



Environmental Data Logging

User Manual

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Preface

Purpose of this document

This document outline the necessary steps to perform tasks within the Environmental Data Logging application.

System Overview

System Purpose

The Environmental Data Logging application was designed to provide the Environmental Technologies division of Applied Research Information Systems (ARIS) at the Southern Alberta Institute of Technology (SAIT) a centralized data storage system and to reduce the amount of time spent generating reports based on that data. This application reduces the current 40 hours of time spent collecting data and generating reports down to one (1) hour.

Clients/End Users

This application was designed for the Environmental Technologies division of ARIS at SAIT.

Main Functions of the System

The application has four (4) main functions: importing data from devices in the lab, allowing users to enter data manually, exporting data to comma delimited files (CSV) and generating reports.

Installation Procedure

The application is capable of being deployed on both Windows 7 and Ubuntu 14.04.4 (Linux) operating systems. Below is listed both the installation and uninstallation procedures for both operating systems.

Windows - Installation

- 1) Install MySQL
 - a) **Open** and run *mysql-installer-community-5.7.11.0.msi*
 - b) Agree to License Agreement
 - c) **Click Next**
 - d) **Select Developer Default** as a setup type
 - e) **Click Next** (twice)
 - f) **Click Yes** when prompted to confirm
 - g) Execute
 - h) **Click** next three times after the components are done installing
 - i) **Set MySQL root password** as: *password*
 - j) Add a user
 - i) Username: *enviro*
 - ii) Host: <All Hosts (%)>
 - iii) Role: DB Admin
 - iv) Password: xxxx
 - v) Confirm password : xxx
 - k) **Click** next twice
 - l) Execute & Finish
 - m) **Click Next**
 - n) **Click Check**
 - o) **Click Next**
 - p) Execute & Finish
 - q) **Click Next & Finish**
- 2) **Open** a command prompt
- 3) **Run Script#1** as administrator
- 4) **Run Script#2** as administrator
- 5) **Open** a new command prompt as an administrator
- 6) **Navigate** to: *C:\RecursiveDelegation*
- 7) **Type** in the console: *java -jar EnviroTech.jar*

Windows – Uninstallation

- 1) **Run** *mysql-installer-community-5.7.11.0.msi*
- 2) **Click** *Remove* on the right side of the MySQL installer
- 3) **Check** all boxes
- 4) **Click** *Execute*
- 5) **Click** *Yes* when prompted
- 6) **Click** *Next*
- 7) When complete, **check** the box *'Yes, Uninstall the MySQL installer'*
- 8) **Click** *Finish & Restart*
- 9) **Delete** the *RecursiveDelegation* folder located under the C drive

Ubuntu – Installation

This installation is broken into different sections based on the tool that is being installed. Complete each step in the order they are shown below.

MySQL

- 1) **Open** a terminal window
- 2) **Type** in: *sudo apt-get install mysql-server*
 - a) **Type** *Y* when prompted with *'Do you want to continue?'* (both times)
 - b) **Type** in desired password when prompted for a new password

Database setup

- c) **Open** a terminal window
- d) **Type** in: *mysql -u "root" -p*
- e) **Enter** password when prompted (same as above)
- f) **Log into** MySQL
- g) **Run** the *envirodbCreate.sql* script included

Redis

- 1) **Open** a terminal window and type in the following commands in order:
 - a) *wget http://download.redis.io/releases/redis-3.0.7.tar.gz*
 - b) *tar xzf redis-3.0.7.tar.gz*
 - c) *cd redis-3.0.7*
 - d) *make*
 - e) *src/redis-server to start the server*

Automatic file upload

- 1) **Open** the source code for the project in a file explorer
- 2) **Open** the file *src/main/java/tasks/DirectoryWatcher.java*
- 3) **Edit** the three (3) variables to match the desired directory:
 - a) *archivedFolder*
 - b) *errorFolder*
 - c) *newDirectory*

Using Gradles *bootRepackage* task, rebuild the jar with the dependencies.

Execute

- 1) **Open** a terminal window
- 2) **Navigate** to the location of the .jar file
- 3) **Run** the command: *java -jar EnviroTech.jar*

Ubuntu – Uninstallation

- 1) **Uninstall** *mysql*
- 2) **Uninstall** Redis with the command: *sudo apt-get purge --auto-remove redis-server*
- 3) **Delete** any directories made

Reference Material

This section will outline the process of creating a project. While adding sample information is not required in the process, this section will cover adding a single sample as well as a measurement to that sample.

