**Help file – Twine 2 (+SugarCane)**

Philip Sutton 27 January 2022 / 10:05 PM / Version 14

**Contents**

[Browser support 2](#_Toc94213539)

[Location of Twine 2 windows installer file 2](#_Toc94213540)

[Code repository for Twine 2 2](#_Toc94213541)

[A catalog of Twine story and proofing formats 2](#_Toc94213542)

[Story format repositories for Twine 2 2](#_Toc94213543)

[Guides to Story formats for Twine 2 3](#_Toc94213544)

[Installing the latest version of SugarCube for Twine 2 & repository 3](#_Toc94213545)

[Proofing formats for Twine 2 3](#_Toc94213546)

[Information about Twine (all versions) 4](#_Toc94213547)

[CSS & html guides/templates for Twine 4](#_Toc94213548)

[Additional Twine / SugarCube code resources 4](#_Toc94213549)

[General guides for Twine 2 4](#_Toc94213550)

[Guides for Web languages 4](#_Toc94213551)

[Special passages that are automatically displayed in the final HTML 5](#_Toc94213552)

[Special passages that are NOT displayed in the final HTML 5](#_Toc94213553)

[Special Twine 2 passages NOT used in Twine 2 6](#_Toc94213554)

[Special tags with predefined roles 6](#_Toc94213555)

[Special tags NOT used any more 6](#_Toc94213556)

[Preventing the passage of ‘private’ information into the final .html file – a work around 7](#_Toc94213557)

[Formatting text / Markup 7](#_Toc94213558)

[Links 7](#_Toc94213559)

[Heading format 7](#_Toc94213560)

[Basic formatting https://www.motoslave.net/sugarcube/2/docs/#markup-style 8](#_Toc94213561)

[Characters/ Symbols 8](#_Toc94213562)

[Text colour 8](#_Toc94213563)

[List format 8](#_Toc94213564)

[List format 9](#_Toc94213565)

[Blockquote 9](#_Toc94213566)

[Special formatting codes 9](#_Toc94213567)

[Code within-a passage 9](#_Toc94213568)

[Non-active emulation text 10](#_Toc94213569)

[Verbatim text in TwineScript and html 10](#_Toc94213570)

[Commenting out – does nor appear in the visible html display – but is passed into the HTML file as a comment 11](#_Toc94213571)

[Supported variable types 11](#_Toc94213572)

[Inbuilt Twine 2 + SugarCane MACROS 13](#_Toc94213573)

[Functions 16](#_Toc94213574)

[Methodss 18](#_Toc94213575)

[Expressions 18](#_Toc94213576)

[TwineScript conditional (evaluation) operators 18](#_Toc94213577)

[JavaScript conditional (evaluation) operators 19](#_Toc94213578)

[TwineScript assignment operators 20](#_Toc94213579)

[Transferring data between Twine projects 20](#_Toc94213580)

[SugarCube documentation – (on the SugarCube site) 20](#_Toc94213581)

[Twine 2 advice from the Twine Cookbook 22](#_Toc94213582)

[Merging Twine 2 files 25](#_Toc94213583)

[Developer and resource curator contact details 25](#_Toc94213584)

[Migrating Twine 1 stories/documents to Twine 2 26](#_Toc94213585)

[Installing and running Tweego 27](#_Toc94213586)

[Useful things in Twine 1 that are NOT available in Twine 2/SugaCube 27](#_Toc94213587)

[Sending people links to specific passages in a Twine .html file The hashbang method 27](#_Toc94213588)

[Special passage: StoryIncludes 27](#_Toc94213589)

[Special tags: Twine.private 27](#_Toc94213590)

[(the rest??) 27](#_Toc94213591)

[Twine users/related tools that have use-cases more like what RSTI is trying to do 28](#_Toc94213592)

[Branching scenarios in training/elearning, story-based teaching 28](#_Toc94213593)

[Building databases in twine 29](#_Toc94213594)

[Related tools 29](#_Toc94213595)

# Browser support

[https://twinery.org/cookbook/twine1/editor/**browser\_support**.html](https://twinery.org/cookbook/twine1/editor/browser_support.html)

# Location of Twine 2 windows installer file

Twine 2 - v2.3.15 download link:

<https://twinery.org/>

There might be a new version at:

[https://github.com/klembot/twinejs/releases](https://github.com/klembot/twinejs)

As of Jan 2022, Twine 2.4 is in development (with a beta available from the Twine 2 repository.

# Code repository for Twine 2

<https://github.com/klembot/twinejs>

# A catalog of Twine story and proofing formats

[http://mcdemarco.net/tools/hyperfic/twine/**catalog**/](http://mcdemarco.net/tools/hyperfic/twine/catalog/)

# Story format repositories for Twine 2

[https://github.com/tmedwards/](https://github.com/tmedwards/sugarcube-2)**[sugarcube](https://github.com/tmedwards/sugarcube-2)**[-2](https://github.com/tmedwards/sugarcube-2)

[https://github.com/klembot/**chapbook**](https://github.com/klembot/chapbook)

[https://foss.heptapod.net/games/**harlowe**](https://foss.heptapod.net/games/harlowe)

[https://github.com/videlais/**snowman**](https://github.com/videlais/snowman)

# Guides to Story formats for Twine 2

**Sugarcube 2** guide  
[http://www.motoslave.net/sugarcube/2/](http://www.motoslave.net/sugarcube/2/docs/)**[docs](http://www.motoslave.net/sugarcube/2/docs/)**[/](http://www.motoslave.net/sugarcube/2/docs/)

<http://www.motoslave.net/sugarcube/2/>

**Chapbook** guide:  
[https://klembot.github.io/**chapbook**/guide/](https://klembot.github.io/chapbook/guide/)

**Harlowe** guide:  
<https://twine2.neocities.org>

**Snowman 1** guide:  
[https://videlais.github.io/**snowman**/1/](https://videlais.github.io/snowman/1/)

**Snowman 2** guide:  
[https://videlais.github.io/**snowman**/2/](https://videlais.github.io/snowman/2/)

# Installing the latest version of SugarCube for Twine 2 & repository

***Instructions:***

From: [http://twinery.org/forum/discussion/7903/**how-can-i-install-sugarcube-2-x-as-a-format**](http://twinery.org/forum/discussion/7903/how-can-i-install-sugarcube-2-x-as-a-format)

+ Download the current local/offline version of SugarCube 2.x for Twine 2.

[https://github.com/tmedwards/sugarcube-2/**releases**/](https://github.com/tmedwards/sugarcube-2/releases/)

+ Extract the archive to a safe location on your computer and take note of the path to it. Make sure to keep the files together if you move them out of the included directory.

+ Launch Twine 2.

+ Click on the Formats link in the Twine 2 sidebar.

+ In the dialog that opens, click on the Add a New Format tab.

+ Finally, paste a file URL to the **format.js** file, based on the path from step #2, into the textbox and click the +Add button (see below for examples).

<https://github.com/tmedwards/sugarcube-2>

# Proofing formats for Twine 2

**Illume**

<http://www.maximumverbosity.net/twine/Illume/>

<http://www.maximumverbosity.net/twine/Illume/format.js>

[https://www.christytuckerlearning.com**/illume-proofing-format-for-twine**/](https://www.christytuckerlearning.com/illume-proofing-format-for-twine/)

**Poof**

[https://github.com/ChapelR/**poof**](https://github.com/ChapelR/poof)

<https://cdn.jsdelivr.net/gh/chapelr/poof@latest/docs/use/format.js>

**DotGraph**

[http://mcdemarco.net/tools/scree/**dotgraph**/](http://mcdemarco.net/tools/scree/dotgraph/)

# Information about Twine (all versions)

Information about Twine (all versions) has moved from the Twinery Wiki to the Twine Cookbook.

<https://twinery.org/cookbook/>

[https://twinelab.net/](https://twinelab.net/twine-resources)**[twine-resources](https://twinelab.net/twine-resources)**

[https://github.com/ChapelR/twine-](https://github.com/ChapelR/twine-resources)**[resource](https://github.com/ChapelR/twine-resources)**[s](https://github.com/ChapelR/twine-resources) (the Twine Resources repository)

<https://intfiction.org/c/authoring/twine/46> (active – read/write)

[https://**discord**app.com/invite/n5dJvPp](https://discordapp.com/invite/n5dJvPp)

[https://www.**reddit**.com/r/twinegames/](https://www.reddit.com/r/twinegames/) The Twine subreddit

<http://twinery.org/forum> (read only since 2017)

<https://twinery.org/questions/> (read only since 2019)

# CSS & html guides/templates for Twine

<https://gcbaccaris.itch.io/grimoire-one>

[https://itch.io/c/1625036/**coding-templates-resources**](https://itch.io/c/1625036/coding-templates-resources)

[https://www.w3schools.com/colors/](https://www.w3schools.com/colors/colors_names.asp)**[colors\_names](https://www.w3schools.com/colors/colors_names.asp)**[.asp](https://www.w3schools.com/colors/colors_names.asp)

# Additional Twine / SugarCube code resources

**Chapel's Custom Macro Collection**

[https://twinelab.net/**custom-macros-for-sugarcube-2**/#/](https://twinelab.net/custom-macros-for-sugarcube-2/#/)

