VEX-IQ

(Programming Your Bot)
Driver Control Mode

YouTube Tutorial

Modkit for VEX Part 1 - Setup

http://www.youtube.com/watch?v=NhTpHzvFbMs

(Optional)

To Prepare for Programming

- Step 1 - Make sure your firmware is up-to-date with the VEX Firmware Updater, available here.

Advice:

Try this process at home first with your home internet access. School/external organization internet access may restrict functionality due to firewall limitations.

To Prepare for Programming

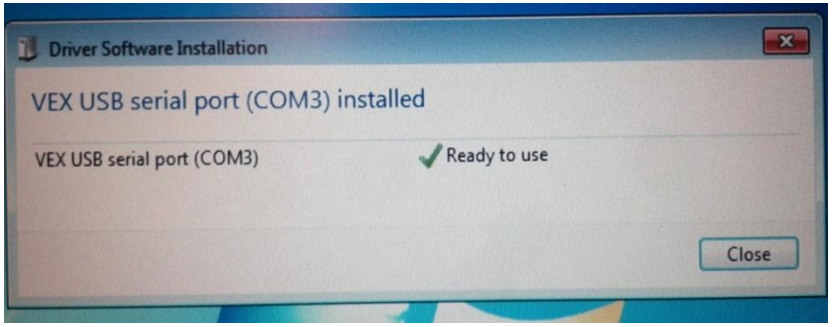
- Step 2 - Install **Modkit Link**:
  - Download and Install the latest Modkit Link software for Windows or Mac (Link).
    *your antivirus software or firewall may ask you if it's OK to run this, please allow it.
  - Launch the Modkit Link software – this will run in the background and it may not be initially obvious it's running. Look for the "m" icon in the system tray (Windows) or menu bar near the clock (Mac).
  - (Make sure to check both boxes for network access.)

To Prepare for Programming

- Step 3 – Download and install Google Chrome
- Step 4 - Get a Google account id: gmail, youtube, etc. (you will need it to save your files)
- Connect your VEX-IQ bot to your computer via the micro USB cable

To Prepare for Programming

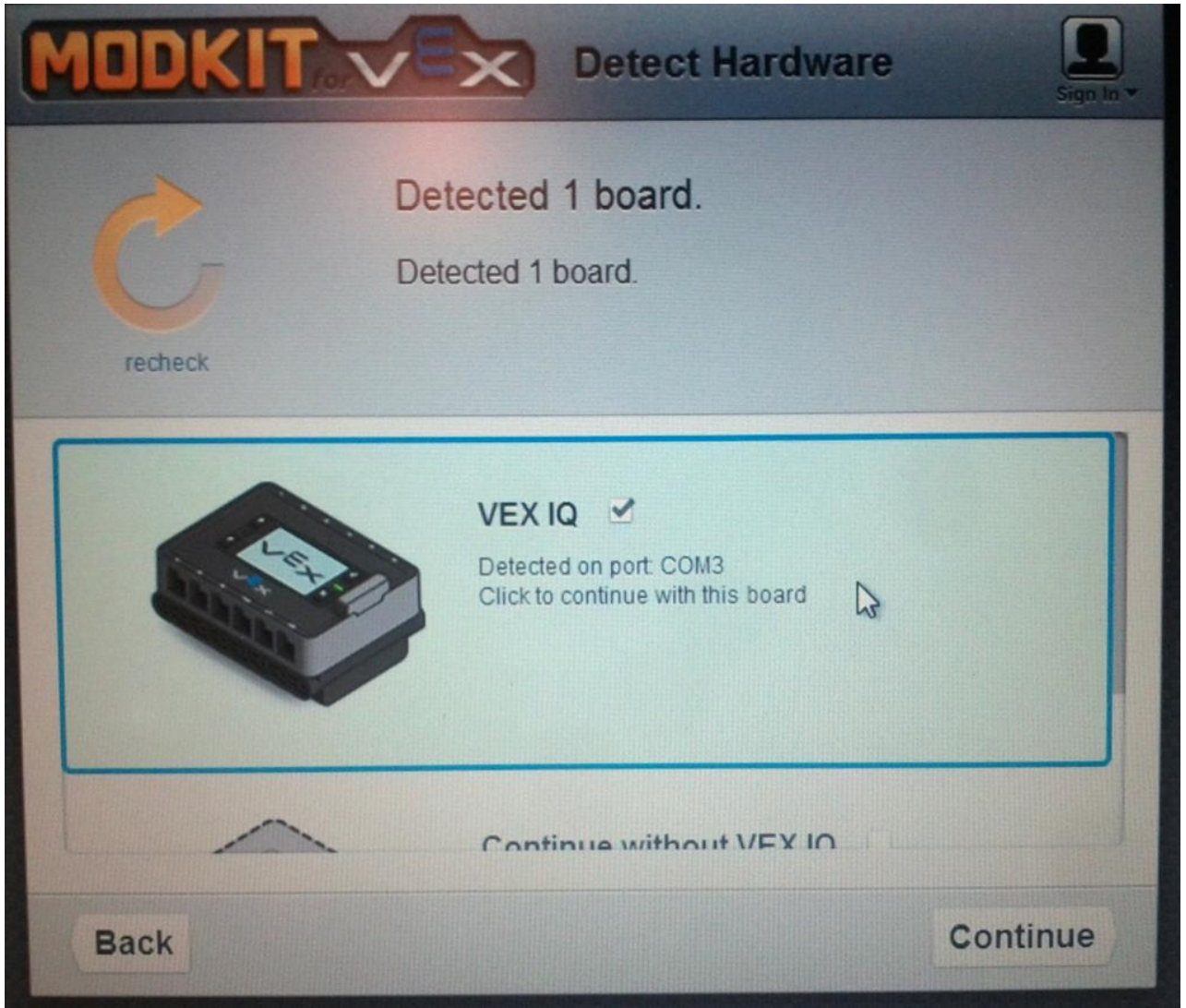
- Power on your VEX-IQ bot
- Your should see the following dialog box if this is your first time plugging in the VEX-IQ bot to your computer.



