

INTRODUCTION TO *FLOW* BLOCKS

SENSING BLOCKS

These blocks enable the robot to get information about its surroundings. All sensing blocks output *numbers*.

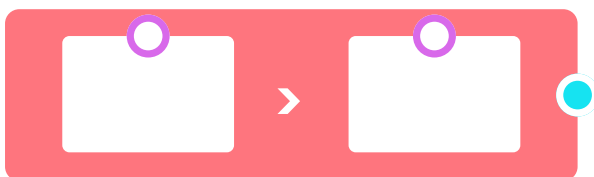


OPERATION BLOCKS

Basic mathematic calculations such as addition, subtraction, multiplication, and division are available.



COMPARISON BLOCKS



There are also greater than, less than, equal, and not-equal blocks for comparisons. These comparison blocks output either TRUE or FALSE, and can be used with conditional blocks (explained later).

LOGICAL BLOCKS



The AND block outputs TRUE if both inputs are TRUE. Otherwise, it outputs FALSE.

The OR block outputs TRUE if one or both inputs are TRUE. Otherwise, it outputs FALSE.



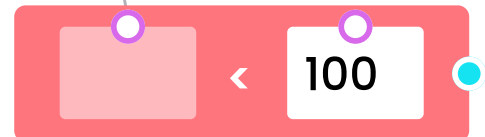
The NOT block outputs TRUE if the input is FALSE, and outputs FALSE if the input is TRUE.

Logical blocks take *booleans* (TRUE or FALSE) as input and also output *booleans*.

SENSING + COMPARISON COMBO



Sensing blocks output numbers so they can be connected to operation blocks. In this example, the operation block outputs TRUE if the sensor reading is less than 100, and FALSE otherwise.



SENSING + COMPARISON + LOGICAL COMBO



Use logical blocks when combining two conditions. For example, the AND block here will only output TRUE if the sensor 1 reading is greater than 5 AND sensor 2 reading is less than 10. Otherwise, the output is FALSE.



CONDITIONAL BLOCKS

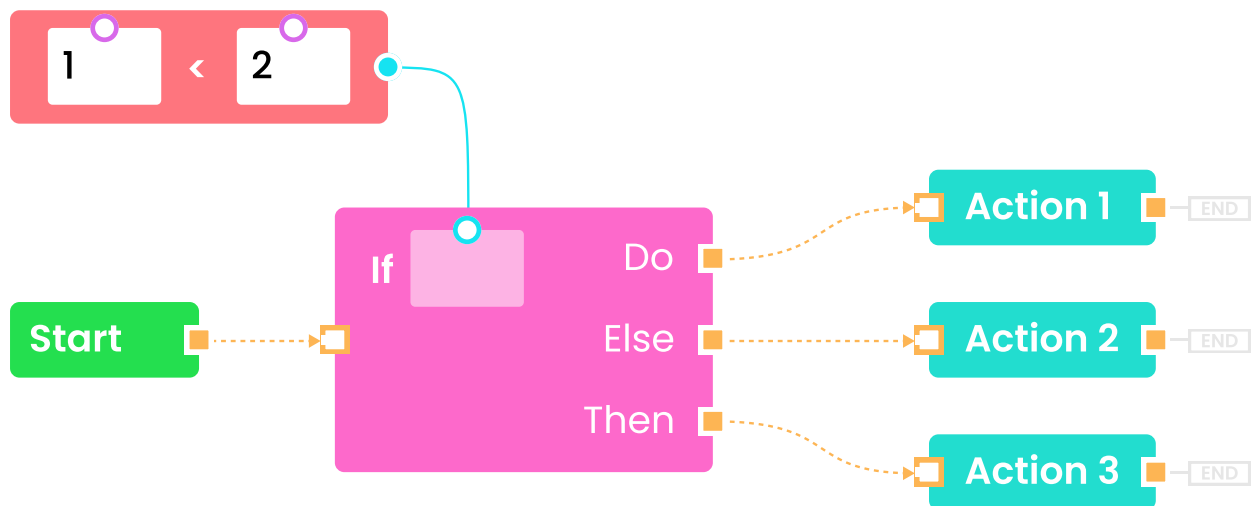
IF BLOCK

The IF block operates according to the input condition, which is always either TRUE or FALSE.

If the condition is TRUE, it will run the DO branch (Action 1) once.

If the condition is FALSE, it will run the ELSE branch (Action 2) once.

After running one of the two branches, the code will continue by running the THEN branch (Action 3).



In this example, which actions will be run?