

# SPACE GARDEN APP

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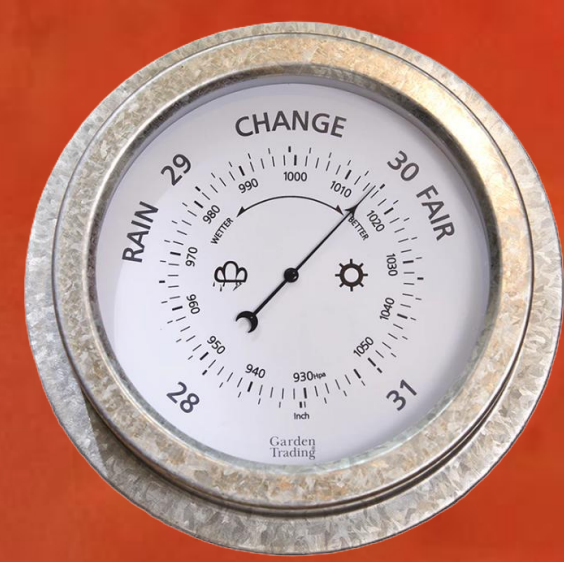
## Introduction

The space Garden app is an app that takes data from an excel file and uses that data to control parts of the garden. For example, if the garden is too cold heat will be turned on. The data is then saved and outputs in the home fragment. This is where you can see all the data that was taken from the excel file and where you see how the garden was changed.

## The 5 Tools

The 5 tools that are used to measure the garden. Is the thermometer, barometer, wind meter, air and soil humidity sensor. These tools are needed to be able to collect the data and input them in their designated areas

### Barometer



Measures atmospheric pressure and determines the weather. It uses Inches of Mercury

### Thermometer



Measures the temperature using Fahrenheit

### Wind Meter



Measures the speed of the wind in mph.

### Soil Humidity Sensor



Measures the humidity of the soil. 1 being dry and 10 being wet

### Air Humidity Sensor



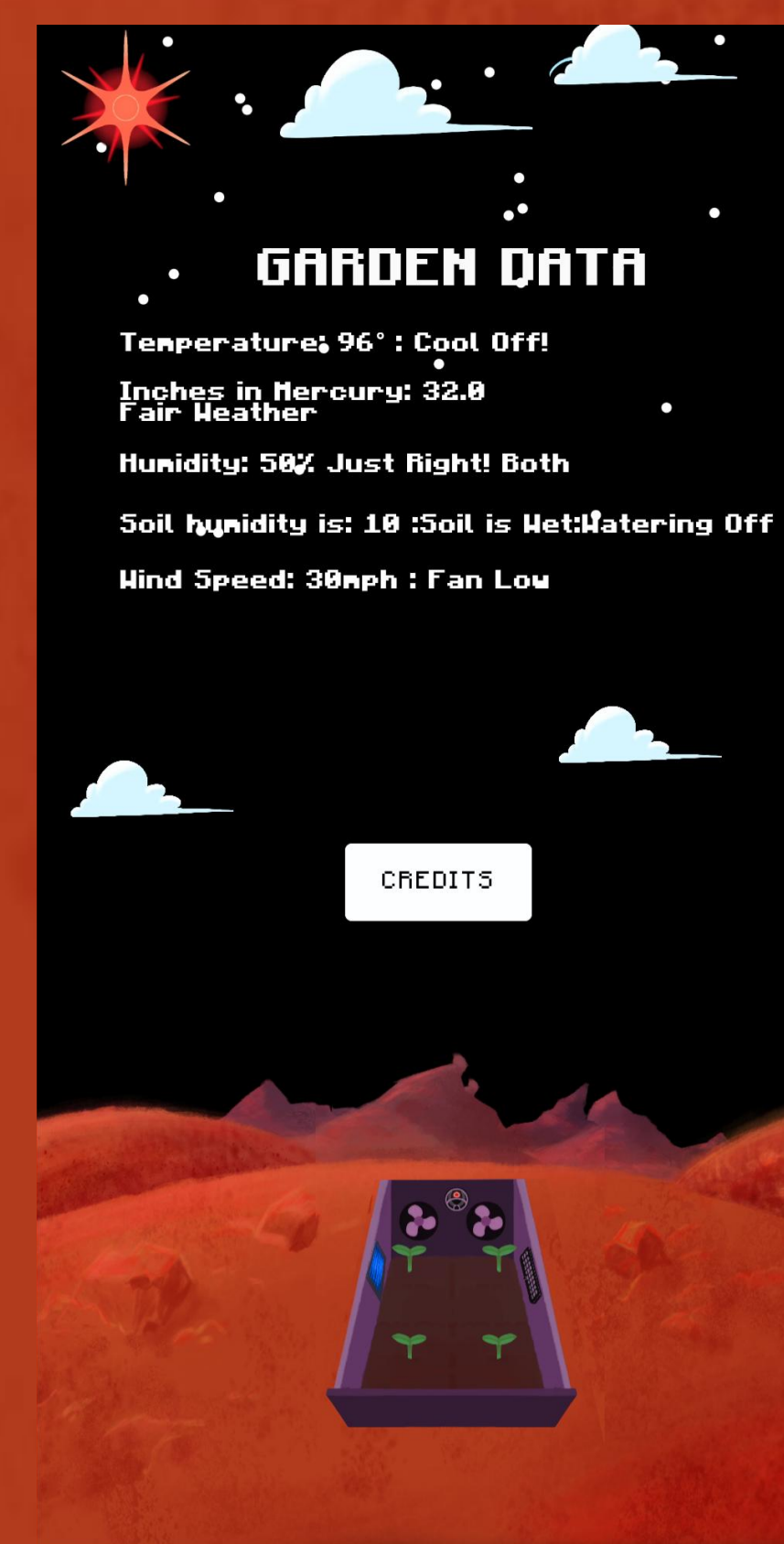
Measures the amount of water vapor in the air using relative Humidity (RH). 1% being dry and 100% being wet



Pressure Tool Data



Excel File



(New UI)

## Discussion

Before the app took input data from the user. Instead, the app will automatically collect data from the excel file. The app will read the file and display the data/changes on the app.

## Videos

[Read and Display Excel Data in RecyclerView | Android Studio Tutorials](#) made by SmallAcademy

This video is a tutorial into creating an app that reads excel data and displays it on an app. This app uses 3 new libraries and uses github to get this data. Using this information is helpful into updating the space garden app.

## Future Research?

The Excel file still needs to be updated constantly to be able to be used on the app. The tools also need to get connected to the file, so the data doesn't stay constant.

## What Is The App Doing To Get The Data?

The tools would be connected to the excel file which updates frequently. This in turn would update the data on the app and would activate or deactivate devices. For example, if the current temperature is 51 degrees the heater would be turned on, no data input is needed