# WORKFLOW-IO



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# Section 1 - Websites

## System overview

These websites eases the workflow of an admin and agent. There are three websites in total:

1. Admin portal: Allows the admin to add or remove a plumber, add an agent and view statistics.
2. Agent Portal: allows the agent to add a new case, close cases that are completed, view statistics and risk factors.
3. Feedback portal: allows the clients to give feedback on the service provided to them.
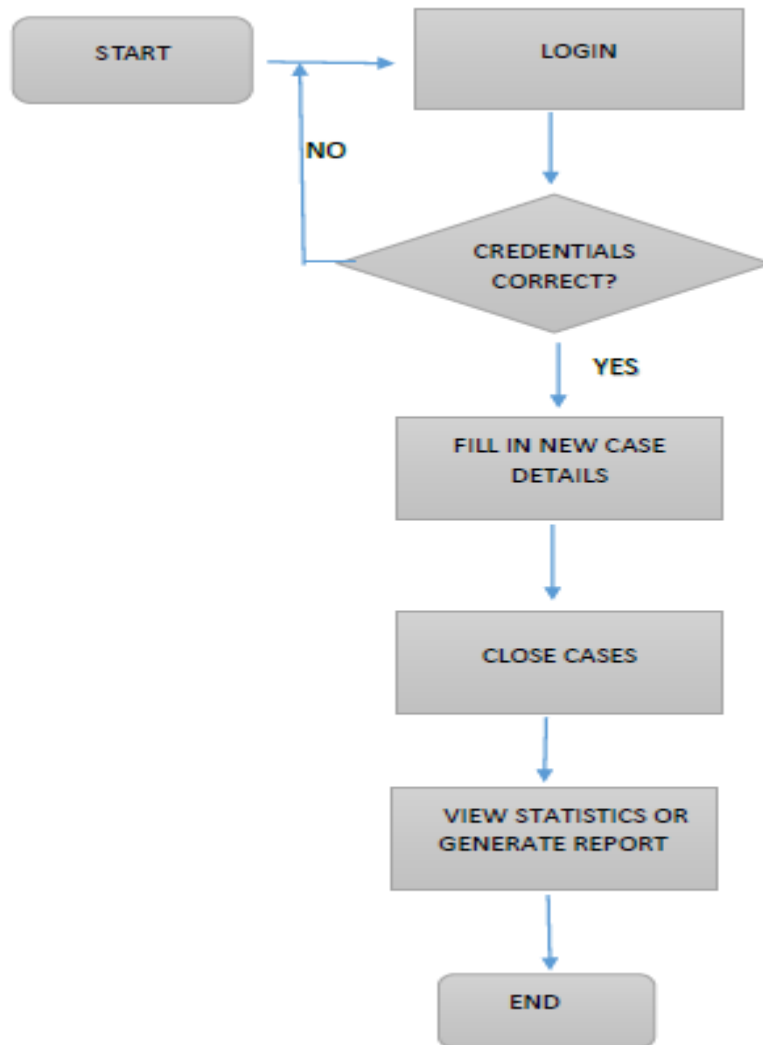
## System Configuration

This website works across all the web browsers. Furthermore, it communicates with the database for all events that are performed by the admin. To access this website, internet connection is required.
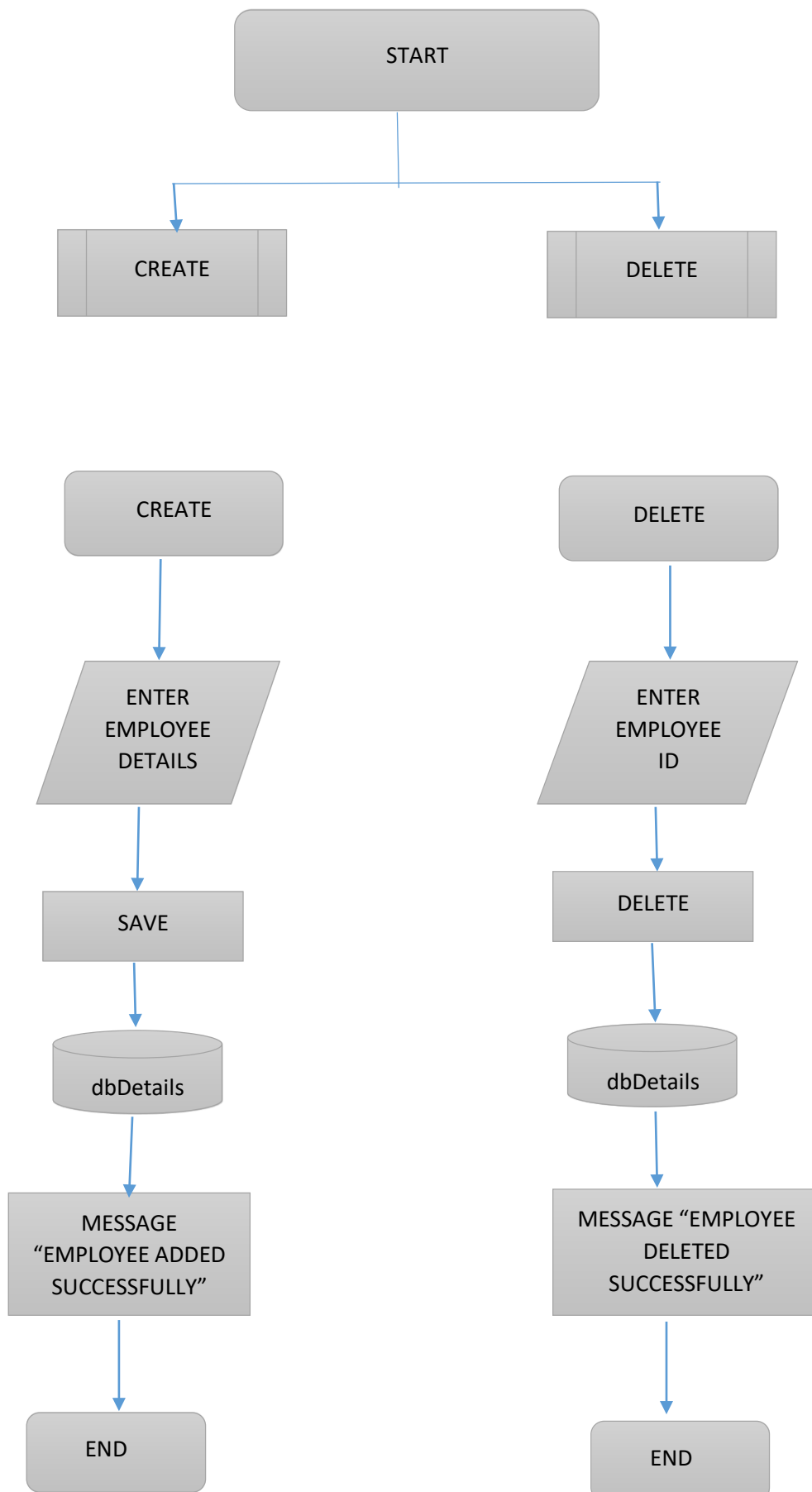
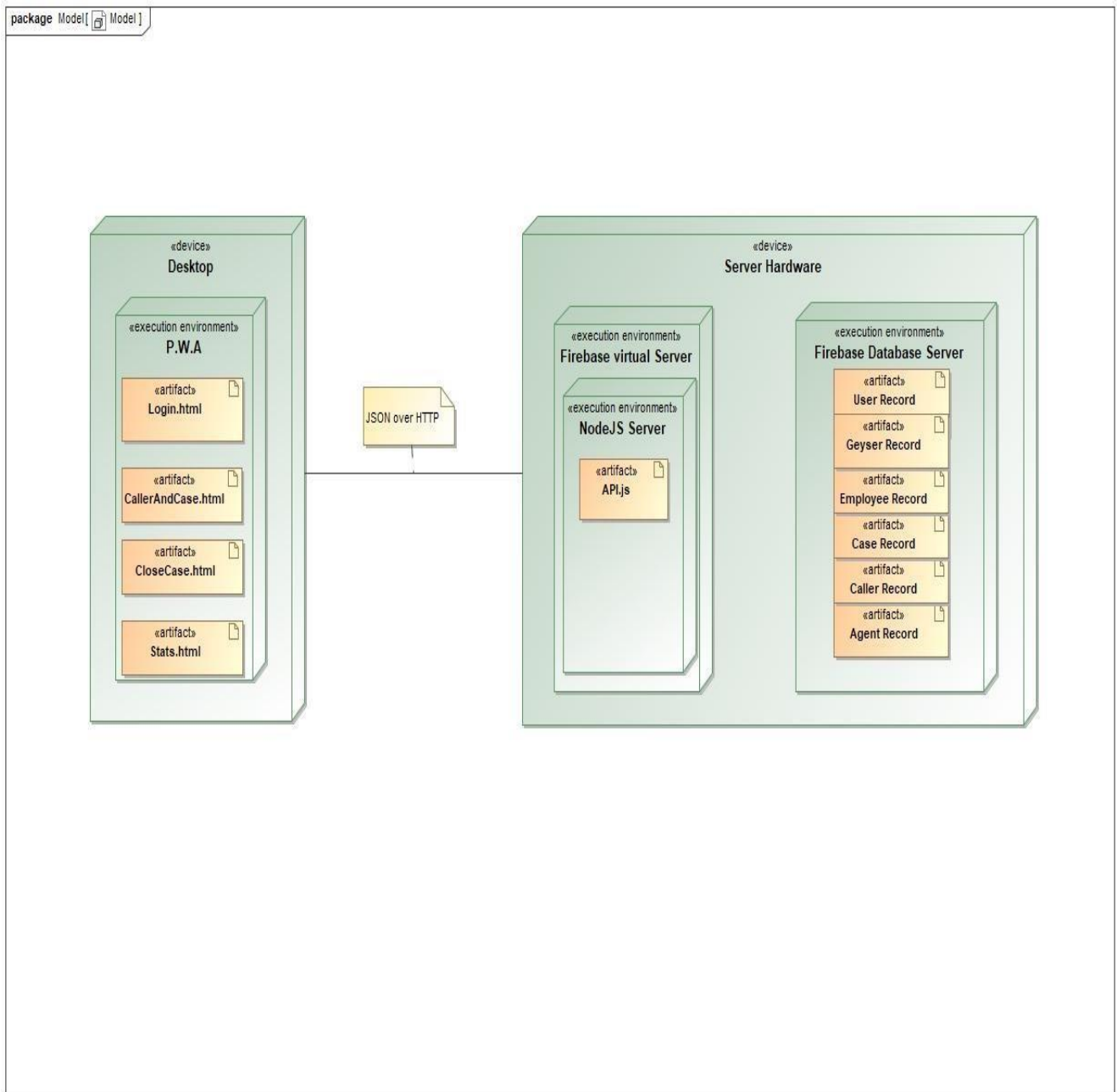## Website URL

