

# Professional Computing Group 15

## Project Document

### Overview

Our project was to create a visitor management system for the UWA Ridgefield Farm. The key features of the visitor management system are:

- A fully functional web application made using the React framework with easy navigation to all key pages.
- A fully functional backend made in Firebase written in JavaScript to provide functionality to the web app.
- The ability for visitors to the farm to register an account that is associated with important information for the farm manager such as name, email, emergency contact etc. This information is stored in a Firebase database.
- The ability for visitors to use their accounts to log in and check into specific locations on the farm and the length of time they intended to spend there.
- The ability for visitors to see their own visitor log and see when they have visited the farm.
- The ability for the farm manager to send out notifications to all visitors in case of an emergency as well as observe the visitor log to see who is currently at the site.
- The ability for admins to create notifications, creating the opportunity to inform users about changes or news.
- 

**The website is hosted at the link below:**

<https://csb-rdxfbp.netlify.app/>

### Installation

To install and run the project on your own local host, it is required to install react.js and node.js. To install the package node.js please follow instructions on the following links:

<https://nodejs.dev/en/download/>

The back-end of our project was implemented using the Firebase Firestore database. For more information and how to install the component above please see the following information:

# Getting Started

## React

After the installation of node.js and react.js we can start building the react program.

In the project directory, you can run:

### npm start

Runs the app in the development mode.

Open <http://localhost:3000> to view it in your browser.

The page will reload when you make changes.

You may also see any lint errors in the console.

### npm test

Launches the test runner in the interactive watch mode.

See the section about [running tests](#) for more information.

### npm run build

Builds the app for production to the build folder.

It correctly bundles React in production mode and optimizes the build for the best performance.

The build is minified and the filenames include the hashes.

Your app is ready to be deployed!

See the section about [deployment](#) for more information.

### npm run eject

Note: this is a one-way operation. Once you eject, you can't go back!

## Firebase:

The project's backend system is made through the use of a node.js and a Backend-as-a-service (Baas) FireBase. The Database is constructed through the use of Firebase/Firestore. This project is build using React.js therefore some parts may require you to install React as well, please find instructions on how to install React on the main project page.

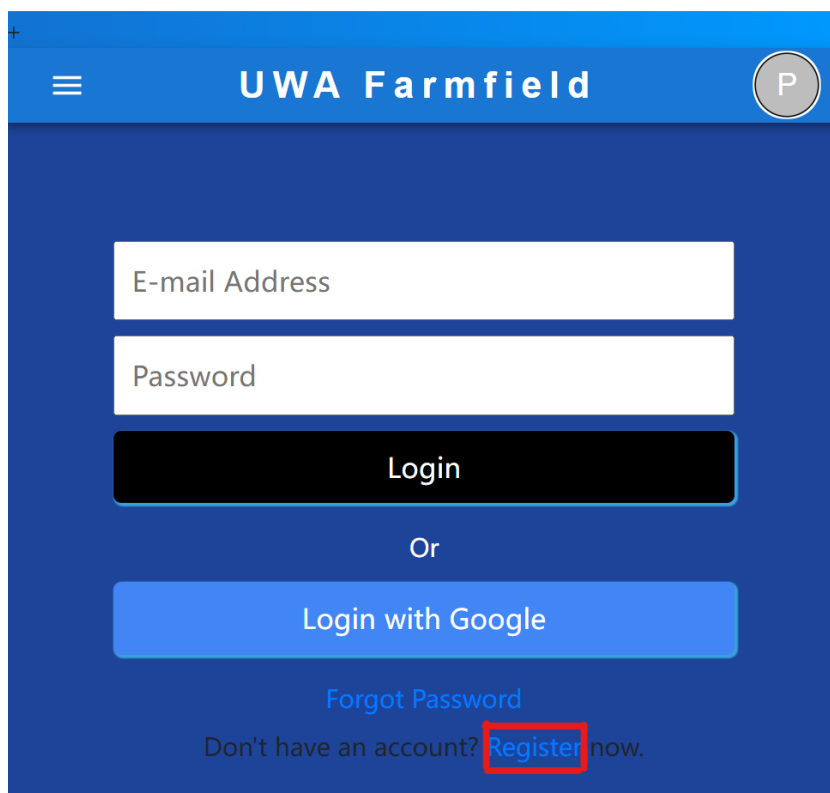
Requires import of firebase.js which will contain the SDK (config file)

1. install node.js <https://nodejs.dev/en/download/>
2. Create a new project on firebase console
3. Obtain the firebase project config file from the console.
4. install Firebase on your project using npm:  
npm install firebase

5. Install Firebase CLI:  
`npm install -g firebase-tools`
6. Create a `firebase.js` file for Create Read Update Delete operations and paste config in the file.

