

FlipRobot

E300

Project 1

Robotic Pet Training



E300 Project 1 Robotic Pet Training

Mission 2 Teach Your Puppy to Chase it's Tail

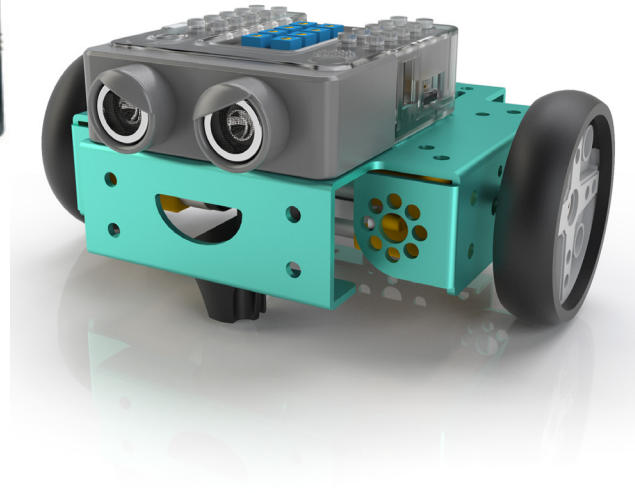
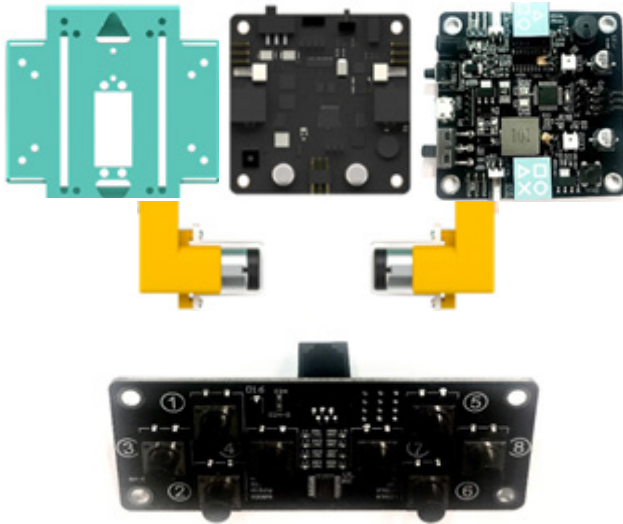
Now that we have taught our FlipRobot puppy to move forward and back it is time to teach our first trick. Using our leash (remote control) we will now teach our puppy to turn left and right so that it can be commanded to chase its tail.

Learning Objects

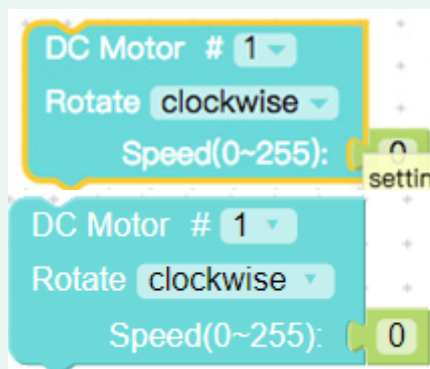
- Learn to use FlipCode to control DC motors' movements.
- Learn to use If and Then logic in FlipCode.
- Learn to program joystick buttons in FlipCode and command FlipRobot puppy to execute different movements.
- Learn to create and apply programming functions.

