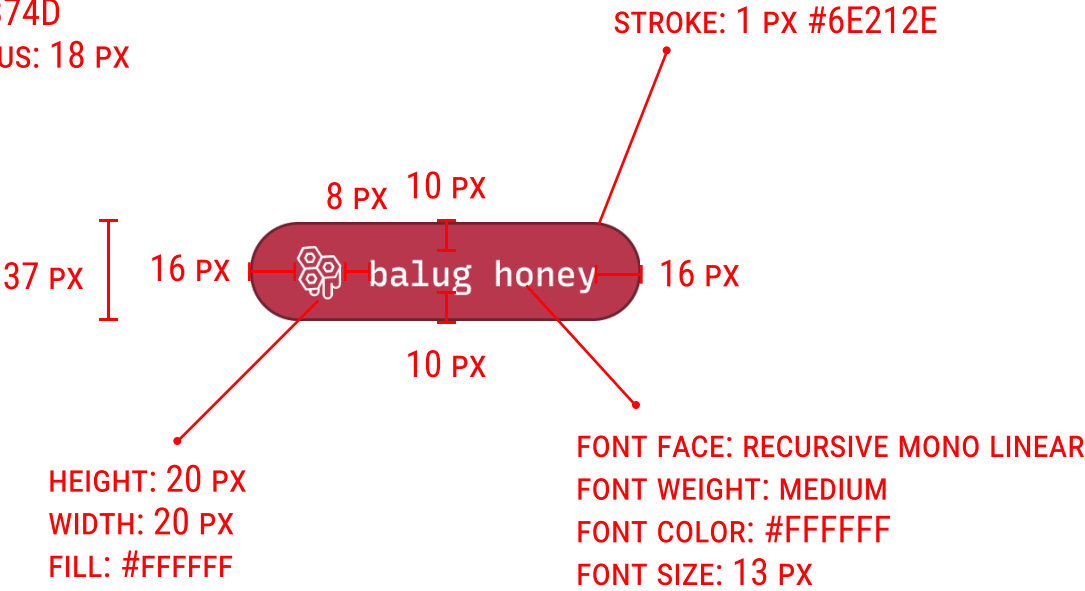**BLOCKS**

Ingredients 🌿

Ingredient blocks are simple, fixed blocks that represent one unit of an individual ingredient (e.g. "siren scale"). They are variables that change and morph once an action has been applied to it (at which point they become an **active ingredient**). Players may begin with an introductory set of ingredients and collect more as they discover additional recipes.

DEFAULT

COLOR: #B9374D
BORDER RADIUS: 18 PX

STROKE: 1 PX #6E212E

8 PX   10 PX

37 PX   16 PX   balug honey   16 PX

10 PX

HEIGHT: 20 PX
WIDTH: 20 PX
FILL: #FFFFFF

FONT FACE: RECURSIVE MONO LINEAR
FONT WEIGHT: MEDIUM
FONT COLOR: #FFFFFF
FONT SIZE: 13 PX

GRABBED

balug honey

DROP SHADOW:
#000000 AT 33% OPACITY
X: 0, Y: 6
BLUR: 4

STANDARD INGREDIENTS

shrivelfig   bat wings

siren scale   kappa drool

mollyweed   bitter root

moon rocks   dragon nail

star seed   bell whistle

balug honey   golly frogs

ACTIVE ITEMS

cauldron

This static item is always present in the lab station.

10 shredded bitter root

Example of a manipulated ingredient.