- Step 5 - Launch the web version of Modkit for VEX from the link.

Programming your bot to respond to your joystick

You should see this:



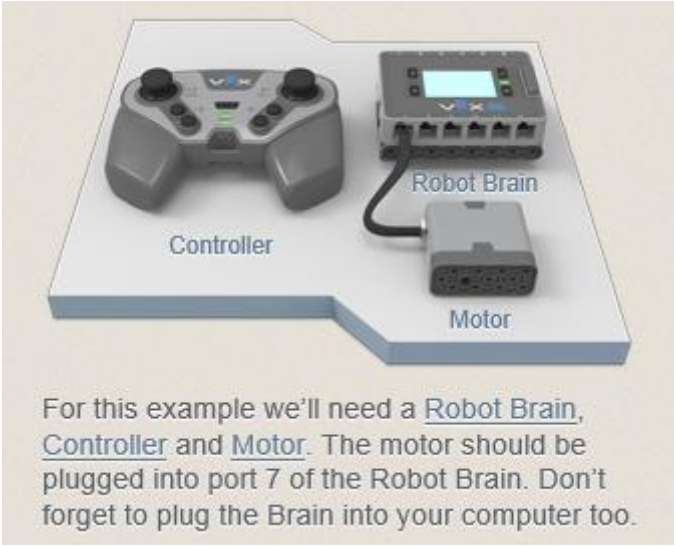
Controller Actions

- Controller Actions are the simplest way to control how your robot behaves. With Controller Actions you decide what you want your robot to do when you press the Controller's buttons or move its joysticks.

What You'll Make

- Motor that is controlled by the left joystick and 2 of the Controller buttons.