FlipRobot

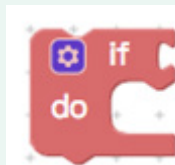
Hardware Required



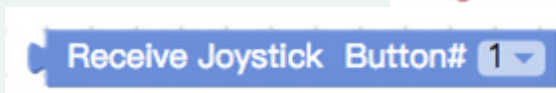
FlipCode Blocks Required



DC motor block



If and Then logic block

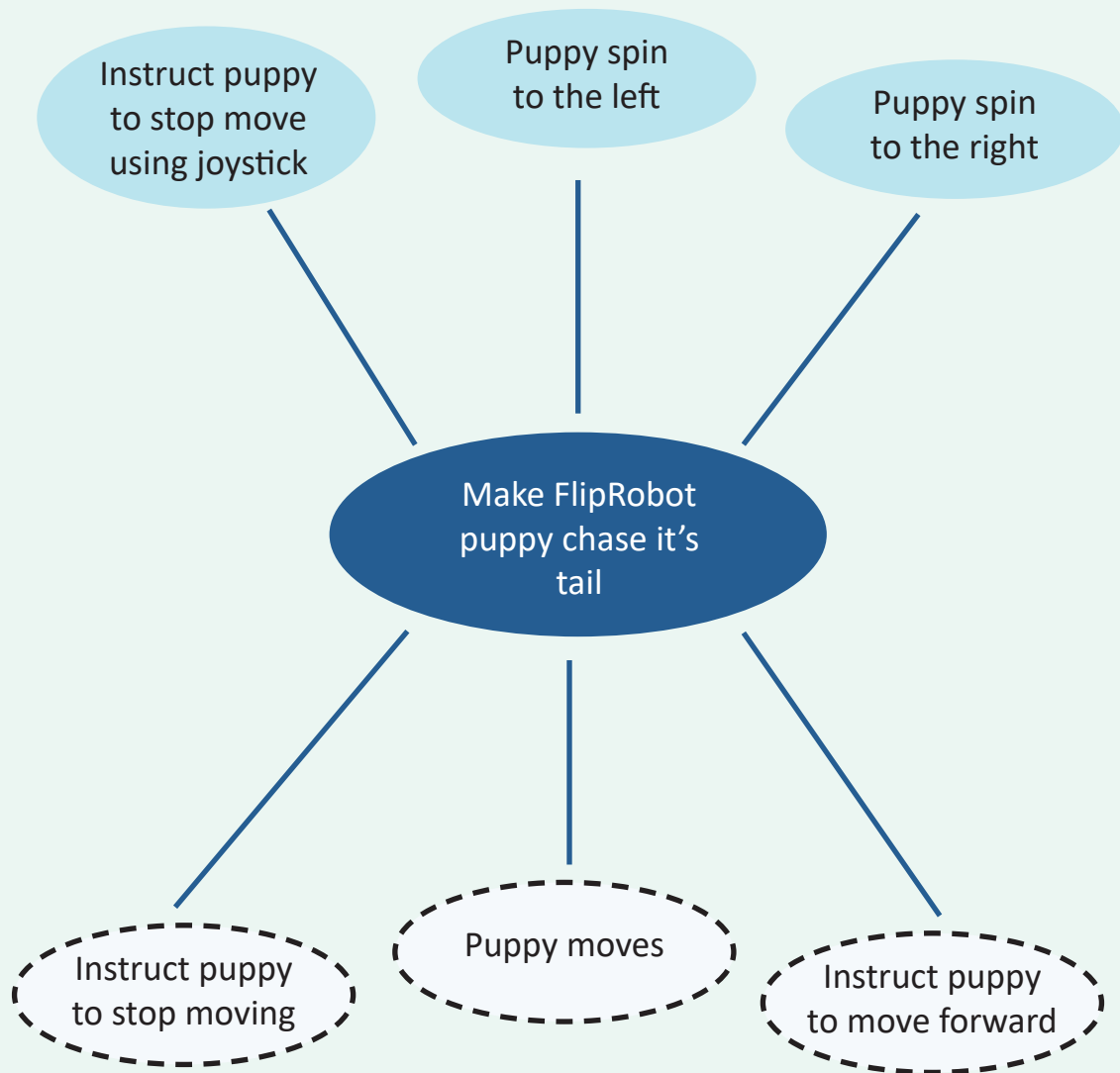


Joystick Remote Control Block