Instructions

1. Navigate to the Project page via the left dropdown menu
2. Click on the *Add* button on the right side of the screen (labeled with a + symbol)

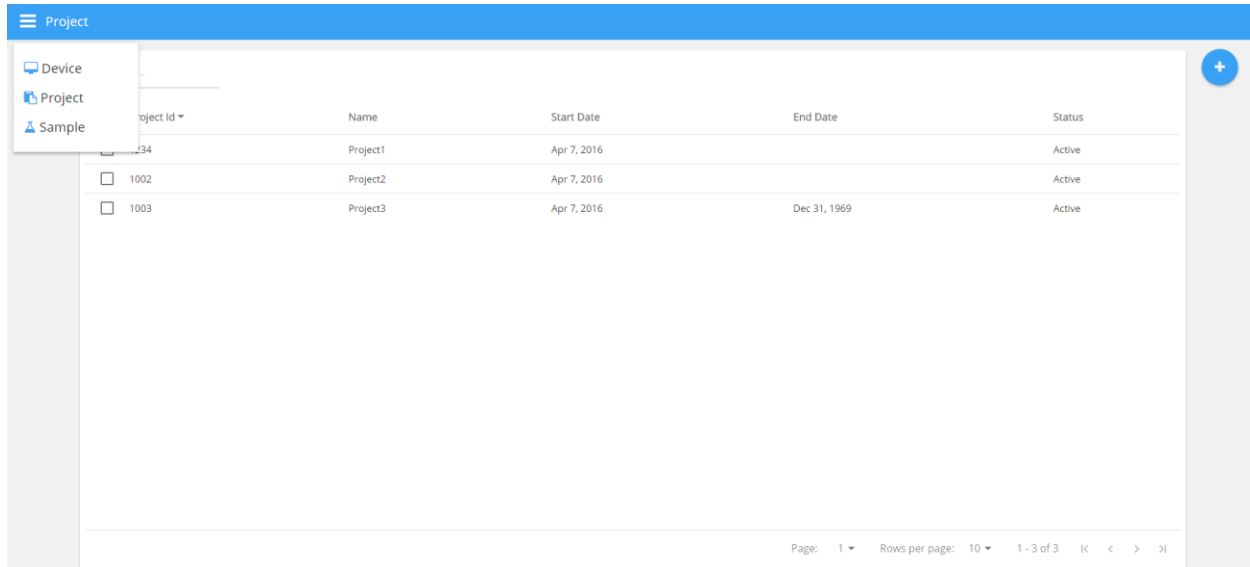


Figure 1 - Add Project Overview Screen

3. Fill in all the fields. Those marked with an asterisk (*) are required.
4. When all required fields are filled in, the *Save* button will become enabled (labeled with a floppy disk icon)
5. At any point click on the *Cancel* button to discard all changes and navigate back to the project overview page (labeled with the crossed-out circle)