## User Guide

### Registration

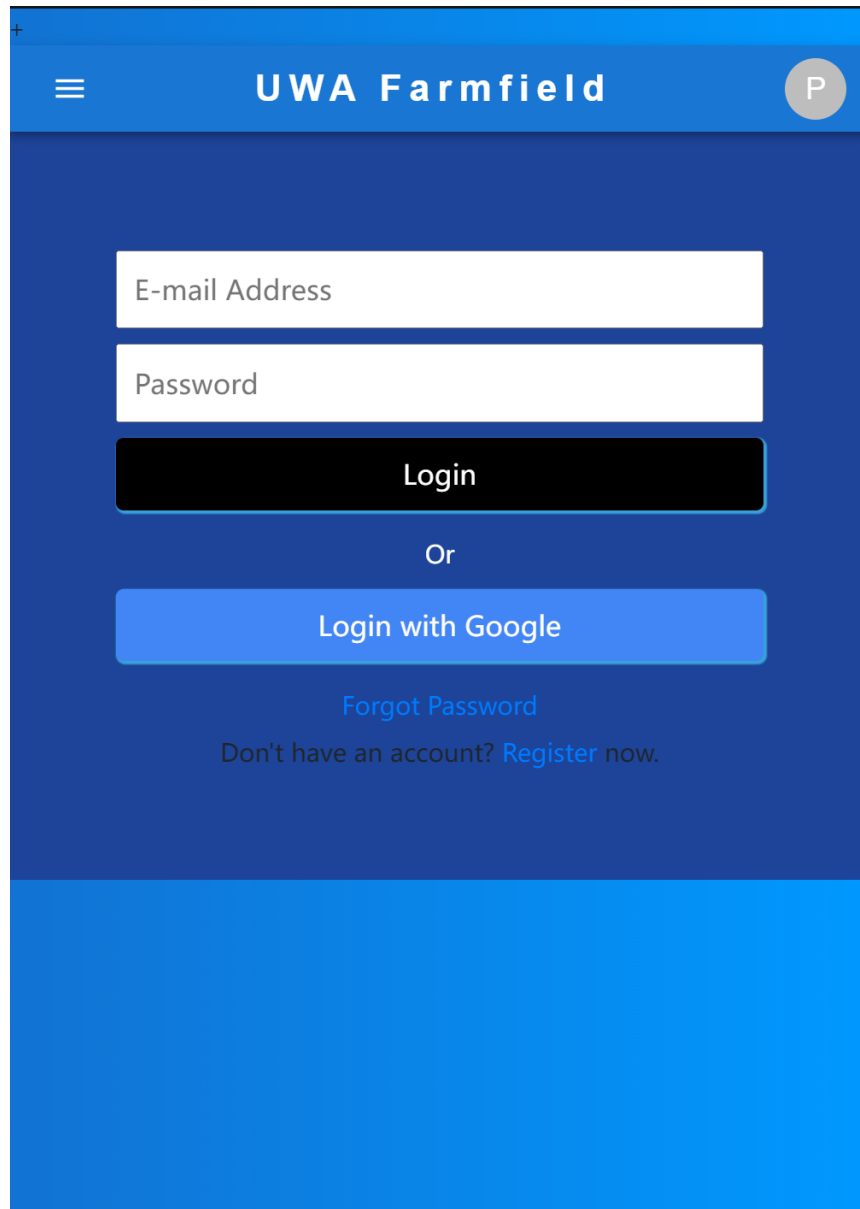


The screenshot shows the UWA Farmfield login and registration interface. At the top, there is a blue header with a hamburger menu icon on the left, the text "UWA Farmfield" in the center, and a circular profile icon with the letter "P" on the right. Below the header, there are two white input fields: "E-mail Address" and "Password". Below these fields is a black "Login" button. Under the "Login" button is the text "Or". Below "Or" is a blue "Login with Google" button. At the bottom, there is a link "Forgot Password" in blue. Below that is the text "Don't have an account?" followed by a blue "Register" button (highlighted with a red box in the original image) and the word "now.".

- When using the software for the first time, click the "Register" button at the bottom to go to the registration page



## Login and authentication



The image shows a mobile application login screen for 'UWA Farmfield'. The header is a blue bar with a hamburger menu icon on the left, the text 'UWA Farmfield' in the center, and a circular profile icon with the letter 'P' on the right. Below the header, the background is a dark blue gradient. The login form consists of two white input fields: 'E-mail Address' and 'Password'. Below these is a black 'Login' button. Under the button is the word 'Or'. Below that is a light blue 'Login with Google' button. At the bottom of the form area, there is a link 'Forgot Password' and a text prompt 'Don't have an account? Register now.' with 'Register' as a link. The bottom of the screen is a solid blue bar.

UWA Farmfield

E-mail Address

Password

Login

Or

Login with Google

[Forgot Password](#)

Don't have an account? [Register](#) now.

- From this screen, you can also login using the credentials you have used for the registration.

- If you Forgot your Password, click "Forgot Password" and you will be redirected to a reset password page which will send you a link which allows you to change your password.
- If hosted on an authorized domain, it is possible to login using your google mail account.

