

# Text

Texts Examples of texts are:

“Thing 1”

“12. March 2010”

“” (empty text)

Text can contain letters (capital or lower case), numbers, punctuation marks, other symbols, and spaces.

## Blocks

### Creating text

The following block creates the text “Hello” and saves it in the variable named **greeting**:



The block **create text with** combines the value of the variable **greeting** and the new text “world” to create the text “Helloworld.” Please note that there is no space between the two texts, since there was none in the original texts.



To increase the number of text inputs, click the (+) symbol. To remove the last output, click the (-) symbol.

### Changing text

The block **to ... append** adds the entered text to the given variable. In this example, it changes the value for the variable **greeting** from “Hello” to “Hello, there!”:



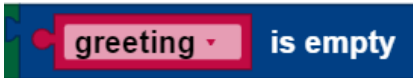
### Text length

The **length of** block counts the number of characters (letters, numbers, etc.) contained in a text. The length of “We are #1!” is 12, and the length of the empty text is 0.



### Check for empty text

This **is empty** block checks whether the entered text is empty (the length is 0). The result is **true** in the first example, and **false** in the second example.

A Scratch 'is empty' block. It consists of a blue header with a small 'C' icon on the left, followed by a text input field containing an empty square, and the text 'is empty'.A Scratch 'is empty' block with a dropdown menu. The dropdown menu is set to 'greeting' and the text 'is empty' is to its right.

## Search for text

These blocks can be used to check whether a text is present in another text, and if so, where. For example, this block checks for the first occurrence of “e” in “Hello,” and the result is 2:

A Scratch 'find first occurrence of text' block. It has a blue header with a 'C' icon, followed by 'in text', a text input field with 'hello', 'find', a dropdown menu set to 'first', 'occurrence of text', and a text input field with 'e'.

This one checks for the last occurrence of “e” in Hello, which is also 2:

A Scratch 'find last occurrence of text' block. It has a blue header with a 'C' icon, followed by 'in text', a text input field with 'hello', 'find', a dropdown menu set to 'last', 'occurrence of text', and a text input field with 'e'.

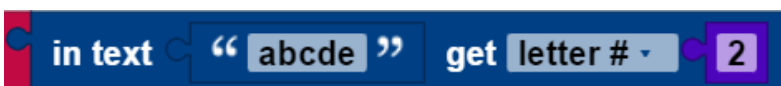
Regardless of whether the first or last occurrence is selected, this block delivers the result 0, since “Hello” does not contain a “z.”

A Scratch 'find first occurrence of text' block. It has a blue header with a 'C' icon, followed by 'in text', a text input field with 'hello', 'find', a dropdown menu set to 'first', 'occurrence of text', and a text input field with 'z'.

## Extracting text

### Extracting a single character

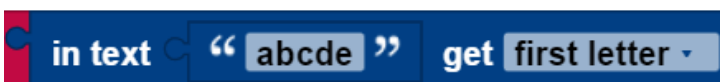
This returns “b,” the second letter in “abcde”:

A Scratch 'get letter #' block. It has a blue header with a 'C' icon, followed by 'in text', a text input field with 'abcde', 'get', a dropdown menu set to 'letter #', and a numeric input field with '2'.

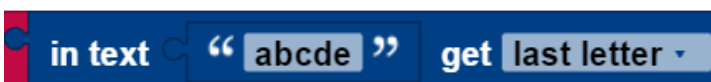
This returns “d,” the next to last letter in “abcde”:

A Scratch 'get letter # from end' block. It has a blue header with a 'C' icon, followed by 'in text', a text input field with 'abcde', 'get', a dropdown menu set to 'letter # from end', and a numeric input field with '2'.

This returns “a,” the first letter in “abcde”:

A Scratch 'get first letter' block. It has a blue header with a 'C' icon, followed by 'in text', a text input field with 'abcde', and 'get first letter'.

This returns “e,” the last letter in “abcde”:

A Scratch 'get last letter' block. It has a blue header with a 'C' icon, followed by 'in text', a text input field with 'abcde', and 'get last letter'.

This contains each of the 5 letters in “abcde” with the same probability:



None of them changes the text from which these results are extracted.

## Extracting a text range

The **in text ... get substring from** block can be used to extract a text range that either starts with:

- letter #
- letter # from end
- first letter

and ends with:

- letter #
- letter # from end
- last letter

In the following example, “abc” is extracted:



## Change text capitalization

This block generates a version of the input text either written in

- UPPER CASE (all letters in caps) or
- lower case (all letters as lower case), or
- Substantive (first letters capitalized, other letters lower case).

The result of the following block is “HELLO”:



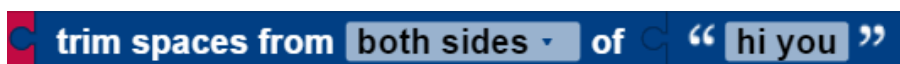
Non-alphabetic characters are not affected. Please note that this block does not work on text in languages without capital and lower case letters, like Chinese.

## Trimming (removing) spaces

The following block removes spaces, depending on the settings in the drop down menu (small triangle):

- at the start of the text
- at the end of the text
- on both sides of the text

The result of the following block is “Hi you.”



Spaces in the middle of the text are not affected.

## Print text

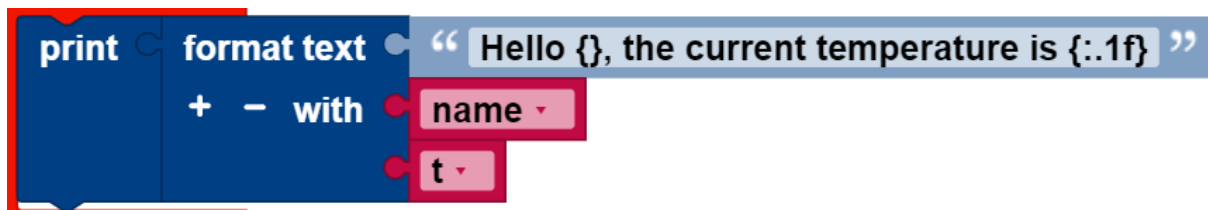
The **print** block causes the input value in the console window to be printed:



It is never sent to the printer, although the name might seem to indicate this.

## Output text with formatting

You can use the **formatted text** block to output texts with formatted variable content. All place holders {} in the text are replaced with the content of the variables appended after the text. Formatting can be entered into the brackets. The formatting {:.1f}, for instance, outputs only the first decimal place in the variable **t**.



---

Revision #2

Created 21 February 2022 15:50:52 by Admin

Updated 9 January 2023 10:40:20 by Alexander Steiger