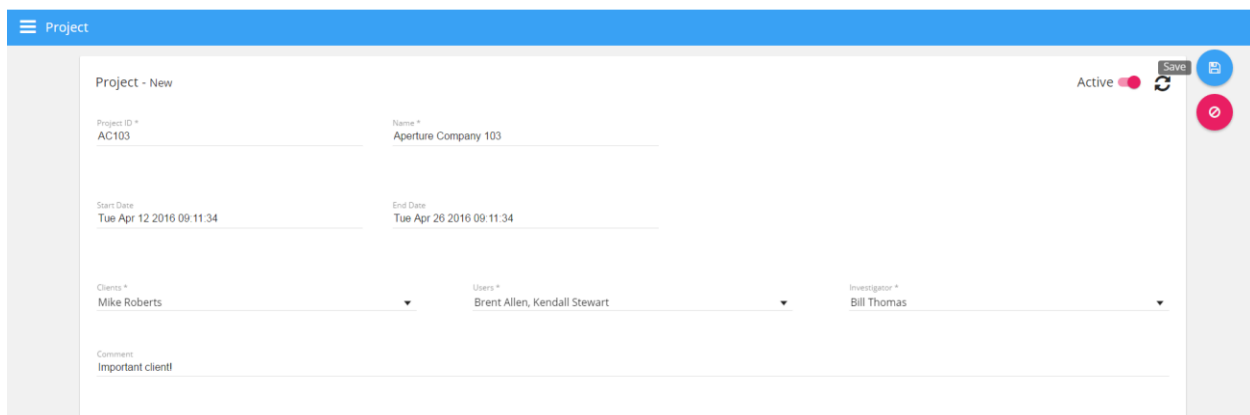


Figure 2- Add Project Details Screen

Tutorial

This section will outline the process of performing general tasks in the Environmental Data Logging application. Tasks that are similar in their process (i.e. all admin tasks, create and edit) will not be duplicated.

Login

1. Fill out the form
2. Click on *Login*
3. If the information provided matches an active user in the application the screen will navigate to the *Project* screen

