**SF-3 Assignment**

Create an intruder alarm with a photoresistor, as many LEDs as you like, one buzzer, and a button. The board must behave as follows:

1. When the photoresistor sees light, the LED(s) flash, and the buzzer produces a custom sound (any song you want)
2. When the button is pushed, the board resets, Lights and buzzer turn off and the alarm becomes active again.
3. When there is no light, LED(s) and the buzzer are off.
4. Repeat!

* Prepare an algorithm for the main script and your function.
* You should have at least one custom function in your code that does some portion of the tasks listed above. Functions make your code look neater and easy to debug.
* You will need to use the codes provided to you from Sparkfun to create new code to run this program. All the attributes discussed above MUST function in one code file. Copy and Pasting from the Sparkfun code is acceptable for this assignment.
* Use constant variables to store pin numbers, push button state, etc.
* Your name and email address should be in the first line.
* Your code should have enough comments to help me understand:
* What each line of your code does, and how the hardware is connected
* Prepare a final wire diagram of the components used for this assignment using AutoDesk circuit!

**Submission:**

1. Individually record a short video that shows steps 1~4. **Your Student ID** should be in the video.
2. Upload your algorithm, video, Arduino code, and a screen shot of the final wire diagram prepared with Autodesk circuit to Canvas through SF-3 Assignment Link by the due date.

**Rubric**

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| **items** | **Points** |
| Upload one pdf (Syntax description table) | 10 |
| Student ID is shown in the video, Your code should have the followings: Name, Email, Comment every line of the code, explain hardware connection, constant variables | 10 |
| Algorithm(s) is clear and easy to follow | 10 |
| The wire diagram shown on the screen shot is correct for this assignment! | 10 |
| Arduino code complies with no error. | 10 |
| Steps 1~4 clearly shown in the video. Has Husky ID in the video | 10 |
| The photoresistor activates LED(s) and buzzer when sees light. | 10 |
| When the button is pushed it resets and turns off LED(s) and buzzer | 10 |
| no light? LEDs off, buzzer off. | 10 |
| Uses at least one custom function | 10 |
| **Total** | **100** |