## User Dashboard:

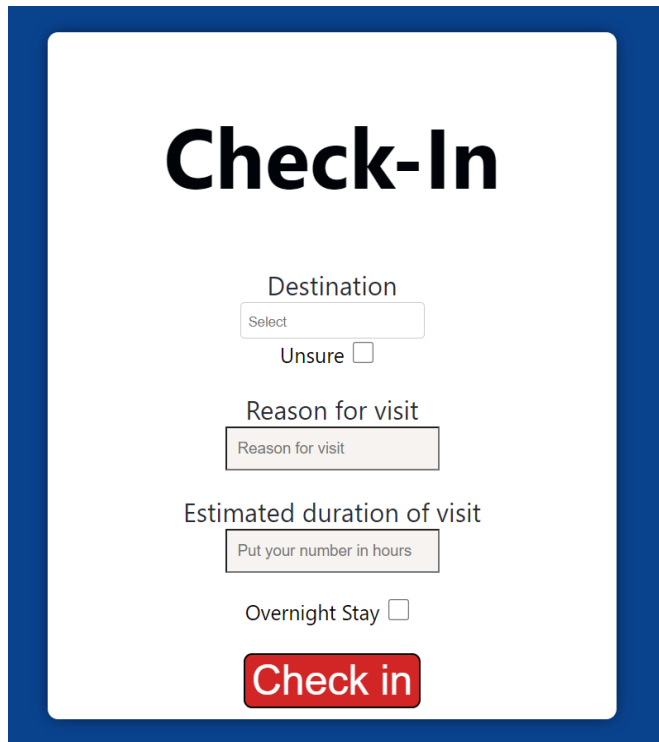
The dashboard features a blue header with the UWA Farmfield logo and navigation links: PROFILE, DASHBOARD, CHECKIN, ADMIN, and CONTACT. The main content area is divided into four cards:

- Welcome Back Logan C:** Displays user information including email (logan@ok.com), user ID (xESHRQdmtRXBk65V1M8onSH45E2), student ID (224555444), check status (false), and current time (10-20-2022 07:06:28).
- Previous visits:** A table showing visit history with columns for Locations, Check-In Time, Duration of Stay, Reason for visit, and Check Out Time. It includes two entries for 'Avery's Shearing ShedGeneral Purpose' with 'Check Out' buttons.
- Announcements:** A table showing messages from 'Logan C (Admin)' with columns for the message content and timestamp.
- Contact Staff:** A table listing staff members with columns for Name, Phone number, and E-mail.

The user dashboard consists of 4 cards:

1. Basic user information card
2. Previous visits card
  - a. This card stores the previous check-ins made by the user.
  - b. This card is used to check-out a visit.
3. Announcements tab, users can see announcements made from the admin in this tab
4. Contact tab, users can contact important personnel from this tab in case of an emergency

## Check in

A screenshot of a 'Check-In' form. The form is titled 'Check-In' in a large, bold, black font. Below the title, there are four sections: 1. 'Destination' with a dropdown menu showing 'Select' and an 'Unsure' checkbox. 2. 'Reason for visit' with a dropdown menu showing 'Reason for visit'. 3. 'Estimated duration of visit' with a dropdown menu showing 'Put your number in hours'. 4. 'Overnight Stay' with a checkbox. At the bottom of the form is a red button with the text 'Check in' in white.

# Check-In

Destination

Select

Unsure ☐

Reason for visit

Reason for visit

Estimated duration of visit

Put your number in hours

Overnight Stay ☐

Check in

- In this page you can choose the locations that you want to visit in the first dropdown. In this dropdown you can scroll down or type the name of the location to find it.
- If you're not sure where you're going to visit just click on the "Unsure" checkbox below the dropdown.
- Next dropdowns are the reason for your visit and estimated duration of your visit. Please put your estimation in hours.
- Last checkbox is for visitors who want to stay overnight. Please check this and make sure that you've booked your stay.
- At the end click on the check-in button to get directed to the next page.

## Check Out:

In the user dashboard under the previous visits card, the user can check out the visit being made by pressing check-out on their desired visit.

Only when a check-out has been made will the date and time appear in the Check-out cell.

If the user has not yet checked out the cell will remain with the Checkout button only.

When the user successfully checks out, the check out time will be added on top of the check out button.

## Previous visits

Locations	Check-In Time	Duration of Stay	Reason for visit	Check Out Time
Avery's Shearing ShedGeneral Purpose ShedFarm Manager's House	10-20- 2022 06:33:35	2	Education	<a href="#">Check Out</a>
Avery's Shearing ShedGeneral Purpose	10-19- 2022 23:38:40	3	TESTING	10-20-2022 04:53:04 <a href="#">Check Out</a>

### Log out

- Click the “Logout” button and you will be safely logged out of the account.