Below is the url to access the website: https://tk-naidu.github.io

# Getting Started

**Below is typical walkthrough (in a form of flowchart) of the website:**

```
START ──────────►  LOGIN

     │ NO            │
     │               ▼
     │         CREDENTIALS
     └─────     CORRECT?
                     │ YES
                     ▼
             FILL IN NEW CASE
                 DETAILS

                     │
                     ▼
               CLOSE CASES

                     │
                     ▼
             VIEW STATISTICS OR
             GENERATE REPORT

                     │
                     ▼
                   END
```

**Workflow to add and delete an employee**

```
                          ┌─────────────────┐
                          │      START      │
                          └─────────────────┘
                                   │
                    ┌──────────────┴──────────────┐
                    ▼                              ▼
           ┌─────────────────┐           ┌─────────────────┐
           │     CREATE      │           │     DELETE      │
           └─────────────────┘           └─────────────────┘


           ┌─────────────────┐           ┌─────────────────┐
           │     CREATE      │           │     DELETE      │
           └─────────────────┘           └─────────────────┘
                    │                              │
                    ▼                              ▼
            ╱─────────────╲               ╱─────────────╲
            │    ENTER    │               │    ENTER    │
            │  EMPLOYEE   │               │  EMPLOYEE   │
            │   DETAILS   │               │     ID      │
            ╲─────────────╱               ╲─────────────╱
                    │                              │
                    ▼                              ▼
           ┌─────────────────┐           ┌─────────────────┐
           │      SAVE       │           │     DELETE      │
           └─────────────────┘           └─────────────────┘
                    │                              │
                    ▼                              ▼
            ┌───────────────┐             ┌───────────────┐
            │   dbDetails   │             │   dbDetails   │
            └───────────────┘             └───────────────┘
                    │                              │
                    ▼                              ▼
           ┌─────────────────┐           ┌─────────────────┐
           │    MESSAGE      │           │ MESSAGE "EMPLOYEE│
           │ "EMPLOYEE ADDED │           │     DELETED     │
           │ SUCCESSFULLY"   │           │  SUCCESSFULLY"  │
           └─────────────────┘           └─────────────────┘
                    │                              │
                    ▼                              ▼
           ┌─────────────────┐           ┌─────────────────┐
           │      END        │           │      END        │
           └─────────────────┘           └─────────────────┘
```

# Deployment Diagram



package Model[ Model ]

**«device»**
**Desktop**

**«execution environment»**
**P.W.A**

**«artifact»**
Login.html

**«artifact»**
CallerAndCase.html

**«artifact»**
CloseCase.html

**«artifact»**
Stats.html

JSON over HTTP

**«device»**
**Server Hardware**

**«execution environment»**
**Firebase virtual Server**

**«execution environment»**
**NodeJS Server**

**«artifact»**
API.js

**«execution environment»**
**Firebase Database Server**

**«artifact»**
User Record

**«artifact»**
Geyser Record

**«artifact»**
Employee Record

**«artifact»**
Case Record

**«artifact»**
Caller Record

**«artifact»**
Agent Record

**This deployment model basically gives you an overview of the system and what artifacts and technologies are used to deploy this system.**

# Guidelines as how to use these website

## 1.Admin Portal

**1.1 Login Page**: the admin enters his/her credentials. Based on the role, appropriate task will be displayed for the admin to perform.



ACCOUNT LOGIN

| Username | Password |

SIGN IN

Sign up

Sign in using your credentials.

**1.2 Home Page :** When you login this is the home page that will be displayed.

Navigation bar

By clicking this button it will open up a navigation bar for you to choose the task you want to perform.

HOMEPAGE

STATISTICS ⌄

ADD PLUMBER

REMOVE PLUMBER

ADD NEW AGENT

EXTERNAL LINK

LOGOUT

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☰

**WORKFLOW-IO**

## Home Page

**WorkFLow-IO** Welcome to the WorkFlow home! The purpose of this portal is to make the process of logging cases easier and more efficient so that more jobs can be done per day. Below you will find links to our gitHub and project management tool.

**1.3 Adding a plumber**

Click here to add a new plumber.

≡                                                          **WORKFLOW-IO**

HOMEPAGE

STATISTICS                    ⌄

ADD PLUMBER

REMOVE PLUMBER

ADD NEW AGENT

EXTERNAL LINK

LOGOUT

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# Home Page

**WorkFLow-IO** Welcome to the WorkFlow home! The purpose of this portal is to make the process of logging cases easier and more efficient so that more jobs can be done per day. Below you will find links to our gitHub and project management tool.

# Add New Plumber

**Note:** Plumber's details can be copy-pasted below from the CV else you can manually type it out

[ AUTO FILL ]

Name

ID number

Cell Number

Address

Plumber ID

Plumber Password

[ GENERATE PLUMBER ID ]

[ GENERATE PLUMBER PASSWORD ]

Attach CV

Choose File | No file chosen

Attach ID copy

Choose File | No file chosen

Attach other supporting documents

Choose File | No file chosen

[ SUBMIT ]

Click on choose file to upload supporting documents for the new plumber.

## 1.4 Removing a plumber

Click here to remove plumber.
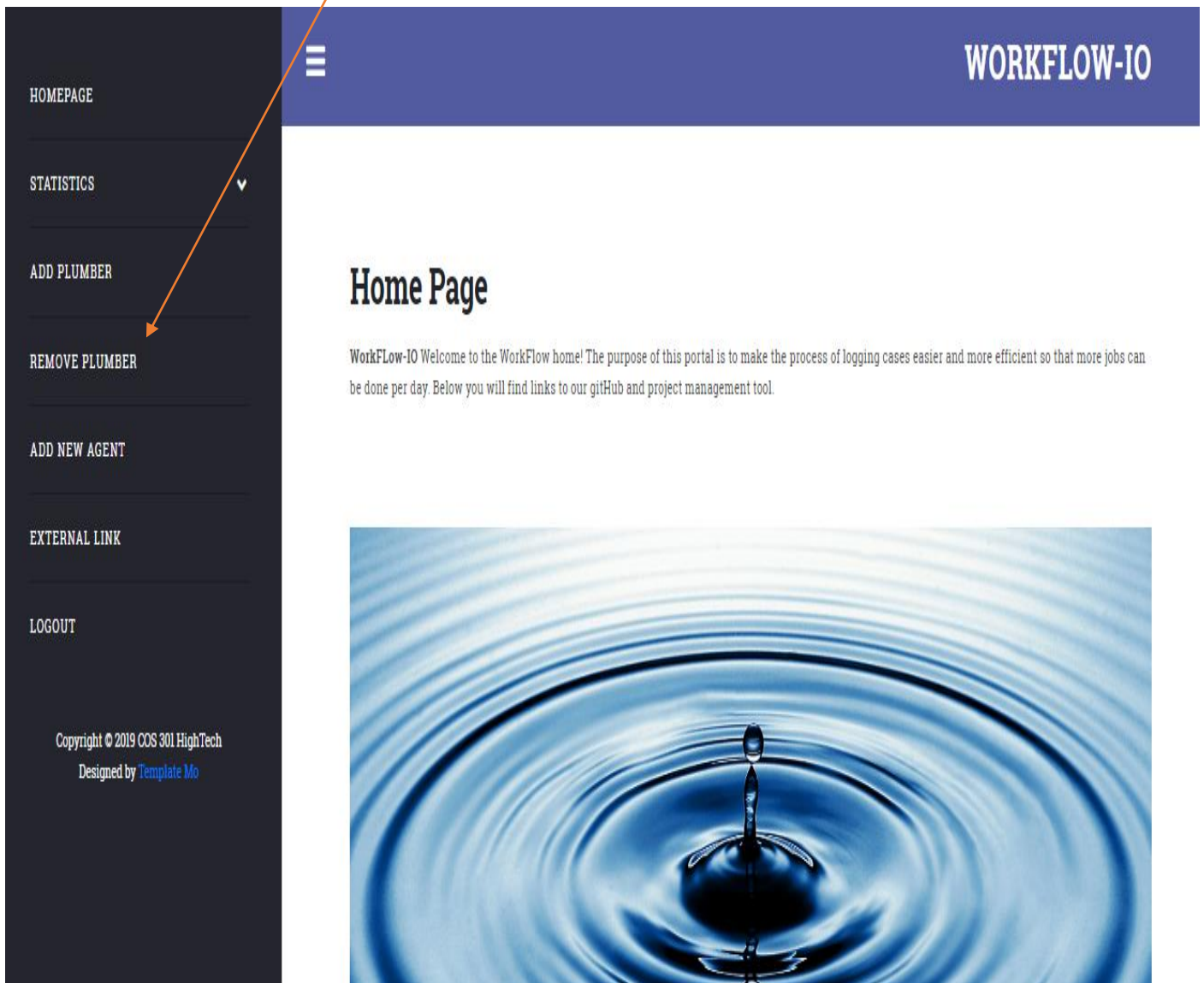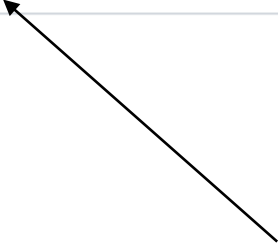
# Removing a Plumber

Insert Plumber ID to remove

Plumber ID...

