Start: Getting Coding with MiiA.bit

Introduction

At this stage you should have MiiA.bit bot fully assembled and ready for programming. If you are a beginner, this guide will help you set things up and get you started quickly.

MiiA.bit uses an easy to program **drag and drop system** which has been developed by LOFI Blocks (http://www.lofiblocks.com/code/). The drag and drop system uses Bluetooth to communicate with the MiiA.bit robot. LOFI Blocks allows you to program your robot using an android App or through chrome with use of a Chrome Extension. The processes for both the mobile app and Chrome setup is explained below:

Mobile App Setup

Step One: Download the MiiA.bit Companion App

The MiiA.bit Companion app is the place where all the information, exercises and challenges are contained. This app is also used to track your progress as you walk this journey of discovery. Download the app from the Android Play Store by searching "**MiiA.bit Companion**". Once downloaded, open the app and have a look around!

Step Two: Download the LOFI Blocks App

To program MiiA.bit, a third party app called LOFI Blocks is to be used. This is the app where you will be implementing the code and exercises which you will receive from the MiiA.bit Companion App. Download the app from the android play store by searching "LOFI Blocks". Once downloaded, open the app and have a look around on explore the different blocks that can be used.

Step Three: Pairing the Bluetooth module

As mentioned, Bluetooth will be used to communicate between MiiA.bit and the LOFI app. Take note! On the MiiA.bit control board you will see a small switch near the centre of the board. Make sure it is switched to the side marked '**BT**'. This ensures that it is able to receive messages from Bluetooth. Once done. Turn on the control board. You will see a light flashing. This is the Bluetooth module looking for a device to pair with. Open your phone's Bluetooth devices in order to find your MiiA.bit. It may be listed as a device called "*HC-06*". Make sure your phone's visibility is on. Once MiiA.bit's

Bluetooth device is found, pair with it. If prompted for a password use either '1234' or '0000'. Great! You are nearly there!

Step Four: Jumping into coding!

Now is the moment that you have been waiting for! Let's get programming! Open the LOFI App and tap the robot head icon in the top right hand corner. You should see your Bluetooth device which you just paired with listed there. Tap it. A circle should now be around the robot head. This indicates that it is now paired with MiiA.bit. Great! Now to test things out!

Open the MiiA.bit Companion App and go to the first exercise within the Light Module and recreate the starter code as seen there within the LOFI App and tap the orange play button on the left of the screen. You should see MiiA.bit light up with joy to see you! And that's it! You're now ready and all set up to follow the exercises and begin exploring the wonderful world of robotics.

Happy Coding! ☺

Chrome Setup

It should be noted that although this procedure works, it is recommended that a smart phone be used for the execution of the exercises as outlined in the *Mobile App Setup* above. It should also be noted that this setup guide is focused for a personal computer running the Microsoft Windows operating system with Google Chrome installed.

Step One: Download the MiiA.bit Companion App

The MiiA.bit Companion app is the place where all the information, exercises and challenges are contained. This app is also used to track your progress as you walk this journey of discovery. Download the app from the android play store by searching "**MiiA.bit Companion**". Once downloaded, open the app and have a look around!

Step Two: Pairing the Bluetooth module

The next step is to pair the Bluetooth module to your computer. To do this make sure that the robot is on and that the Bluetooth module chip is flashing. Go to **Bluetooth & other devices**. Wait for the Bluetooth module to be detected - the name will be "HC-06". Select the option to pair with this device. If prompted for a password use "1234" or "0000". Once the module is paired you are ready to move on to the next step.

Step Three: Exploring and setting up the LOFI chrome environment

The next step is to connect with the LOFI coding environment with chrome. First go to the coding website here: http://www.lofiblocks.com/code/.

Before you will be able to use the chrome platform the LOFI Blocks chrome extension needs to be downloaded. This can be found here:

https://chrome.google.com/webstore/detail/lofi-robot-extension/opdjdfckg bogbagnkbkpjgficbampcel?utm_source=chrome-ntp-icon

Download and install the Chrome Extension.

Once installed, run the extension. With the computer still paired with the Bluetooth module, Check which port your bluetooth module is connected to. Go to:

Control panel -> device manager-> Ports (COM & LPT)

In this drop down menu the port which the bluetooth is connected to will be shown there. Write down or remember these port numbers. Navigate back to

the extension and choose the port which the bluetooth is connected to and click connect. In the Chrome code editor the robot head should now have a ring around it. If that is the case, you are now ready to start coding.

Step Four: Jumping into coding!

Open the MiiA.bit Companion App and go to the first exercise within the Light Module and recreate the starter code as seen there within the LOFI App and tap the orange play button on the left of the screen. You should see MiiA.bit light up with joy to see you! And that's it! You're now ready and all set up to follow the exercises and begin exploring the wonderful world of robotics.

Happy Coding! ☺