**Software Requirements Specification (SRS) Document**

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|  | **Demand Forecasting of Air Conditioning for Commercial Complex, Team 12 and Akshat Goyal, Kanish Anand, Nikunj Nawal and Sridhar M** |

# Brief problem statement

Given the energy consumption data of any building we have to estimate the future energy demand of the complex on an hourly and daily basis. We are supposed to create a web application for the pre-stated problem statement.

# System requirements

# Frontend - HTML, CSS , JavaScript

# Backend - NodeJS

# Database - MongoDB

# Machine Learning - Python3 , Mathematics and ML libraries

# Cloud Hosting - Azure or AWS

# API - Open Weather API

# Users profile

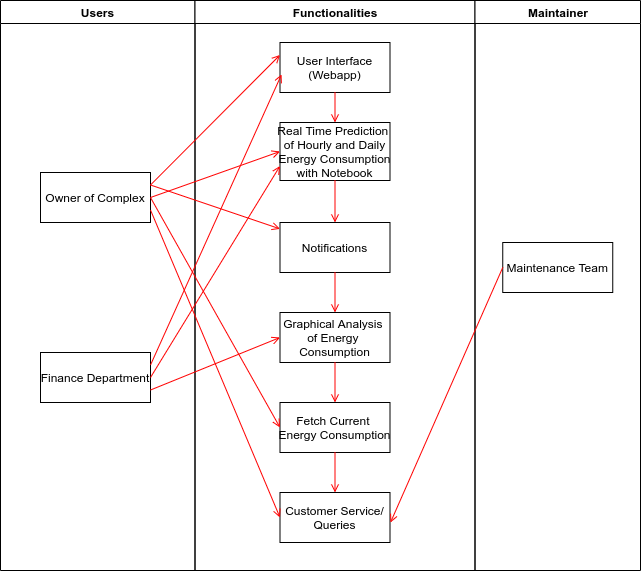
# The different users who would be using the software include:

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| S.No. | USER | Description |
| 1 | Owner of the Complex | The Owner will have full access to the product, will be familiar with using the software and can monitor energy consumption rate, generate reports and act accordingly. |
| 2. | Finance Team of the Complex | The Finance team will use the future energy consumption to reduce the consumption and cost of electricity. |
| 3. | Maintenance Team | The Maintenance team will ensure the maintenance of the software with the changing system environment and will provide updates. |

# Feature requirements (described using use cases)

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| **No.** | **Use Case Name** | **Description** | **Release** |
|  | Real Time Prediction of hourly or daily energy consumption with Notebook without User Interface. | Users can get the prediction of hourly and daily energy consumption by using Jupyter Notebook. Functional Web-app not included | R1 |
| 2. | Graphical Analysis of the energy consumption | Users can get the graphical analysis of the energy consumption. | R1 |
| 3. | User Interface | The users will be accessing the WebApp on a web browser. A responsive user interface will be designed to provide various functionalities. | R2 |
| 4. | Notifications | SMS notifications and emails will be sent to the user in case of high energy consumption. | R2 |
| 5. | Fetching the current energy consumption | The system will fetch the current energy consumption of the building to improve the model and will keep the statistics of the past energy consumption. | R2 |
| 6. | Customer Services/Queries | The user can ask the queries in case of any trouble. | R2 |

**Use case diagram**

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**Use case description**