

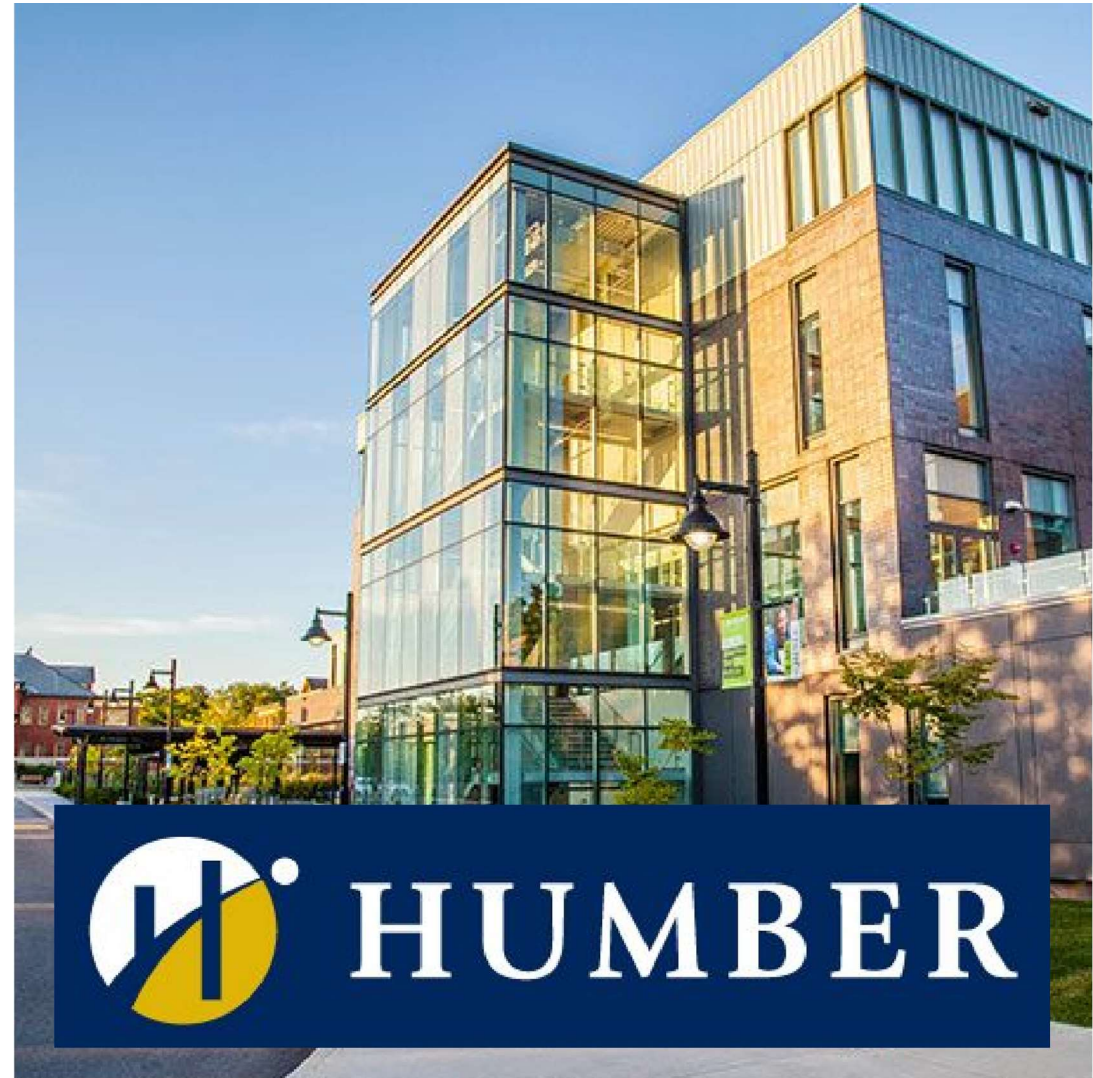
London Bus

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London Bus

London Bus London Bus Set #40220



The LEGO Group. (n.d.). London bus™. Retrieved 2022, from. <https://www.lego.com/en-ca/product/london-bus-40220>