UWA Farmfield PROFILE DASHBOARD CHECKIN ADMIN CONTACT

Welcome Back Logan C

logan@ok.com  
 user id: xESHQRQdkmFRXBk65V1M80nSH45E2  
 student id 224555444  
 check false  
 checkTime undefined  
 current Time 10-20-2022 06:33:35

Previous visits

Locations	Check-In Time	Duration of Stay	Reason for visit	Check Out Time
Avery's Shearing ShedGeneral Purpose ShedFarm Manager's House	10-20-2022 06:33:35	2	Education	<a href="#">Check Out</a>

Logout

## Navigation

UWA Farmfield

Welcome Back Logan C

logan@ok.com  
 user id: xESHQRQdkmFRXBk65V1M80nSH45E2  
 student id 224555444  
 check false  
 checkTime undefined  
 current Time 10-20-2022 07:44:03


Previous visits

Locations	Check-In Time	Duration of Stay	Reason for visit	Check Out Time
Avery's Shearing ShedGeneral Purpose ShedFarm Manager's House	10-20-2022 06:33:35	2	Education	<a href="#">Check Out</a>
Avery's Shearing ShedGeneral Purpose	10-19-2022 23:38:40	3	TESTING	10-20-2022 04:53:00 <a href="#">Check Out</a>

Announcements

- When the visitor has logged in successfully, click on the top left corner and the navigation will be displayed
- Users with admin role will be displayed an additional page called “Admin” where they can:
  - See the user database

- ## Floating announcement:

 **Please note mobile service can be intermittent and unreliable at the farm**

If you do not have service, move to another area to be in range. You must have access to a Telstra m...

An additional feature we have implemented is the floating announcements which pops up after a certain period of time passes reminding the user of important information. When clicked it will redirect you to the UWA Farm Ridgefield website.

## Admin Panel/Backend

### Making announcements:

Another additional feature we implemented would be the announcement board system. Admins can make announcements for users to see on the admin page. The announcements being made will be displayed in the user dashboard.

Create announcement

Enter title...

Enter context of announcement...

Post

## Announcements

<b>Logan C</b> (Admin):	<b>Welcome to EMS Debra!</b>	Our team is happy to present to you our current product!	10-20-2022 06:32:13
<b>Logan C</b> (Admin):	<b>Hello World2</b>	This is a test2	10-20-2022 03:46:02
<b>Logan C</b> (Admin):	<b>Hello World</b>	This is a test	10-20-2022 03:44:41

## Granting admin privileges and changing roles:

In the user database displayed in the admin page, it is possible to grant users admin privileges. In addition it is also possible to change their roles by editing the field in the role cell.

## User Database

Name	Student ID	E-mail	Phone Number	Role	Provider	Make Admin	Delete User
Logan C	224555444	logan@ok.com	041109367	Admin	local	<a href="#">Grant</a>	<a href="#">Delete</a>
Matin Nourdel	22844196	matinnourdel98@gmail.com	045555555	Student	local	<a href="#">Grant</a>	<a href="#">Delete</a>
zijian chen	22998601	2546549221czj@gmail.com	123456		local	<a href="#">Grant</a>	<a href="#">Delete</a>
Logan C				Admin		<a href="#">Grant</a>	<a href="#">Delete</a>
Tuguldur Gantumur		gtrtuugii@kindle.com			local	<a href="#">Grant</a>	<a href="#">Delete</a>

## Deleting accounts:

An additional feature we have included is the deletion of users which can be activated from the user database table in the admin page.

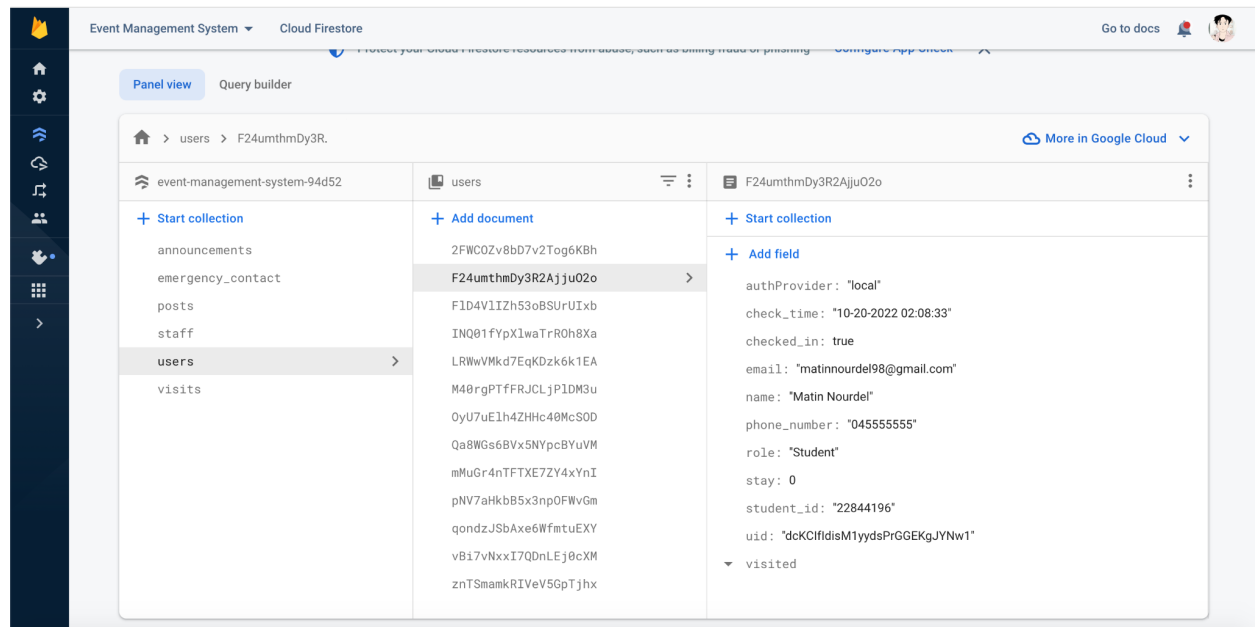
User Database							
Name	Student ID	E-mail	Phone Number	Role	Provider	Make Admin	Delete User
Logan C	224555444	logan@ok.com	041109367	Admin	local	<button>Grant</button>	<button>Delete</button>
Matin Nourdel	22844196	matinnourdel98@gmail.com	045555555	Student	local	<button>Grant</button>	<button>Delete</button>
zijian chen	22998601	2546549221czj@gmail.com	123456		local	<button>Grant</button>	<button>Delete</button>
Logan C				Admin		<button>Grant</button>	<button>Delete</button>
Tuguldur Gantumur		gtrtuugii@kindle.com			local	<button>Grant</button>	<button>Delete</button>