DELETE    clear

In order to remove plumber's records from a database, insert the plumber's ID .

## Example for removing a plumber



This page says

Are you sure you want to remove the Plumber?

OK    Cancel

### Removing a Plumber

Insert Plumber ID to remove

24ItuBsa

DELETE    clear
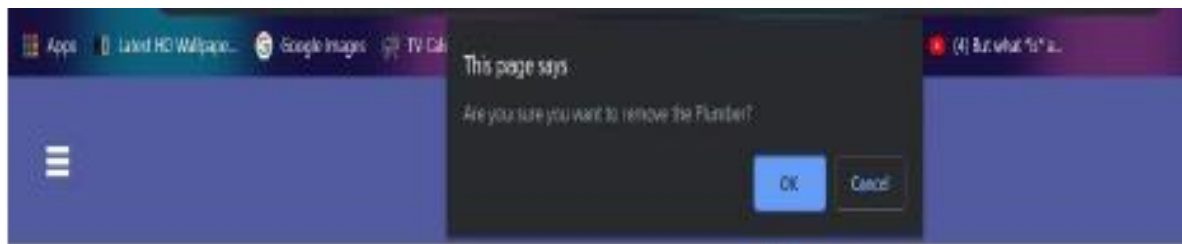
Confirmation message before deleting an employee's record. If you think you have entered the wrong plumber's ID then click on cancel else click on ok.

**1.5 Add a new agent**

Click here to add a new agent.

≡

# WORKFLOW-IO

HOMEPAGE

STATISTICS    ⌄

ADD PLUMBER

REMOVE PLUMBER

ADD NEW AGENT

EXTERNAL LINK

LOGOUT

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# Home Page

**WorkFLow-IO** Welcome to the WorkFlow home! The purpose of this portal is to make the process of logging cases easier and more efficient so that more jobs can be done per day. Below you will find links to our gitHub and project management tool.

# Sign Up New Agent

Full name

Agent ID

Note: please click the generate button to create an ID.

GENERATE AGENT ID

**Password**

Note: Generate or type your own password.

Show Password ☐
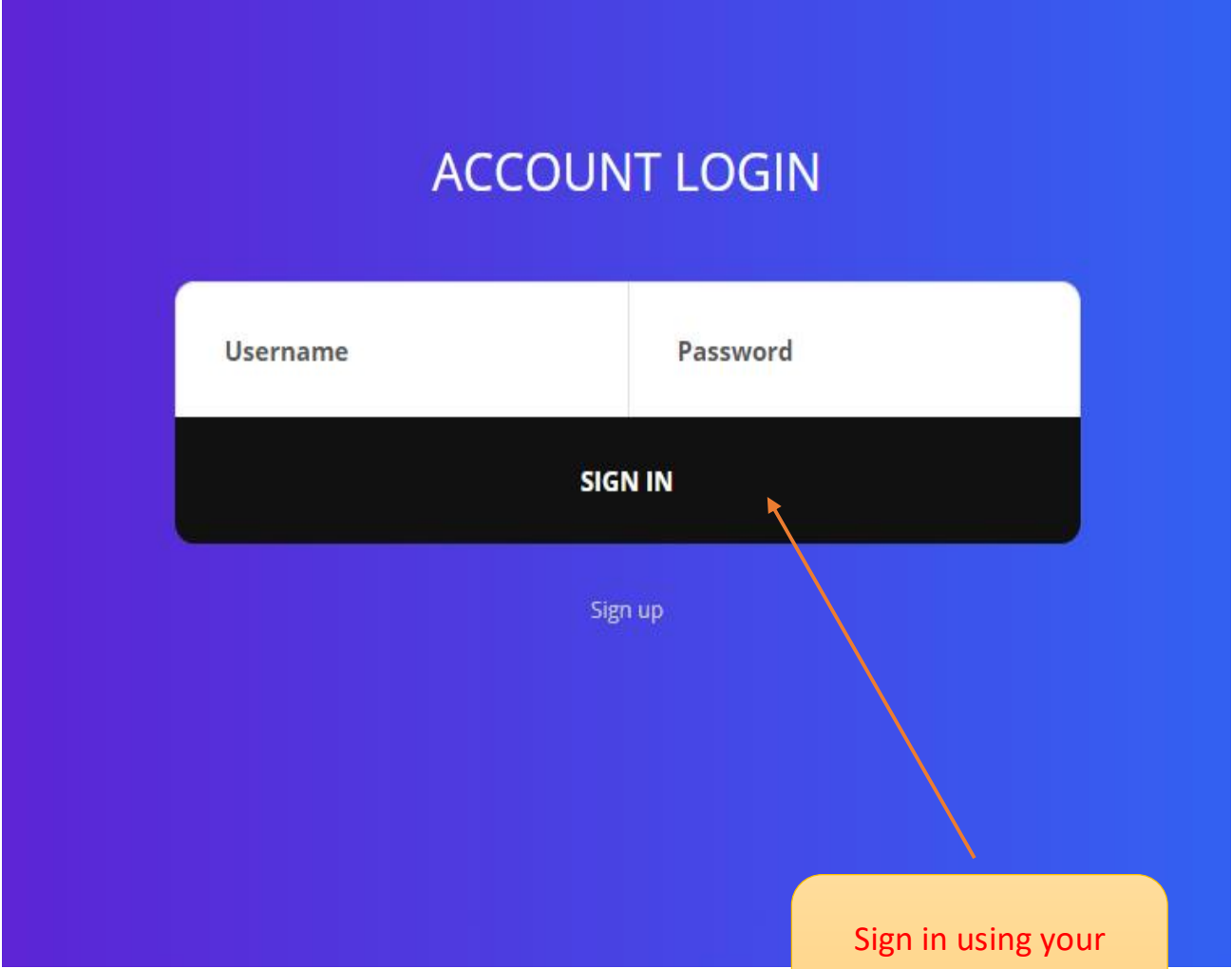
GENERATE AGENT PASSWORD ←

**Confirm Password**

SIGNUP

By clicking this button you will get a suggested password which we highly recommend for security purpose otherwise you can create your own password.

# 2.Agent Portal



ACCOUNT LOGIN

| Username | Password |
| --- | --- |

SIGN IN

Sign up

Sign in using your credentials.

**2.1 Enter new case**

Click here to create a new case.

HOMEPAGE

CASES ^

NEW CASE

CLOSE CASE

STATISTICS ∨

EXTERNAL LINK

LOGOUT

**WORKFLOW-IO**

w home! The purpose of this portal is to make the process of logging cases easier and more efficient so

low you will find links to our gitHub and project management tool.
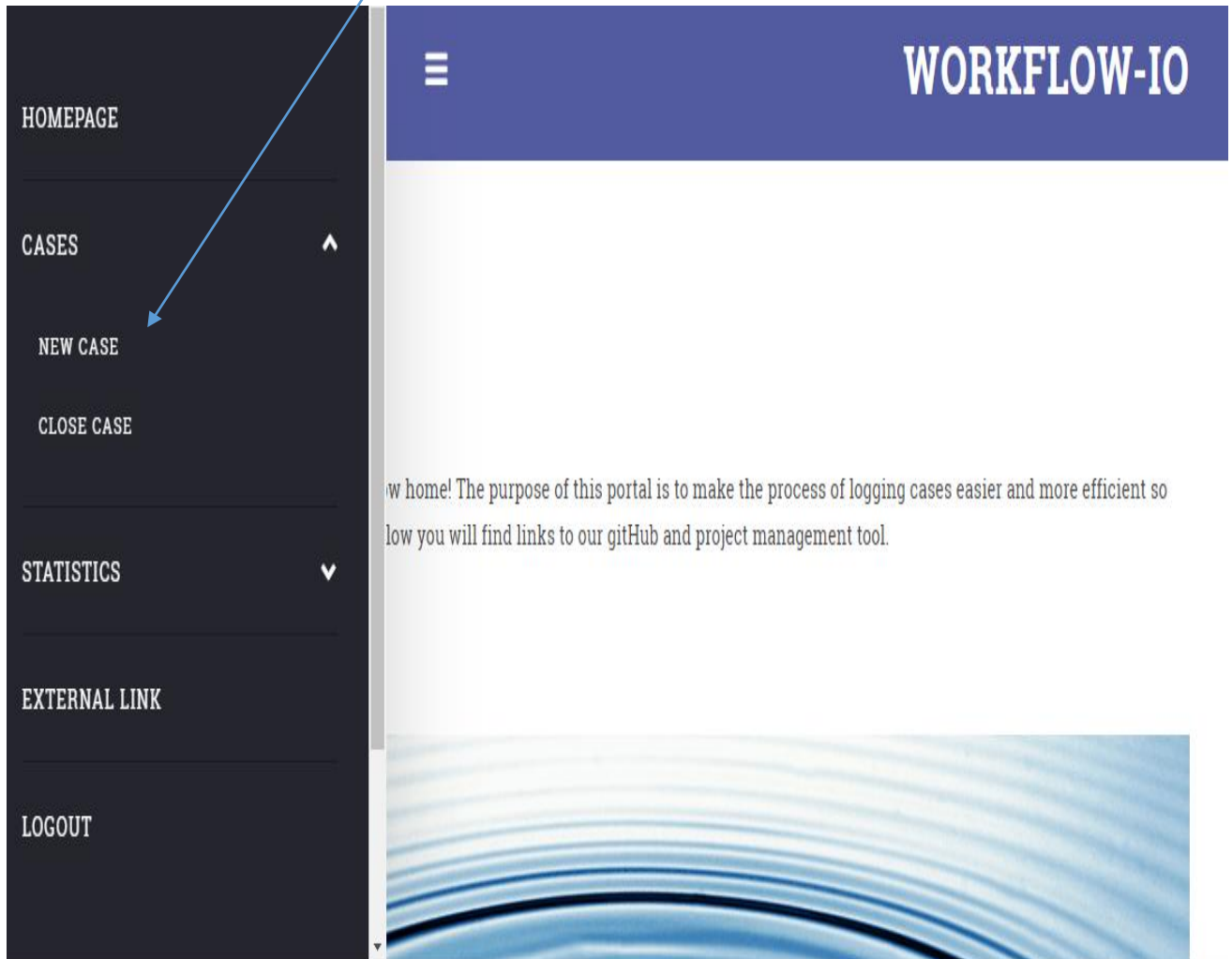
# Caller Identification

**Note**: Paste the client details below

[                                      ]

[ **VERIFY THE CONTENT** ]

[ **AUTO FILL** ]

Name

[                    ]

Surname

[                    ]

Address

[                    ]

Cell Number

[                    ]

Call back number

[                    ]

Client Type

[                    ]

Service Type

[                    ]

Reason

[                    ]

# Generating Case Report

Case ID

Caller ID

GENERATE CASE ID

GENERATE CALLER ID

Incident Date

Case Description

GET CURRENT DATE

Case Status

completed

Plumber ID

Case Opened by (Agent ID)

SUBMIT

**Example of generating a new case report**

# Caller Identification

**Note:** Paste the client details below

Name = Janaki
Surname = Patil
Address = eruditi, prospect street, Hatfield, Pretoria, 0028
Cell number = 0123456789
Call back number = 0789456123
Client type = home owner
Service type = installation
Reason = require new geyser

VERIFY THE CONTENT

AUTO FILL

Make sure the format for the client's details is correct. Then click on "verify the content". If you click on autofill nothing will happen because you have to verify the content first and then it will allow you to autofill.