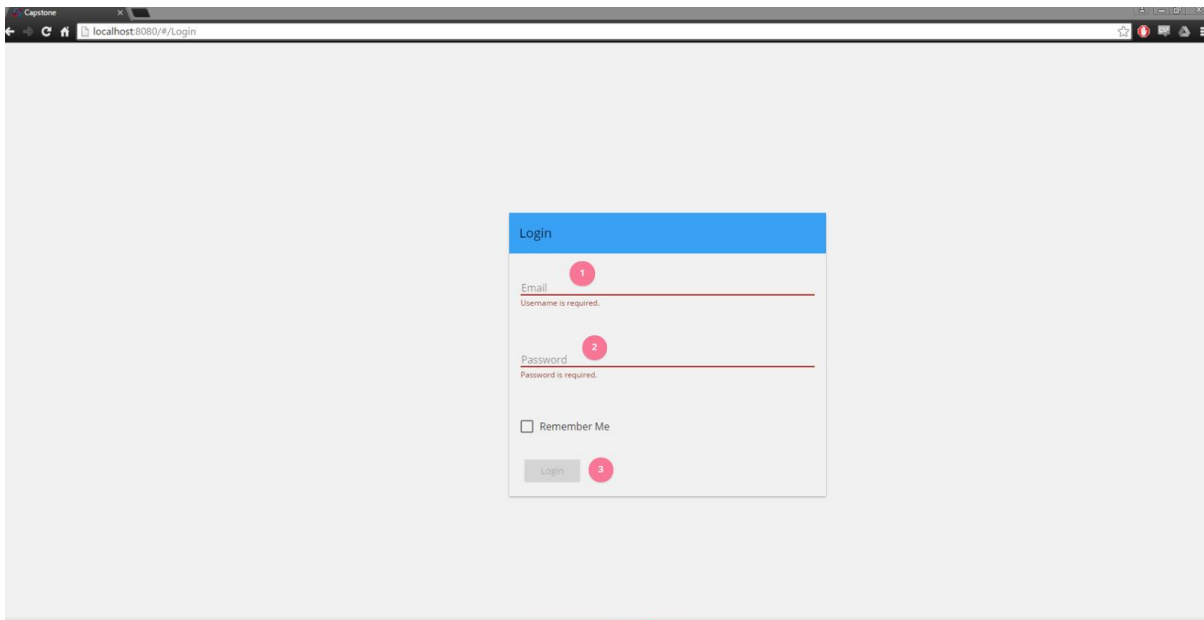


Figure 3 - Login Page

Logout

1. Click on the circular button in the top right corner of the application

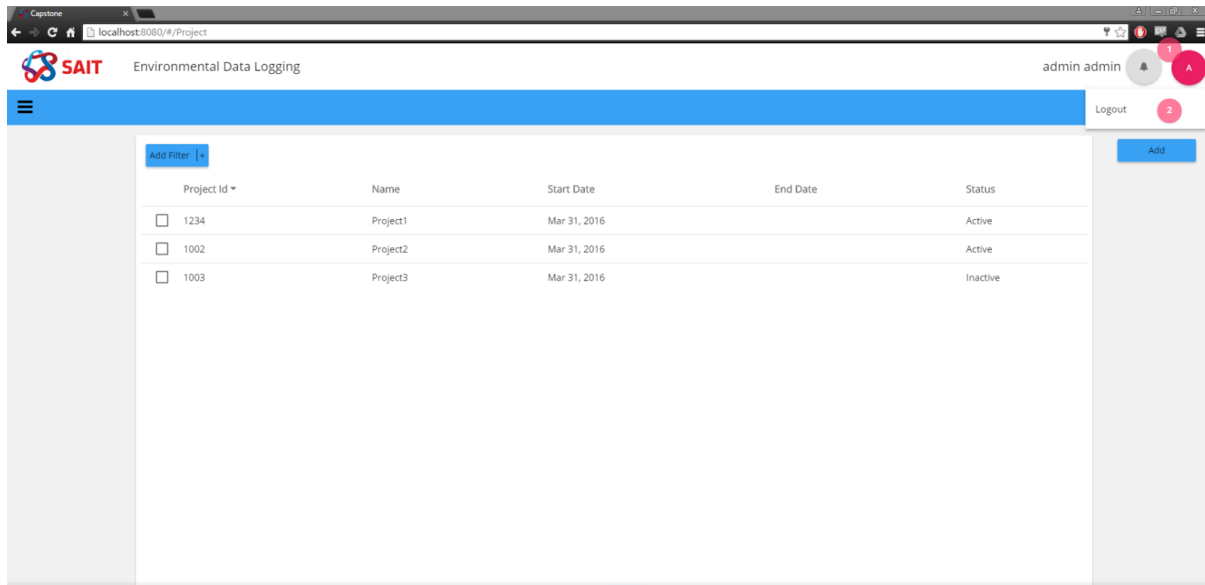


Figure 4 - Logout Page

Add Project

This process will outline how to add a project to the application. This process also applies to editing a project.

1. Navigate to the Project page via the left dropdown menu
2. Click on the *Add* button on the right side of the screen (labeled with a plus symbol)

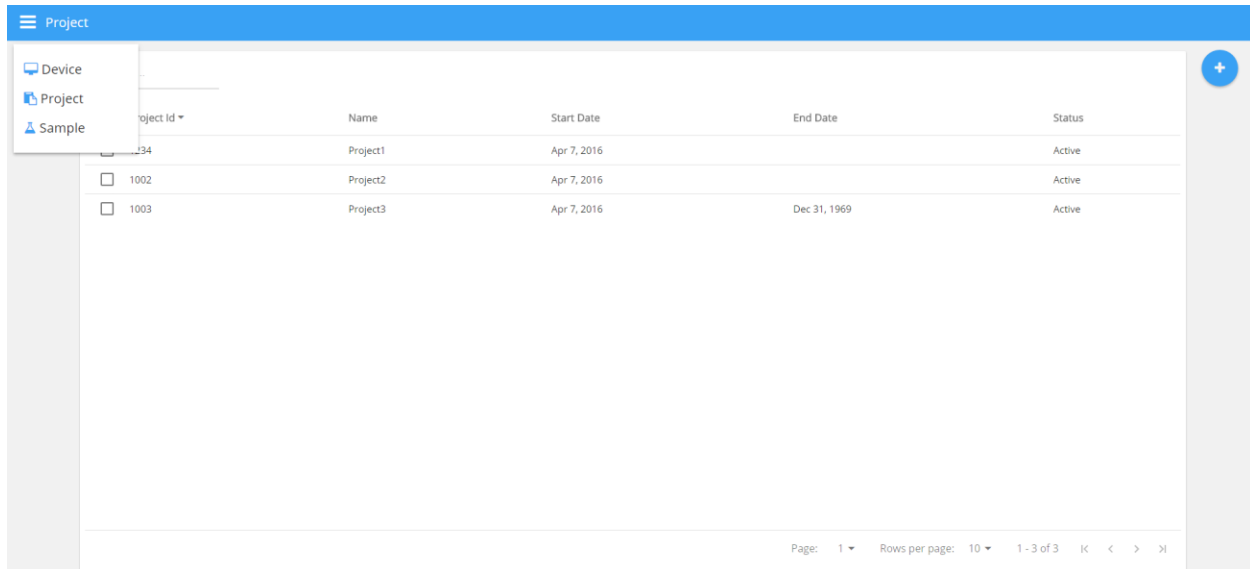


Figure 5 - Add Project Overview Screen

3. Fill in all the fields. Those marked with an asterisk (*) are required.
4. When all required fields are filled in, the *Save* button will become enabled (labeled with a floppy disk icon)
5. At any point click on the *Cancel* button to discard all changes and navigate back to the project overview page (labeled with the crossed-out circle)