**HiEv**

<https://qjzhvmqlzvoo5lqnrvuhmg-on.drv.tw/UInv/Sample_Code.html#Main%20Menu>

(Includes code for linking to passages externally using a url)

**SugarCube author (Thomas Edwards) add-on code**

<http://www.motoslave.net/sugarcube/2/#downloads>

**cyrusfirheir**

<https://github.com/cyrusfirheir/cycy-wrote-custom-macros/tree/master/live-update>

**A list of sources for additional resources:**

<https://twinelab.net/twine-resources/#/?id=sugarcube-libraries>

# General guides for Twine 2

[https://www.adamhammond.com/](https://www.adamhammond.com/twineguide/)**[twineguide](https://www.adamhammond.com/twineguide/)**[/](https://www.adamhammond.com/twineguide/)

# Guides for Web languages

[https://developer.**mozilla**.org/en-US/docs/Web](https://developer.mozilla.org/en-US/docs/Web)

[https://www.**w3schools**.com](https://www.w3schools.com)

# Special passages that are automatically displayed in the final HTML

|  |  |
| --- | --- |
| Passage name | Explanation |
| “Start” | The first passage to display (in Twine 2 this passage can have **any** name – Twine 2 allows the developer to assign the “start” role to any passage. |
| StoryAuthor | Text in this passage inserts the story author’s name in the side bar (menu). Used to populate the authorial byline area in the menu (element ID: story-author). |
| StoryBanner | Can be used to include a graphic or logo at the top of the menu |
| StoryCaption | May be, and often is, used to add additional story UI elements and content to the menu. |
| StoryDisplayTitle | Sets the story's display title in the browser's titlebar and the menu (element ID: story-title). If omitted, the story title will be used instead. |
| StorySubtitle | Sets the story's subtitle in the menu (element ID: story-subtitle). |
| StoryMenu | The story menu only displays links—specifically, anything that creates an anchor element (<a>). While it renders content just as any other passage does, instead of displaying the rendered output as-is, it sifts through the output and builds its menu from the generated links contained therein. |
| StoryShare | Used to populate the contents of the Share dialog. Intended for social media links. NOTE: The Share dialog only displays links—specifically, anything that creates an anchor element (<a>). While it renders content just as any other passage does, instead of displaying the rendered output as-is, it sifts through the output and builds its contents from the generated links contained within. |
| StoryInterface | Used to replace SugarCube's default menu. Its contents are treated as raw HTML markup—i.e., none of SugarCube's special HTML processing is performed. It must contain, at least, an element with the ID passages that will be the main passage display area.  Additional elements, aside from the #passages element, may include either the data-init-passage or data-passage content attribute, whose value is the name of the passage used to populate the element—the passage will be processed as normal, meaning that markup and macros will work as expected. The data-init-passage attribute causes the element to be updated once at initialization, while the data-passage attribute causes the element to be updated upon each passage navigation. See:  <https://www.motoslave.net/sugarcube/2/docs/#special-passage-storyinterface> for links to more information in how to set up the alternative user interface. |
| PassageHeader | Prepended to each rendered passage.  Roughly equivalent to the :passagestart event. |
| PassageFooter | Appended to each rendered passage.  Roughly equivalent to the :passagerender event. |

[https://www.motoslave.net/sugarcube/2/docs/#**special-names**](https://www.motoslave.net/sugarcube/2/docs/#special-names)

[https://twinery.org/cookbook/sidebar\_left/sugarcube/sugarcube\_**sidebar\_left**.html](https://twinery.org/cookbook/sidebar_left/sugarcube/sugarcube_sidebar_left.html)

# Special passages that are NOT displayed in the final HTML

|  |  |
| --- | --- |
| Passage name | Explanation |
| StoryInit | Used for pre-story-start initialization tasks, like variable initialization (happens at the beginning of story initialization). Generates no visible output. |
| PassageReady | Used for pre-passage-display tasks, like redoing dynamic changes (happens before the rendering of each passage). Generates no visible output.  Roughly equivalent to the :passagestart event. |
| PassageDone | Used for post-passage-display tasks, like redoing dynamic changes (happens after the rendering and display of each passage). Generates no output visible.  Roughly equivalent to the :passagedisplay event. |
| StorySettings | WARNING: Not used by SugarCube. The Config API serves the same basic purpose. |

[https://www.motoslave.net/sugarcube/2/docs/#**special-names**](https://www.motoslave.net/sugarcube/2/docs/#special-names)

[https://twinery.org/cookbook/sidebar\_left/sugarcube/sugarcube\_**sidebar\_left**.html](https://twinery.org/cookbook/sidebar_left/sugarcube/sugarcube_sidebar_left.html)

# Special Twine 2 passages NOT used in Twine 2

|  |  |
| --- | --- |
| Passage name | Explanation |
| StoryTitle | Replaced by StoryDisplayTitle |
| StoryIncludes | Include other paths/URLs for .tws or .twee files to include in the build of this file |

# Special tags with predefined roles

|  |  |
| --- | --- |
| **Special tags**  (case sensitive) | **Explanation** |
| bookmark | Registers the passage into the Jump To menu. |
| nobr | Causes leading/trailing newlines to be removed and all remaining sequences of newlines to be replaced with single spaces before the passage is rendered. Equivalent to wrapping the entire passage in a <<nobr>> macro. See the Config.passages.nobr setting for a way to apply the same processing to all passages at once. |
| init | Registers the passage as an initialization passage. Used for pre-story-start initialization tasks, like variable initialization (happens at the beginning of story initialization). Generates no output. |
| Twine.audio | Registers the passage as an audio passage. See Guide: Media Passages for more information. |
| Twine.image | Registers the passage as an image passage. See Guide: Media Passages for more information. |
| Twine.video | Registers the passage as a video passage. See Guide: Media Passages for more information. |
| Twine.vtt | Registers the passage as a VTT passage. See Guide: Media Passages for more information. |
| widget | Registers the passage as <<widget>> macro definitions, which are loaded during startup. |

# Special tags NOT used any more

|  |  |
| --- | --- |
| **Special tags**  (case sensitive) | Explanation |
| Twine.private | Passages with this tag are **not** passed to the final HTML file. |
| annotation | Large area display in the story map, and passages with this tag are **not** passed to the final HTML file. |

Passages tagged with Twine.private can be stripped out of the .html file if the Twine 2 published file is run through Tweego to produce a new .html file – because Tweego recognises the Twine.private tag in the way it works in Twine 1. See the instructions near the end of this file.

# Preventing the passage of ‘private’ information into the final .html file – a work around

It should be possible to strip information in passages tagged with Twine.private by passing the Twine 2 published HTML through Tweego, since it supports the `Twine.private` tag.

eg., `tweego -o final.html twine2\_published.html

# Formatting text / Markup

[http://www.motoslave.net/sugarcube/2/docs/#](http://www.motoslave.net/sugarcube/2/docs/#markup)**[markup](http://www.motoslave.net/sugarcube/2/docs/#markup)**

|  |  |
| --- | --- |
| **Links** | |
| **Markup** | **Output** |
| SugarCube's link markup consists of a required **Link** component and optional **Text** and **Setter** components. The Link and Text components may be either plain text or any valid TwineScript expression, which will be evaluated early—i.e., when the link is initially processed. The Setter component, which only works with passage links, must be a valid TwineScript expression, of the <<set>> macro variety, which will be evaluated late—i.e., when the link is clicked on.  For the following examples assume: $go is "Grocery" and $show is "Go buy milk" | |
| [[Link]] | [[Grocery]]  [[$go]] |
| [[Text|Link]] | [[Go buy milk|Grocery]]  [[$show|$go]] |
| [[Link][Setter]] | [[Grocery][$bought to "milk"]]  [[$go][$bought to "milk"]] |
| [[Text|Link][Setter]] | [[Go buy milk|Grocery][$bought to "milk"]]  [[$show|$go][$bought to "milk"]] |

See <<link>> macros in the section on macros ie. “Inbuilt Twine 2 + SugarCane MACROS”.