mixture

Icons demonstrate which active ingredients are in the mixture.
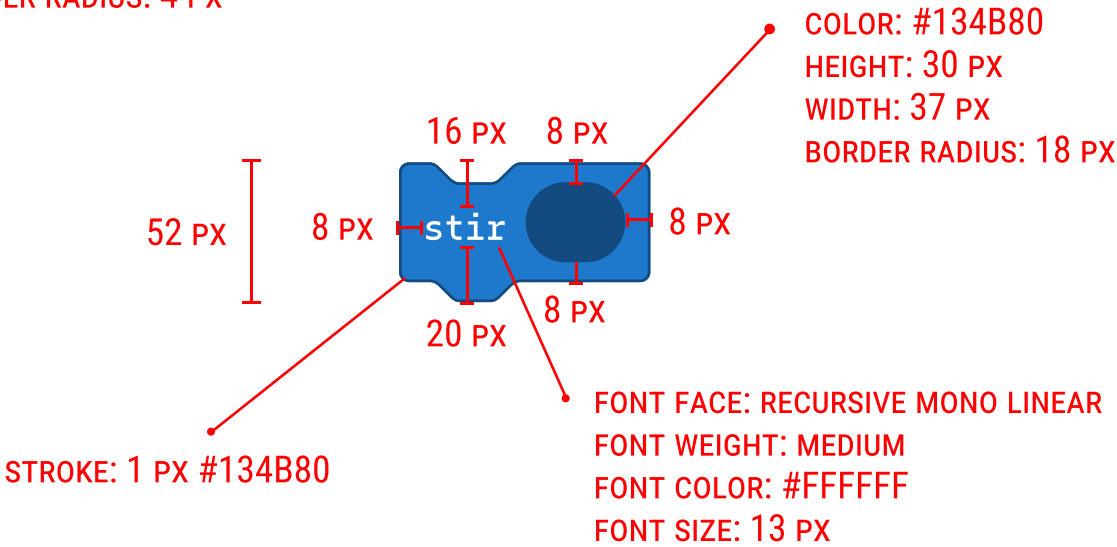
BLOCKS

Actions

Action blocks represent functions in programming. In Alchemi, most actions map to a cooking action (e.g. "mash", "stir", etc.). Action blocks are most commonly combined with ingredient blocks to designate how a certain ingredient should be manipulated. There are also special actions to add objects together and restart from a specified command.

DEFAULT

COLOR: #1E78CC
BORDER RADIUS: 4 PX

COLOR: #134B80
HEIGHT: 30 PX
WIDTH: 37 PX
BORDER RADIUS: 18 PX

16 PX   8 PX

52 PX   8 PX   stir   8 PX

20 PX   8 PX

STROKE: 1 PX #134B80

FONT FACE: RECURSIVE MONO LINEAR
FONT WEIGHT: MEDIUM
FONT COLOR: #FFFFFF
FONT SIZE: 13 PX

GRABBED

stir

DROP SHADOW:
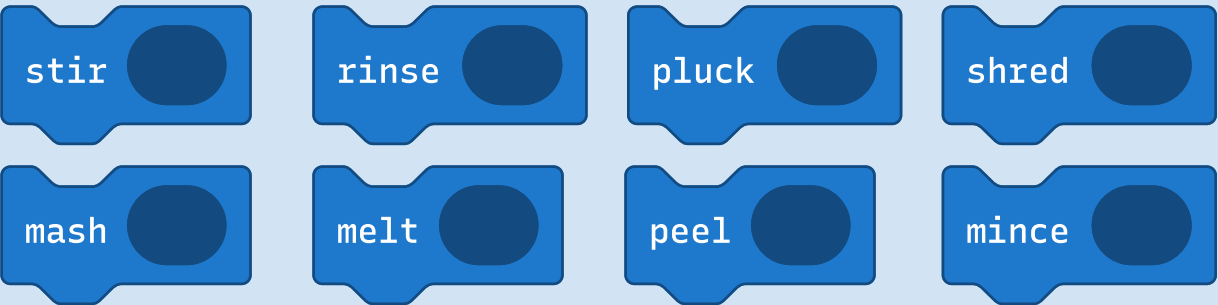#000000 AT 33% OPACITY
X: 0, Y: 6
BLUR: 4

BLOCK HOVER

stir
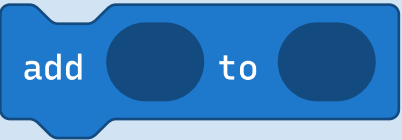
STROKE: 2.5 PX #FFFFFF
LAYER BLUR: 1

STANDARD ACTIONS

These are a set of basic cooking actions that are commonly used to alter and prepare ingredients for brewing.