# Caller Identification

**Note**: Paste the client details below

Name = Janaki
Surname = Patil
Address = eruditi, prospect street, Hatfield, Pretoria, 0028
cell number = 0123456789
Call back number = 0789456123
Client type = home owner
Service type = installation
Reason = require new geyser

**VERIFY THE CONTENT**

**AUTO FILL**

**This page says**

The format is incorrect.

**OK**

If the format is incorrect, you will receive this alert message.

## 2.2 Closing a case

**To close a case click here**:



⇨
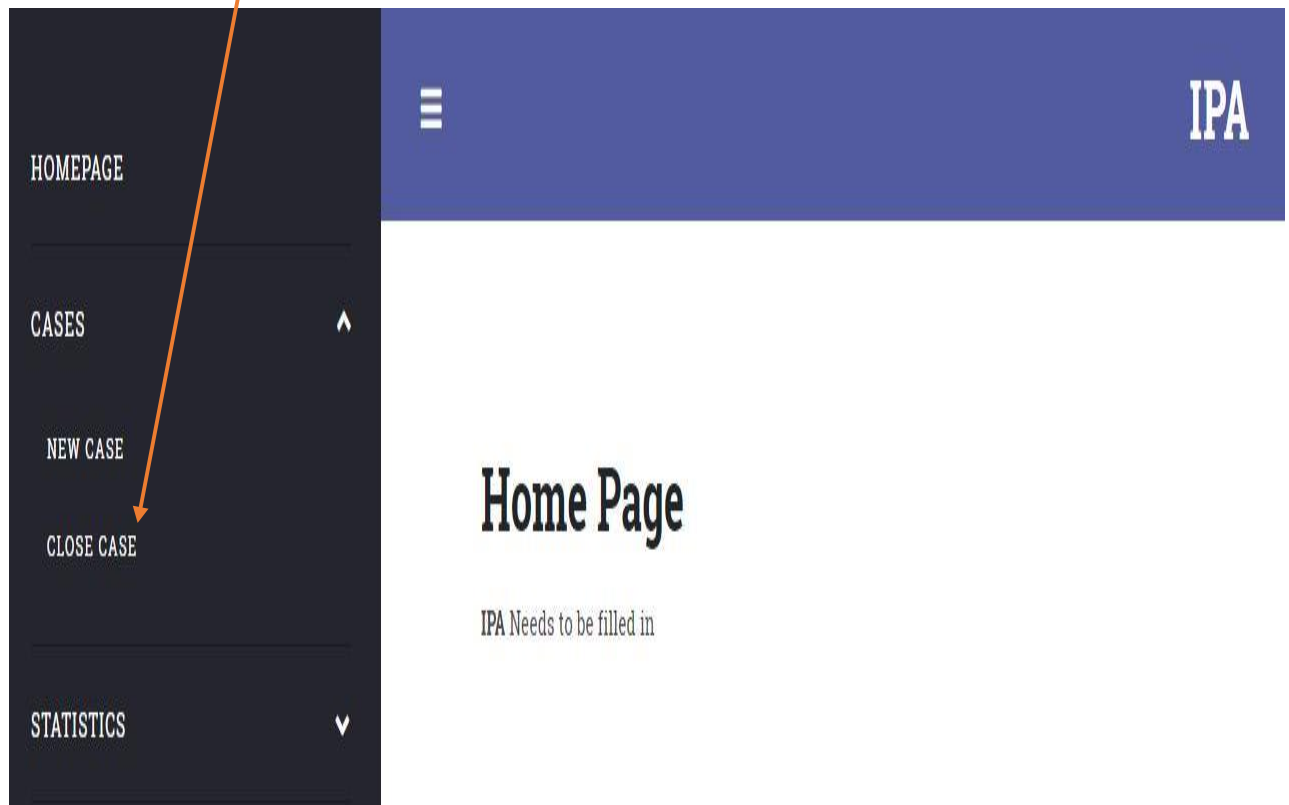
**By clicking on the "view cases that needs to be closed "button, a list of cases will be displayed that needs to be closed and then enter you agent ID in order to close it. Below is an example as how to close a case/cases.**
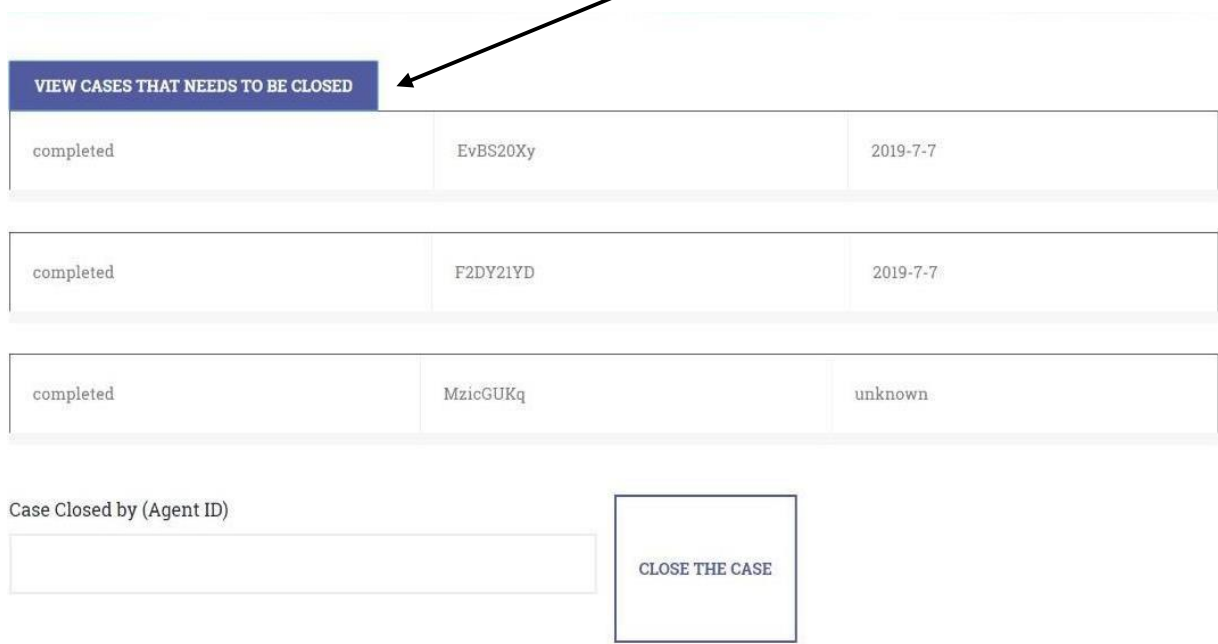


Sign Up New Agent
Close a Case

VIEW CASES THAT NEEDS TO BE CLOSED

Case Closed by (Agent ID)

CLOSE THE CASE

**When "view case that needs to be closed" button clicked a list of cases are shown:**

| VIEW CASES THAT NEEDS TO BE CLOSED | | |
|---|---|---|
| completed | EvBS20Xy | 2019-7-7 |

| | | |
|---|---|---|
| completed | F2DY21YD | 2019-7-7 |

| | | |
|---|---|---|
| completed | MzicGUKq | unknown |

Case Closed by (Agent ID)

|  | CLOSE THE CASE |
|---|---|

**Choose your agent ID from the drop down and click "close the case" button.**
⇨

| | | |
|---|---|---|
| completed | EvBS20Xy | 2019-7-7 |
| completed | F2DY21YD | 2019-7-7 |
| completed | MzicGUKq | unknown |

Case Closed by (Agent ID)