|  |  |
| --- | --- |
| **Heading format** | |
| **Markup** | **Output** |
| ! | **Level 1 Heading** |
| !! | **Level 2 Heading** |
| !!! | **Level 3 Heading** |
| !!!! | **Level 4 Heading** |
| !!!!! | **Level 5 Heading** |
| !!!!!! | **Level 6 Heading** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Basic formatting** [https://www.motoslave.net/sugarcube/2/docs/#**markup-style**](https://www.motoslave.net/sugarcube/2/docs/#markup-style) | | | |
| **Type** | **Markup** | **Rendered as html** | **Output** |
| **Bold** | ''sample text''  (ie. two single quotation marks at each end) | <strong>sample text</strong> | **sample text** |
| **Italics** | //sample text// | <em>sample text</em> | *sample text* |
| **Underline** | \_\_sample text\_\_ | <u>sample text</u> | sample text |
| **Strikethrough** | ==sample text== | <s>sample text</s> | ~~sample text~~ |
| **Superscript** | sample ^^text^^ | sample<sup> text</sup> | sample text |
| **Subscript** | sample ~~text~~ | sample<sub> text</sub> | sample text |

| **Characters/ Symbols** | |
| --- | --- |
| **Description** | **Code** |
| double dash – | &ndash; |
| triple dash — | &mdash; |
| Bullet code | &#8226; |
| Bullet code | &bull; |
| Size controlled bullet, ready to paste | <font size=3>&#8226;</font> |
| < symbol | &lt; |
| > symbol | &gt; |
| [ symbol | &#91; |
| ] symbol | &#93; |
| **|** (vertical bar) | &#124; |
| Non-breaking space | &nbsp; |
| \* asterisk | &#42; |
| ∗ Asterisk not recognised by code as an asterisk!! (called a ‘lowast’ – low asterisk?) | &#8727; &lowast; |
| Ready to paste degree symbol º | &#176; |
| Double chevrons (that don’t trigger macro behaviour in Twine) | « » |
| Angle brackets (that don’t trigger macro behaviour in Twine) | ≪ ≫ |

| **Text colour** | |
| --- | --- |
| **Description** | **Code** |
| Xxxxxxx | <font color=red>Xxxxxxx</font>  Colours that work: yellow, cyan, red, blue, white (plus?) |

| **List format** | | | |
| --- | --- | --- | --- |
| **Type** | **Syntax & Example** | **Rendered As** | **Displays As (roughly)** |
| **Unordered** | \* A list item \* Another list item  \*\* **Nested** one level down  \*\*\* Nested two levels  (Unordered lists have only 3 levels of unique bullets. | <ul> <li>A list item</li> <li>Another list item</li> </ul> | * A list item * Another list item |
| **Ordered** | # A list item # Another list item  ##  ###  (numbered lists seem to be nested endlessly) | <ol> <li>A list item</li> <li>Another list item</li> </ol> | 1. A list item 2. Another list item |

| **List format** | | | |
| --- | --- | --- | --- |
| **Type** | **Syntax & Example** | **Rendered As** | **Displays As (roughly)** |
| **Unordered** | \* A list item \* Another list item  \*\* **Nested** one level down  \*\*\* Nested two levels  (Unordered lists have only 3 levels of unique bullets. | <ul> <li>A list item</li> <li>Another list item</li> </ul> | * A list item * Another list item |

| **Blockquote** | | |
| --- | --- | --- |
| **Syntax & Example** | **Rendered As** | **Displays As (roughly)** |
| >Line 1  >Line 2  >>Nested 1  >>Nested 2 | <blockquote>Line 1<br>  Line 2<br>  <blockquote>Nested 1<br>  Nested 2<br>  </blockquote></blockquote> | Line 1 Line 2  Nested 1 Nested 2 |

| **Special formatting codes** | | |
| --- | --- | --- |
| **Type** | **Syntax** | **Rendered As** |
| **Inline** | ---- | Full width horizontal line |
| **Non-breaking line** | The rain in Spain falls¬  \ mainly on the plain. | The rain in Spain falls mainly on the plain. |
|  | The various no-break features—[<<nobr>> macro](https://www.motoslave.net/sugarcube/2/docs/#macros-macro-nobr), [nobr special tag](https://www.motoslave.net/sugarcube/2/docs/#special-tag-nobr), and [Config.passages.nobr setting](https://www.motoslave.net/sugarcube/2/docs/#config-api-property-passages-nobr)—all perform a similar, though slightly different, function. | |

| **Code within-a passage** | | |
| --- | --- | --- |
| **Type** | **Syntax & Example** | **Rendered As** |
| **Inline** | {{{Code}}} | Code |
| **Block** | <pre><code>Code  More code  Even more code  </code></pre> | Code  More code  Even more code |

**Non-active emulation text**

(Using a character set that is not recognised by Twine as control text.)

&#8727; &lowast; ∗ Asterisk not recognised by code as an asterisk!! (called a ‘lowast’ – low asterisk?)

〚Link-text|http׃⁄⁄url.url〛

«actions»

«back»

«choice»

«print»

«return»

«set»

«textarea»

«update»

≪actions≫

≪back≫

≪display≫

≪print≫

≪return≫

≪set≫

≪textarea≫

≪update≫

**The <<Back>> macro**

&lt;&lt; back &gt;&gt;

<IMG SRC="http://www.green-innovations.asn.au/Twine/Back.gif">

**The <<Choice>> macro**

&lt;&lt; choice &gt;&gt;

<IMG SRC="http://www.green-innovations.asn.au/Twine/Choice-macro.gif">

**The <<Display>> macro**

&lt;&lt; display &gt;&gt;

<IMG SRC="http://www.green-innovations.asn.au/Twine/Display-macro.gif">

**Warning**: These methods, below, for making text verbatim don’t seem to prevent the text from having active effect in all cases. Not sure what the failure pattern is. Combining triple quotes with chevrons instead of angle brackets seems to render everything literal and inactive.

| **Verbatim text in TwineScript and html** | | |
| --- | --- | --- |
| **Type** | **Syntax & Example** | **Displays As (roughly)** |
| **Triple double quotes** | """No //format//""" | No //format// |
| **<nowiki> tag** | <nowiki>No //format//</nowiki> | No //format// |
| <**html**><**/html**> |  | |
| A set of opening and closing <html> tags—i.e., <html></html>—defines the verbatim HTML markup. The verbatim HTML markup disables processing of all markup contained within—both SugarCube and HTML—passing its contents directly into the output as HTML markup for the browser. Thus, you should only use plain HTML markup within the verbatim markup—meaning using none of SugarCube's special HTML attributes or directives.  The verbatim text markup disables processing of all markup contained within—both SugarCube and HTML—passing its contents directly into the output as plain text. | | |

| **Commenting out – does nor appear in the visible html display – but is passed into the HTML file as a comment** |
| --- |
| **SugarCube passage text** |
| **/\*** Singe line comment. **\*/** |
| **/\*** Multi-line  comment. **\*/** |
| **/%** Single line or multi-line **%/** |
| **<!**-- Single line or multi-line comment. --> |
| **Javascript** |
| **//** This is a single line Javascript comment – anything following the operator to the end of he line..  /\* This is a multi-line  Javascript comment \*/ |
| **CSS** |
| **/\*** Single line or multi-line CSS comment. **\*/** |

[https://www.motoslave.net/sugarcube/2/docs/#**markup-comment**](https://www.motoslave.net/sugarcube/2/docs/#markup-comment)

I haven’t been able to find way to stop comment text being included in the published file or to make a passage private.  (Passages tagged with Twine.private can be stripped out of the .html file if the Twine 2 published file is run through Tweego to produce a new .html file – because Tweego recognises the Twine.private tag rin the way it works in Twine 1.)

# Supported variable types

**Primitives**

Booleans—e.g., true & false

Numbers—e.g., 42, 3.14, & -17.01

Strings—e.g., "I like pie" & 'You like pie'

null

undefined

**Objects**

Array

Date

Map

Set

Generic objects

|  |  |  |
| --- | --- | --- |
| **Notation types** | **Syntax** | **Example** |
| Simple variable | $variable | $name |
| Property access, dot notation | $variable.property | $thing.name |
| Index/property access, square bracket notation | $variable[numericIndex]  $variable["property"]  $variable['property']  $variable[$indexOrPropertyVariable] | $thing[0]  $thing["name"]  $thing['name']  $thing[$member] |

**Some array use cases :**

***Create empty array.***

<<set $*array* to []>>

***Set array to values***

This creates or resets an array with two items with the value 0 each.

<<set $*array* to [0,0]>>

***Changing specific array values***

This changes the first array member to the value 1.

<<set $*array* [0] to 1>>

***Adding items to an array*** *(at the end)*

This .push method adds an item to the end of an array.

<<set $*array*.push(“cat”)>>

***Deleting all items of a type from an array***

This .delete method removes all instances of one or more item types.

<<run $*array*.delete(4,6)>>

***Deleting items at defined index locations of an array***

This .delete method removes all instances of one or more item types.

<<run $*array*.delete(4,6)>>

***To find the first instance of an item in an array***

If the item is not in the array, $index will be set to -1, otherwise it will be set to the index value if the first instance of the item, counting from the left.

<<set $index = $array.indexOf(“cat”)>>

[https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global\_Objects/Array/**indexOf**](https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array/indexOf)

