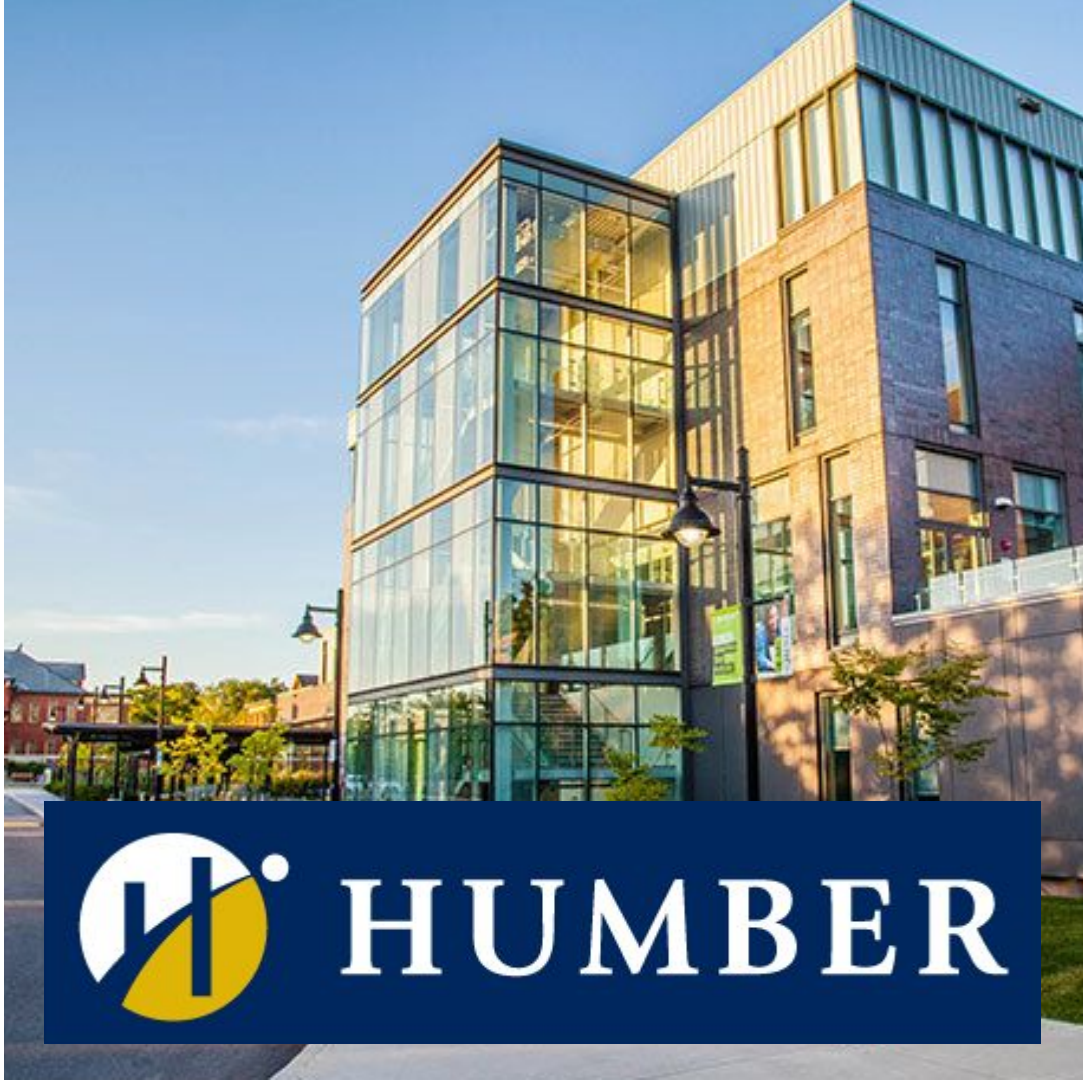
Ice Cream Truck

Group 2:

Sravani, Hanna, Jaskaran, Ameesa



Ice-Cream Truck

Ice-Cream Truck

Lego Friends

Set #41715

The LEGO Group. (n.d.). Lego Friends™. Retrieved 2023, from https://www.lego.com/en-ca/product/ice-cream-truck-41715

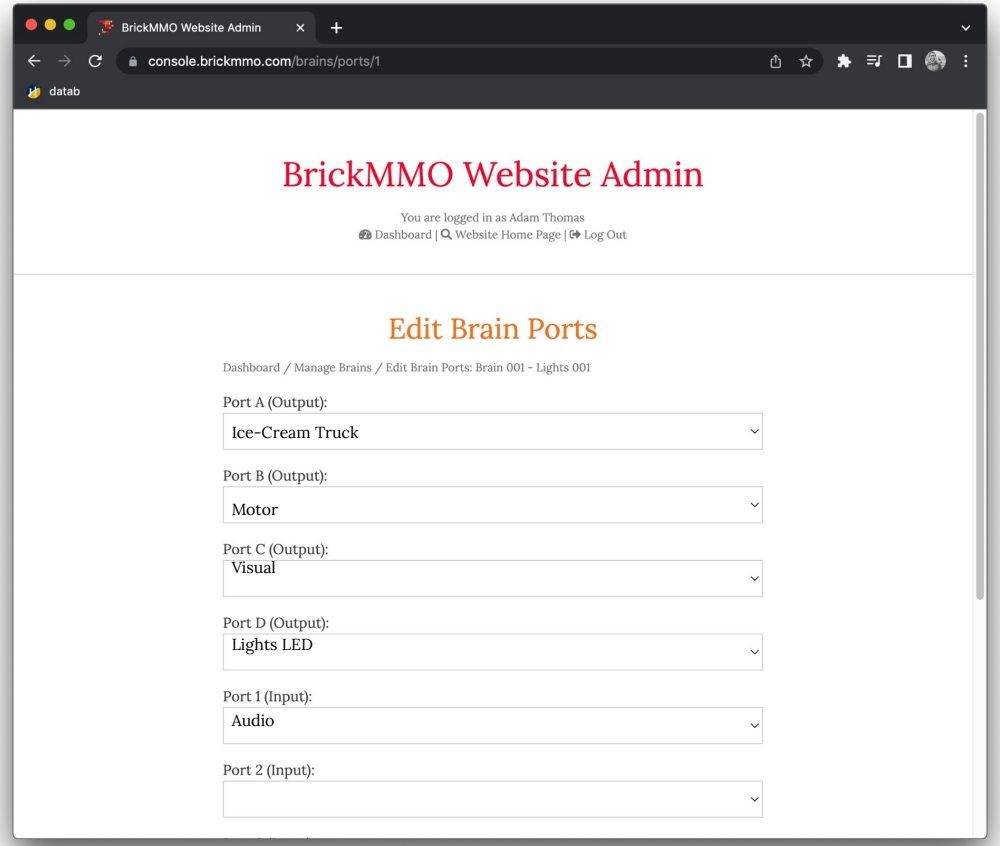
Module Description

The Ice-Cream Truck will drive around Lego City and stop for people who want to buy ice cream. It will use a motor to create motion, cameras to detect pedestrians, LED lights to simulate color, and audio outputs to play music according to the presence of pedestrians.

The LEGO Group. (n.d.). Lego Friends™. Retrieved 2023, from https://www.lego.com/en-ca/product/ice-cream-truck-41715

Requirements

The Ice-Cream Truck will require 4 outputs on an EV3 brain.



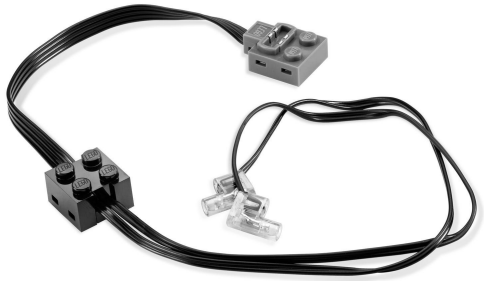
Sensors and Motors

The 4 outputs will be attached to an EV3 brain, and will have a camera kit for visual input.