AXJXoxUcT ▼          CLOSE THE CASE

# Searching for cases handled by a specific plumber

⇨ **To perform search functionality click here:**



HOMEPAGE

CASES ⌄

STATISTICS ⌃

  GRAPH STATS

  SEARCH ENQUIRIES

ADD PLUMBER

EXTERNAL LINK

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IPA

≡

## Home Page

IPA Needs to be filled in
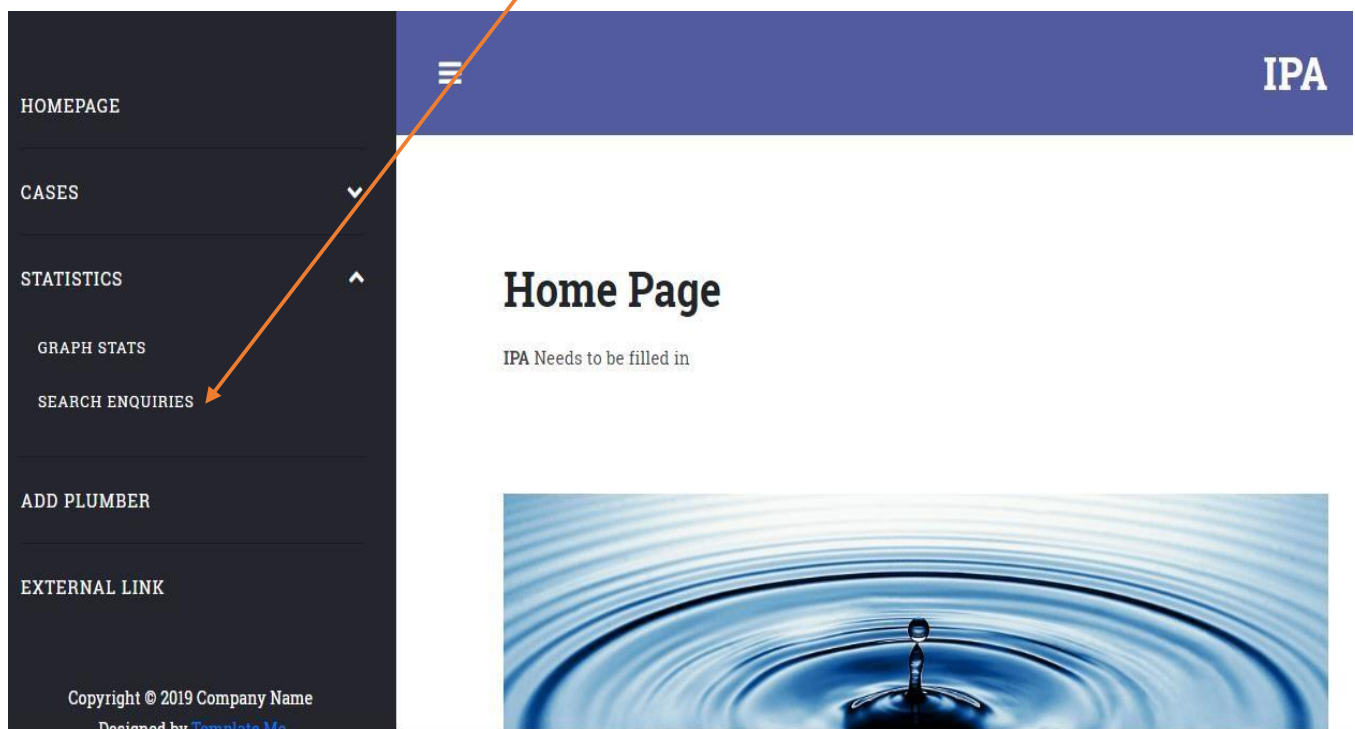
**Enter the plumber's ID to get details on the cases handled by a specific plumber.**

# Search based on various features

Cases done by plumber:

Plumber ID...

SEARCH   clear

# Tables

| CaseID | Incident Date | Address | Case Status | Description | Caller ID | Agent O | Agent C |
|--------|---------------|---------|-------------|-------------|-----------|---------|---------|

**=>Example of searching for case handled by plumber ID 24DhAjwRbi**

## Search based on various features

Cases done by plumber:

| 24DhAjwRbi |

[SEARCH] clear

**Tables**

| CaseID | Incident Date | Address | Case Status | Description | Caller ID | Agent O | Agent C |
|--------|---------------|---------|-------------|-------------|-----------|---------|---------|
| EvBS20Xy | 2019-9-9 | The Fields, Burnett Street, Hatfield, Pretoria, 0028 | completed | Same as the reason above | UgEqyuNW | ARvCV6mlk | ARvCV6mlk |
| MzicGUKq | 2019-7-8 | 1104 Prospect street, Hatfield, Pretoria 0028 | completed | Burst valve | ng2bbEEB | AXJXoxUcT | unknown |
| jAqMKs7W | 2019-7-7 | House No 1456, Legabe street, unit 4 | pending | Same as the reason above | uaWQeEOl | AXJXoxUcT | unknown |

## _Statistics_

**To view Statistics, click here :**

HOMEPAGE

CASES ⌄

STATISTICS ⌃

GRAPH STATS

SEARCH ENQUIRIES

ADD PLUMBER

EXTERNAL LINK

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≡

IPA

# Home Page

**IPA** Needs to be filled in
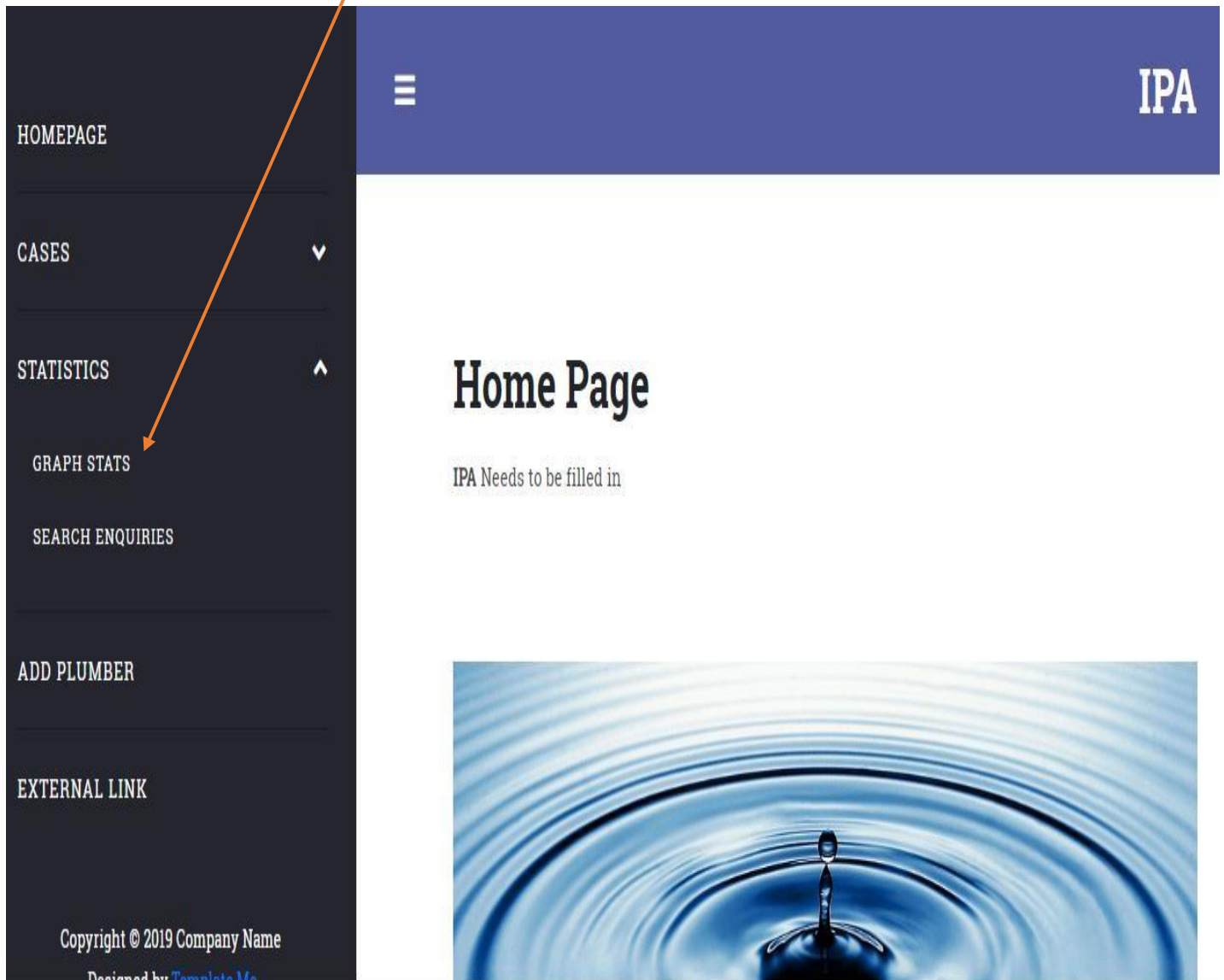
**Click on the button called "view number of cases per month " to get an overview of the cases handled per month.**
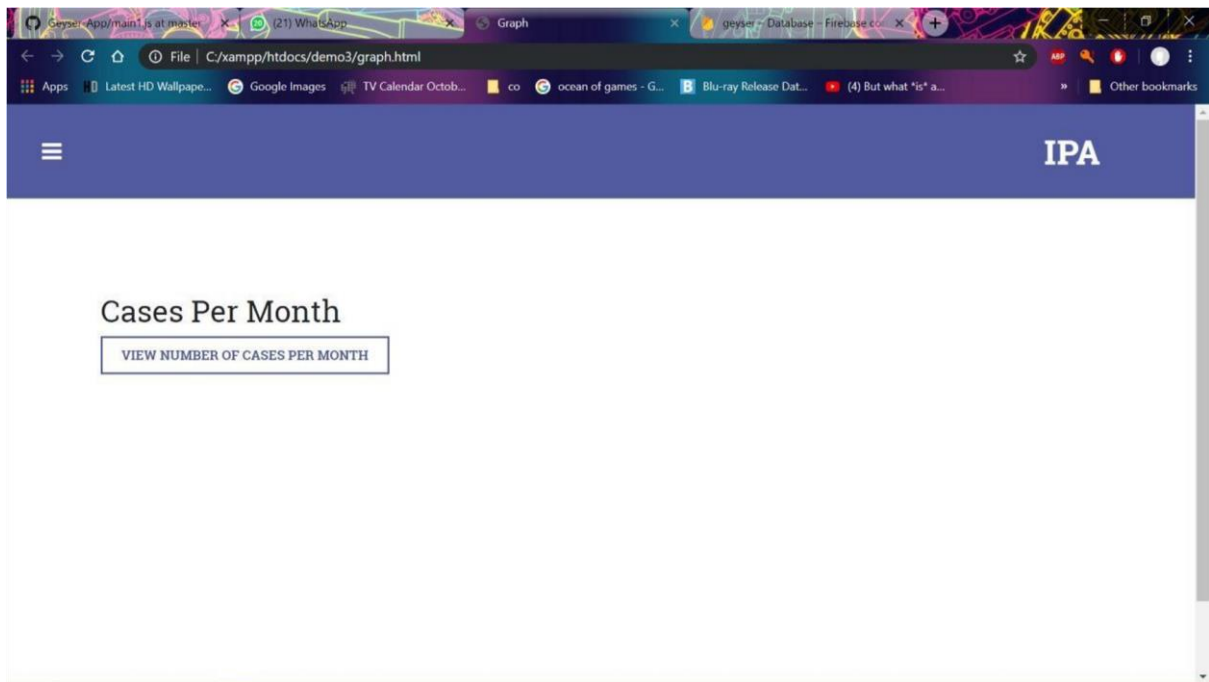
## Risk analysis