***Creating a new array using Joey’s .without() method***

<<set $newArray = $initialArray.without(“cat”,”horse”)>>

# Inbuilt Twine 2 + SugarCane MACROS

|  |  |
| --- | --- |
| **Variables Macros** | <https://www.motoslave.net/sugarcube/2/docs/#macros-variables> |
| **<<capture>>** | <http://www.motoslave.net/sugarcube/2/docs/#macros-macro-capture> |
| **<<set>>** | <<set expression>>  Sets story $variables and temporary \_variables based on the given expression.  → Using the TwineScript "to" operator  <<set $cheese to "a nice, sharp cheddar">> → Assigns "a nice, sharp cheddar" to story variable $cheese  <<set $chestEmpty to true>> → Assigns boolean true to story variable $chestEmpty  <<set $gold to $gold + 5>> → Adds 5 to the value of story variable $gold  <<set \_counter to \_counter + 1>> → Adds 1 to the value of temporary variable \_counter  → Using standard JavaScript operators  <<set $cheese = "a nice, sharp cheddar">> → Assigns "a nice, sharp cheddar" to story variable $cheese  <<set $chestEmpty = true>> → Assigns boolean true to story variable $chestEmpty  <<set $gold += 5>> → Adds 5 to the value of story variable $gold  <<set \_counter += 1>> → Adds 1 to the value of temporary variable \_counter  See the list of “See the list of “TwineScript assignment operators”  <http://www.motoslave.net/sugarcube/2/docs/#macros-macro-set> |
| **<<unset>>** | <<unset variableList>>  Unsets story $variables and temporary \_variables.  eg.  <<unset $cheese, $chestEmpty, $gold>>  <<unset \_someTempVar>>  [http://www.motoslave.net/sugarcube/2/docs/#macros-macro-**unset**](http://www.motoslave.net/sugarcube/2/docs/#macros-macro-unset) |
| **Scripting Macros** | <https://www.motoslave.net/sugarcube/2/docs/#macros-scripting> |
| **<<run>>** | [http://www.motoslave.net/sugarcube/2/docs/#macros-macro-**run**](http://www.motoslave.net/sugarcube/2/docs/#macros-macro-run) |
| **<<script>>** | [http://www.motoslave.net/sugarcube/2/docs/#macros-macro-**script**](http://www.motoslave.net/sugarcube/2/docs/#macros-macro-script) |
| **Display Macros** | <https://www.motoslave.net/sugarcube/2/docs/#macros-display> |
| **<<=>>** | <<= expression>>  Outputs a string representation of the result of the given expression. This macro is an alias for <<print>>. |
| **<<->>** | <<- expression>>  Outputs a string representation of the result of the given expression. This macro is functionally identical to <<print>>, save that it also encodes HTML special characters in the output. |
| **<<include>>** | <<include [[passageName]] [elementName]>>  <<include passageName [elementName]>>  <<include linkMarkup [elementName]>>  <<include "Go West">> → Include the passage "Go West"  <<include [[Go West]]>> → Include the passage "Go West"  <<include "Go West" "div">> → Include the passage "Go West", wrapping it within a <div>  <<include [[Go West]] "div">> → Include the passage "Go West", wrapping it within a <div>  Replaces Twine 1 <<display>> |
| **<<nobr>>** | <<nobr>> <</nobr>>  Non-breaking block |
| **<<print>>** | <<print expression>>  Outputs a string representation of the result of the given expression. |
| **<<silently>>** | [http://www.motoslave.net/sugarcube/2/docs/#macros-macro-**silently**](http://www.motoslave.net/sugarcube/2/docs/#macros-macro-silently) |
| **<<type>>** |  |
| **Control Macros** | <https://www.motoslave.net/sugarcube/2/docs/#macros-control> |
| **<<if>>** | <<if conditional>> … [<<elseif conditional>> …] [<<else>> …] <</if>>  See the list of ***English-based*** “TwineScript conditional (evaluation) operators” below or see here:.  [http://www.motoslave.net/sugarcube/2/docs/#macros-macro-**if**](http://www.motoslave.net/sugarcube/2/docs/#macros-macro-if)  See the list of ***mathematical*** “JavaScript conditional (evaluation) operators” below or see here:.  [http://www.motoslave.net/sugarcube/2/docs/#macros-macro-**if**](http://www.motoslave.net/sugarcube/2/docs/#macros-macro-if) |
| **<<for>>** |  |
| **<<break>>** |  |
| **<<continue>>** |  |
| **<<switch>>** |  |
| **Interactive Macros** | <https://www.motoslave.net/sugarcube/2/docs/#macros-interactive> |
| **<<button>>** | <<button linkText [passageName]>> … <</button>>  <<button linkMarkup>> … <</button>>  <<button imageMarkup>> … <</button>>  Creates a button that silently executes its contents when clicked, optionally forwarding the player to another passage. May be called with either the link text and passage name as separate arguments, a link markup, or an image markup.  [http://www.motoslave.net/sugarcube/2/docs/#macros-macro-**button**](http://www.motoslave.net/sugarcube/2/docs/#macros-macro-button) |
| **<<checkbox>>** |  |
| **<<cycle>>** |  |
| **<<link>>** | <<link linkText [passageName]>> … <</link>>  <<link linkMarkup>> … <</link>>  <<link imageMarkup>> … <</link>>  Creates a link that silently executes its contents when clicked, optionally forwarding the player to another passage. May be called with either the link text and passage name as separate arguments, a link markup, or an image markup.  → Without forwarding: a very basic statistic setting example  Strength: <<set $pcStr to 10>><span id="stats-str"><<print $pcStr>></span> \  ( <<link "[+]">><<set $pcStr++>><<replace "#stats-str">><<print $pcStr>><</replace>><</link>> \  | <<link "[-]">><<set $pcStr-->><<replace "#stats-str">><<print $pcStr>><</replace>><</link>> )  → With forwarding: execute a script, then go to the specified passage  <<link "Onward, Reginald!" "On with the story">><<script>>/\* (code) \*/<</script>><</link>>  <<link [[Onward, Reginald!|On with the story]]>><<script>>/\* (code) \*/<</script>><</link>>  <<link [img[onward.jpg][On with the story]]>><<script>>/\* (code) \*/<</script>><</link>> |
| **<<linkappend>>** |  |
| **<<linkprepend>>** |  |
| **<<linkreplace>>** |  |
| **<<listbox>>** |  |
| **<<numberbox>>** |  |
| **<<radiobutton>>** |  |
| **<<textarea>>** |  |
| **<<textbox>>** |  |
| **Links Macros** | <https://www.motoslave.net/sugarcube/2/docs/#macros-links> |
| **<<actions>>** |  |
| **<<choice>>** |  |
| **<<return>>** |  |
| **<<back>>** |  |
| **DOM Macros** | <https://www.motoslave.net/sugarcube/2/docs/#macros-dom> |
| **<<addclass>>** |  |
| **<<append>>** |  |
| **<<copy>>** |  |
| **<<prepend>>** |  |
| **<<remove>>** |  |
| **<<removeclass>>** |  |
| **<<replace>>** |  |
| **<<toggleclass>>** |  |
| **Audio Macros** | <https://www.motoslave.net/sugarcube/2/docs/#macros-audio> |
| **<<audio>>** |  |
| **<<cacheaudio>>** |  |
| **<<createaudiogroup>>** |  |
| **<<createplaylist>>** |  |
| **<<masteraudio>>** |  |
| **<<playlist>>** |  |
| **<<removeaudiogroup>>** |  |
| **<<removeplaylist>>** |  |
| **<<waitforaudio>>** |  |
| **Miscellaneous Macros** | <https://www.motoslave.net/sugarcube/2/docs/#macros-miscellaneous> |
| <<**done**>> |  |
| <<**goto**>> |  |
| <<**repeat**>> |  |
| <<**stop**>> |  |
| <<**timed**>> |  |
| <<**widget**>> |  |

|  |  |  |
| --- | --- | --- |
| **Deprecated Macros –**These macros currently work but should be replaced | | |
| **Old** | **Replaced by:** | **Link** |
| **<<display>>** | <<**include**>> | <https://www.motoslave.net/sugarcube/2/docs/#macros-macro-display> |
| **<<forget>>** | **forget**() | <https://www.motoslave.net/sugarcube/2/docs/#functions-function-forget> |
|  | <<**forget** $variable>>  << forget $variable =numerical expression>>  << forget $variable ="text string">> | |
| **<<remember>>** | **memorize**() or  **recall**() | <https://www.motoslave.net/sugarcube/2/docs/#functions-function-memorize>  <https://www.motoslave.net/sugarcube/2/docs/#functions-function-recall> |
|  | <<**remember** $variable>>  <<remember $variable =numerical expression>>  <<remember $variable ="text string">> | |
| **<<click>>** |  |  |
| **<<setplaylist>>** |  |  |

|  |  |
| --- | --- |
| **Twine 1 macros that have been dropped or replaced** | |
| **Twine 1 macros** | **Relationship to Twine 2-SugarCube macros** |
| <<**display**>> | Replaced by <<**include**>> |
| <<**forget** >> | Replaced by the **forget**() function |
| <<**$variable**>> |  |
| <<**PassageName**>> |  |
| <<**radio**>> | Replaced by <<**radiobutton**>> |
| <<**remember**>> | Replaced by the **memorize**() or **recall**()the functions. |
| <<set $thisYear to new Date().getFullYear()>> |  |
| <<**textinput**>> | Replaced by <<**textarea**>> and <<**textbox**>> |