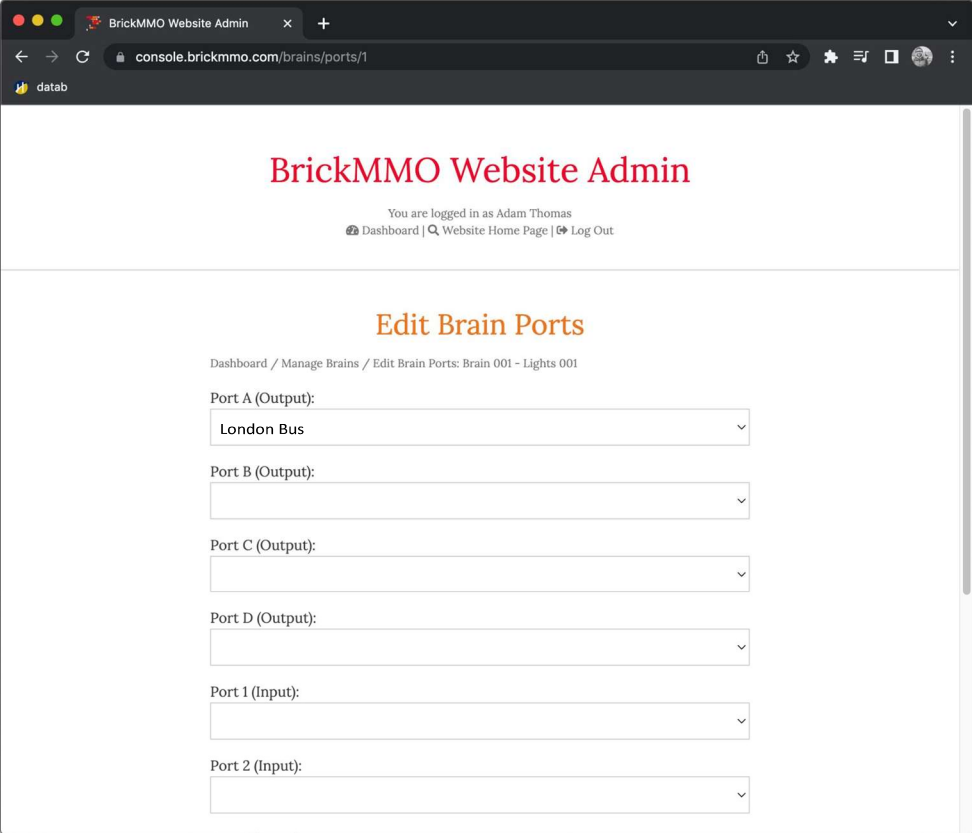
Module Description

London Bus is our module so basically when the bus goes from one stop to another with the use of sensor the bus doors will automatically open 10 seconds and if passengers is not there the bus will automatically close its doors. Apart from this one feature we would like to add is that when the moving vehicle passes or comes in front of the bus to a certain distance of 10 meters and so the bus will automatically honk.



Requirements

- Sensor
- Actuators
- Power Supply



The screenshot shows a web browser window with the title 'BrickMMO Website Admin' and the URL 'console.brickmmo.com/brains/ports/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 Brain Ports' and shows a breadcrumb trail 'Dashboard / Manage Brains / Edit Brain Ports: Brain 001 - Lights 001'. Below this, there are six dropdown menus for configuring ports: 'Port A (Output)' (set to 'London Bus'), 'Port B (Output)', 'Port C (Output)', 'Port D (Output)', 'Port 1 (Input)', and 'Port 2 (Input)'.