## Visitor Log

Visitor Log						
Visitor name	Type of Visitor	Date of visit	Locations visited	Estimated stay	Reason of visit	Time of exit
Logan C	Admin	10-20-2022 06:33:35	Avery's Shearing ShedGeneral Purpose ShedFarm Manager's House	2 hours	Education	
Logan C	Admin	10-19-2022 23:38:40	Avery's Shearing ShedGeneral Purpose ShedFarm Manager's House	3 hours	TESTING	10-20-2022 04:53:04
Matin Nourdel	Student	10-19-2022 17:03:09	Avery's Shearing Shed	2 hours	Studies ENV1001	
Logan C	Admin	10-18-2022 22:53:18	Avery's Shearing ShedGeneral Purpose ShedFarm Manager's House	2 hours	matin	10-20-2022 06:33:17

Admin can see all logs of visitors who have entered the farm, with information including Type of visitor, date of visit, locations visited, their inputted estimated stay, reason of visit, and the time they exit the farm.

## User Database in Firebase FireStore:



Upon user registration, the information visible is added to the collection 'users' and a uid is generated for the users which we have used to join queries. The user email and user UID is also stored in authentication and user for login purposes.

Event Management System

Go to docs

# Authentication

[Users](#)
[Sign-in method](#)
[Templates](#)
[Usage](#)
[Settings](#)

Search by email address, phone number, or user UID

Add user

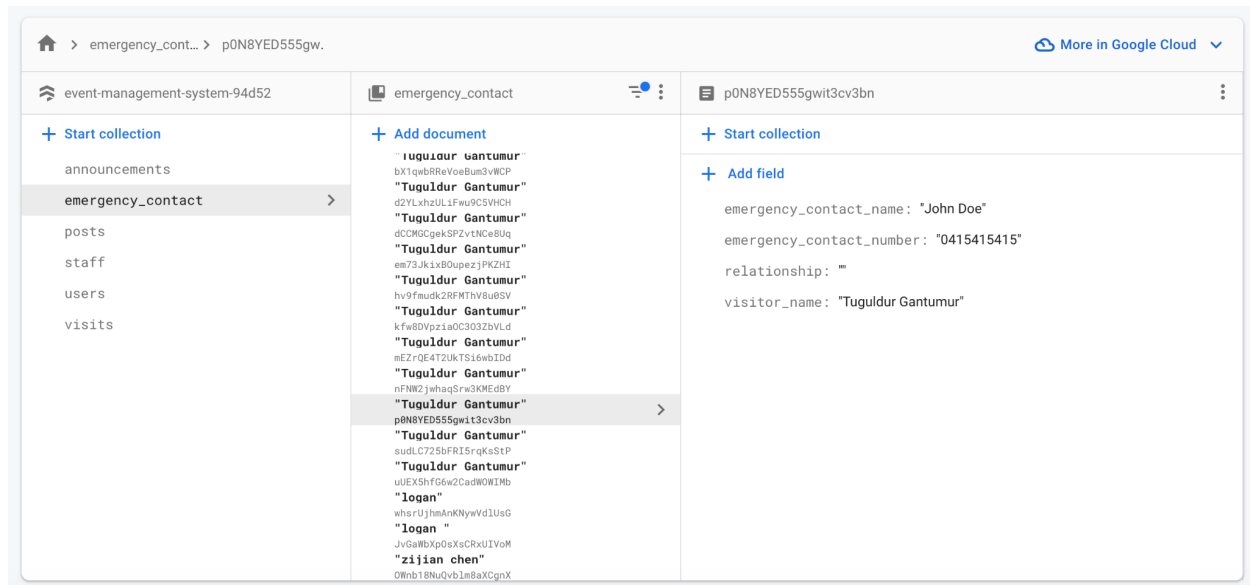
Identifier	Providers	Created ↓	Signed in	User UID
matinnourdel98@gmail.com		Oct 19, 2022	Oct 19, 2022	dcKClfdisM1yydsPrGGEKgJYNw1
logan@ok.com		Oct 17, 2022	Oct 20, 2022	xESHRQdkmFRXBk65V1M80nSH4...
gtrtuugii@looktv.com		Oct 17, 2022	Oct 17, 2022	Nn47I4wmewWHsucIqZ1s8GV4XLJ3
gtrtuugii@ok.com		Oct 17, 2022	Oct 17, 2022	0CLBZSMVL0hrEDqmKAD3Uanng...
15850622643@qq.com		Oct 16, 2022	Oct 16, 2022	dPtIO81WKcYHuC7ndM0TxnZsOo...
2546549221czj@gmail.com		Oct 15, 2022	Oct 19, 2022	tEp5ks8mgtaPwqJLIDao87DUH1e2
mihir8@gmail.com		Oct 5, 2022	Oct 5, 2022	ym79xAH9qFSnFKUIGwZ2gFX07z...
gtrtuugii@hotmail.com		Oct 5, 2022	Oct 5, 2022	ww7W1CKJe2TnBVj4DSkUYOZmZ...
dummyaccount@gmail.com		Oct 5, 2022	Oct 5, 2022	g28YCiXdWlVZ3IB8xP60SD51nl82