stir   rinse   pluck   shred

mash   melt   peel   mince

SPECIAL ACTIONS

mix

MIX
Used to combine ingredients, this block will require at least two arguments.

add   to

ADD TO
This block requires two arguments and is often used to add mixtures to the cauldron.

set   to

SET TO
This block requires two arguments and is often used to set brewing temperatures.

restart   all

RESTART
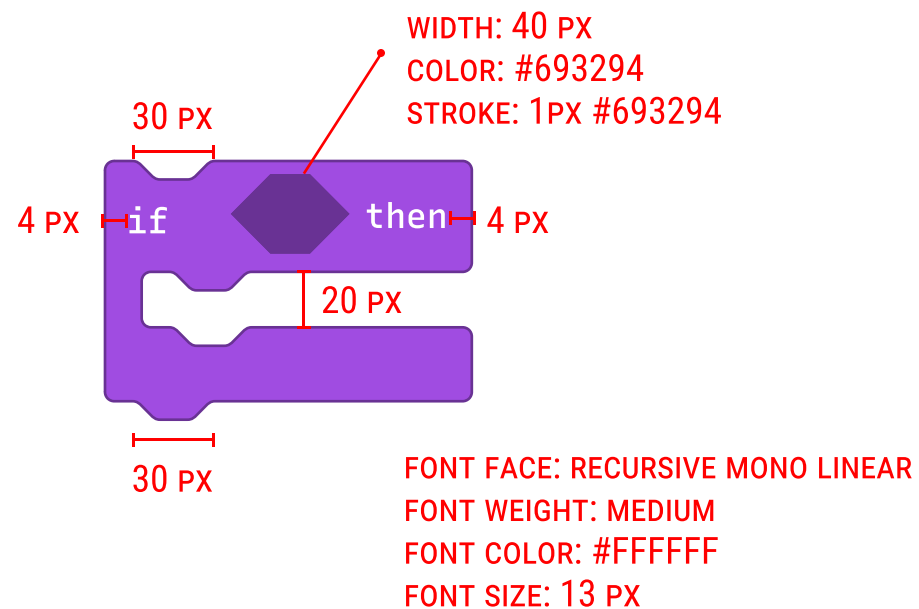This restarts the program from a specified code block (default is from the beginning).
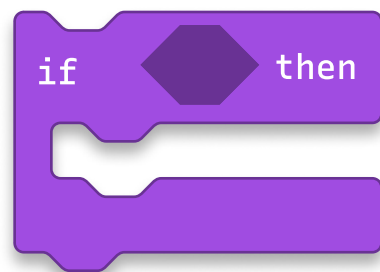
BLOCKS

Controls

Control blocks are used for conditional logic, loops, and executing specific parts of the program. These blocks are the core computational thinking piece of Alchemi, adding complexity to recipes. In more advanced scenarios, they can also be used to introduce the concept of parallel computing, going beyond the linear nature of traditional recipes. They are most commonly combined with action blocks.

DEFAULT

COLOR: #A04CE1
BORDER RADIUS: 4 PX

WIDTH: 40 PX
COLOR: #693294
STROKE: 1PX #693294

30 PX

4 PX — if   then — 4 PX

20 PX

30 PX

FONT FACE: RECURSIVE MONO LINEAR
FONT WEIGHT: MEDIUM
FONT COLOR: #FFFFFF
FONT SIZE: 13 PX

GRABBED

if   then

DROP SHADOW:
#000000 AT 33% OPACITY
X: 0, Y: 6
BLUR: 4
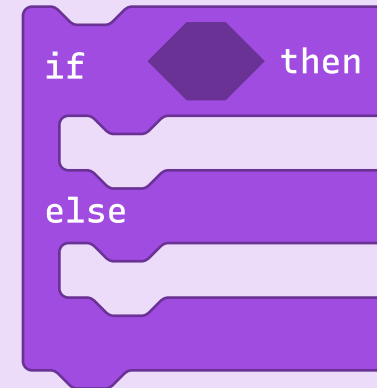
BLOCK HOVER

if   then

STROKE: 2.5 PX #FFFFFF
LAYER BLUR: 1

IF-THEN

if   then

This is a basic control statement that tells the program to execute a command only if the specified condition evaluates to true.