# Functions

<https://www.motoslave.net/sugarcube/2/docs/#functions>

| **Function** | **Advice** |
| --- | --- |
| Any Javascript built-in function is available to Twine | |
| **memorize()** | memorize(key, value)  Sets the specified key and value within the story metadata store, which causes them to persist over story and browser restarts. To update the value associated with a key, simply set it again.  Parameters:   * key: (string) The key that should be set. * value: (any) The value to set.   Examples:  <<run memorize('$TestVariable', 29)>>  <<run memorize('$TestVariable', ‘horse’)>>  // Sets 'achievements', with the given value, in the metadata store.  <<run memorize('achievements', { ateYellowSnow : true })>>  // Sets 'ngplus', with the given value, in the metadata store.  <<run memorize('ngplus', true)>>  [http://www.motoslave.net/sugarcube/2/docs/#functions-function-**memorize**](http://www.motoslave.net/sugarcube/2/docs/#functions-function-memorize) |
| **recall()** | recall(key [, defaultValue]) → any  Returns the value associated with the specified key from the story metadata store or, if no such key exists, the specified default value, if any.  Parameters:   * key: (string) The key whose value should be returned. * defaultValue: (optional, any) The value to return if the key doesn't exist.   Examples:  <<set $TestVariable to recall('$TestVariable ')>>  // Set setup.achievements to the 'achievements' metadata or an empty generic object.  <<set setup.achievements to recall('achievements', {})>>  // Set setup.ngplus to the 'ngplus' metadata, with no default.  <<set setup.ngplus to recall('ngplus')>>  [http://www.motoslave.net/sugarcube/2/docs/#functions-function-**recall**](http://www.motoslave.net/sugarcube/2/docs/#functions-function-recall) |
| **forget()** | forget(key)  Removes the specified key, and its associated value, from the story metadata store.  <<run forget('$TestVariable')>>  <<run forget('achievements')>>  [http://www.motoslave.net/sugarcube/2/docs/#functions-function-**forget**](http://www.motoslave.net/sugarcube/2/docs/#functions-function-forget) | |
| **clone()** |  | |
| **either()** |  | |
| **hasVisited()** |  | |
| **lastVisited()** |  | |
| **importScripts()** |  | |
| **importStyles()** |  | |
| **passage()** | [http://www.motoslave.net/sugarcube/2/docs/#functions-function-**passage**](http://www.motoslave.net/sugarcube/2/docs/#functions-function-passage) | |
| **previous()** | [http://www.motoslave.net/sugarcube/2/docs/#functions-function-**previous**](http://www.motoslave.net/sugarcube/2/docs/#functions-function-previous) | |
| **random()** | [http://www.motoslave.net/sugarcube/2/docs/#functions-function-**random**](http://www.motoslave.net/sugarcube/2/docs/#functions-function-random) | |
| **randomFloat()** |  | |
| **setPageElement()** |  | |
| **tags()** |  | |
| **temporary()** |  | |
| **time()** |  | |
| **turns()** |  | |
| **variables()** |  | |
| **visited()** |  | |
| **visitedTags()** |  | |
|  |  | |

**Issues with memorize(), recall() and forget():**

[https://www.reddit.com/r/twinegames/comments/q0jpmp/**achievements\_with\_memorize**/](https://www.reddit.com/r/twinegames/comments/q0jpmp/achievements_with_memorize/)

[https://intfiction.org/t/**a-persisting-scoreboard-for-sugarcube**/48311](https://intfiction.org/t/a-persisting-scoreboard-for-sugarcube/48311)

[https://intfiction.org/t/**help-with-memorize-function-twine-2-sugarcube-2**-30-0/45743](https://intfiction.org/t/help-with-memorize-function-twine-2-sugarcube-2-30-0/45743)

| **Built in browser functions** | **Advice** |
| --- | --- |
| Any Javascript built-in function is available to Twine | |
| confirm("String") | Used inside a <<set>> macro. Displays an OK/Cancel dialog box. If you click Yes, the function's value is true. Otherwise, it is false. The provided string is the question shown to the player.  [https://twinery.org/cookbook/twine1/functions/**confirm**.html](https://twinery.org/cookbook/twine1/functions/confirm.html) |
| alert("message") | Used inside a <<set>> macro. Displays an alert box, with the given text string displayed. It has no value - feel free to use it by simply writing.  [https://twinery.org/cookbook/twine1/functions/**alert**.html](https://twinery.org/cookbook/twine1/functions/alert.html) |
| open("url") | Used inside a <<set>> macro. When given a URL in string form, it opens a new browser tab containing that web page. It has no value.  [https://twinery.org/cookbook/twine1/functions/**open**.html](https://twinery.org/cookbook/twine1/functions/open.html) |

|  |  |
| --- | --- |
| **Twine 1 functions that have been dropped or replaced** | |
| **Twine 1 function** | **Relationship to Twine 2-SugarCube functions** |
| **parameters()** |  |
| [https://twinery.org/cookbook/twine1/functions/**parameter**.html](https://twinery.org/cookbook/twine1/functions/parameter.html) | |
| **prompt()** | Replaced by <<textbox>> macro. |

# Methodss

[https://www.motoslave.net/sugarcube/2/docs/#**methods**](https://www.motoslave.net/sugarcube/2/docs/#methods)

# Expressions

<http://www.motoslave.net/sugarcube/2/docs/#twinescript-expressions>

You will, in all likelihood, use **expressions** most often within macros—e.g., <<set>>, <<print>>, <<if>>, <<for>>

# TwineScript conditional (evaluation) operators

For use with <<if>> statements:

| **Operator** | **Function** | **Example** |
| --- | --- | --- |
| **is** | Evaluates to true if both sides are strictly equal. | <<if $bullets is 6>> |
| **isnot** | Evaluates to true if both sides are strictly not equal. | <<if $pie isnot "cherry">> |
| **eq** | Evaluates to true if both sides are equivalent. | <<if $bullets eq 6>> |
| **neq** | Evaluates to true if both sides are not equivalent. | <<if $pie neq "cherry">> |
| **gt** | Evaluates to true if the left side is greater than the right side. | <<if $cash gt 5>> |
| **gte** | Evaluates to true if the left side is greater than or equal to the right side. | <<if $foundStars gte $neededStars>> |
| **lt** | Evaluates to true if the left side is less than the right side. | <<if $shoeCount lt ($peopleCount \* 2)>> |
| **lte** | Evaluates to true if the left side is less than or equal to the right side. | <<if $level lte 30>> |
| **not** | Flips a true evaluation to false, and vice versa. | <<if not $hungry>> |
| **and** | Evaluates to true if all subexpressions evaluate to true. | <<if $age gte 20 and $age lte 30>> |
| **or** | Evaluates to true if any subexpressions evaluate to true. | <<if $friend is "Sue" or $friend is "Dan">> |
| **def** | Evaluates to true if the right side is defined. | <<if def $mushrooms>> |
| **ndef** | Evaluates to true if the right side is not defined. | <<if ndef $bottlecaps>> |

The **def** and **ndef** operators have very low precedence, so it is strongly recommended that if you mix them with other operators, that you wrap them in parentheses—e.g., (def $style) and ($style is "girly").

# JavaScript conditional (evaluation) operators

For use with <<if>> statements:

| **Operator** | **Function** | **Example** |
| --- | --- | --- |
| **===** | Evaluates to true if both sides are strictly equal. | <<if $bullets === 6>> |
| **!==** | Evaluates to true if both sides are strictly not equal. | <<if $pie !== "cherry">> |
| **==** | Evaluates to true if both sides are equivalent. | <<if $bullets == 6>> |
| **!=** | Evaluates to true if both sides are not equivalent. | <<if $pie != "cherry">> |
| **>** | Evaluates to true if the left side is greater than the right side. | <<if $cash > 5>> |
| **>=** | Evaluates to true if the left side is greater than or equal to the right side. | <<if $foundStars >= $neededStars>> |
| **<** | Evaluates to true if the left side is less than the right side. | <<if $shoeCount < ($peopleCount \* 2)>> |
| **<=** | Evaluates to true if the left side is less than or equal to the right side. | <<if $level <= 30>> |
| **!** | Flips a true evaluation to false, and vice versa. | <<if !$hungry>> |
| **&&** | Evaluates to true if all subexpressions evaluate to true. | <<if $age >= 20 && $age <= 30>> |
| **||** | Evaluates to true if any subexpressions evaluate to true. | <<if $friend === "Sue" || $friend === "Dan">> |

# TwineScript assignment operators

For use with <<set>>:

|  |  |  |  |
| --- | --- | --- | --- |
| **TwineScript** | | | |
| **Operator** | | **Function** | **Example** |
| **to** | | Assigns the value on the right-hand side of the operator to the left-hand side. | <<set $apples to 6>> |
| **JavaScript assignment operators:** *(not an exhaustive list)* | | | |
| **Operator** | **Function** | | **Example** |
| **=** | Assigns the value on the right-hand side of the operator to the left-hand side. | | <<set $apples = 6>> |
| **+=** | Adds the value on the right-hand side of the operator to the current value on the left-hand side and assigns the result to the left-hand side. | | <<set $apples += 1>> |
| **-=** | Subtracts the value on the right-hand side of the operator from the current value on the left-hand side and assigns the result to the left-hand side. | | <<set $apples -= 1>> |
| **\*=** | Multiplies the current value on the left-hand side of the operator by the value on the right-hand side and assigns the result to the left-hand side. | | <<set $apples \*= 2>> |
| **/=** | Divides the current value on the left-hand side of the operator by the value on the right-hand side and assigns the result to the left-hand side. | | <<set $apples /= 2>> |
| **%=** | Divides the current value on the left-hand side of the operator by the value on the right-hand side and assigns the remainder to the left-hand side. | | <<set $apples %= 10>> |

# Transferring data between Twine projects

<http://twinery.org/questions/1102/how-to-transfer-variables-from-one-twine-story-to-another>

# SugarCube documentation – (on the SugarCube site)

(very detailed)

<https://www.motoslave.net/sugarcube/2/docs/> ….(home page)

[https://www.motoslave.net/sugarcube/2/docs/#**introduction**](https://www.motoslave.net/sugarcube/2/docs/#introduction)

[https://www.motoslave.net/sugarcube/2/docs/#**markup**-naked-variable](https://www.motoslave.net/sugarcube/2/docs/#markup-naked-variable)

[https://www.motoslave.net/sugarcube/2/docs/#**twinescript**](https://www.motoslave.net/sugarcube/2/docs/#twinescript) …(variables, expressions, functions, operators, etc.)