'To do something' functions block

Scenario Brainstorming



Programming Logic Flow and Code

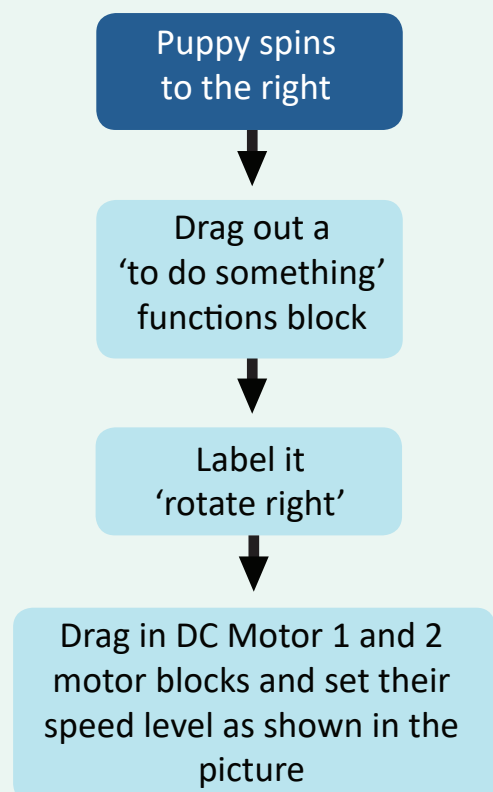
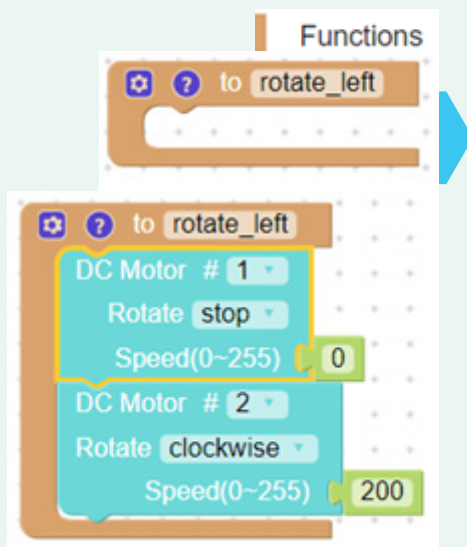
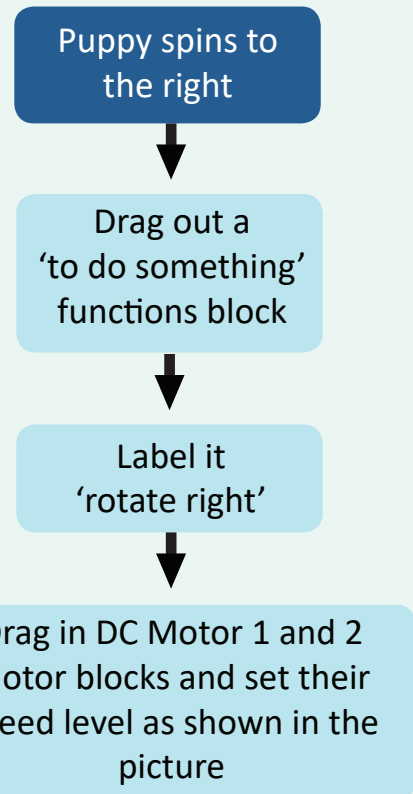
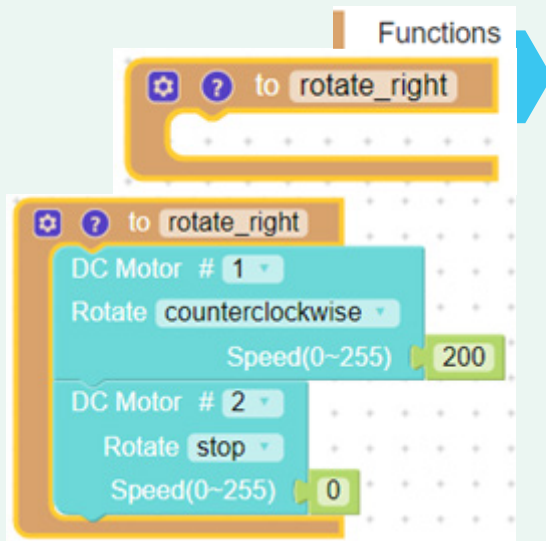
Puppy moves