IF-THEN-ELSE

if   then
else

Similar to the if-then statement, this block also includes a secondary path to be executed if the condition is not met.

REPEAT
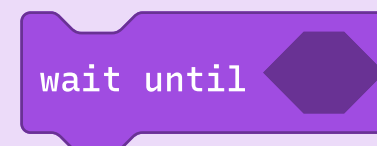
repeat 6

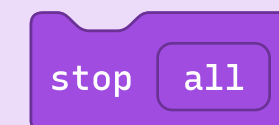Executes a command a specified number of times (default value is 6, but accepts any positive integer).

REPEAT UNTIL

repeat until

Executes a command repeatedly and only stops when the specified condition is met.

WAIT UNTIL

wait until

Does not advance until the condition becomes true.

STOP

stop all

Stops a specified action or set of actions.

GO TO

go to
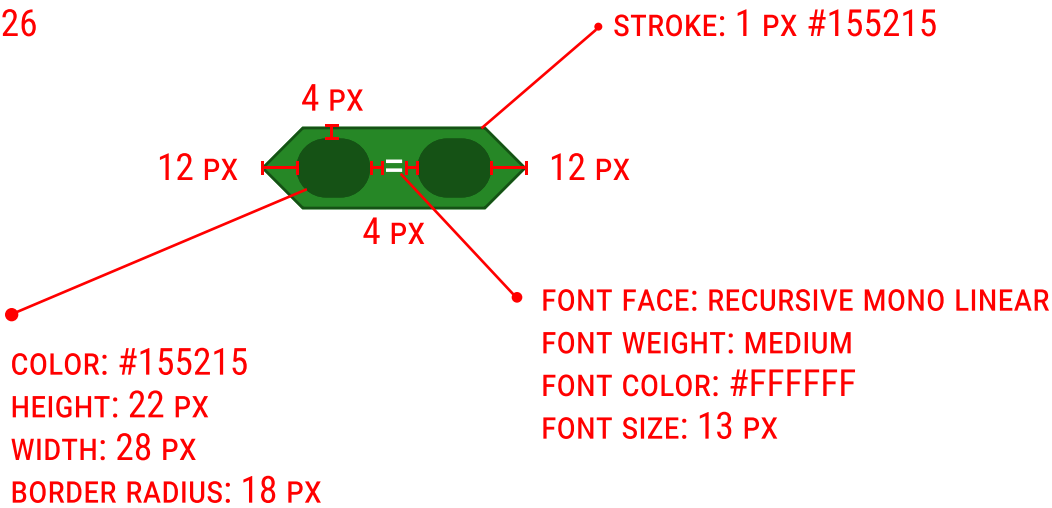
Advances to a certain code block.

BLOCKS

Operators ⏱

Operator blocks define relational and logical comparisons. These blocks are most commonly used in conjunction with control blocks, used to specify a certain condition.

DEFAULT

COLOR: #268726

STROKE: 1 PX #155215

4 PX

12 PX   = H   12 PX

4 PX

COLOR: #155215
HEIGHT: 22 PX
WIDTH: 28 PX
BORDER RADIUS: 18 PX

FONT FACE: RECURSIVE MONO LINEAR
FONT WEIGHT: MEDIUM
FONT COLOR: #FFFFFF
FONT SIZE: 13 PX

GRABBED

=

DROP SHADOW:
#000000 AT 33% OPACITY
X: 0, Y: 6
BLUR: 4

BLOCK HOVER

O =

STROKE: 2.5 PX #FFFFFF
LAYER BLUR: 1

---

and

AND
TRUE IF BOTH FIRST AND SECOND CONDITIONS ARE MET.

or

OR
True if one or both conditions are met.

not

NOT
Reverses the outcome of the condition.

<

LESS THAN
Tests whether the first value is less than the second value.

=

EQUAL TO
Tests whether the first value is equal to the second value.