[https://www.motoslave.net/sugarcube/2/docs/#**macros**](https://www.motoslave.net/sugarcube/2/docs/#macros)

[https://www.motoslave.net/sugarcube/2/docs/#**functions**](https://www.motoslave.net/sugarcube/2/docs/#functions)

[https://www.motoslave.net/sugarcube/2/docs/#**methods**](https://www.motoslave.net/sugarcube/2/docs/#methods)

[https://www.motoslave.net/sugarcube/2/docs/#**special-names**](https://www.motoslave.net/sugarcube/2/docs/#special-names) …(special names to give ‘objects’ special functions

[https://www.motoslave.net/sugarcube/2/docs/#**css**](https://www.motoslave.net/sugarcube/2/docs/#css)

[https://www.motoslave.net/sugarcube/2/docs/#**html**](https://www.motoslave.net/sugarcube/2/docs/#html)

[https://www.motoslave.net/sugarcube/2/docs/#**events**](https://www.motoslave.net/sugarcube/2/docs/#events)

[https://www.motoslave.net/sugarcube/2/docs/#**config-api**](https://www.motoslave.net/sugarcube/2/docs/#config-api)

[https://www.motoslave.net/sugarcube/2/docs/#**dialog-api**](https://www.motoslave.net/sugarcube/2/docs/#dialog-api)

[https://www.motoslave.net/sugarcube/2/docs/#**engine-api**](https://www.motoslave.net/sugarcube/2/docs/#engine-api)

[https://www.motoslave.net/sugarcube/2/docs/#**fullscreen-api**](https://www.motoslave.net/sugarcube/2/docs/#fullscreen-api)

[https://www.motoslave.net/sugarcube/2/docs/#**loadscreen-api**](https://www.motoslave.net/sugarcube/2/docs/#loadscreen-api)

[https://www.motoslave.net/sugarcube/2/docs/#**macro-api**](https://www.motoslave.net/sugarcube/2/docs/#macro-api)

[https://www.motoslave.net/sugarcube/2/docs/#**macrocontext-api**](https://www.motoslave.net/sugarcube/2/docs/#macrocontext-api)

[https://www.motoslave.net/sugarcube/2/docs/#**passage-api**](https://www.motoslave.net/sugarcube/2/docs/#passage-api)

[https://www.motoslave.net/sugarcube/2/docs/#**save-api**](https://www.motoslave.net/sugarcube/2/docs/#save-api)

[https://www.motoslave.net/sugarcube/2/docs/#**setting-api**](https://www.motoslave.net/sugarcube/2/docs/#setting-api)

[https://www.motoslave.net/sugarcube/2/docs/#**simpleaudio-api**](https://www.motoslave.net/sugarcube/2/docs/#simpleaudio-api)

[https://www.motoslave.net/sugarcube/2/docs/#**audiotrack-api**](https://www.motoslave.net/sugarcube/2/docs/#audiotrack-api)

[https://www.motoslave.net/sugarcube/2/docs/#**audiorunner-api**](https://www.motoslave.net/sugarcube/2/docs/#audiorunner-api)

[https://www.motoslave.net/sugarcube/2/docs/#**audiolist-api**](https://www.motoslave.net/sugarcube/2/docs/#audiolist-api)

[https://www.motoslave.net/sugarcube/2/docs/#**state-api**](https://www.motoslave.net/sugarcube/2/docs/#state-api)

[https://www.motoslave.net/sugarcube/2/docs/#**story-api**](https://www.motoslave.net/sugarcube/2/docs/#story-api)

[https://www.motoslave.net/sugarcube/2/docs/#**template-api**](https://www.motoslave.net/sugarcube/2/docs/#template-api)

[https://www.motoslave.net/sugarcube/2/docs/#**ui-api**](https://www.motoslave.net/sugarcube/2/docs/#ui-api)

[https://www.motoslave.net/sugarcube/2/docs/#**uibar-api**](https://www.motoslave.net/sugarcube/2/docs/#uibar-api)

[https://www.motoslave.net/sugarcube/2/docs/#**guide-state-sessions-and-saving**](https://www.motoslave.net/sugarcube/2/docs/#guide-state-sessions-and-saving)

[https://www.motoslave.net/sugarcube/2/docs/#**guide-tips**](https://www.motoslave.net/sugarcube/2/docs/#guide-tips)

[https://www.motoslave.net/sugarcube/2/docs/#**guide-media-passages**](https://www.motoslave.net/sugarcube/2/docs/#guide-media-passages)

[https://www.motoslave.net/sugarcube/2/docs/#**guide-test-mode**](https://www.motoslave.net/sugarcube/2/docs/#guide-test-mode)

[https://www.motoslave.net/sugarcube/2/docs/#**guide-typescript**](https://www.motoslave.net/sugarcube/2/docs/#guide-typescript)

[https://www.motoslave.net/sugarcube/2/docs/#**guide-installation**](https://www.motoslave.net/sugarcube/2/docs/#guide-installation)

[https://www.motoslave.net/sugarcube/2/docs/#**guide-code-updates**](https://www.motoslave.net/sugarcube/2/docs/#guide-code-updates)

# Twine 2 advice from the Twine Cookbook

[https://twinery.org/cookbook/questions/**links**.html](https://twinery.org/cookbook/questions/links.html)

[https://twinery.org/cookbook/questions/**style\_text**.html](https://twinery.org/cookbook/questions/style_text.html)

[https://twinery.org/cookbook/questions/**stories\_saved**.html](https://twinery.org/cookbook/questions/stories_saved.html)

[https://twinery.org/cookbook/terms/**terms\_stories**.html](https://twinery.org/cookbook/terms/terms_stories.html)  (especially the IFID identifier)

<https://twinery.org/cookbook/terms/terms_passages.html> (mainly about links)

[https://twinery.org/cookbook/terms/**terms\_variables**.html](https://twinery.org/cookbook/terms/terms_variables.html)

[https://twinery.org/cookbook/terms/terms\_**markdown\_and\_markup**.html](https://twinery.org/cookbook/terms/terms_markdown_and_markup.html)

[https://twinery.org/cookbook/terms/terms\_**storyformats**.html](https://twinery.org/cookbook/terms/terms_storyformats.html)

[https://twinery.org/cookbook/terms/terms\_**macros**.html](https://twinery.org/cookbook/terms/terms_macros.html)

[https://twinery.org/cookbook/terms/terms\_**css**.html](https://twinery.org/cookbook/terms/terms_css.html)

[https://twinery.org/cookbook/terms/terms\_**javascript**.html](https://twinery.org/cookbook/terms/terms_javascript.html)

[https://twinery.org/cookbook/terms/terms\_**html**.html](https://twinery.org/cookbook/terms/terms_html.html)

[https://twinery.org/cookbook/introduction/twine2\_**story\_listing**.html](https://twinery.org/cookbook/introduction/twine2_story_listing.html)

[https://twinery.org/cookbook/introduction/twine2\_**passages\_view**.html](https://twinery.org/cookbook/introduction/twine2_passages_view.html)

[https://twinery.org/cookbook/introduction/**passages**.html](https://twinery.org/cookbook/introduction/passages.html)

[https://twinery.org/cookbook/introduction/**story\_formats**.html](https://twinery.org/cookbook/introduction/story_formats.html)

[https://twinery.org/cookbook/starting/twine2/**firststory**.html](https://twinery.org/cookbook/starting/twine2/firststory.html)

[https://twinery.org/cookbook/starting/twine2/**storyformat**.html](https://twinery.org/cookbook/starting/twine2/storyformat.html)  (choosing story formats)

[https://twinery.org/cookbook/starting/twine2/**creatinglinks**.html](https://twinery.org/cookbook/starting/twine2/creatinglinks.html)

[https://www.motoslave.net/**sugarcube**/2/docs/#**markup-link**](https://www.motoslave.net/sugarcube/2/docs/#markup-link)

[https://twinery.org/cookbook/starting/twine2/**review**.html](https://twinery.org/cookbook/starting/twine2/review.html) (reviewing stories)

[https://twinery.org/cookbook/**html/reviewing**.html](https://twinery.org/cookbook/html/reviewing.html)

[https://twinery.org/cookbook/html/storyformats/**sugarcube**.html](https://twinery.org/cookbook/html/storyformats/sugarcube.html) ….( SugarCube HTML)

[https://twinery.org/cookbook/**css/selectors**.html](https://twinery.org/cookbook/css/selectors.html)

[https://twinery.org/cookbook/**css**/storyformats/**sugarcube**.html](https://twinery.org/cookbook/css/storyformats/sugarcube.html) …….(SugarCube CSS)

[https://twinery.org/cookbook/**js/reviewing**.html](https://twinery.org/cookbook/js/reviewing.html)

[https://twinery.org/cookbook/**js**/storyformats/**sugarcube**.html](https://twinery.org/cookbook/js/storyformats/sugarcube.html)

<https://www.motoslave.net/sugarcube/2/> …….(go to the Add-Ons section)