The database is mainly used to store user, visit, announcement, emergency contact information.

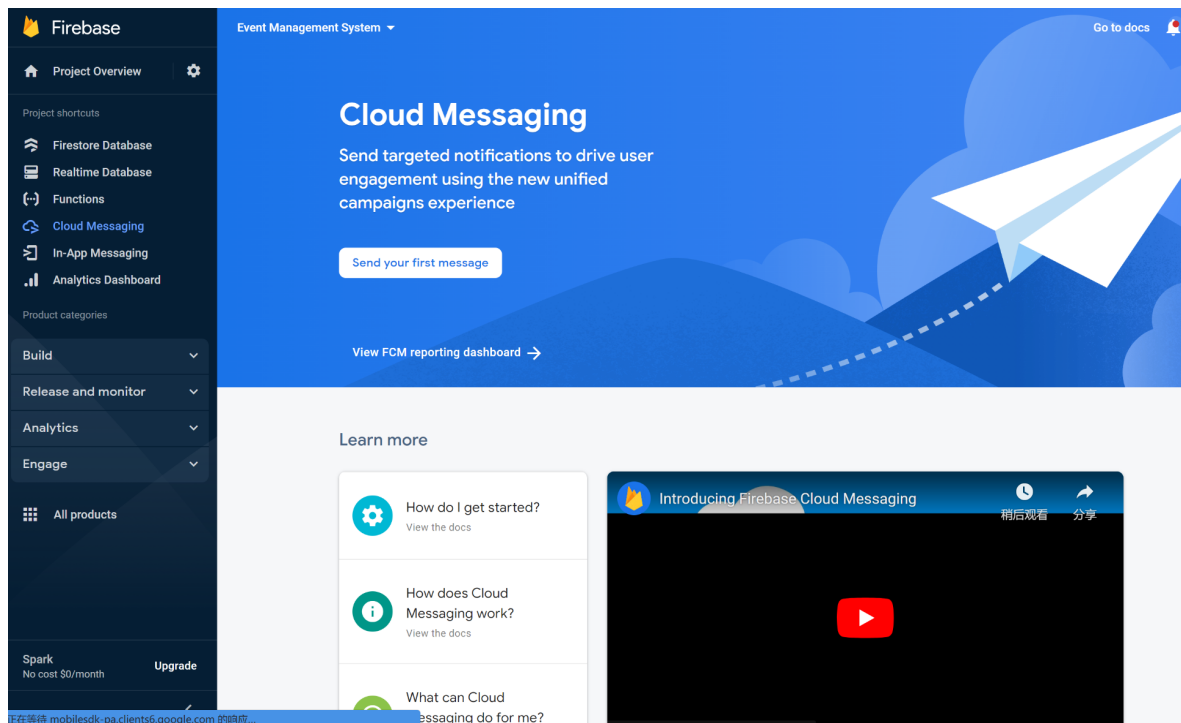
<div> <div> <div>🏠</div> <div>&gt; visits &gt; 5xgfaOhoag0Eie</div> </div> <div>More in Google Cloud</div> </div>		
<div>event-management-system-94d52</div> <div>visits</div> <div> <div>+ Start collection</div> <div> <div>announcements</div> <div>emergency_contact</div> <div>posts</div> <div>staff</div> <div>users</div> <div>visits</div> </div> </div>	<div> <div>+ Add document</div> <div> <div>5xgfaOhoag0EieS0gfxC</div> <div>aFSVQuTwQ4cNafEjoUW</div> <div>kcwG1z6MbsdjPk41LXfQ</div> <div>mmyFRAMnoVx0Q3NZrv4</div> <div>oDeax0Ajcl3WoORtHqLN</div> </div> </div>	<div> <div>5xgfaOhoag0EieS0gfxC</div> <div> <div>+ Start collection</div> <div>+ Add field</div> <div> <div>locations_visited</div> <div> <div>0 "Avery's Shearing Shed"</div> <div>1 "General Purpose Shed"</div> <div>2 "Farm Manager's House"</div> </div> <div>reason_for_visit: "TESTING"</div> <div>time_entry: "10-19-2022 23:38:40"</div> <div>time_exit: "10-20-2022 04:53:04"</div> <div>time_stay: "3"</div> <div>uid: "xESHQRQdkmFRXBk65V1M80nSH45E2"</div> <div>visitor_email: "logan@ok.com"</div> <div>visitor_name: "Logan C"</div> <div>visitor_phone_number: "041109367"</div> </div> </div> </div>