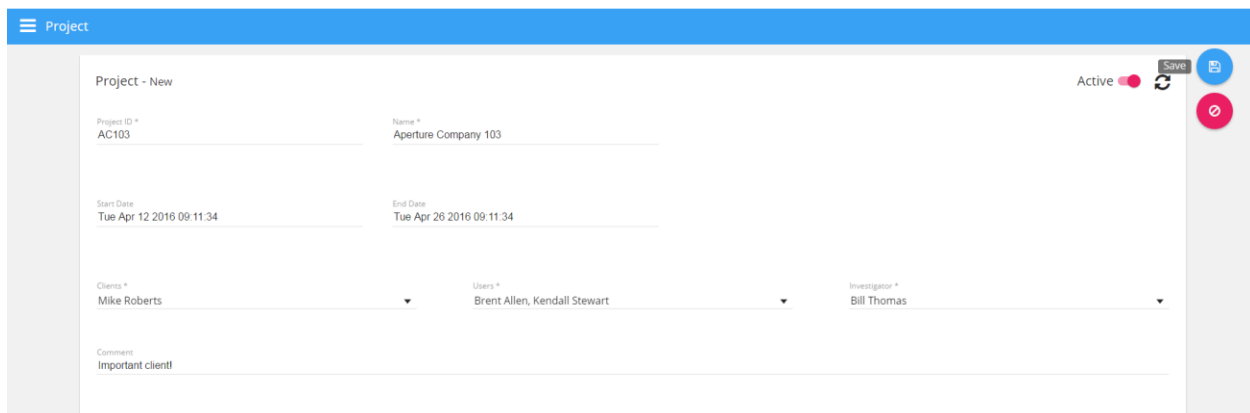


Figure 6- Add Project Details Screen

Edit Device

This process outlines how to edit a device comments or samples. Devices cannot be added through the application. If a device needs to be added then consult your support team for assistance.

1. Navigate to the Device overview page
2. Click on the required row in the grid.
3. Click on the *View* button on the right side of the screen (labeled with the eye icon)