[https://twinery.org/cookbook/addingfunctionality/sugarcube/sugarcube\_](https://twinery.org/cookbook/addingfunctionality/sugarcube/sugarcube_adding_functionality.html)**[adding\_functionality](https://twinery.org/cookbook/addingfunctionality/sugarcube/sugarcube_adding_functionality.html)**[.html](https://twinery.org/cookbook/addingfunctionality/sugarcube/sugarcube_adding_functionality.html)

[https://www.motoslave.net/sugarcube/2/docs/#**macro-api**](https://www.motoslave.net/sugarcube/2/docs/#macro-api)

[https://twinery.org/cookbook/arrays/sugarcube/**sugarcube\_arrays**.html](https://twinery.org/cookbook/arrays/sugarcube/sugarcube_arrays.html)

[https://twinery.org/cookbook/audio/sugarcube/sugarcube\_**audio**.html](https://twinery.org/cookbook/audio/sugarcube/sugarcube_audio.html)

[https://twinery.org/cookbook/conditionalstatements/sugarcube/sugarcube\_**conditionalstatements**.html](https://twinery.org/cookbook/conditionalstatements/sugarcube/sugarcube_conditionalstatements.html)

[https://twinery.org/cookbook/cssselectors/sugarcube/sugarcube\_**cssselectors**.html](https://twinery.org/cookbook/cssselectors/sugarcube/sugarcube_cssselectors.html)

[https://twinery.org/cookbook/passagetags/sugarcube/sugarcube\_**passagetags**.html](https://twinery.org/cookbook/passagetags/sugarcube/sugarcube_passagetags.html)

[https://twinery.org/cookbook/cycling/sugarcube/sugarcube\_**cycling**.html](https://twinery.org/cookbook/cycling/sugarcube/sugarcube_cycling.html) …….(cycling choices)

[https://twinery.org/cookbook/dateandtime/sugarcube/sugarcube\_**dateandtime**.html](https://twinery.org/cookbook/dateandtime/sugarcube/sugarcube_dateandtime.html)

[https://twinery.org/cookbook/delayedtext/sugarcube/sugarcube\_**delayedtext**.html](https://twinery.org/cookbook/delayedtext/sugarcube/sugarcube_delayedtext.html)

[https://twinery.org/cookbook/deletingvariables/sugarcube/sugarcube\_**deletingvariables**.html](https://twinery.org/cookbook/deletingvariables/sugarcube/sugarcube_deletingvariables.html)

[https://twinery.org/cookbook/dicerolling/sugarcube/sugarcube\_**dicerolling**.html](https://twinery.org/cookbook/dicerolling/sugarcube/sugarcube_dicerolling.html)

[https://twinery.org/cookbook/fairmath/sugarcube/sugarcube\_**fairmath**.html](https://twinery.org/cookbook/fairmath/sugarcube/sugarcube_fairmath.html)

[https://twinery.org/cookbook/geolocation/sugarcube/sugarcube\_**geolocation**.html](https://twinery.org/cookbook/geolocation/sugarcube/sugarcube_geolocation.html)

[https://twinery.org/cookbook/googlefonts/sugarcube/sugarcube\_**googlefonts**.html](https://twinery.org/cookbook/googlefonts/sugarcube/sugarcube_googlefonts.html)

[https://twinery.org/cookbook/headersandfooters/sugarcube/sugarcube\_**headersandfooters**.html](https://twinery.org/cookbook/headersandfooters/sugarcube/sugarcube_headersandfooters.html)

[https://twinery.org/cookbook/hiddenlink/sugarcube/sugarcube\_**hiddenlink**.html](https://twinery.org/cookbook/hiddenlink/sugarcube/sugarcube_hiddenlink.html)

[https://twinery.org/cookbook/images/sugarcube/sugarcube\_**images**.html](https://twinery.org/cookbook/images/sugarcube/sugarcube_images.html)

[https://twinery.org/cookbook/importexternaljs/sugarcube/sugarcube\_**importexternaljs**.html](https://twinery.org/cookbook/importexternaljs/sugarcube/sugarcube_importexternaljs.html)

[https://twinery.org/cookbook/keyboard/sugarcube/sugarcube\_**keyboard**.html](https://twinery.org/cookbook/keyboard/sugarcube/sugarcube_keyboard.html) ….(keyboard events)

[https://twinery.org/cookbook/sidebar\_left/sugarcube/sugarcube\_](https://twinery.org/cookbook/sidebar_left/sugarcube/sugarcube_sidebar_left.html)**[sidebar\_left](https://twinery.org/cookbook/sidebar_left/sugarcube/sugarcube_sidebar_left.html)**[.html](https://twinery.org/cookbook/sidebar_left/sugarcube/sugarcube_sidebar_left.html)

[https://www.motoslave.net/sugarcube/2/docs/#**special-names**](https://www.motoslave.net/sugarcube/2/docs/#special-names)

[https://twinery.org/cookbook/clamping\_numbers/sugarcube/sugarcube\_**clamping\_numbers**.html](https://twinery.org/cookbook/clamping_numbers/sugarcube/sugarcube_clamping_numbers.html)

[https://twinery.org/cookbook/loadscreen/sugarcube/sugarcube\_**loadscreen**.html](https://twinery.org/cookbook/loadscreen/sugarcube/sugarcube_loadscreen.html)

[https://twinery.org/cookbook/lockandkey\_variable/sugarcube/sugarcube\_**lockandkey\_variable**.html](https://twinery.org/cookbook/lockandkey_variable/sugarcube/sugarcube_lockandkey_variable.html)

[https://twinery.org/cookbook/looping/sugarcube/sugarcube\_**looping**.html](https://twinery.org/cookbook/looping/sugarcube/sugarcube_looping.html)

[https://twinery.org/cookbook/modal/sugarcube/sugarcube\_**modal**.html](https://twinery.org/cookbook/modal/sugarcube/sugarcube_modal.html) …….("Modal (Pop-up Window)")

[https://twinery.org/cookbook/modularity/sugarcube/sugarcube\_**modularity**.html](https://twinery.org/cookbook/modularity/sugarcube/sugarcube_modularity.html) ......Modularity, widgets, and <<include>> (like <<display>>)

[https://twinery.org/cookbook/dungeonmoving/sugarcube/sugarcube\_**dungeonmoving**.html](https://twinery.org/cookbook/dungeonmoving/sugarcube/sugarcube_dungeonmoving.html)

[https://twinery.org/cookbook/passageevents/sugarcube/sugarcube\_**passage\_events**.html](https://twinery.org/cookbook/passageevents/sugarcube/sugarcube_passage_events.html)

[https://twinery.org/cookbook/passagesinpassages/sugarcube/sugarcube\_**passagesinpassages**.html](https://twinery.org/cookbook/passagesinpassages/sugarcube/sugarcube_passagesinpassages.html).....(like <<display>>)

[http://www.motoslave.net/sugarcube/2/docs/#macros-macro-**include**](http://www.motoslave.net/sugarcube/2/docs/#macros-macro-include)

[https://twinery.org/cookbook/passagetransitions/sugarcube/sugarcube\_**passagetransitions**.html](https://twinery.org/cookbook/passagetransitions/sugarcube/sugarcube_passagetransitions.html)

[https://twinery.org/cookbook/passagevisits/sugarcube/sugarcube\_**passagevisits**.html](https://twinery.org/cookbook/passagevisits/sugarcube/sugarcube_passagevisits.html)

[https://twinery.org/cookbook/playerstatistics/sugarcube/sugarcube\_**player\_statistics**.html](https://twinery.org/cookbook/playerstatistics/sugarcube/sugarcube_player_statistics.html)

[https://twinery.org/cookbook/programmaticundo/sugarcube/sugarcube\_**programmaticundo**.html](https://twinery.org/cookbook/programmaticundo/sugarcube/sugarcube_programmaticundo.html)

[https://twinery.org/cookbook/passagetoelement/sugarcube/sugarcube\_**passagetoelement**.html](https://twinery.org/cookbook/passagetoelement/sugarcube/sugarcube_passagetoelement.html%20) .....(render passage to element)

[https://twinery.org/cookbook/savinggames/sugarcube/sugarcube\_**savinggames**.html](https://twinery.org/cookbook/savinggames/sugarcube/sugarcube_savinggames.html)

<https://twinery.org/cookbook/settingandshowing/sugarcube/sugarcube_settingandshowing.html> ….(setting and showing variables)

[https://twinery.org/cookbook/spaceexploration/sugarcube/sugarcube\_**space\_exploration**.html](https://twinery.org/cookbook/spaceexploration/sugarcube/sugarcube_space_exploration.html)

[https://twinery.org/cookbook/statichealthbars/sugarcube/sugarcube\_**statichealthbars**.html](https://twinery.org/cookbook/statichealthbars/sugarcube/sugarcube_statichealthbars.html)

[https://twinery.org/cookbook/storyandpassage/sugarcube/sugarcube\_**storyandpassage**.html](https://twinery.org/cookbook/storyandpassage/sugarcube/sugarcube_storyandpassage.html)

…(story and passage API for external date access)

[https://twinery.org/cookbook/markup/sugarcube/sugarcube\_**markup**.html](https://twinery.org/cookbook/markup/sugarcube/sugarcube_markup.html) ….(style markup)