<div> <div> <div>🏠</div> <div>&gt; announcements &gt; vlyRs234dY23g...</div> </div> <div>More in Google Cloud</div> </div>		
<div>event-management-system-94d52</div> <div>announcements</div> <div> <div>+ Start collection</div> <div> <div>announcements</div> <div>emergency_contact</div> <div>posts</div> <div>staff</div> <div>users</div> <div>visits</div> </div> </div>	<div> <div>+ Add document</div> <div> <div>6Ek883p4vCKt4EhoA2aj</div> <div>WwhXV59uE9o8EDbEdHqB</div> <div>vIyRs234dY23g2NNaDq5</div> </div> </div>	<div> <div>vlyRs234dY23g2NNaDq5</div> <div> <div>+ Start collection</div> <div>+ Add field</div> <div> <div>name: "Logan C"</div> <div>role: "Admin"</div> <div>text: "Our team is happy to present to you our current product!"</div> <div>time: "10-20-2022 06:32:13"</div> <div>title: "Welcome to EMS Debra!"</div> <div>uid: "xESHQRQdkmFRXBk65V1M80nSH45E2"</div> </div> </div> </div>

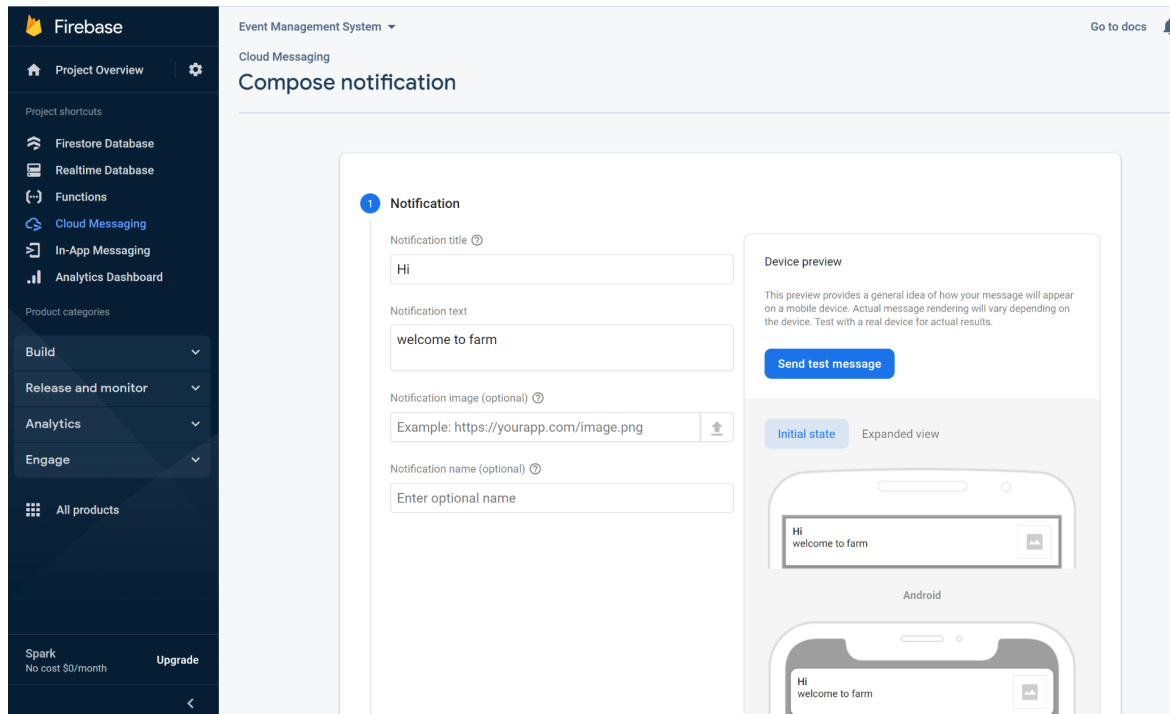




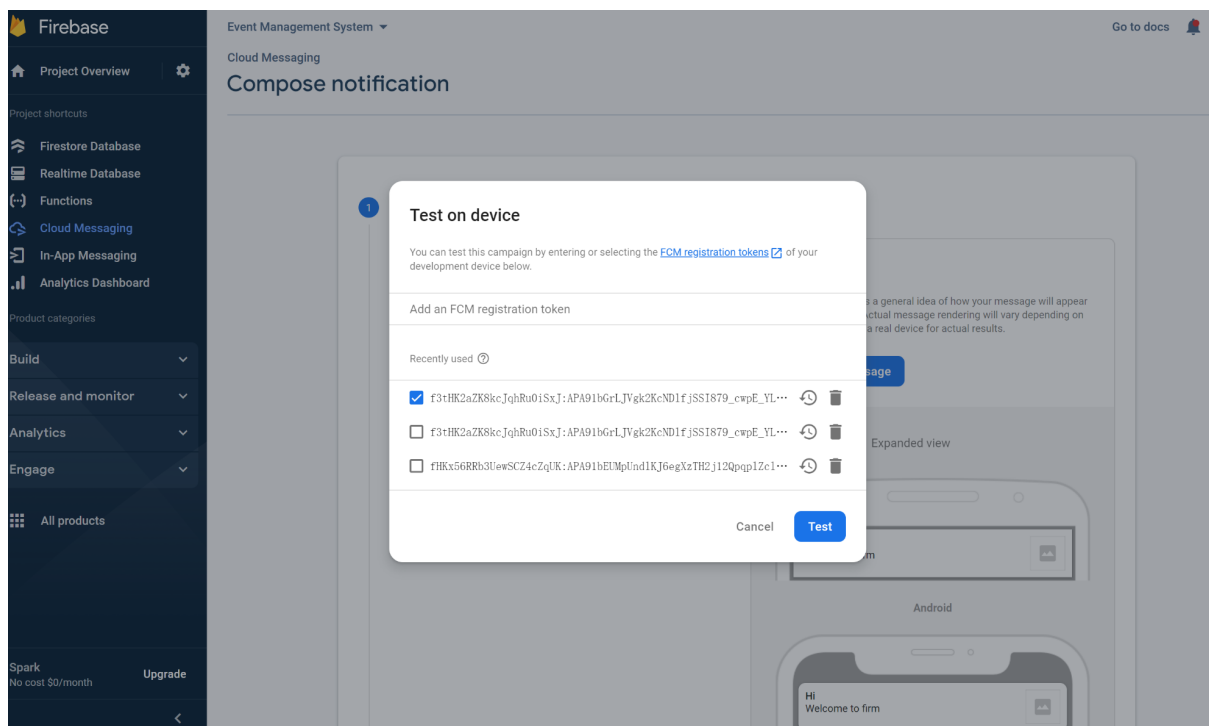
## Sending Notifications



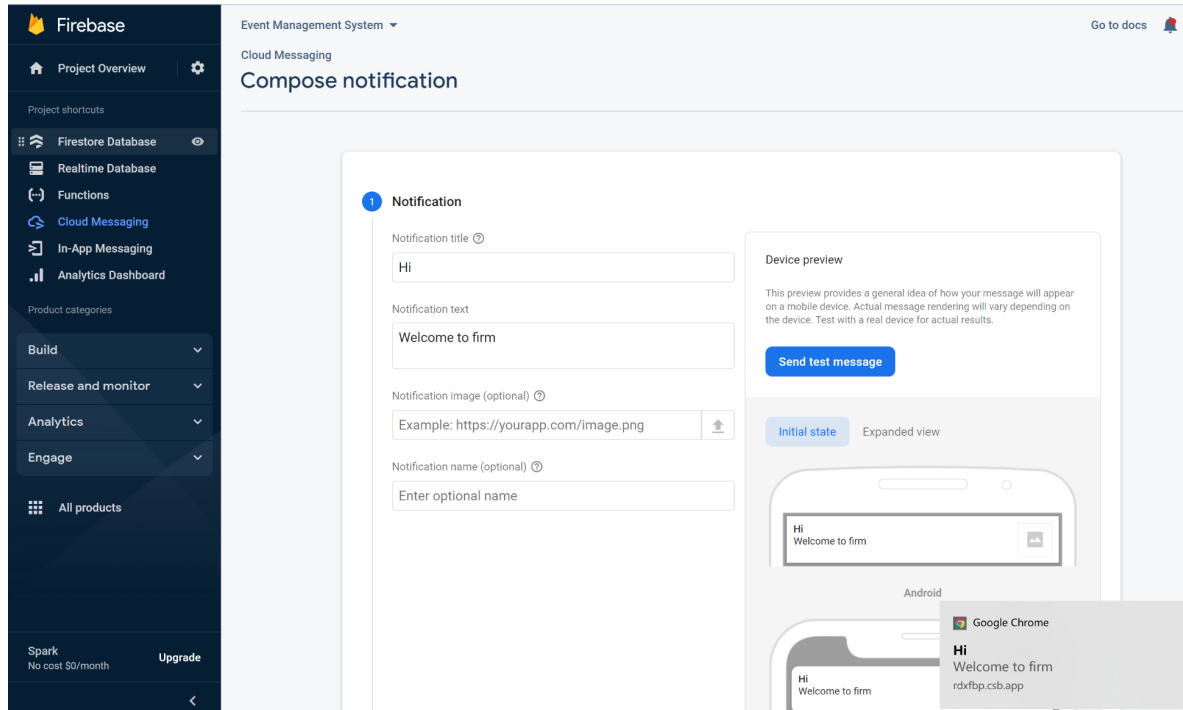
- The manager can use the firebase cloud messaging function to send the message that you want to the students who have successfully logged in.
- First, click on “Send your first message” to send notifications.



- Here, the manager can set the title and content of the message she/he wants to send.



- Choose the device and send.



- The visitor will receive the notification.