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################### DoorC Readme ##############################
# Eklektik Design
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#
# Purpose: Explain how to set up the DoorC Project
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###############################################################


#################### The Hardware #############################
The NWatch module is a small box with a laser transmitter and reciever, one in each 'eye'
To begin, place the NWatch securely on a wall, and plug it into a nearby powersource
Place a mirror on the opposite wall
Adjust the reflected laser so it hits the receiver 'eye' on the NWatch

#################### The DoorC Software  ######################
In this folder, there is a directory called 'Final Code'
Copy the folder 'DoorC Release' to the desired computer and run 'DoorC.exe'
Assuming the computer is capable of Bluetooth, the software will automatically begin searching for the NWatch modules
When the list is populated, double click the NWatch module (Default name: Door#)
When a connection is made, the 'Ambient Light' and 'Laser Light' boxes will begin to change
When they have reached a constant number, drag the Trigger point to some number in between the two
The module should be working and recording data now

Controls:
Trigger Point       - The point at which the device should know it is not detecting the laser anymore (because it is blocked
by a passing patron)
Duration of Validity - The number of readings that need to be taken for the device to recognize a patron
                       Increase to remove 'Triggered when nobody passed' | Decrease to remove 'Did not trigger when
                       someone did pass'
Duration of Reset   - The number of readings that need to be taken for the device to recognize a patron is no longer present.
                       Increase to remove 'double counts' | Decrease to remove 'missed counts'

Ambient Light       - An averaged reading of the ambient light value for the room
Laser Light         - An averaged reading of the laser light from the NWatch module

Raw                 - Display all readings from the NWatch module
Clean               - Display 0 if the reading is below the trigger and 1 if it is above
Patron              - Only display acknowledgements of a patron entering

Disconnect          - Disconnect from the current NWatch module

Scan                - Search for nearby NWatch modules

#################### The SDF3K Software #######################
In this folder, there is a directory called 'Final Code'
Copy the folder 'SDF3K Release' to the desired computer and run 'SDF3K.exe'
To convert the data from the DoorC program to the calendar template,
First select the month the data was taken
Select the first day of that month
Select the file with the DoorC data
Select the Worksheet with the data (Each reboot of the program creates a new sheet)
Press Format

#################### Additional Notes ########################
All process work is included in this directory, including:
Circuit diagrams
Case Designs
GUI Designs
Bluetooth Setup Instructions

Should the code need to be replicated or modified, the documents should be sufficient in understanding and recreating my work
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