

*Project Description*

# ***Web Interface for ABB Ventilation Controller***

Internet of Things TX00CI63-3006  
Joseph Hotchkiss  
2021

# ***Project Overview***

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## Create a Web Interface

- The interface is for displaying information from and Issuing commands to the ventilation controller simulator
- The simulator has two modes (Automatic and Manual) which should be able to be toggled from the web interface

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# Automatic Mode

- The user should be able to set a pressure value in the Web interface
  - The user can set a value between 0 and 120Pa in the interface
  - A command will be sent to the simulator device through your server, to set the pressure on the simulator.
  - The simulator will measure the pressure and CO2
  - Pressure and CO2 measurements should be sent to the simulator at a reasonable interval to be able to graph the reaction curve of the fan
  - If the fan doesn't settle in a reasonable time, you should indicate this in your UI

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# Manual Mode

- In manual mode the user will be able to set a fan speed from 0% to 100%
  - The web interface should issue a command to the simulator to set the fan speed
  - The current fan speed (Percentage) should be displayed on the page
  - The “real-time” pressure and CO2 levels should be displayed as well
  - The pressure and CO2 should be logged over time
  - Time should also be logged

# General

- You should implement some sort of Authentication for administrative users
  - People in your group and a teacher account
  - You should keep statistics on login information(Who, when, how often)
  - You should be able to visualize account activities
    - Overall and individual
- All sensor data, fan activities and times that they were measured should be logged at a reasonable rate
  - You should be able to visualize an aggregate of this data
  - The data should be selectable for a user selectable time period and then displayed
  - Graphical data could be utilized

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# ***Design and UX***

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# Design and User Experience

- Effort should be put into the overall design of your interface
  - A concise clear consistent interface should be designed
  - Consistent style is important (It should be cohesive)
- The overall user experience should be considered
  - Controls and information should be intuitive

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# ***Documentation***

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# Design and User Experience

- User Manual
  - Documenting all of the aspects of the Web app
- Program documentation
  - Documentation of your web app

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