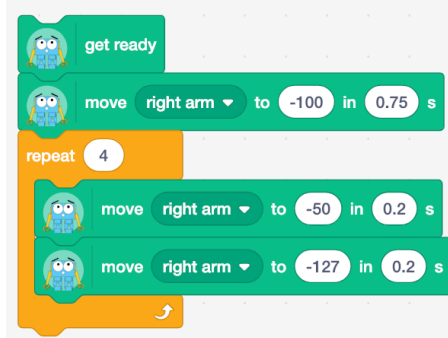


CHALLENGES BY MARTY

Shake Hands with Me: Guide

1 Basic Handshake

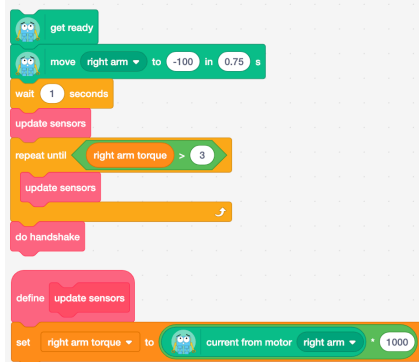
Raise right arm to offer a handshake followed by moving arm up and down 4 times to carry out the handshake



```
get ready
move right arm to -100 in 0.75 s
repeat 4
  move right arm to -50 in 0.2 s
  move right arm to -127 in 0.2 s
```

2 Getting Interactive

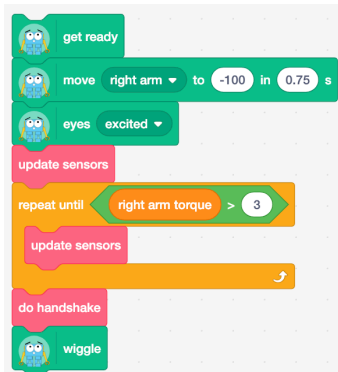
Measure the force on the arm by reading the current from the motor. When this reaches above a certain value, someone has pushed on hand and is ready for the handshake!



```
get ready
move right arm to -100 in 0.75 s
wait 1 seconds
update sensors
repeat until right arm torque > 3
  update sensors
do handshake
define update sensors
  set right arm torque to current from motor right arm * 1000
```

3 Adding Emotions

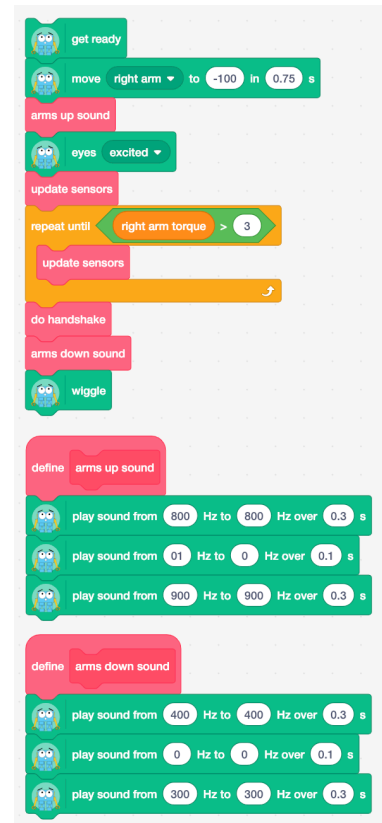
Adding in some emotion to Marty's movements will make our handshake feel a little bit more personal! We've even added a small wiggle onto the end for fun!



```
get ready
move right arm to -100 in 0.75 s
eyes excited
update sensors
repeat until right arm torque > 3
  update sensors
do handshake
wiggle
```

4 Next Steps

- Try adding in some sounds throughout the handshake
- What other handshake movements could you add in? A fist bump? High fives?



```
get ready
move right arm to -100 in 0.75 s
arms up sound
eyes excited
update sensors
repeat until right arm torque > 3
  update sensors
do handshake
arms down sound
wiggle

define arms up sound
  play sound from 800 Hz to 800 Hz over 0.3 s
  play sound from 0 Hz to 0 Hz over 0.1 s
  play sound from 900 Hz to 900 Hz over 0.3 s

define arms down sound
  play sound from 400 Hz to 400 Hz over 0.3 s
  play sound from 0 Hz to 0 Hz over 0.1 s
  play sound from 300 Hz to 300 Hz over 0.3 s
```