What You'll Need



YouTube Tutorial

Modkit for VEX Part 2 – Driver Control

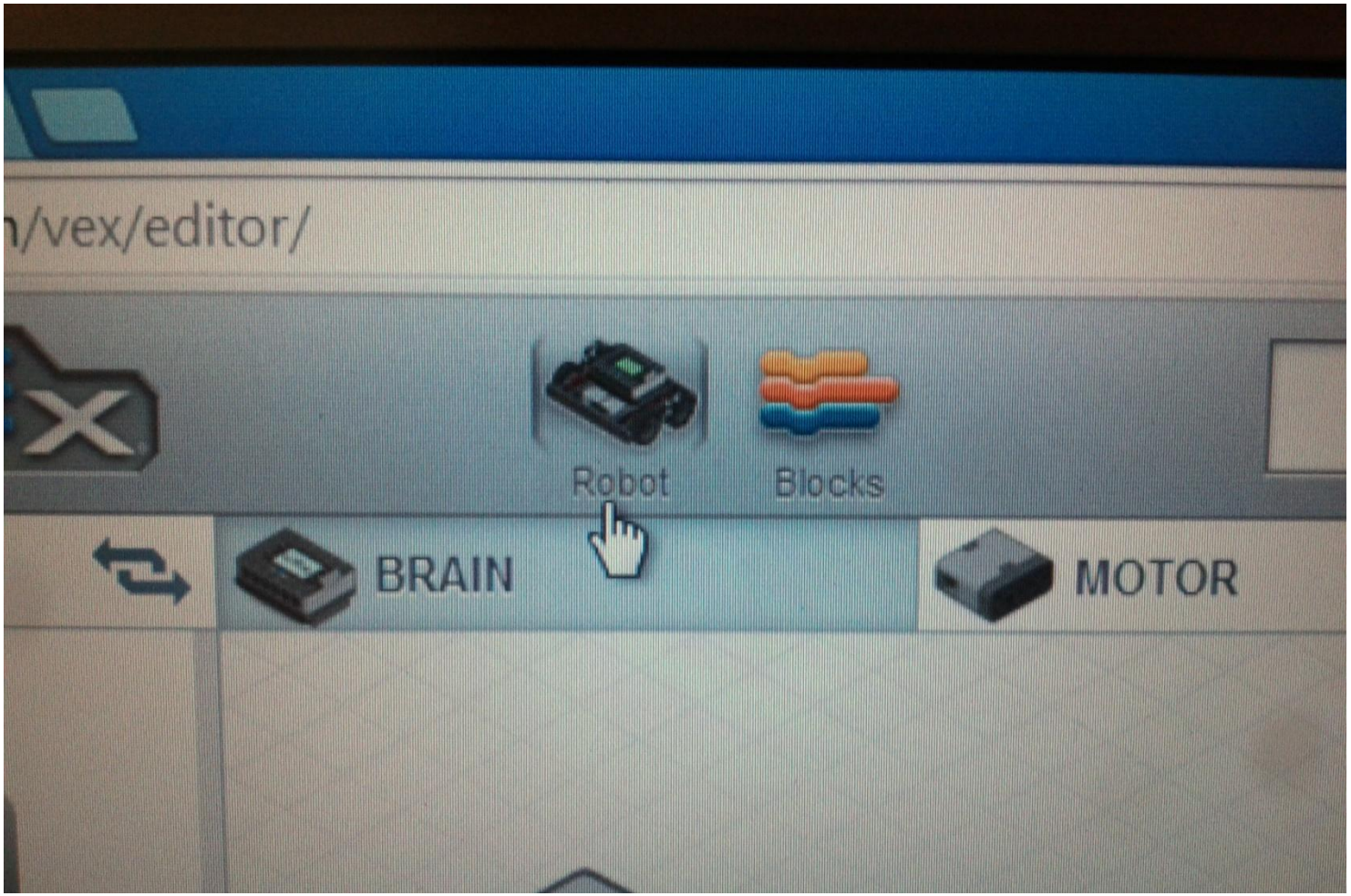
http://www.youtube.com/watch?v=kND5jS0uOA8

(Optional)

Giving instructions to your robot

- Your robot's components will need to calibrate to a specific function. (For example, your motor will spin clockwise or counter clockwise when you press a button.)
- In Modkit, you will begin in 'Robot' mode.
- This will allow you to calibrate each component as well as designate its connections to the brain and to the joystick.

