

Sri Lanka Institute of Information Technology

Distributed Systems – SE3020

FIRE ALARM MONITORING SYSTEM

<< Assignment-2 >>

Group Members:

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| --- | --- |
| IT18189704 - | D.Samarajeewa |
| IT18058574 - | H.K.Kisal Randula |
| IT18076844 - | A.P.Manjari Mandara |
| IT18137392 - | R.A.D.M.Bandara |

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Technologies Used

1. Rest API

* Jersey

1. Desktop Client

* Java Swing
* Java Mail

1. Web Client

* HTML
* React JS
* CSS (Bootstrap Framework)
* JavaScript

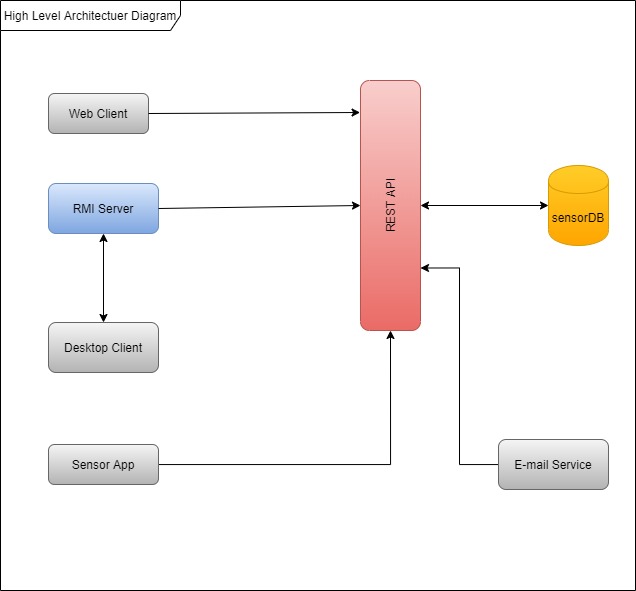
1. Sensor App

* JQuery Ajax
* HTML
* CSS (Bootstrap Framework)

