

Adam Thomas

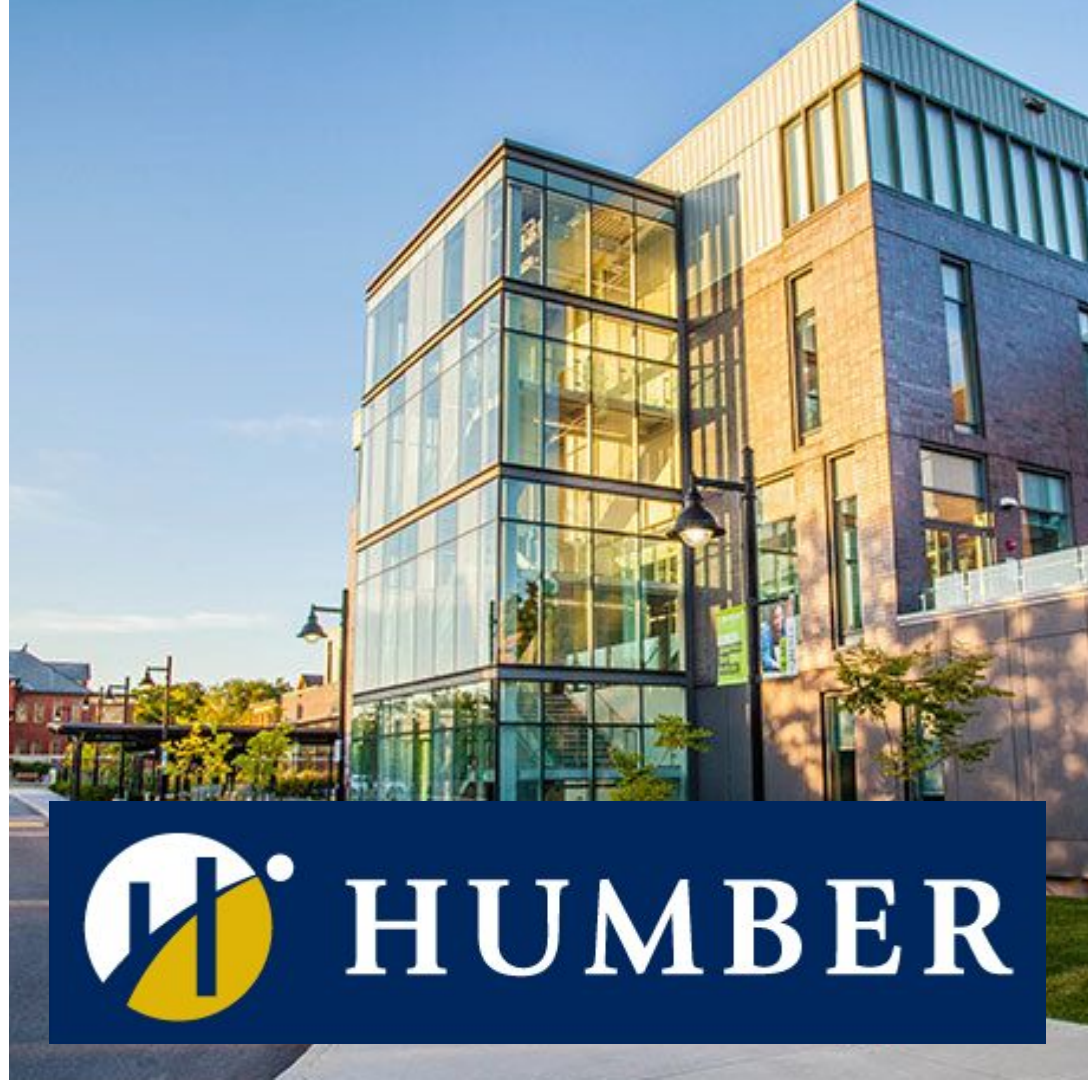
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HUMBER

LONDON

London

Architecture
Set #21034



The LEGO Group. (n.d.). Diagon Alley™. Retrieved 2022, from <https://www.lego.com/en-ca/product/diagon-alley-75978>.