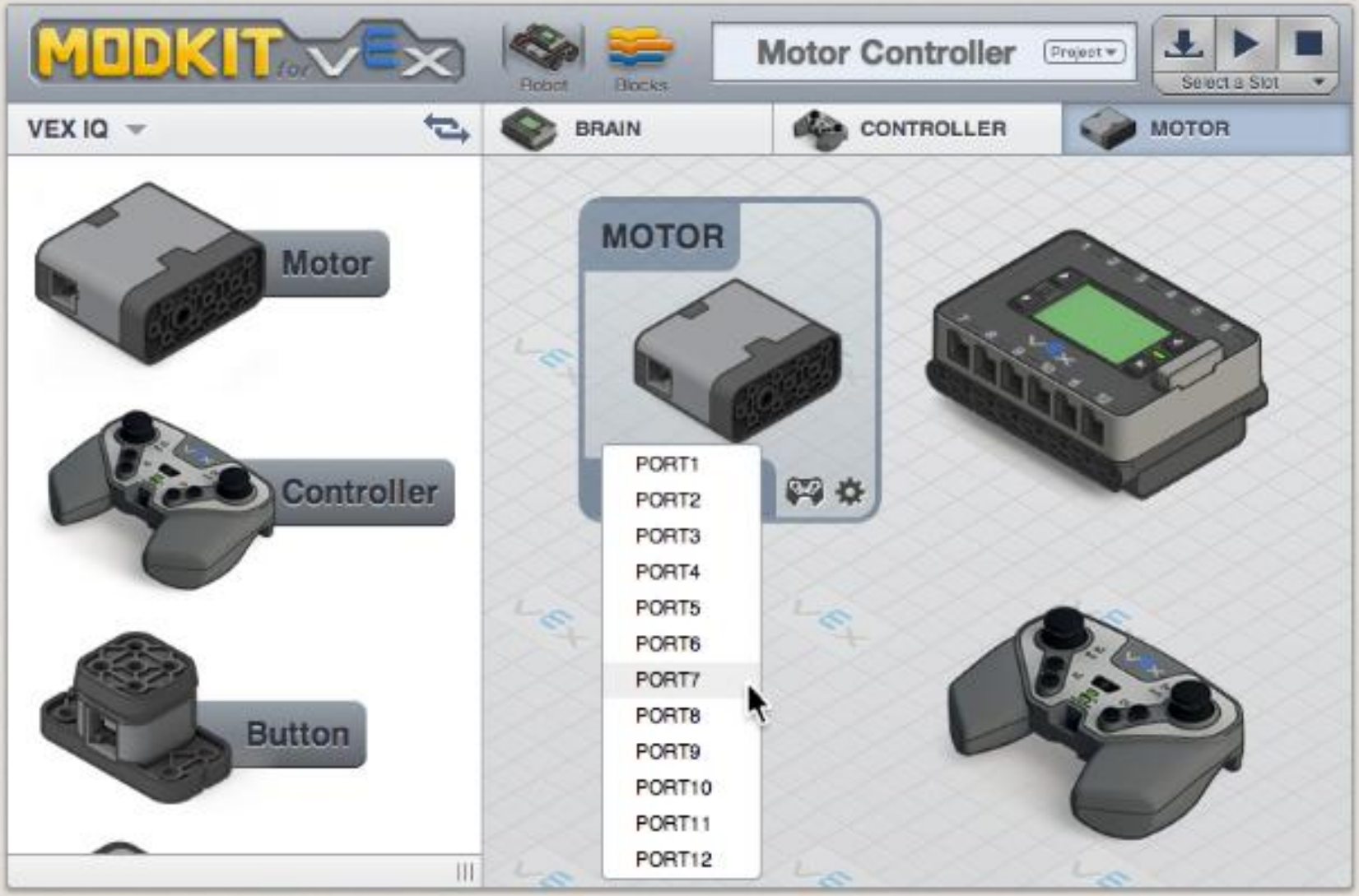
Pictorial ‘Robot’ Mode



1. Add a Motor & Controller

In Robot View, drag & drop a Motor and Controller to the Robot Pad.

2. Setup Motor



Select port 7 for the Motor. Make sure you've plugged the motor into port 7 on your Robot Brain.