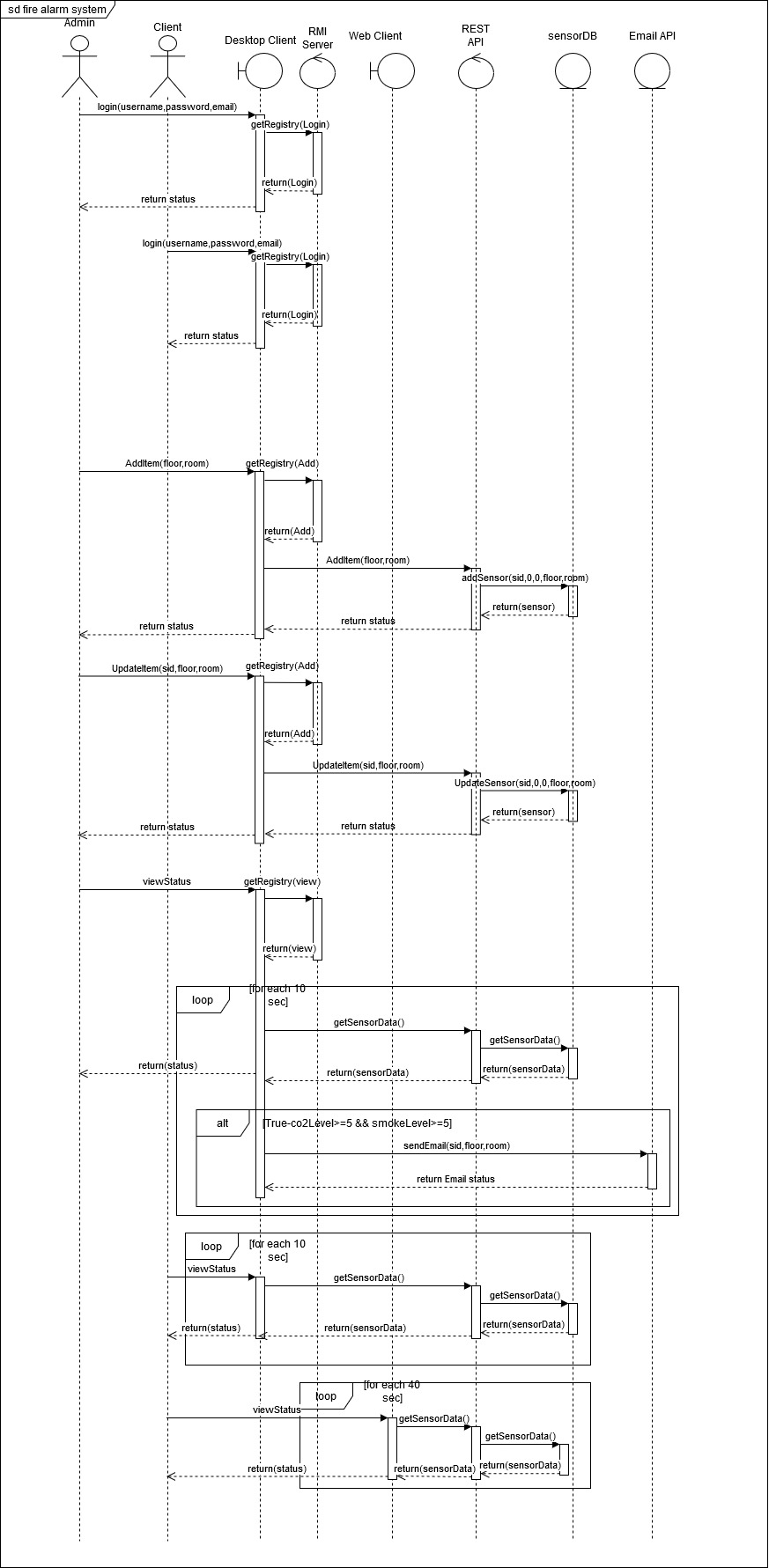
4. Database

* MySQL

High level Architecture Diagram



Sequence Diagram



List of Interfaces

* Desktop Client

**Login** - to login to system as Admin/Client,Receive emails when sensors exceed threshold level.

* Admin login- To add or edit sensor location(floor & room),To view new sensor updates (GET)

( Username-admin , Password-123 )

* Client login- To view new sensor updates (GET).

( Username-client, Password-123 )

**Add** - to register new sensors in the system.(POST)

**Update** - to update existing sensor locations.(PUT)

* Web Client

**Fire Alarms Dashboard** - to view new sensor updates(GET)

( sensor id, co2level, smoke level, floor,room )

Indicate Fire warning if co2 & smoke levels exceeds threshold level (5) .

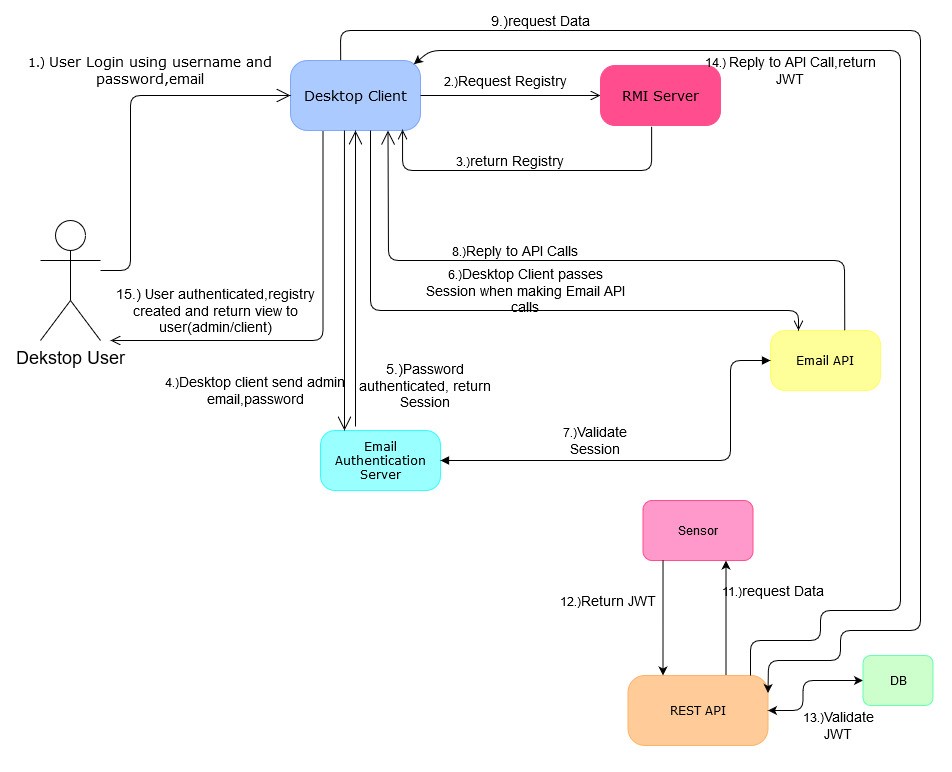
* Sensor Simulator

**Sensor simulator -** to start updating sensor values.(PUT)

(random values will be passed as a demonstration.)