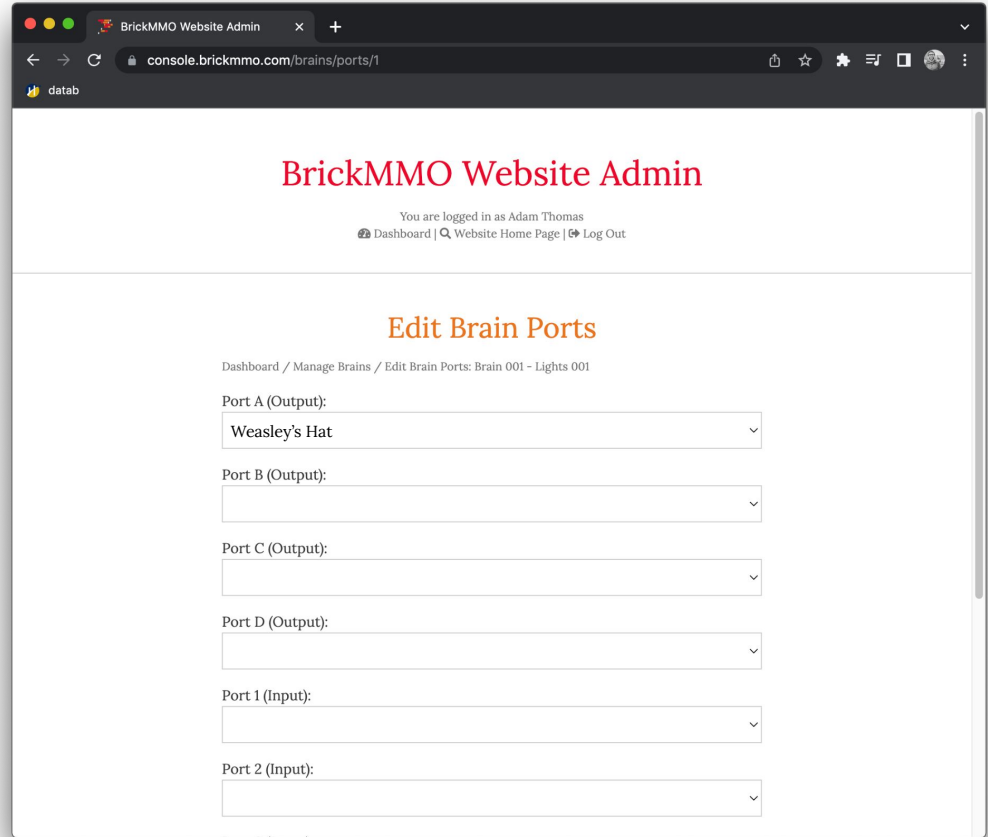
Module Description

1. The London Eye will turn at a steady pace with lights.
2. The London Bridge will sense movement of boats and will open until sensor stops detecting. Will also change traffic lights accordingly.
3. If possible, add a clock on Big Ben. It will chime every hour.



Requirements

1. 2 3x3 light matrix, small motor + battery
2. Ultrasonic sensor, 2 small motors + battery
3. Speaker, clock.



Sensors and Motors

The output port will be for motors and lights.



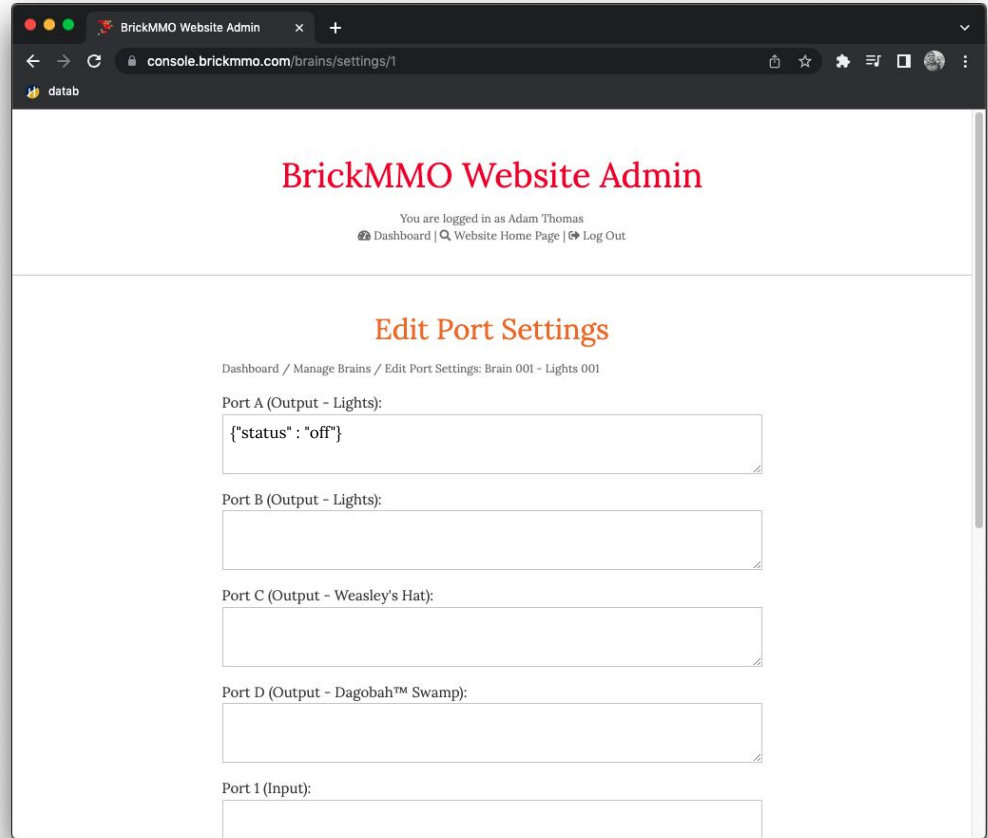
Port Settings

Status: Can be set to "on" or "off".