Click here to view risk factors
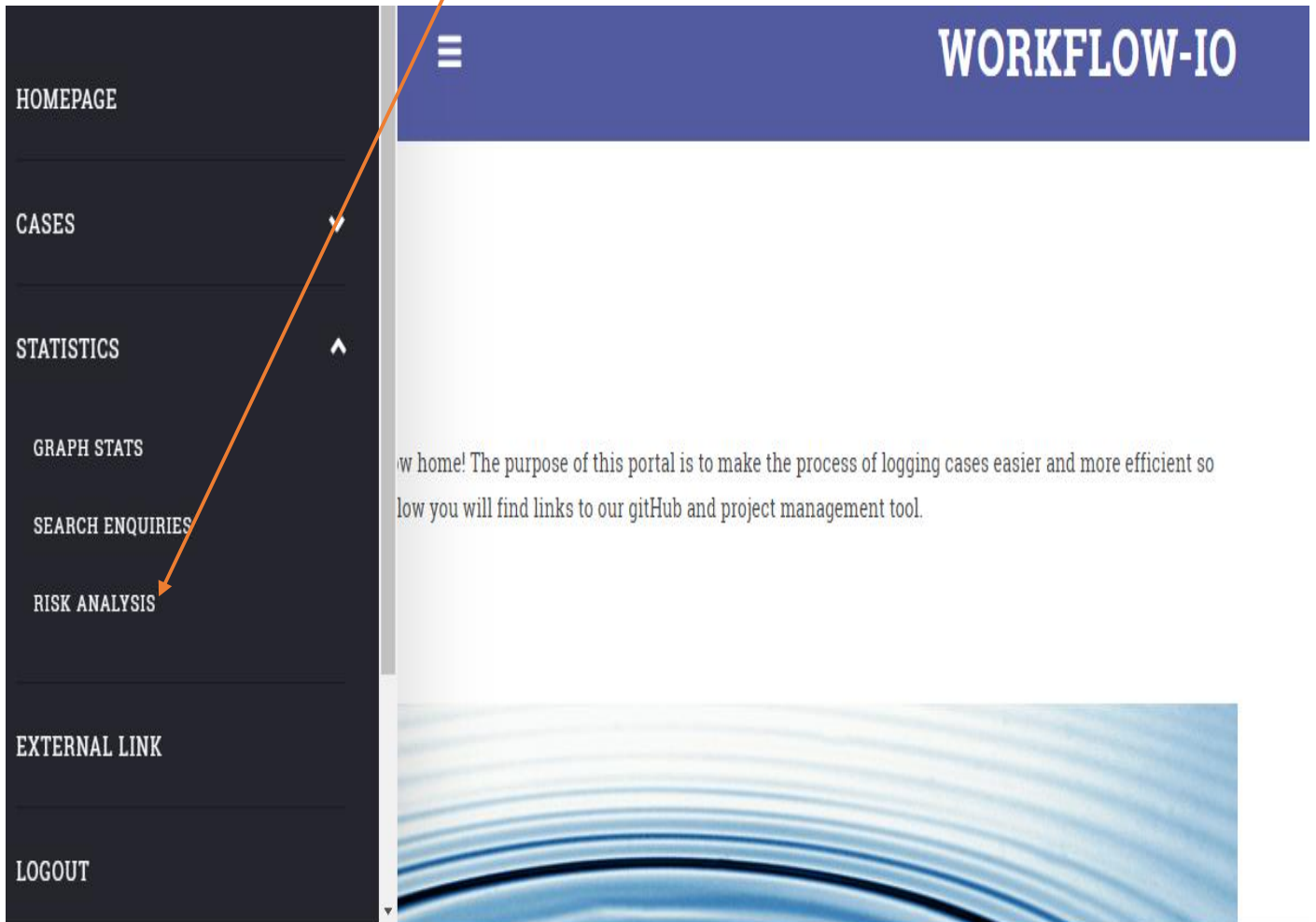
**When you click on geyser temperature button, it will will you the graph and table as shown below. This will tell you which geysers for which caseID are at high risk based on their temperature set.**

# Geyser Temperature

VIEW GEYSER TEMPERATURE



Geyser Temperature

Trial Version

Temperature in degrees celcius

CanvasJS.com
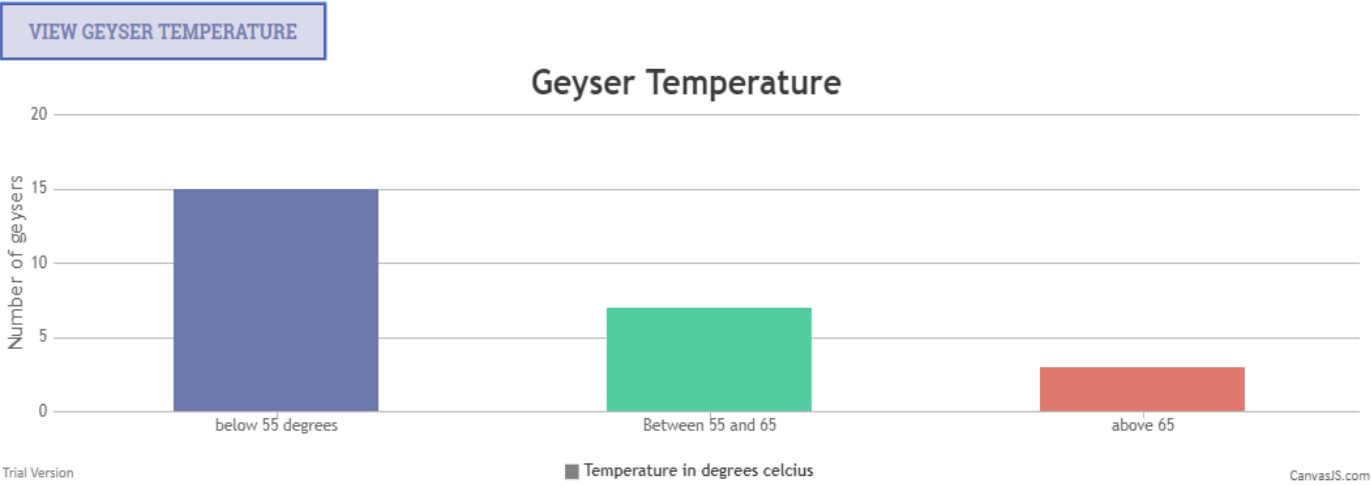
# Tables

| CaseID | GeyserTemperature | Capacity |
|--------|-------------------|----------|
| 0B3Zl2OU | 82 | 150L |
| FYmyocDF | 65 | 100L |
| GjuqY0UN | 100 | 250L |
| 3c3oWlEm | 63 | 100L |

**When you click on view feedback risk button, it will show you how many reviews are negative and positive. Those reviews that are negative, the table below will show you which case this review is coming from.**

# Feedback

VIEW FEEDBACK RISK
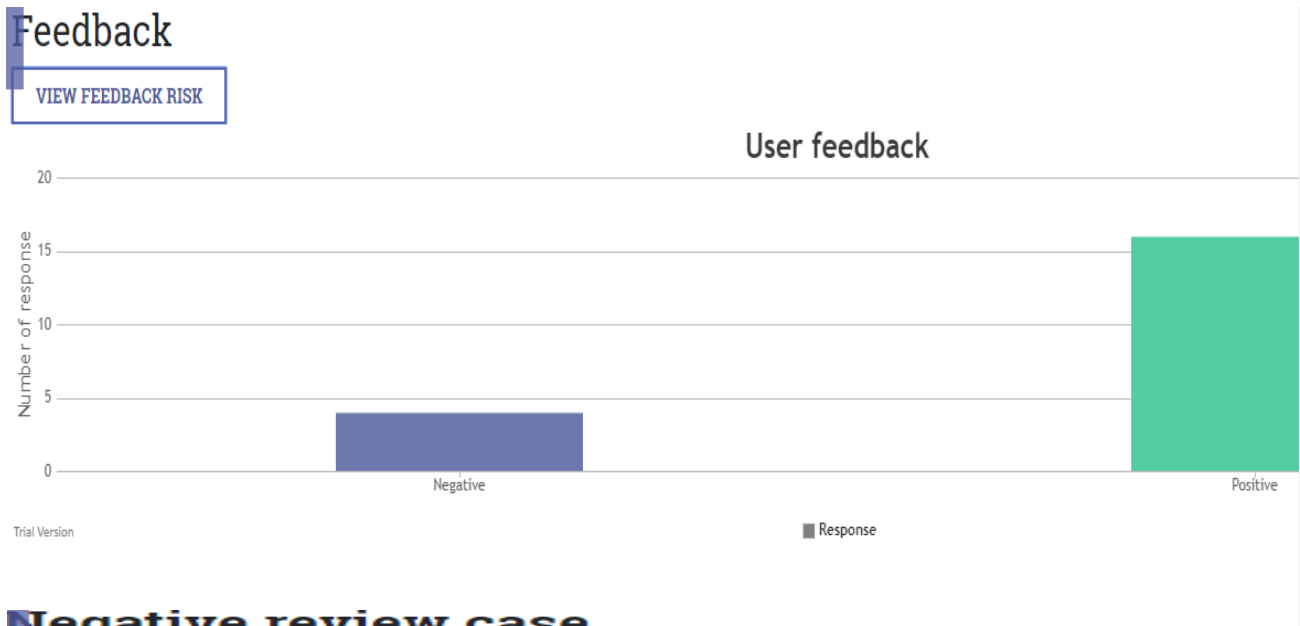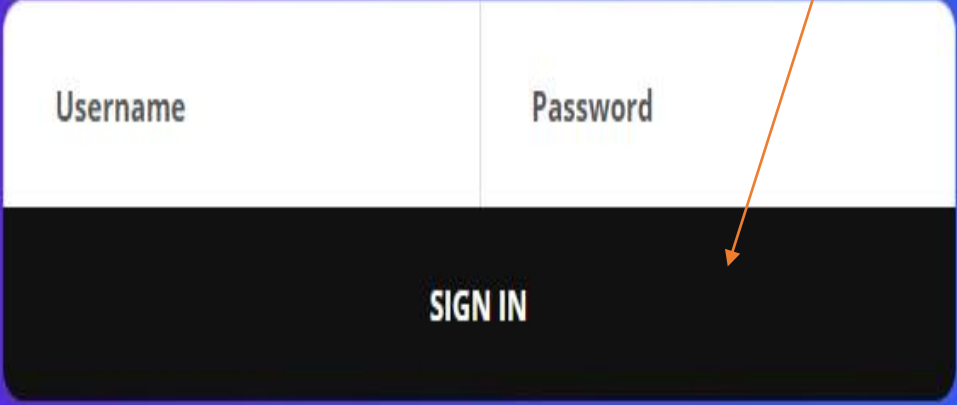