Authentication Mechanisms used

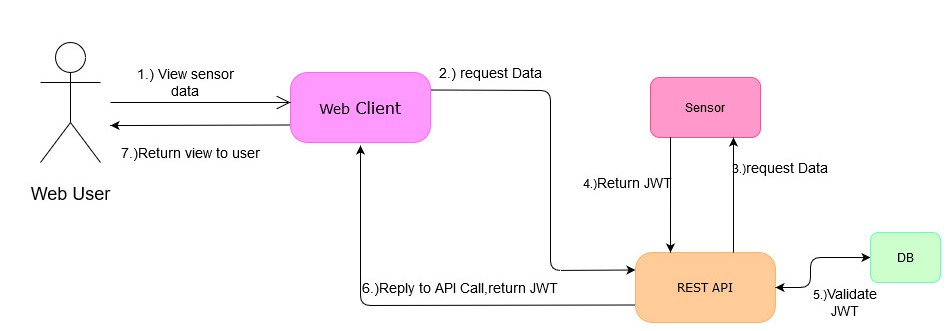
Desktop Client



JSON Web Tokens are used in this system to authenticate the sensors

Sessions are Used in this System to authenticate the email.

Web Client



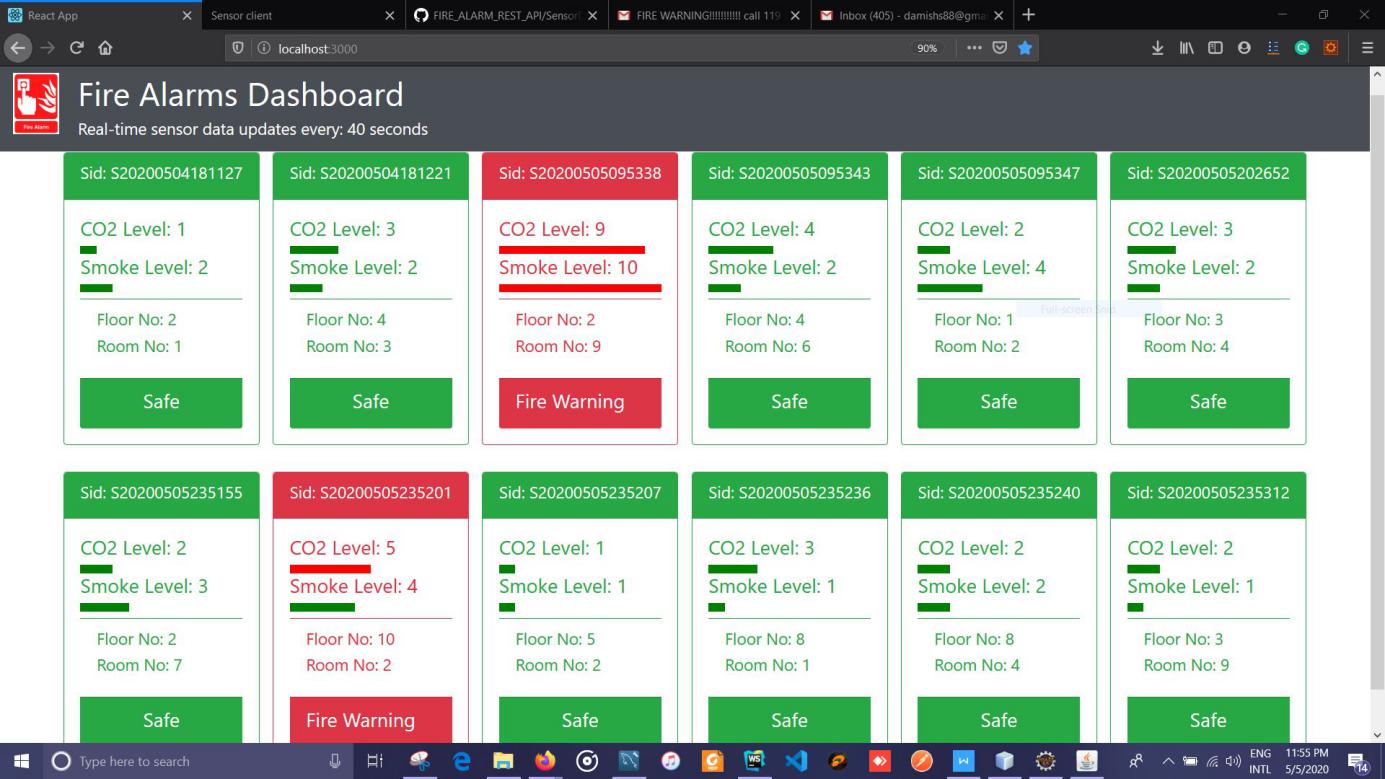
JSON Web Tokens are used in this system to authenticate the sensors