>

GREATER THAN
Tests whether the first value is greater than the second value.
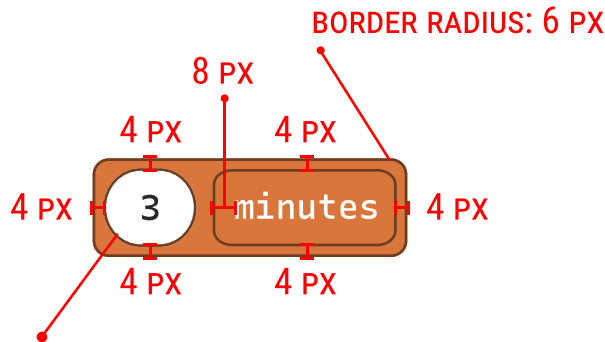
BLOCKS

Attributes ⏱

Attribute blocks are variables that players use to assign custom values and parameters such as time, temperature, amount, etc. all of these blocks involve an integer input, a dropdown selection, or both.
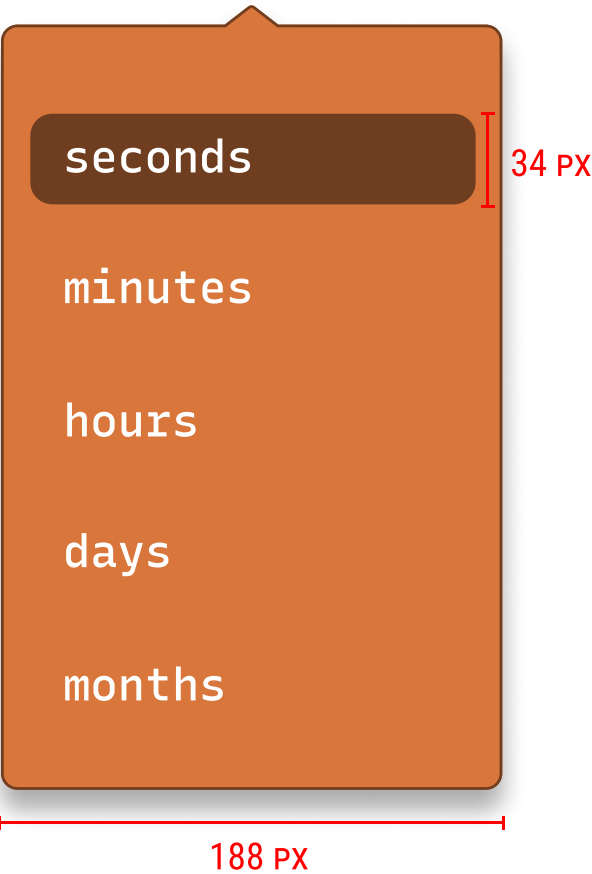
DEFAULT

COLOR: #D9763B
BORDER RADIUS: 4 PX
STROKE: 1 PX #6F3E21

BORDER RADIUS: 6 PX

8 PX
4 PX   4 PX
4 PX   3   minutes   4 PX
4 PX   4 PX

COLOR: #FFFFFF
FONT COLOR: #282828
BORDER RADIUS: 18 PX

FONT FACE: RECURSIVE MONO LINEAR
FONT WEIGHT: MEDIUM
FONT COLOR: #FFFFFF
FONT SIZE: 13 PX

VALUE DROPDOWN

seconds   34 PX

minutes

hours

days

months

188 PX

DROP SHADOW:
#000000 AT 33% OPACITY
X: 0, Y: 6
BLUR: 4

---

5   **NUMBER**
A basic number variable. Accepts integers.

orange   **COLOR**
Select from a dropdown of standard colors.

140 degrees   **TEMPERATURE**
Designate degrees by entering a positive integer.

8 teaspoons   **AMOUNT**
Designate amounts in different measurements
(tsp, tbsp, etc.) Accepts positive integers.

3 minutes   **TIME**
Designate time in seconds, minutes, hours,
and days. Accepts positive integers.

fruity   **SMELL**
Select from a dropdown of various smells
(toasty, minty, citrus, etc.)

bitter   **TASTE**
Select from a dropdown of various tastes
(sweet, sour, salty, etc.)

clockwise   **DIRECTION**
Selection of either clockwise or
counter-clockwise.