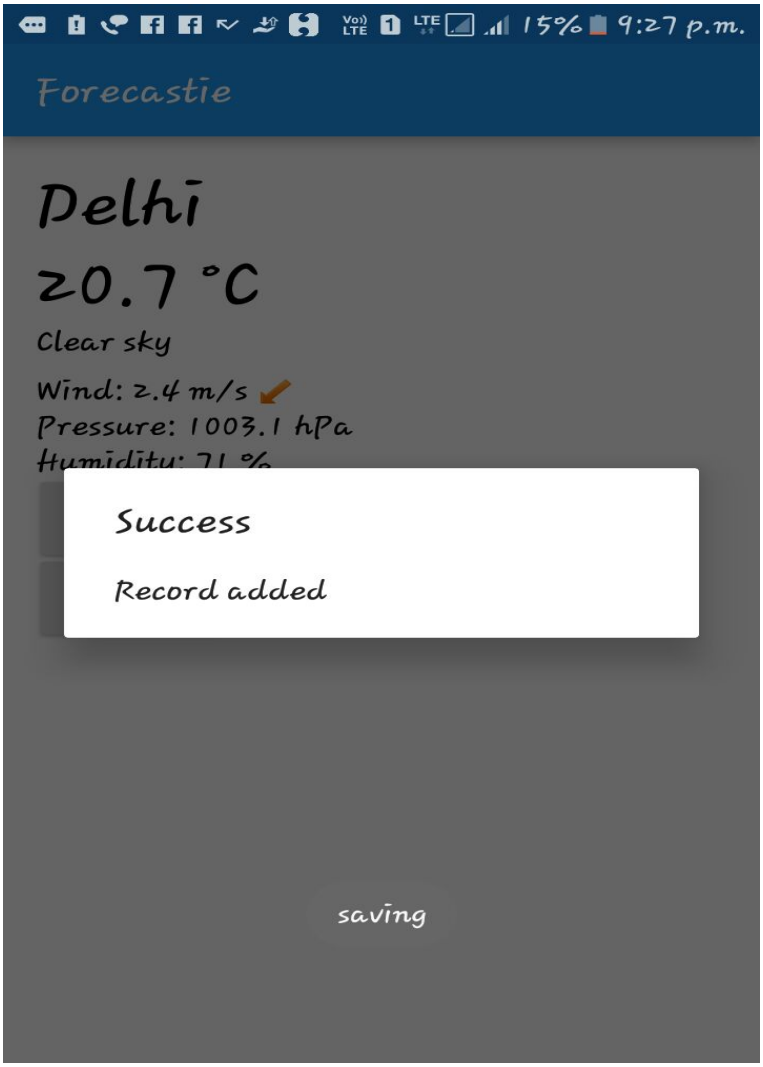
1. Start
2. Load the searched weather datas in to a new activity
3. Create the Button for save and display
4. Fetch the values and save the contents into a database using queries
5. Display the Weather details in to a report
6. Stop

