Submission Date	9/18/2017
Project Name	RaspiGuard
Student Name	Karel Tutsu
Project website	n01147386.github.io/RaspiGuard
My project will be a	Security application that can be used in either home and/or office rooms.
The database will store	Timestamps with names of people toggling alarm system on/off and also any door openings and closings will be tracked.
The mobile device functionality will include	Turning the alarm service on/off;Ability to see the local weather around premise (using address);Ability to control and/or monitor multiple locations - these are just the immediate ideas that popped in my head. Possibly more functionality to come.
I will be collaborating with the following company/department	n/a
My group in the winter semester will include	fellow student Vivek; We will be combining our devices/projects and adding extra features to the system
50 word problem statement	Installing a home security system can be costly, but not installing one could cost you even more.Most home or office intrusions are done when they are least expected. Having a security system in place provides people warning to get to a safe location in our outside the premise while the alarm system dispatches local authorities.
100 words of background	The mention of security systems immediately brings thoughts of intrusion scenarios; however, this system also provides additional information aside of the main functionality: such as children going or leaving their home. In a business environment it can be used to track employees - when they are coming and going the office rooms. Home or business owners can be rest assured that their properties are secured and they have the ability to monitor the traffic in their pocket.The system provides overall a much better secure feeling, whether its home or work, a peace of mind to know that when the unexpected happens you aren't alone.
Current product APA citation	n/a
Existing research IEEE paper APA citation	Dechuan Chen and Meifang Wang, "A home security Zigbee network for remote monitoring application," 2006 IET International Conference on Wireless, Mobile and Multimedia Networks, hangzhou, China, 2006, pp. 1-4. doi: 10.1049/cp:20061246 keywords: {MSP430F135 micro-controller;Zigbee;remote alarming;security system for house;wireles network}, URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5195407&isnumber=5195326
Brief description of planned purchases	Raspberry Pi Model 3, Magnetic Contact Switch, 40-pin GPIO Ribbon Cable, 40-pin T-Shaped GPIO to Breadboard Interface Board. I will also be constructing a wooden house model with some mini furniture to visually demonstrate the application in use.Mini Speaker.

Solution description	I will be mounting the door sensors to a wooden constructed miniature house that fits our project dimensions. The raspberry pi will be placed inside the display house, probably under the floor or I will hide it somewhere sleek. I will also place a mini speaker somewhere that will play the system alarm if an intrusion is detected. Finally the miniature house will have one or two led lights mounted in the corner of the walls (green/red) indicating the alarm status. The systems interface will be accessible using an android app.