

To and Fro

This program lets you control MiRo's speed (and direction) by using the touch sensors.

```
Program Start
set speed to 0
repeat while true
do
  if in list Body Touch sensors find first occurrence of item true = 0
  do set body_touch to false
  else set body_touch to true
  if in list Head Touch Sensors find first occurrence of item true = 0
  do set head_touch to false
  else set head_touch to true
  if head_touch
  do set speed to speed + 0.05
  else if body_touch
  do set speed to speed - 0.05
  Run code print "New speed is ", speed
  Set Forward Speed to speed meters per second
```

The code is written in a Scratch-style block-based language. It starts with a 'Program Start' block, followed by a 'set speed to 0' block. A 'repeat while true' loop contains several conditional blocks. The first is an 'if' block that checks if 'true' is in the 'Body Touch sensors' list. If true, it sets 'body_touch' to false; otherwise, it sets 'body_touch' to true. The second is an 'if' block that checks if 'true' is in the 'Head Touch Sensors' list. If true, it sets 'head_touch' to false; otherwise, it sets 'head_touch' to true. The third is an 'if' block that checks the 'head_touch' variable. If true, it sets 'speed' to 'speed + 0.05'. The fourth is an 'else if' block that checks the 'body_touch' variable. If true, it sets 'speed' to 'speed - 0.05'. After the loop, there is a 'Run code print "New speed is ", speed' block and a 'Set Forward Speed to speed meters per second' block.

To and Fro

This program let you control MiRo's speed (and direction) by using the touch sensors.

BEST WAY TO DEMONSTRATE

Simulator: *Very effective*

Robot: *Very effective*



SENSORS & OUTPUTS USED

Head and body touch sensors

DESCRIPTION

This demonstration program allows you to control MiRo's speed by using the head and body touch sensors to increase or decrease the speed by 0.5 m/s. This means you can move MiRo forwards or backwards over the full range of speeds.

EXTENSIONS

-  Add additional actions for MiRo to respond to, such as clapping to stop.
-  Go into the Python editor and change the speed adjustments