Appendix

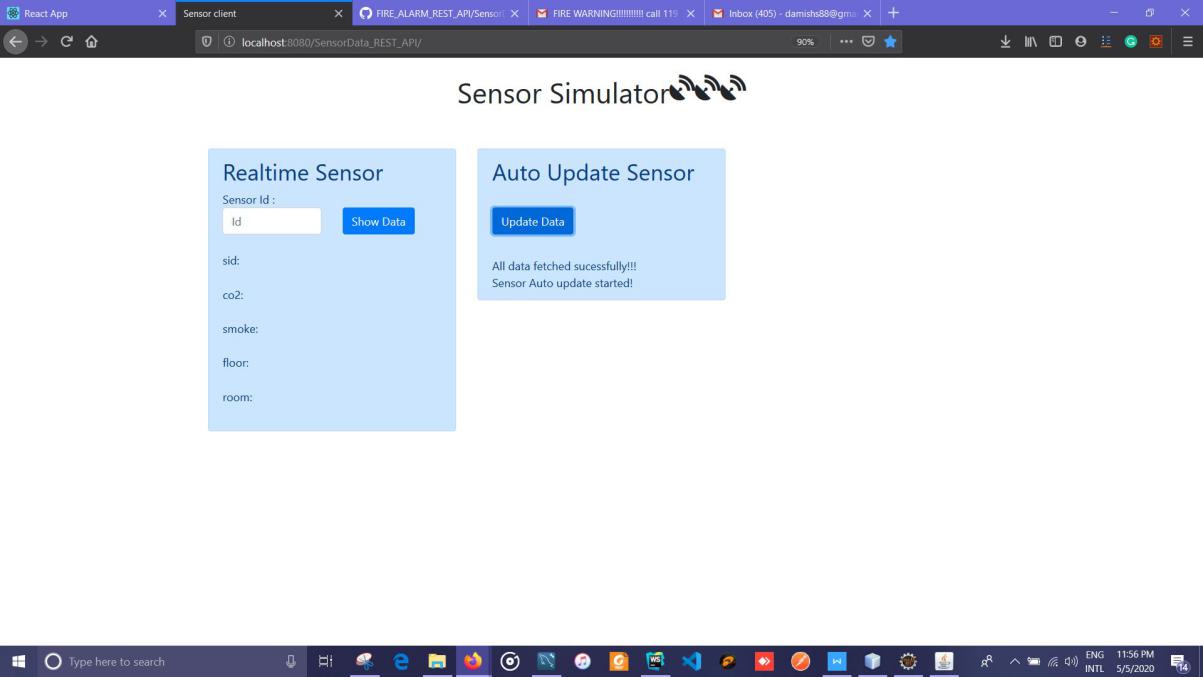
**Service Email login credentials:**

* Email : [firealarmservice2@gmail.com](mailto:firealarmservice2@gmail.com)
* Password: Admin@12345