3. Open Controller Actions

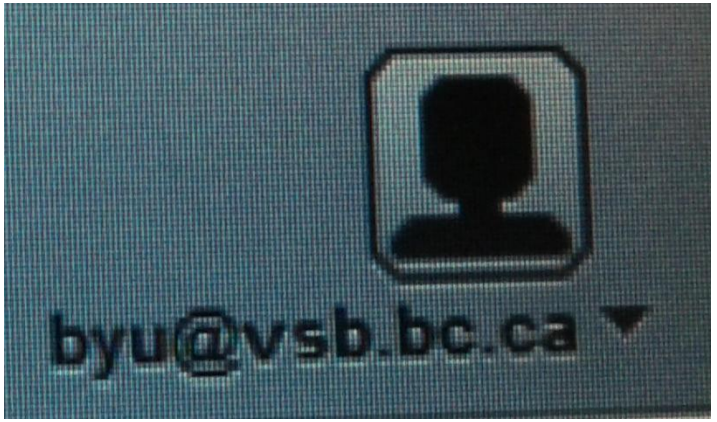
Then click the Controller Actions button next to the port menu to open the Controller Actions window.

4. Select Controller Actions

Select actions for the **R▲** and **R▼** buttons and then set the Joystick A action to **▲FWD / ▼REV**

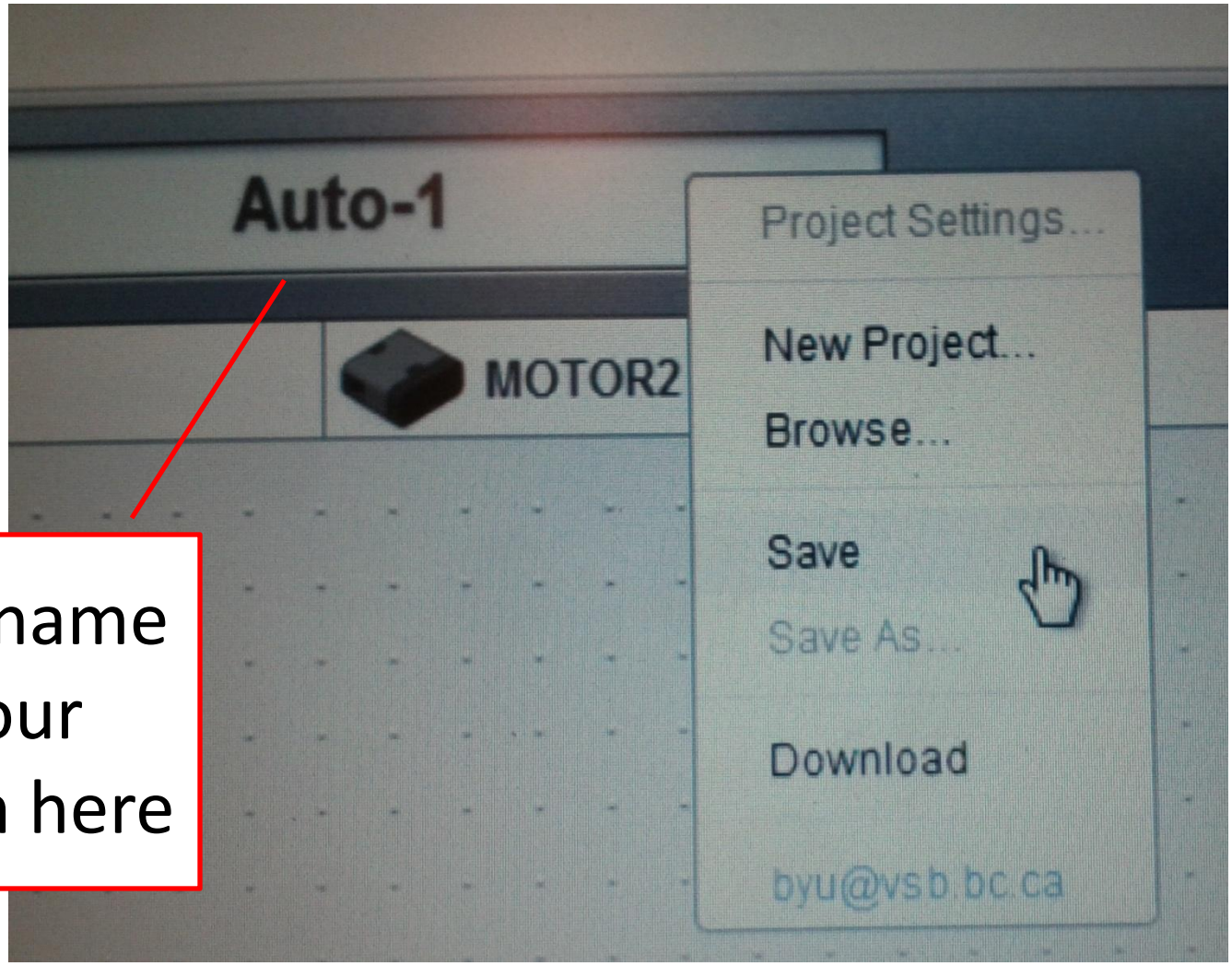
If you have a Google or Yahoo account

- You can save your program. You will need to sign in.