Port 1: When on the wheel will spin, and lights turn on.

Port 2: when on, the bridge will open.

Port 3: when on, clock will make a sound. When off, it will stop.



The screenshot shows a web browser window with the title "BrickMMO Website Admin". The address bar shows the URL "console.brickmmo.com/brains/settings/1". The page content includes the title "BrickMMO Website Admin" in red, followed by a login status "You are logged in as Adam Thomas" and links for "Dashboard", "Website Home Page", and "Log Out". Below this is a section titled "Edit Port Settings" in orange. The breadcrumb trail is "Dashboard / Manage Brains / Edit Port Settings: Brain 001 - Lights 001". There are five form fields for editing port settings:

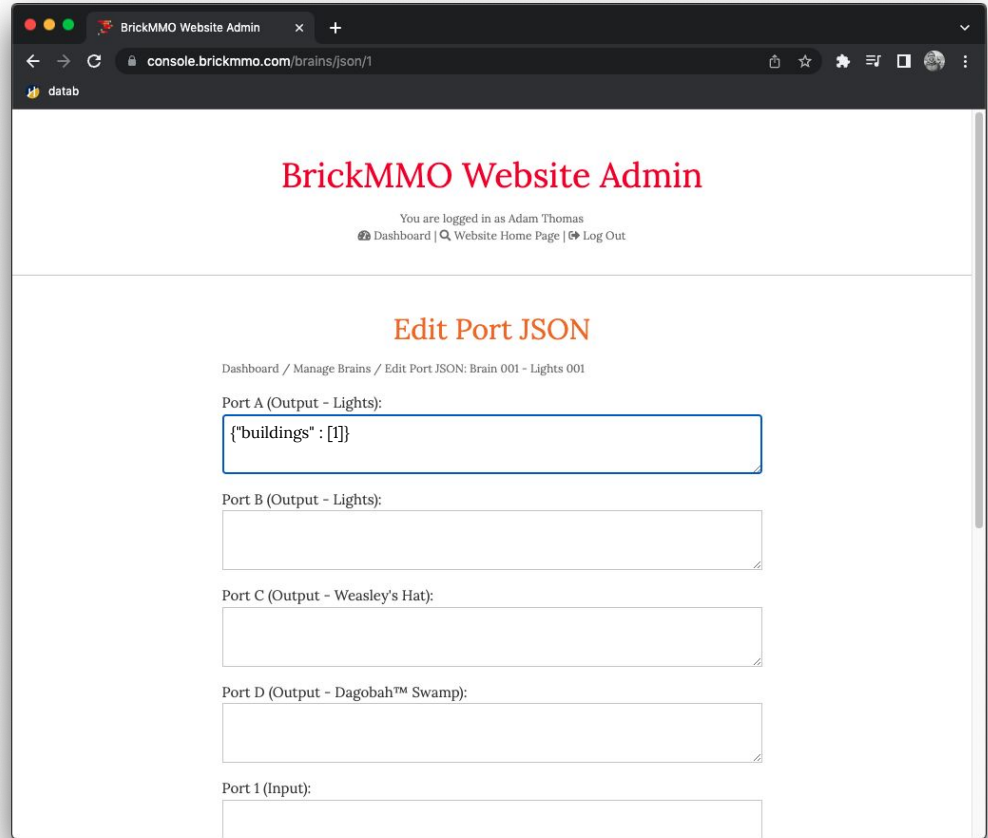
- Port A (Output - Lights): A text area containing the JSON object `{"status": "off"}`.
- Port B (Output - Lights): An empty text area.
- Port C (Output - Weasley's Hat): An empty text area.
- Port D (Output - Dagobah™ Swamp): An empty text area.
- Port 1 (Input): An empty text area.

Port JSON

Wheel: stop, start for 1 minute.

Bridge: open while no movement at a certain distance, close.

Clock: chime every hour.



The screenshot shows a web browser window titled "BrickMMO Website Admin" with the URL "console.brickmmo.com/brains/json/1". The page header includes the title "BrickMMO Website Admin" and a login status "You are logged in as Adam Thomas" with links for "Dashboard", "Website Home Page", and "Log Out". The main content area is titled "Edit Port JSON" and shows a breadcrumb trail "Dashboard / Manage Brains / Edit Port JSON: Brain 001 - Lights 001". Below this, there are five sections for editing JSON data:

- Port A (Output - Lights):** A text box containing the JSON snippet `{"buildings" : [1]}`.
- Port B (Output - Lights):** An empty text box.
- Port C (Output - Weasley's Hat):** An empty text box.
- Port D (Output - Dagobah™ Swamp):** An empty text box.
- Port 1 (Input):** An empty text box.

Pseudocode

1. London eye:

When switch is on:

Turn motor on

When switch is off:

Turn motor off

2. London bridge:

If sensor detects motion within close distance

Open.

Close when movement is gone.

Else

Stay closed.

3. Clock:

If time is the hour in standard time

Chime amount of times equal to hour