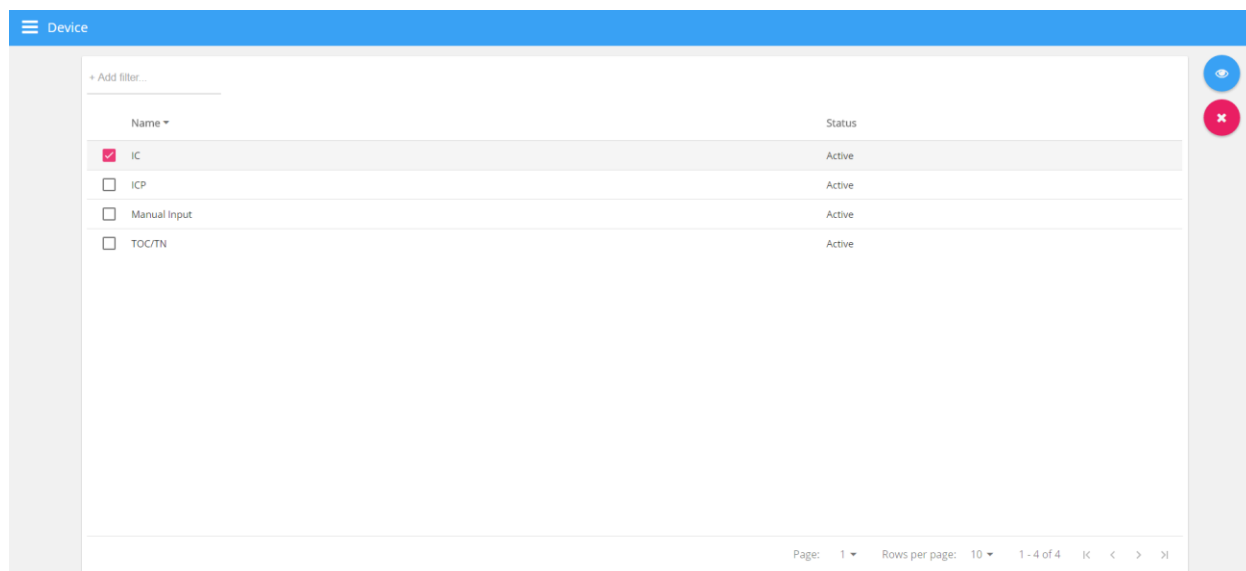


Figure 7 - Device Overview Page

4. Fill in or modify the content in the form
5. Click on the *Save* button when complete (labeled with the floppy disk icon)
6. At any point, click on the *Cancel* button to discard all changes and navigate back to the previous screen (labeled with the crossed-out circle icon)

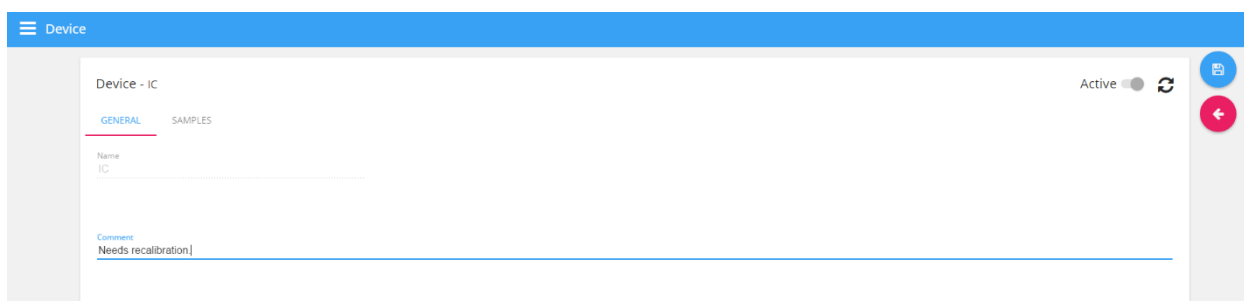
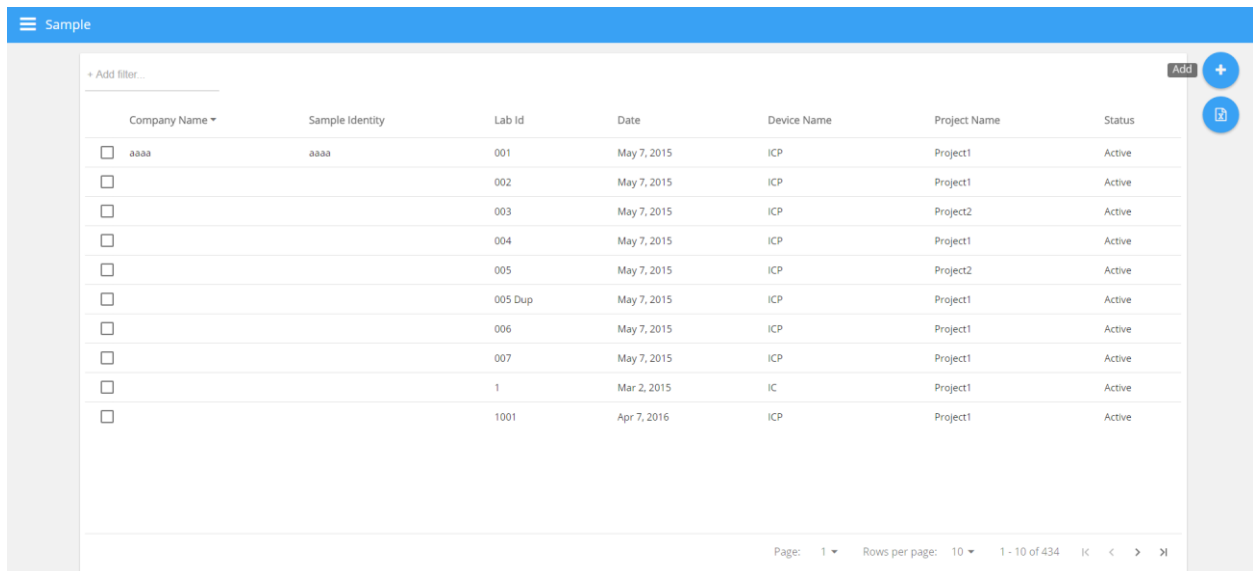


Figure 8 - Device Detail Page

Add Sample

This process outlines how to add a sample to the application. This is the same process for editing a sample.