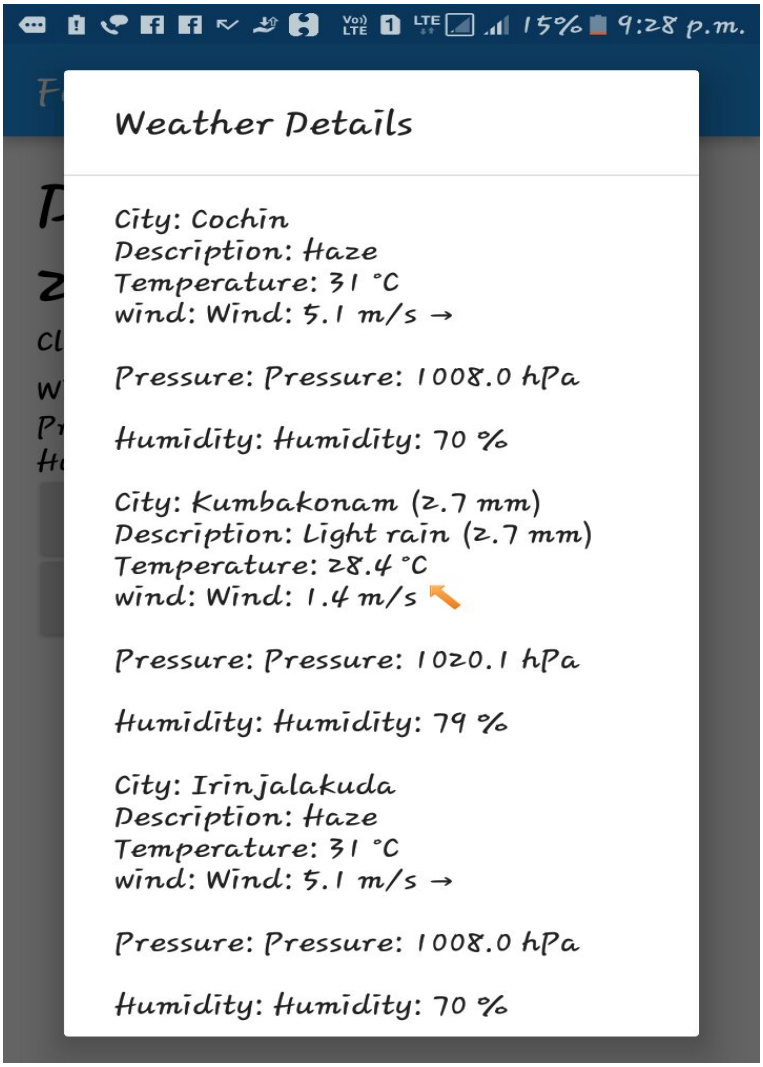
1.2.4 Task completed Date

26th October 2017

Output


15% 9:27 p.m.
Forecastie
Delhi
20.7 °C
Clear sky
Wind: 2.4 m/s
Pressure: 1003.1 hPa
Humidity: 71 %
SAVE
LOAD


15% 9:27 p.m.
Forecastie
Delhi
20.7 °C
Clear sky
Wind: 2.4 m/s
Pressure: 1003.1 hPa
Success
Record added
saving


15% 9:28 p.m.
Weather Details
City: Cochin
Description: Haze
Temperature: 31 °C
wind: Wind: 5.1 m/s →
Pressure: Pressure: 1008.0 hPa
Humidity: Humidity: 70 %
City: Kumbakonam (2.7 mm)
Description: Light rain (2.7 mm)
Temperature: 28.4 °C
wind: Wind: 1.4 m/s
Pressure: Pressure: 1020.1 hPa
Humidity: Humidity: 79 %
City: Irinjalakuda
Description: Haze
Temperature: 31 °C
wind: Wind: 5.1 m/s →
Pressure: Pressure: 1008.0 hPa
Humidity: Humidity: 70 %

Chapter 2

Roles Assigned

Aishwarya Raj is the scrum master. She used to conduct scrum meetings frequently to know and understand the status of the tasks based on weather application and discussed about the task in detail. She assigned the roles for each members of the group. Creation of algorithm and code analysis was done by her.The execution of the code was done by Aishwarya.She searched the new code in python and study the concepts and explained the steps to the group members in detail.

Don C Alosious was selected as the team leader. He searched the code for weather application and completed the design and also provided the technical support for the application. Don helped in finding the errors in the code. Installation of packages and error checking, validate code with training datas were done by Don.

Aneena K Bijy installed the software on her laptop and configure her laptop.She searched for the new code for weather application. She studied the code and explained to the group members. She also found the code for database. She analyzed working of algorithm and ho much it suits for the weather based application. Code execution and error checking was also done. She also helped in making the reports.She created the git repository and add all the reports and code to it

Heera T Mohan installed the softwares on devices and searched the code for weather application. She made a trial execution of the code and found the errors and understood the concept. She identified the technique, studied the concept and explained it to the group members. She also searched

the code analyze working of used algorithm. She also helped in making the Presentations.She helped to find out the datasets

Juhi Jojo searched the code for the android program. And executed the code. She downloaded the database for weather application and searched the code for saving and displaying the weather details. She also studied and executed the code based on sample set and explained it to group members.She helped to find out the relevent dataset from the government recognized site so that rain can be predicted.She also helped in making the reports.

Simi Jose also searched the code for android program and executed the code. She learned and studied the concept. She did a trial execution of the code. And also studied and executed the code based on sample dataset. She also helped in finding the errors and studied about how to cope up with that errors. She also helped in making the reports.

Chapter 3

Proof of Concept

Analysis of Agriculture Data Using Data Mining Techniques :
Application of Big Data
-Jharna Majumdar
-Sneha Naraseeyappa
-shilpa Ankalaki
Pubished : 5 July 2017

Conclusion

Weather plays a major role in our daily life, and without the meteorologist and forecaster we would have difficulty planning our daily activities. As we can see, the weather is not a simple subject like we may have been thinking. The study of weather phenomenon requires the use of science, math, and different types of equipment and technology and data. Even with all these equipment, data, and observation tools, the weather continues to be a topic to study because it is constantly changing. Meteorologist and forecasters predict the weather and its possible changes, but in reality, weather is still unpredictable.

Bibiography

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