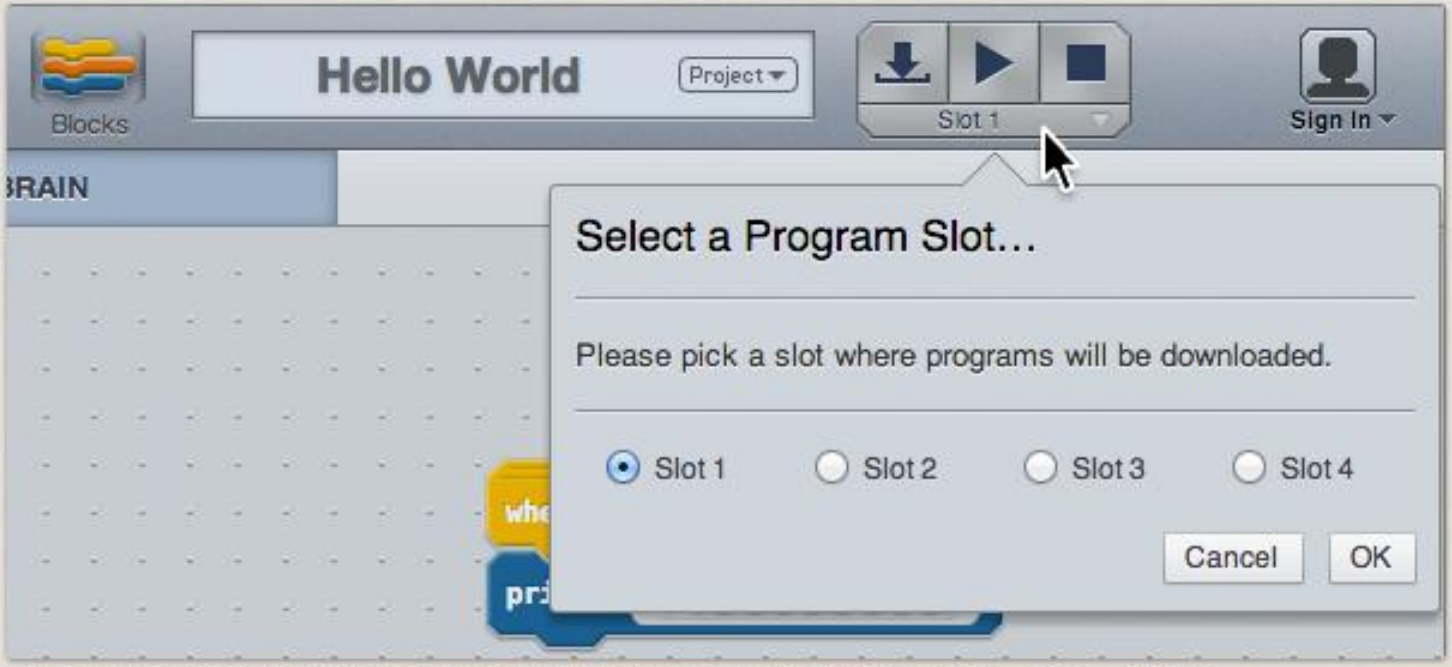
- You can still work with Modkit without signing in.

To Save your program



Enter a name for your program here

5. Download Your Program



To download our program to the Robot Brain, select a Program Slot to save it to.

Now you can download the program by clicking the download button a message appears when the download has completed.

Step 6 – Power on the VEX-IQ Robot

7. Test the Downloaded Program

Select the program in the slot number you chose and run it. Both the joystick and controller should control your motor now.

More to try

- Add Controller actions for a second Motor to drive a robot on the floor. Hint: If the second motor is facing the opposite way, make sure to select Drive (Reversed).

The End of Tutorial