## Negative review case

| PlumberID | CaseID | CaseOpenedOn |
|---|---|---|
| 24DbXsyVhZ | F2DY21YD | 2019-7-7 |
| 24iYRIBgrd | MY9DwdgP | 2019-7-7 |
| 24N8gqUbzf | cBTQ3I2d | 2019-3-18 |
| testID | gINxocMP | 2019-7-19 |

# 3.Feedback Portal



Agents need to give the clients their credentials in order for them to provide a feedback.

# Feedback
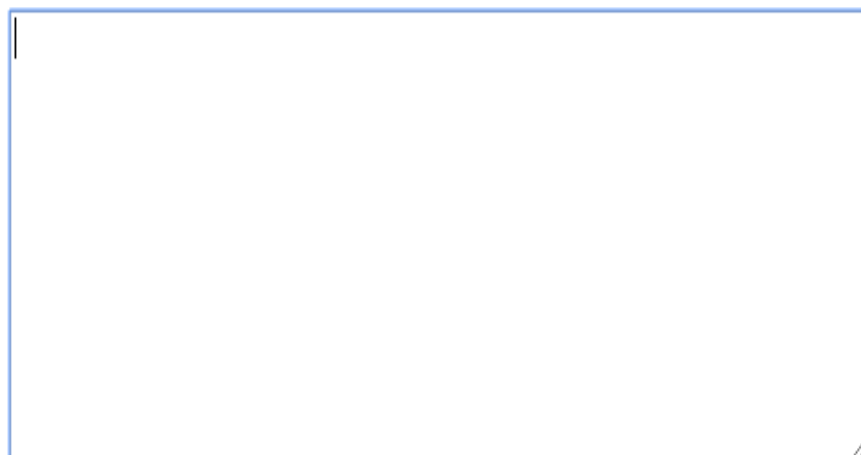
Enter your
case number
given to you

Enter
username of
your choice

★ ★ ★ ★ ★

# Additional comments on our service provided.

Submit ------ Clear

**Example of feedback given**

# Feedback

Enter your case number given to you: cFrgtyn4

Enter username of your choice: tonny



★★★☆☆

# Additional comments on our service provided.

good service provided

Submit ------- Clear

# *Troubleshooting*

Error messages will appear if required fields that need to be filled in have been left blank. In this instance an error message in red will appear underneath the required field. This occurs when filling in case details, new employee's details, login and sign up page. This can be avoided by filling in the required fields.

# *Section 2 - Plumber app*

## System Overview

---

Summary: Information about the geyser and its installation, including relevant documents, are recorded and kept on a database in order to ease the installation process.

Plumbers: The app intends to help the user through any documentation a they might do for a geyser installation/repair.

Homeowners: The app intends to provide a way for users to access information about their registered geyser(s).

Administrators: User data is stored online in a remote, secure database for any queries that the admin requires data for.

## System Configuration

---

This app works on all mobile devices running an Android Operating System, minimum version Oreo. The app communicates with the database on two occasions, one for a login process and once more when either retrieving or sending records from the database for an installation/repair or a data query. The application requires any internet connection to work.

## Installation

---

This software is provided by the administrator. The APK for installation can be found on our project Github page under the "Build" folder. To install simply run the apk on the device and when prompted whether sure or not press "install anyways".
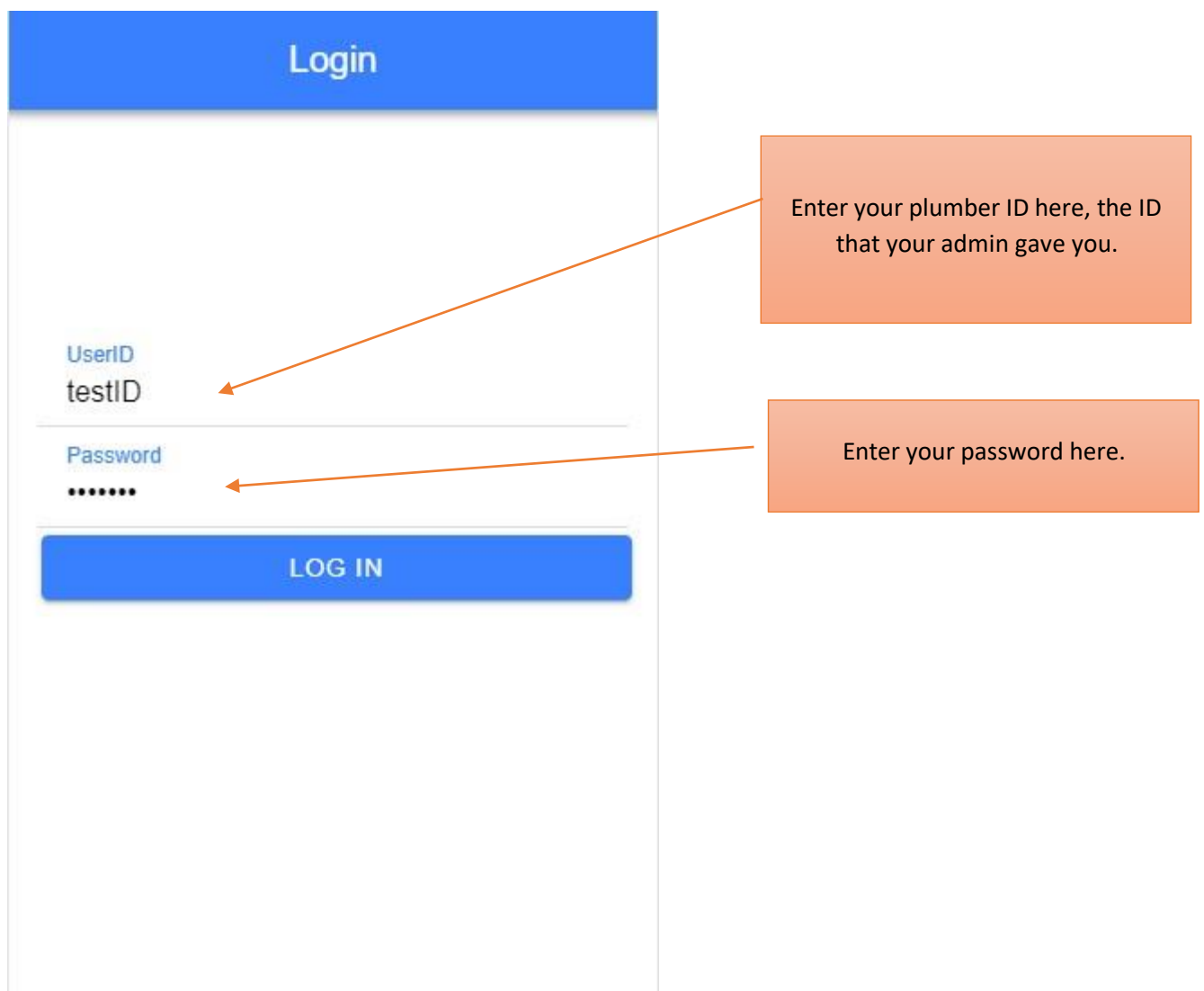
# *Getting Started*
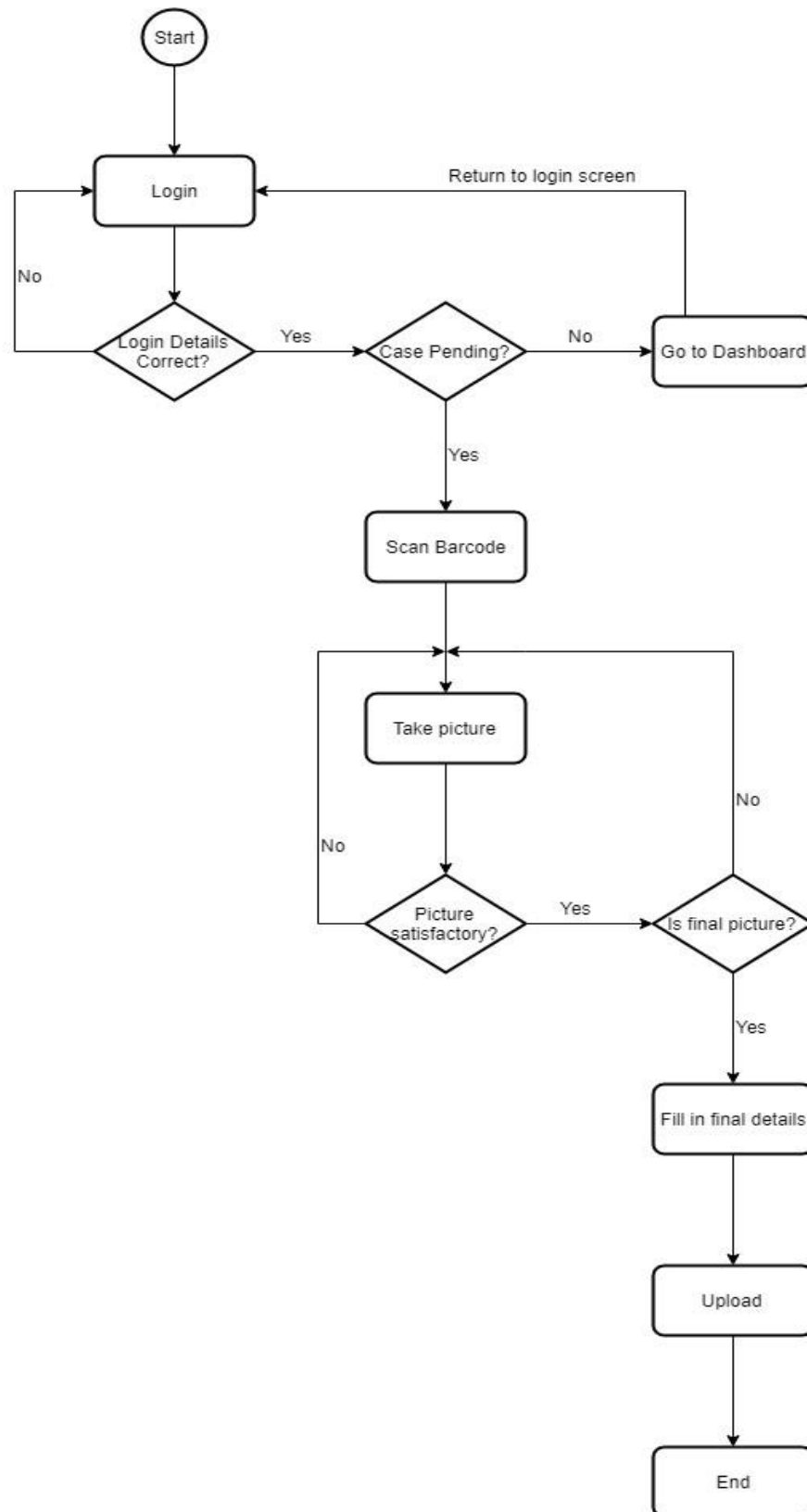
# *Using the System*