Make puppy move forward

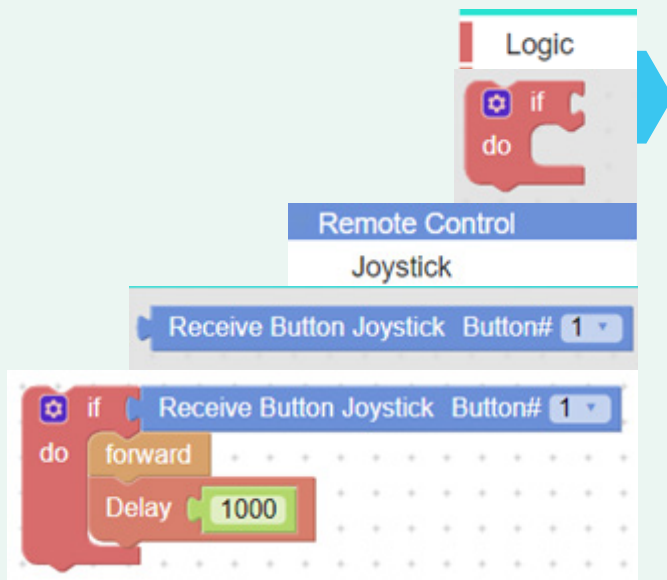
Make puppy stop moving

These three commands have been created in mission 1, so you can use them directly in this mission.

