

|   |   |
|---|---|
| Submission Date   | 2/5/2018  |
| Project Name  | HVAC  |
| Student Names   | Jan Fontanosa, Vyacheslav Perepelytsya, and Maasha Maheson  |
| Project repository  | <a href="https://github.com/fntj0052/HVAC">https://github.com/fntj0052/HVAC</a>   |
| SensorsEffectors choices                                      | Touch sensor, moisture sensor, LCD touchscreen, and sound sensor  |
| The database will store                                       | Operational status/condition and maintenance reminder   |
| The mobile device functionality will include                  | Ability to toggle operational mode and set maintenance schedule   |
| I will be collaborating with the following company/department | Humber Greenhouse   |
| My group in the winter semester will include                  | Jan Fontanosa, Vyacheslav Perepelytsya, and Maasha Maheson  |
| 50 word problem statement                                     | creating and improving upon the monitoring of Heating, Ventilation and Air Conditioning (HVAC) systems with a user-friendly interface, with the ability to remotely control the system activities using a mobile device, and to fetch stored information on the system's condition from a cloud database.   |
| 100 words of background                                       | HVAC systems are useful in all kinds of building applications: a smarter system can provide significant energy and financial savings while scheduling usage and allowing more granular control for systems used in specific applications (a HVAC system used to monitor an industrial refrigerator room will require different settings in comparison to one used in a residential building). By providing the ability for remote control using an Internet of Things(IoT)-based HVAC system, administrators of the system can ensure that the system is working as intended and can administrate changes to the system in a secure manner. |
| Current product APA citation                                  | Ecovent Systems Inc. (n.d.). <i>Ecovent</i> . Retrieved from <a href="https://www.ecoventsystems.com/smart">https://www.ecoventsystems.com/smart</a>  |
| Existing research IEEE paper APA citation                     | Al-Ali, A. R., Alikarar, M., Gupta, R., Rashid, M., Zualkernan, I.A. (2017). A smart home energy management system using IoT and big data analytics approach. <i>IEEE Transactions on Consumer Electronics</i> , 63 (4), 426-434. Retrieved from <a href="http://ieeexplore.ieee.org/document/8246800">http://ieeexplore.ieee.org/document/8246800</a>  |
| Brief description of planned purchases                        | No additional planned purchases   |
| Solution description  | for a user-friendly, Internet of Things-based HVAC system   |