1. Navigate to the Sample overview page
2. Click on the Add button on the right side of the screen (labeled with the plus symbol)

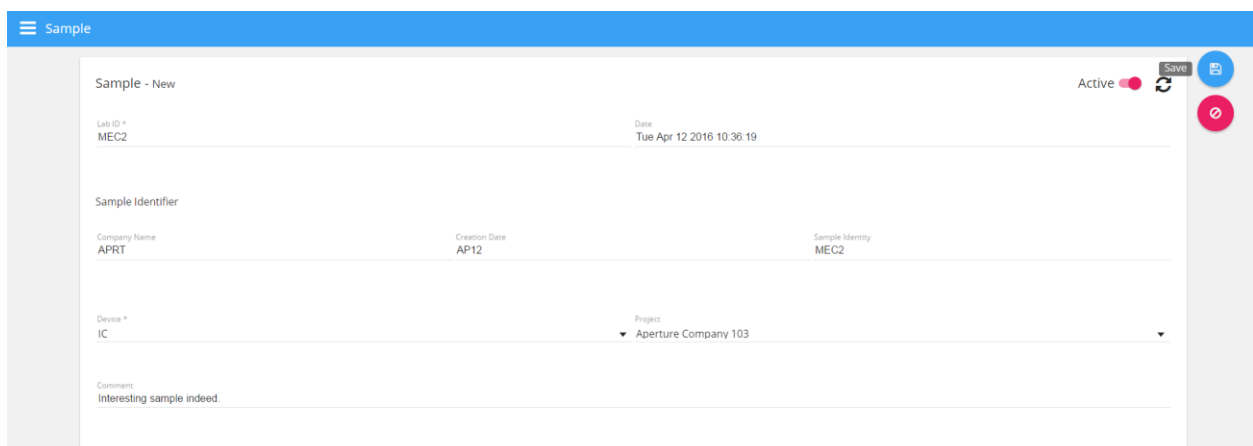


Company Name	Sample Identity	Lab id	Date	Device Name	Project Name	Status
<input type="checkbox"/> aaaa	aaaa	001	May 7, 2015	ICP	Project1	Active
<input type="checkbox"/>		002	May 7, 2015	ICP	Project1	Active
<input type="checkbox"/>		003	May 7, 2015	ICP	Project2	Active
<input type="checkbox"/>		004	May 7, 2015	ICP	Project1	Active
<input type="checkbox"/>		005	May 7, 2015	ICP	Project2	Active
<input type="checkbox"/>		005 Dup	May 7, 2015	ICP	Project1	Active
<input type="checkbox"/>		006	May 7, 2015	ICP	Project1	Active
<input type="checkbox"/>		007	May 7, 2015	ICP	Project1	Active
<input type="checkbox"/>		1	Mar 2, 2015	IC	Project1	Active
<input type="checkbox"/>		1001	Apr 7, 2016	ICP	Project1	Active

Page: 1 Rows per page: 10 1 - 10 of 434

Figure 9 - Sample Overview Page

3. Fill in all the fields in the form. All fields marked with an asterix (*) are required
4. When all required fields are filled in, the *Save* button will become enabled
5. Click on the *Save* button to save the sample and will be navigated back to the previous screen
6. At any point, click on the *Cancel* button to discard all changes and be navigated back to the previous screen



Sample - New

Active ☒ Save

Lab ID *
MEC2

Date
Tue Apr 12 2016 10:36:19

Sample Identifier

Company Name
APRT

Creation Date
AP12

Sample Identity
MEC2

Device *
IC

Project
Aperture Company 103

Comment
Interesting sample indeed.

Figure 10 - Sample Detail Page

Admin Tasks

This process outlines how to perform all administrative tasks. This process applies to all admin sections: Client, Device, Investigator, Test Method, Unit and User.