The truck will need a small motor to move the wheels, and a GPS module to interact with the GPS.

The Ice-Cream Truck will need a distance sensor to detect obstructions.

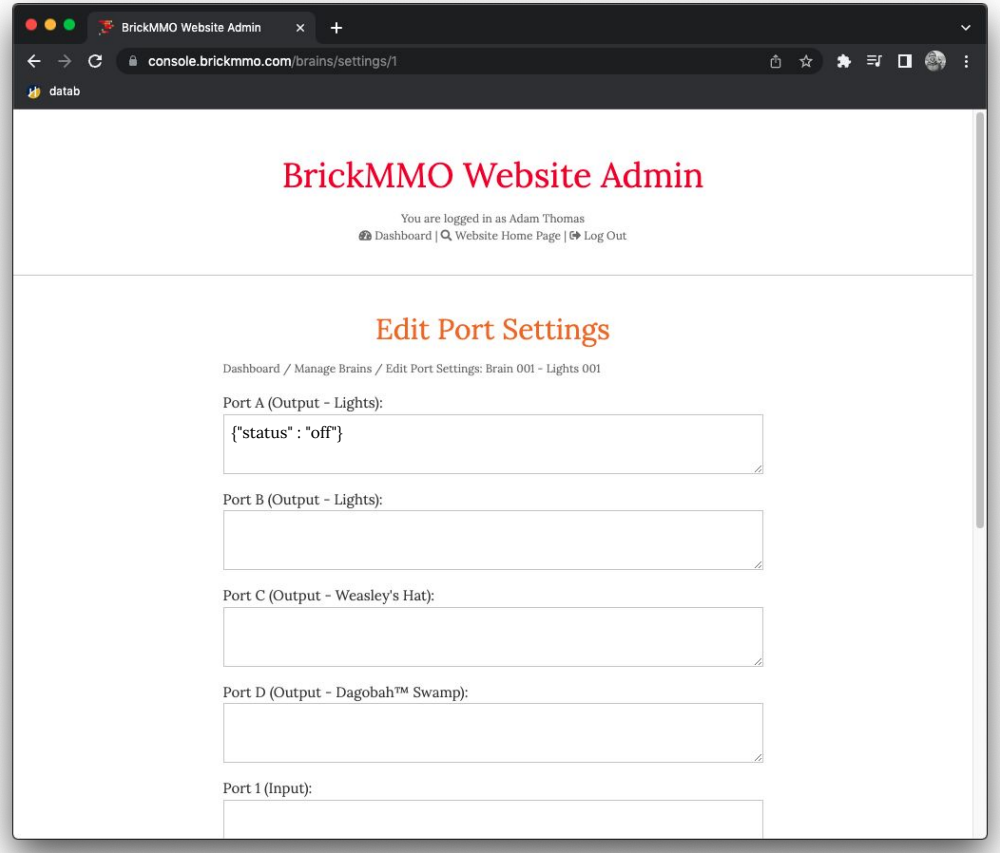
Additionally, it will also need LED lights turning on and off as well as audio outputs to simulate music.



Port Settings

Status: Can be set to "on" or "off" depending on the presence of pedestrians.

The status of audio and visual can also be set to on or off.



IOT Loop

1) Psuedo code for music:

IF camera detects human THEN{

Play music

Turn on lights

}

else{

stop audio and lights

}

2) Pseudo code for motion:

if distanse sensor detects obstructions THEN{

Stop motor

}

else{

run motor

}

The LEGO Group. (n.d.). Lego Friends™. Retrieved 2023, from https://www.lego.com/en-ca/product/ice-cream-truck-41715

Thank you!