## Logging in

**In order to proceed with the app you will have to login using your credentials given to you by your admin.**



Enter your plumber ID here, the ID that your admin gave you.

Enter your password here.

# *Dashboard*

**This is the Dashboard. Should the user have a pending case to work on the dashboard will be skipped and the process for installation/repair will automatically begin, else the user will be told they have no pending cases and can log out.**

Dashboard

There are no pending cases.

Example for when there are no cases.

Log out
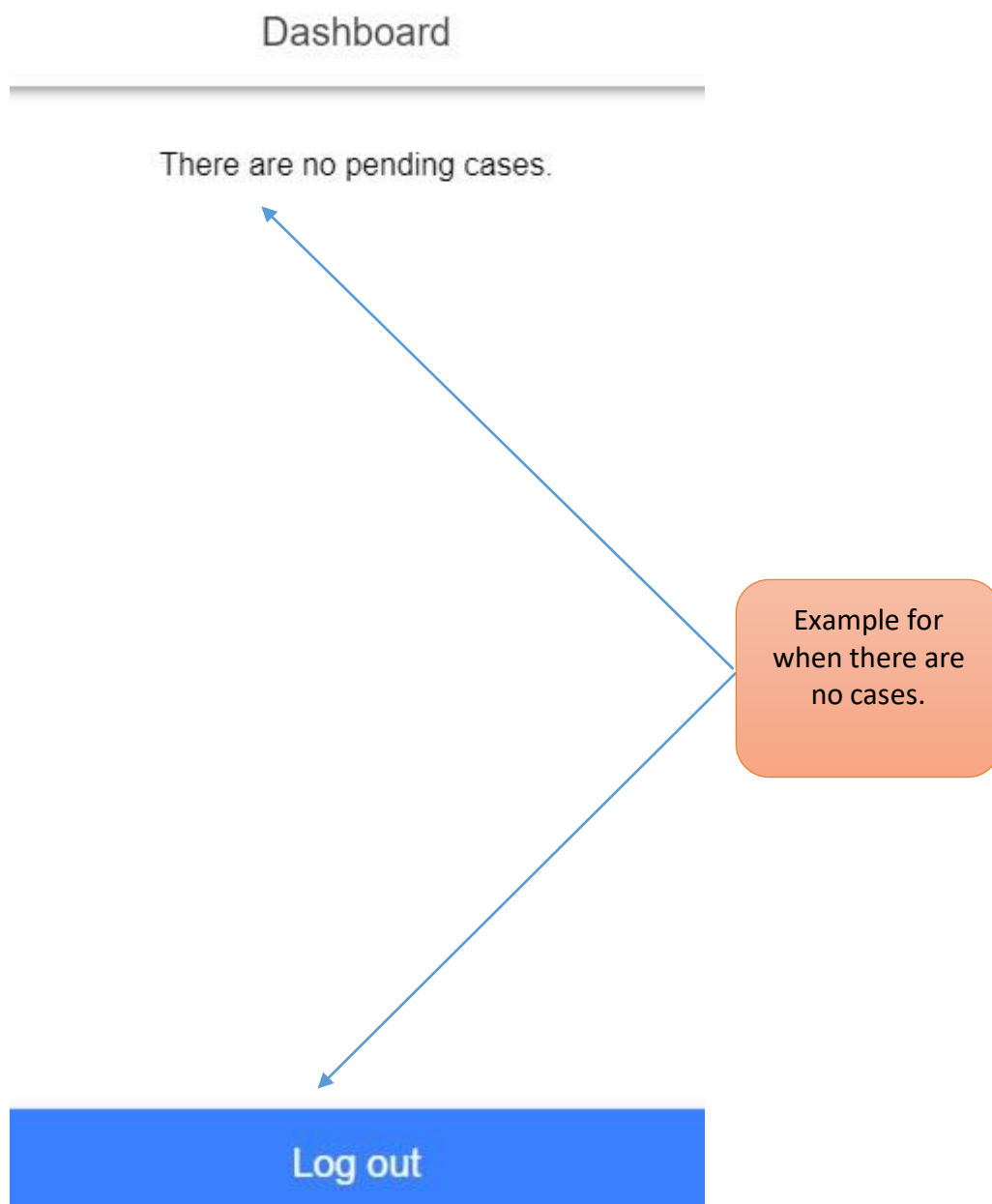
## Barcode Scanner

There is only  button here and it is the "Scan code" button. This identifies the geyser that the user will be working on.

Barcode Scanner

Press Button To Scan

SCAN CODE

Press this button to open the barcode scanner and place the barcode within the field to scan it.

# *Camera*

This screen prompts the user to take pictures of the corresponding geyser part. Pressing the "Open Camera" button will open the camera to take a picture. Once a picture has been taken the user will be given a preview of the picture and the option to retake the picture using the "Retake picture" option depicted below. If the user is satisfied with the picture

they can press the "Confirm" button to proceed to the next image.

Images

Please take a photo of the geyser

OPEN CAMERA

Click this button to open the camera so that you can take images.
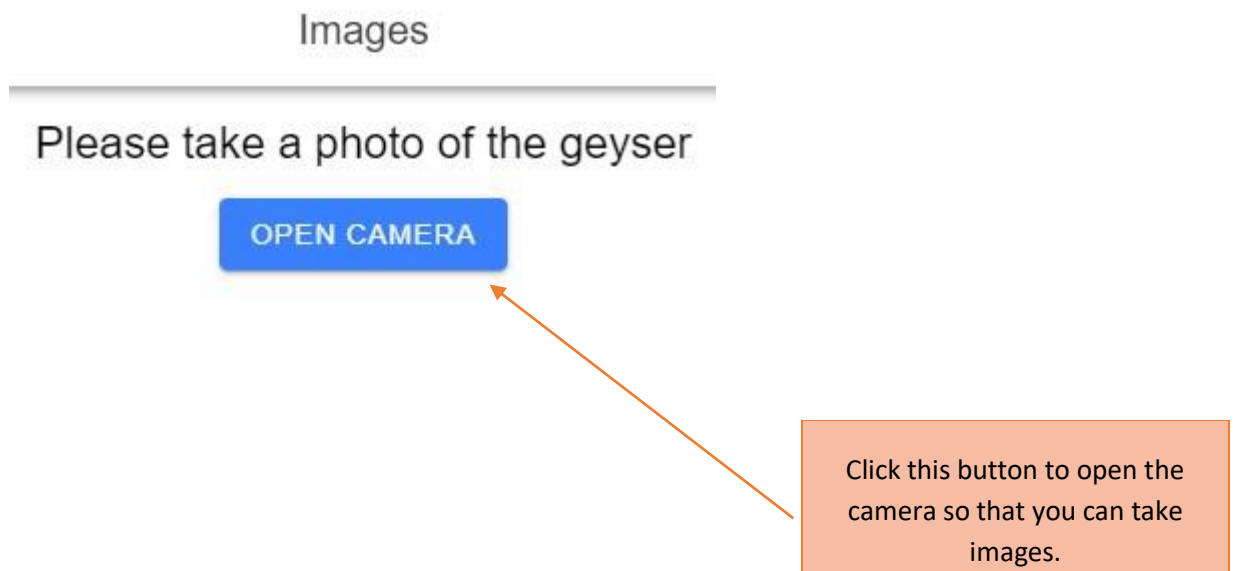
# *Geyser Detail Capture*

All details from top to bottom: Capacity, Model, Manufacturer, Insurance must be filled out and are required in order to be able to press the "Confirm" button and send the details to the database. This is especially important as this is the step where the data is sent to the database. The actual sending only happens after pressing "Confirm". An alert will inform the user that the details were sent. Capacity is a drop down list to conform to database values.

# Troubleshooting

Error messages will appear if required fields that need to be filled in have been left blank. In this instance an error message in red will appear underneath the required field. This occurs on the login page and on the details page. This can be avoided by filling in the required fields.