

Don't Fall Off!

This program directs MiRo to the edge of the table and then uses the sonar sensors to stop before falling.

```
Program Start
Run code print "Point my head towards the floor and start..."
Raise/Lower Head Lower
Start Moving Forwards Fast
Run code print "Keep checking distance to the table using..."
set distance_to_table to Sonar Range
repeat while distance_to_table < 0.5
do
  Run code print "Distance: ", distance_to_table
  set distance_to_table to Sonar Range
  Wait for 0.1 Seconds
Run code print "Danger! Danger! Distance is now ", distan...
Stop Moving
```

The image shows a sequence of code blocks for a program. It starts with a 'Program Start' block, followed by a 'Run code' block that prints 'Point my head towards the floor and start...'. Then, a 'Raise/Lower Head' block is set to 'Lower'. Next is a 'Start Moving' block set to 'Forwards' and 'Fast'. This is followed by another 'Run code' block printing 'Keep checking distance to the table using...'. A 'set' block sets 'distance_to_table' to 'Sonar Range'. A 'repeat while' loop follows, with the condition 'distance_to_table < 0.5'. Inside the loop, there are three blocks: a 'Run code' block printing 'Distance: ', 'distance_to_table', a 'set' block setting 'distance_to_table' to 'Sonar Range', and a 'Wait for' block set to '0.1 Seconds'. After the loop, a 'Run code' block prints 'Danger! Danger! Distance is now ', 'distan...'. The program ends with a 'Stop Moving' block.

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BEST WAY TO DEMONSTRATE

Simulator: *Very effective*

Robot: *Effective*



SENSORS & OUTPUTS USED

Sonar range sensors and user script log

DESCRIPTION

This demonstration program moves MiRo forward and then uses MiRo's sonar sensors to try and reach the edge of the table and stop itself before falling off! It will also record the distance to the edge of the and a danger alert in case the sonar fails to stop MiRo.

EXTENSIONS

-  Add warning sounds and lights to the danger alert.
-  Add subsequent actions for MiRo to perform after reaching the edge, such as backing up.