[https://www.motoslave.net/sugarcube/2/docs/#**markup**](https://www.motoslave.net/sugarcube/2/docs/#markup)

[https://twinery.org/cookbook/template\_type/sugarcube/sugarcube\_**templates**.html](https://twinery.org/cookbook/template_type/sugarcube/sugarcube_templates.html)

[https://twinery.org/cookbook/timedprogressbars/sugarcube/sugarcube\_**timed\_progress\_bars**.html](https://twinery.org/cookbook/timedprogressbars/sugarcube/sugarcube_timed_progress_bars.html)

[https://twinery.org/cookbook/turncounter/sugarcube/sugarcube\_**turncounter**.html](https://twinery.org/cookbook/turncounter/sugarcube/sugarcube_turncounter.html)

[https://twinery.org/cookbook/typewriter/sugarcube/sugarcube\_**typewriter**.html](https://twinery.org/cookbook/typewriter/sugarcube/sugarcube_typewriter.html)

[https://twinery.org/cookbook/storystyling/sugarcube/sugarcube\_**storystyling**.html](https://twinery.org/cookbook/storystyling/sugarcube/sugarcube_storystyling.html) …(variable story styling)

[https://twinery.org/cookbook/usingaddons/sugarcube/sugarcube\_**usingaddons**.html](https://twinery.org/cookbook/usingaddons/sugarcube/sugarcube_usingaddons.html)

<https://www.motoslave.net/sugarcube/2/#downloads> …..(see Add-Ons)

# Merging Twine 2 files

Twine 2 doesn’t have the Twine 1 StoryIncludes functionality

**Work around:**

The Twee command line compiler, Tweego, can read Twine 2 **published** HTML files, so you can use Tweego to merge multiple Twine 2 HTML output files, post-publish.

[https://www.motoslave.net/**tweego**/](https://www.motoslave.net/tweego/)

[https://www.motoslave.net/tweego/**docs**/](https://www.motoslave.net/tweego/docs/) Documentation

[https://github.com/tmedwards/**tweego**](https://github.com/tmedwards/tweego) - source code repository

Multiple Twine 2 files can be merged using Grunt and Entwine running together

[https://github.com/klembot/**grunt-entwine**-quickstart](https://github.com/klembot/grunt-entwine-quickstart)

It might also be possible to do this with Extwee as well.

<https://www.npmjs.com/package/extwee>

<https://github.com/videlais/extwee>

There are various tools to make command line interface (CLI) compilers nicer to work with—e.g.,

Visual Studio Code + Twee 3 Language Tools (T3LT) extension.

# Developer and resource curator contact details

**Twine 2**

Chris Klimas, cpb8010, Leon Arnott, Thomas M Edwards, Valentin Rocher, Jordi Mallach, Ross Smith, Colin McMillan, Moritz Rebbert, Shitake molingyu.

**SugarCube**

Thomas Edwards <https://github.com/tmedwards> / Email: <tmedwards@motoslave.net> / <thomasmedwards@gmail.com> / Guide: <http://www.motoslave.net/sugarcube/2/>

**SugarCube Add-Ons**

??

**Twine Resources**

ChapelR Email: <twinelab.net@gmail.com>

[https://twinelab.net/](https://twinelab.net/twine-resources)**[twine-resources](https://twinelab.net/twine-resources)**

[https://github.com/ChapelR/](https://github.com/ChapelR/twine-resources)[twine-](https://github.com/ChapelR/twine-resources)**[resource](https://github.com/ChapelR/twine-resources)**[s](https://github.com/ChapelR/twine-resources) (the Twine Resources repository)

**RSTI Adviser**

Philip Sutton, Joey Sutton Preece, Daniel Sutton,

?? (Glenn Todd?, Carolyn Hicks?)

# Migrating Twine 1 stories/documents to Twine 2

[https://twinery.org/forum/discussion/8423/**transferring-my-twine-stories-to-another-version-of-twine**](https://twinery.org/forum/discussion/8423/transferring-my-twine-stories-to-another-version-of-twine) 2017 (Advice from Grey Elf)

The Twine 2 application does not currently support the importing of either a Twine 1 Story .tws file or a Story .html file created using Twine 1's build option, but there is a manual process that you can use to convert your existing story into something that the Twine 2 application will recognise.

The following lists the issues that need to be overcome and the steps to do so.

**1. Sugarcane is not supported on Twine 2.**

You can get around this issue by switching your existing Twine 1 project over to using SugarCube v1, which is similar to Sugarcane although there are differences that will **need to be resolved later**.

1a. Download SugarCube 1 [Adding Formats section](http://www.motoslave.net/sugarcube/1/) of the Twine 1 Guide explains how to install the contents of the ZIP file you downloaded in point 1a. <https://www.motoslave.net/sugarcube/1/>

1c. Make a copy of your Story .tws file then open that copy with Twine 1 and use the **Story** > **Story Format** menu items to change it to use SugarCube.

1d. Use the **Build** > **Build Story** menu items to create a new Story .html file, give this HTML file a **different** file name than you would normally use so you can distinguish it from any other story HTML file you have previously created.

**2. Converting Twine 1 Story HTML file to Twine 2 archive file.**

In the **Utilities** section of the web-site you downloaded SugarCube from there is a link for downloading a tool to do this conversion.

2a. Download the ZIP file and extract its contents onto your hard-disk. <http://www.motoslave.net/sugarcube/download.php/extras/t1-compiled-to-t2-archive.zip>

2b. Open the contained HTML file in your web-browser and follow the instructions.

**3. Importing generated Archive file.**

Run the Twine 2 application and use it's **Import From File** option to add the Story Project contained within the Archive file (you just created) to your list of Stories.

**4. Fixing the differences between Sugarcane and SugarCube**

Without knowing exactly what code you have written in your story I can't tell you exactly what may need to be fixed, I can only suggest you test your new story project and use these forums to resolve any issues you find.

**5. Upgrading to** [**SugarCube**](http://www.motoslave.net/sugarcube/2/)

This is an optional but recommended step because as explained on the SugarCube 1 web-site the 1.x series has reached the end of it's development cycle and is now only getting bug/security fixes if they are needed.

# Installing and running Tweego

Download from:

<https://www.motoslave.net/tweego/>

Installation instructions and installer from:

[https://github.com/ChapelR/tweego-setup/blob/tweego-2/docs/**installing-tweego**.md](https://github.com/ChapelR/tweego-setup/blob/tweego-2/docs/installing-tweego.md)

<https://github.com/ChapelR/tweego-installer>

Documentation on running Tweego:

<http://www.motoslave.net/tweego/docs/>

# Useful things in Twine 1 that are NOT available in Twine 2/SugaCube

**Sending people links to specific passages in a Twine .html file  
The hashbang method**

Eg.

https://climate-rescue-global.org/#!Output\_Report

Give internet file path, followed by #! (called hashbang), then follow with the passage name with spaces filled with the underline character.

**Special passage:** **StoryIncludes**

The StoryIncludes was used to store url links to additional Twine or Twee files that would be incorporated into the compiled html output. A work around is available for Twine 2. (See the section “**Merging Twine 2 files**” that is just a few major sections above.

**Special tags: Twine.private**

Passages with this tag would not be incorporated into the Twine html output file.

# (the rest??)

The Twine 1 help file might be a useful guide to content types to build up in this help file (adapted of course to suit the latest Twine 2 with the latest SugarCube format.

macros.forgetall = macros.rememberall = {

handler: function (a, name) {

var s = state.history[0].variables;

for (variable in s) {

if (s.hasOwnProperty(variable)) {

if (name == "forgetall") {

delete window.localStorage[macros.remember.prefix + variable];

delete s[variable];

} else {

window.localStorage[macros.remember.prefix + variable] = s[variable];

}

}

}

}

}

# Twine users/related tools that have use-cases more like what RSTI is trying to do

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**Branching scenarios in training/elearning, story-based teaching**

[https://www.christytuckerlearning.com/**twine-makes-branching-scenarios-easier**/](https://www.christytuckerlearning.com/twine-makes-branching-scenarios-easier/)

[https://www.syniadlearning.com/portfolio/**branching-scenario-example/**](https://www.syniadlearning.com/portfolio/branching-scenario-example/)

[https://www.christytuckerlearning.com/**creative-solutions-with-twine-presentation**/](https://www.christytuckerlearning.com/creative-solutions-with-twine-presentation/)

[https://www.christytuckerlearning.com/**dont-restart-scenario-based-learning-go-back**/](https://www.christytuckerlearning.com/dont-restart-scenario-based-learning-go-back/)

[https://www.christytuckerlearning.com/**branching-scenario-prototype-in-twine**/](https://www.christytuckerlearning.com/branching-scenario-prototype-in-twine/)

[https://www.monash.edu/learning-teaching/TeachHQ/**learning-technologies/twine**](https://www.monash.edu/learning-teaching/TeachHQ/learning-technologies/twine)

[https://blog.training-pros.com/software-tools/**twine-branching-scenarios**/](https://blog.training-pros.com/software-tools/twine-branching-scenarios/)

[https://tedcurran.net/2018/10/**use-twine-for-branching-learning-scenarios**/](https://tedcurran.net/2018/10/use-twine-for-branching-learning-scenarios/)

<https://www.youtube.com/watch?v=arzpprGT9SE> Design a branching elearning scenario with Twine (part 1)

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