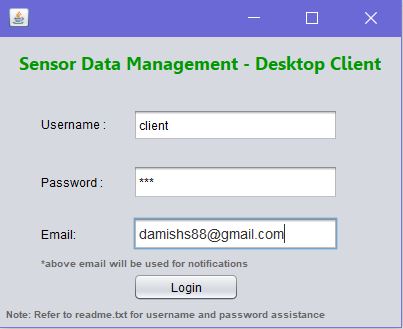
Web Client



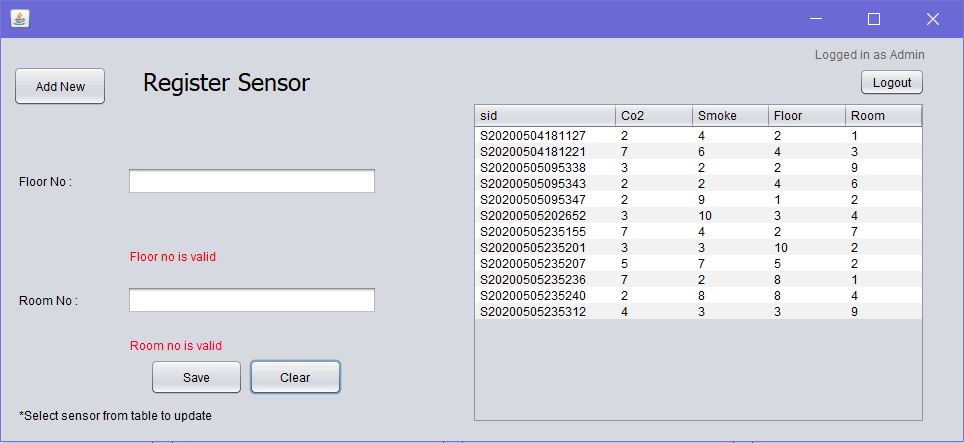
Sensor App



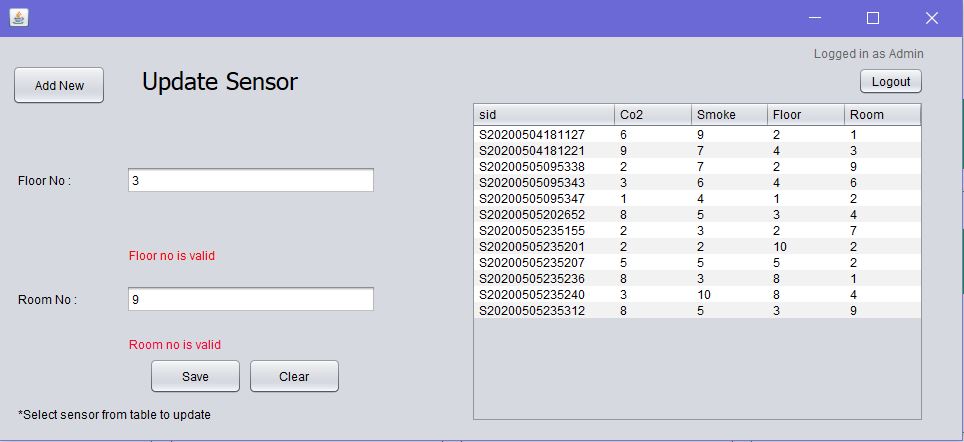
Desktop Client : Login



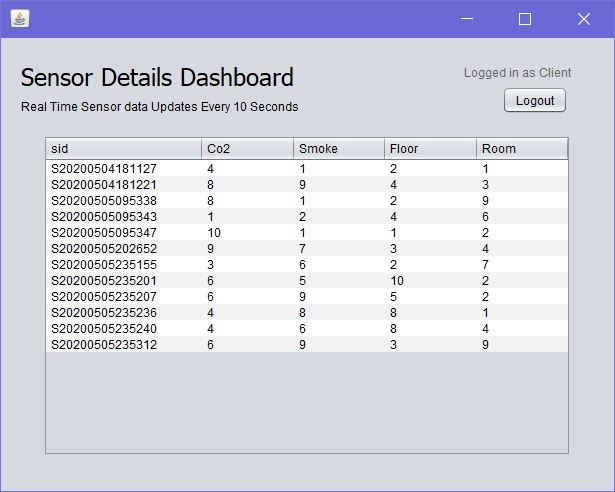
Desktop Client : Admin mode



Desktop Client : Admin Mode : Update Sensor



Desktop Client : Client mode



Note: Since the above content has reached maximum no of pages,the source code is not copied to the report.

Please refer to github projects from following links for source code.

<https://github.com/Damish/FIRE_ALARM_REST_API>

<https://github.com/Damish/Fire_Alarm_WC>

<https://github.com/Damish/-Fire_Alarm_Desktop_Client->