Programming Logic Flow and Code



Programming Logic Flow and Code

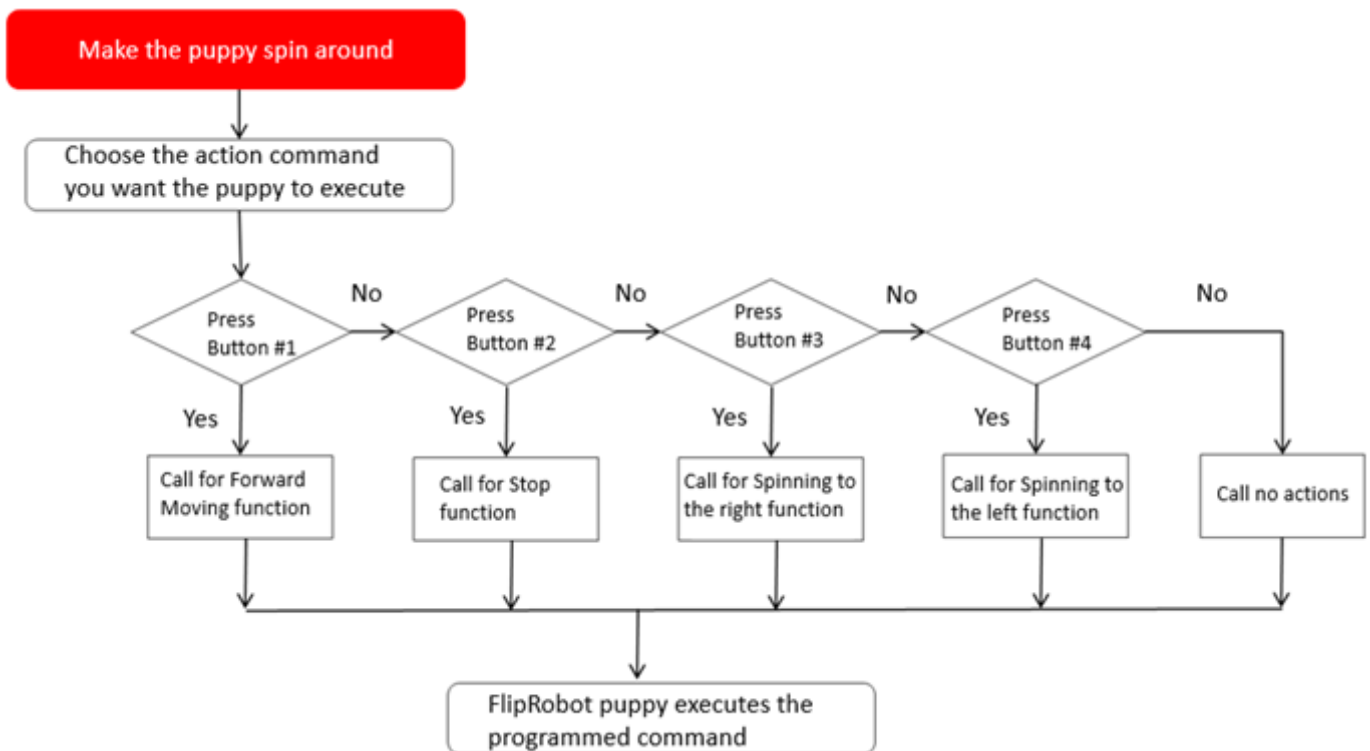


Command puppy movements by programming joystick buttons

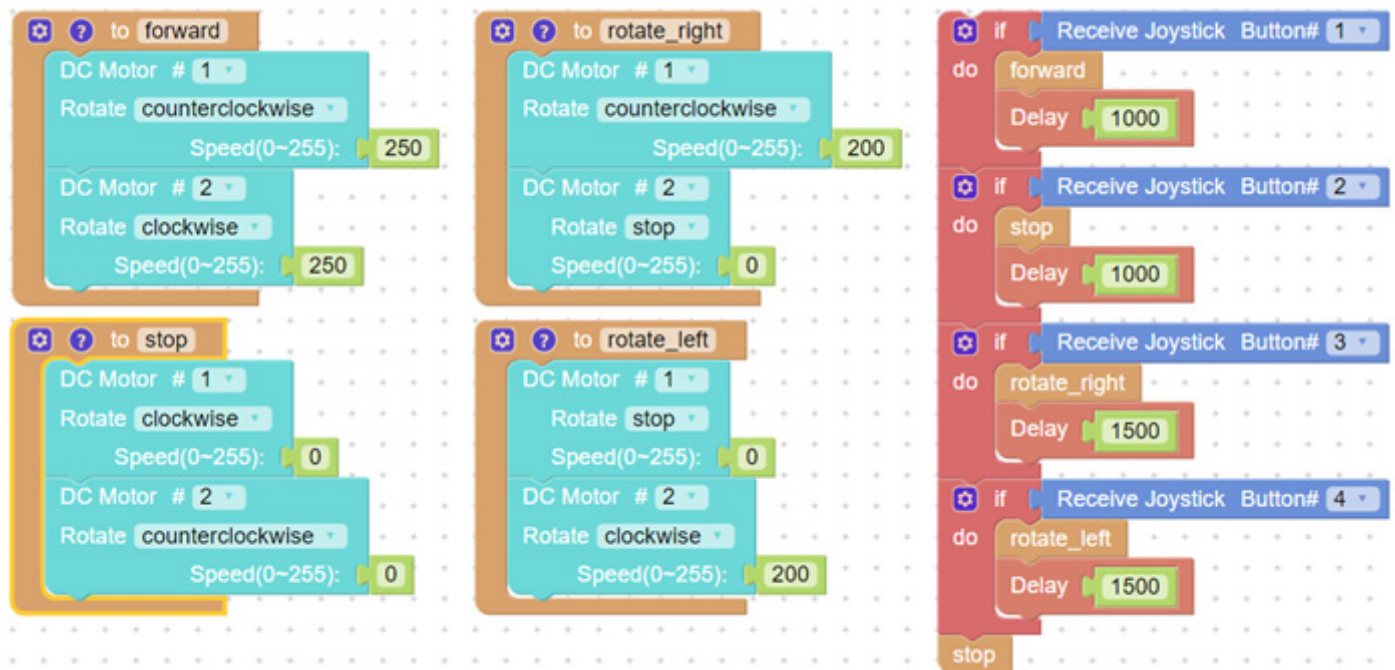
If the programmed button is pressed

FlipRobot puppy will execute the designed actions (#1 moving forward, #2 stop, #3 spin to the right, #4 spin to the left)

Fl!pRobot



Please see the sample program code below:



Tips

1. Imagine what would happen if you remove the 'Stop' function at the end of the program above.
2. Challenge yourself and see if you can use one logic block to achieve the same mission outcome instead of four If and Then logic blocks together. (Hint: try to add 'Else If' into your logic block, and you can do it in the section.)