1. Navigate to an admin page (*Client* is process used in this example)
2. Click on the *Add* button on the right side of the screen

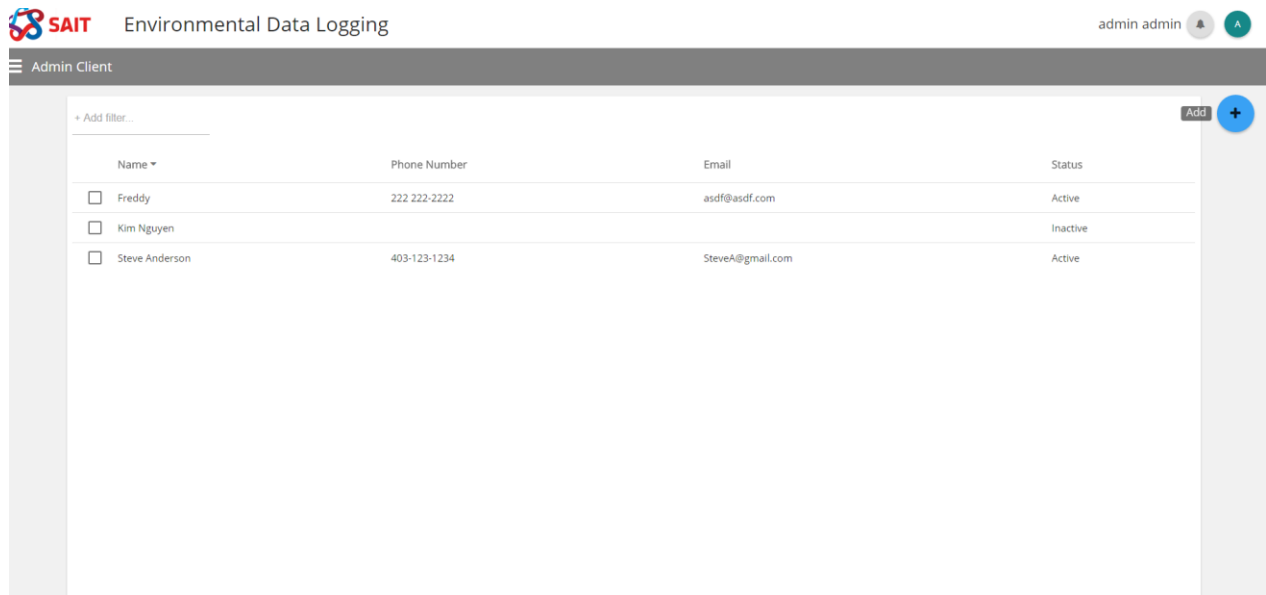


Figure 11 - Admin Overview Page

3. Fill in all the fields in the popup window
4. Click on the *Save* button to save changes to the application and close the popup
5. Click on the *Cancel* button to discard all changes and close the popup

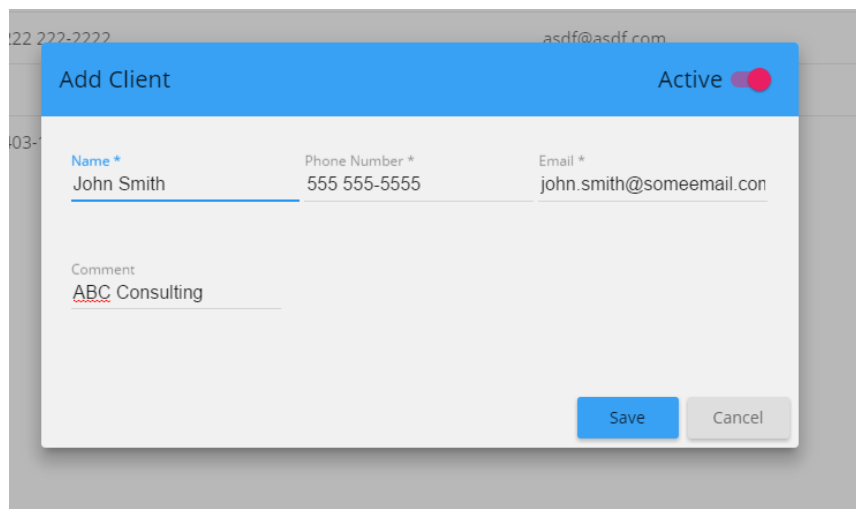


Figure 12 - Admin Popup Window