BrickMMO Website Admin

You are logged in as Adam Thomas
[Dashboard](#) | [Website Home Page](#) | [Log Out](#)

Edit Brain Ports

Dashboard / Manage Brains / Edit Brain Ports: Brain 001 - Lights 001

Port A (Output):
London Bus

Port B (Output):

Port C (Output):

Port D (Output):

Port 1 (Input):

Port 2 (Input):

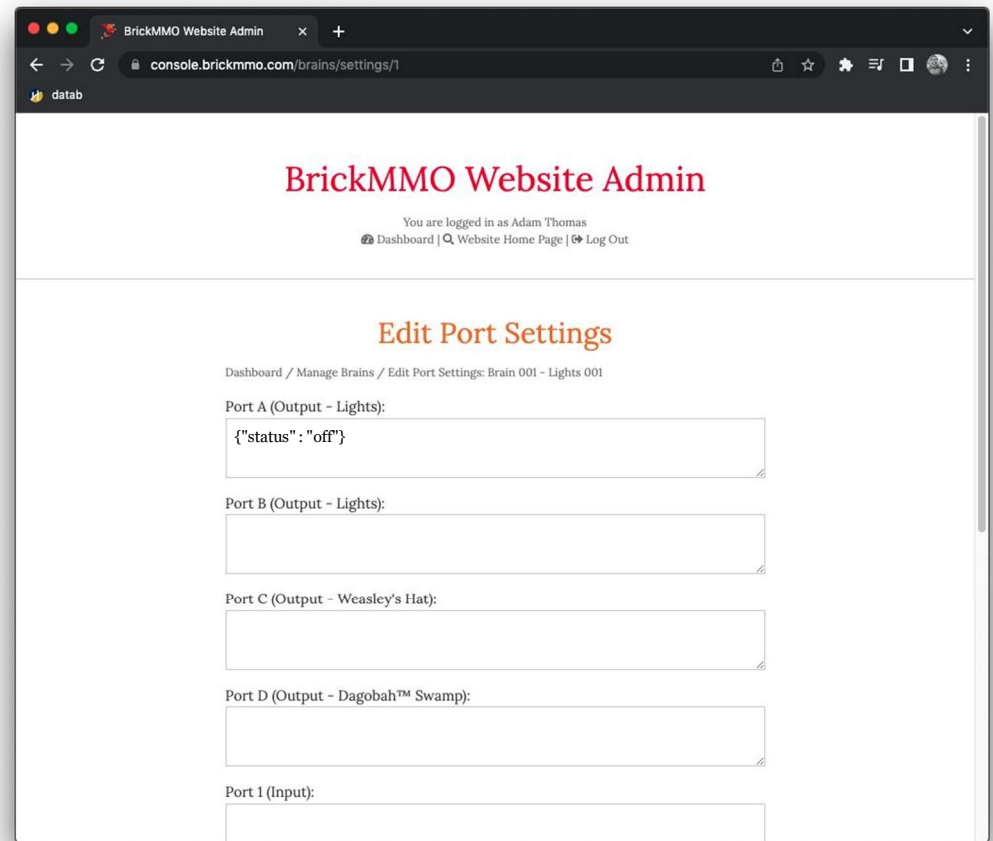
Sensors and Motors

- Automatic door control
- Proximity-based Horn System



Port Settings

- Port is “on” for 10 seconds when the bus will stop to the station and automatically “off” after bus starts.
- Port is “on” when the moving vehicle comes in front of the bus otherwise it will be “of”.



IOT Loop

Door_open_Time: 10 seconds

Vehicle_distance: 20 meters

Check for passengers at the bus stop

```
if Bus_stop():
```

```
    open_doors()
```

```
    BusStop_detected = True
```

```
    wait_for_time(DOOR_OPEN_TIME)
```

```
    close_doors()
```

else:

BusStop_detected = False

Check for nearby moving vehicles

if detect_vehicle_proximity() and not passenger_detected:

activate_horn()

