

Package: aochelpers (via r-universe)

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Title Companion to Advent of Code and Associated Personal Website

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Description Use with advent-of-code-website-template to create a website for Advent of Code solutions. Also includes functions for getting and reading in puzzle input.

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<https://ellakaye.github.io/aochelpers/>

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aoc_delete_conclusion *Delete a conclusion post*

Description

Delete the introduction post with relative path `./YYYY/day/conclusion` (where `YYYY` is the value of year), if it exists.

Usage

```
aoc_delete_conclusion(year = NULL)
```

Arguments

year	An integer representing the year, from 2015 to the current year. Defaults to the current year.
------	--

See Also

[aoc_new_conclusion\(\)](#)

Examples

```
## Not run: aoc_delete_conclusion(2022)
```

aoc_delete_day	<i>Delete the directory for a day or year</i>
----------------	---

Description

Assumes that the directory for the year has the relative path `"/YYYY"` and the directory for the day has the relative path `"/YYYY/day/DD"`, where YYYY and DD are the values of year and day. This will be the case if the post was created using `aoc_new_day()`. If the directory for the day or year has a corresponding directory in `"/_freeze"`, that will also be deleted. Additionally, for `aoc_delete_year()`, the listing page `"/YYYY.qmd` (where YYYY is the value of year) will be deleted.

Usage

```
aoc_delete_day(day, year = NULL)
```

```
aoc_delete_year(year = NULL)
```

Arguments

day	An integer between 1 and 25
year	An integer representing the year, from 2015 to the current year. Defaults to the current year.

Value

The path of the day that was deleted (invisibly)

Examples

```
## Not run: aoc_delete_day(1, 2022)
## Not run: aoc_delete_year(2022)
```

aoc_delete_intro	<i>Delete an introduction post</i>
------------------	------------------------------------

Description

Delete the introduction post with relative path `"/YYYY/day/introduction` (where YYYY is the value of year), if it exists.

Usage

```
aoc_delete_intro(year = NULL)
```

Arguments

year An integer representing the year, from 2015 to the current year. Defaults to the current year.

See Also

[aoc_new_intro\(\)](#) [aoc_new_year\(\)](#) [aoc_delete_year\(\)](#)

Examples

```
## Not run: aoc_delete_intro(2022)
```

aoc_get_input	<i>Get and save the puzzle input</i>
---------------	--------------------------------------

Description

Get the puzzle input from the Advent of Code website for a given day and year and save it to a file. The file will be saved in the current working directory with a relative path "./YYYY/day/DD/input", where YYYY is the value of the year parameter and DD is value of the day parameter. This path echoes the URL structure of the Advent of Code website.

Usage

```
aoc_get_input(day, year = NULL)
```

Arguments

day An integer between 1 and 25

year An integer representing the year, from 2015 to the current year. Defaults to the current year.

Details

This function assumes that you have an account on the [Advent of Code website](#). For this function to work, you must set the ADVENT_SESSION environment variable in your .Renvirom file. For guidance on how to find your session token, see <https://github.com/dgrtwo/adventdrob/tree/main#installation>. Once you have your session token, you can set the environment variable with `usethis::edit_r_envirom()`. This function is adapted from <https://github.com/dgrtwo/adventdrob/blob/main/R/input.R>, but saves the input to a file instead of returning it as a data frame. Once the input is saved, it can be read in with `aoc_input_vector()`, `aoc_input_data_frame()` or `aoc_input_matrix()`, whichever is appropriate for the puzzle. This function is also called as part of `aoc_new_day()`.

Value

Returns, invisibly, a character string with the absolute path to the input file.

See Also

[aoc_new_day\(\)](#) [aoc_input_vector\(\)](#) [aoc_input_data_frame\(\)](#) [[aoc_input_matrix\(\)](#)]

Examples

```
## Not run: aoc_get_input(1, 2022)
```

aoc_input_data_frame *Read puzzle input as a data frame*

Description

Read in the puzzle input, or other file, as a data frame, one row per line. It assumes that the file is stored in the directory `"/YYYY/day/DD"`, where YYYY and DD are the values of year and day. By default, the file name is `"input"`. This file will exist in this location if the post was created using [aoc_new_day\(\)](#). class is `tbl_df`, the reading is done by [readr::read_table\(\)](#). If the class is `data.frame`, the reading is done by [utils::read.table\(\)](#). The defaults have been chosen to suit typical Advent of Code puzzle input.

Usage

```
aoc_input_data_frame(
  day,
  year = NULL,
  file = "input",
  class = c("tbl_df", "data.frame"),
  col_names = FALSE,
  show_col_types = FALSE,
  view = FALSE
)
```

Arguments

day	An integer between 1 and 25
year	An integer representing the year, from 2015 to the current year. Defaults to the current year.
file	Character string. The name of a file that exists in the directory <code>"/YYYY/day/DD"</code> , where YYYY and DD are the values of year and day. Defaults to <code>"input"</code> .
class	character. One of <code>'tbl_df'</code> or <code>'data.frame'</code> . Default is <code>'tbl_df'</code> .
col_names	logical. Only relevant if class is <code>tbl_df</code> . If TRUE, the first row of the input file will be used as the column names. Default is FALSE
show_col_types	logical. If TRUE, the column types will be shown. Default is FALSE
view	logical. If TRUE, calls utils::View() to view the returned input. Default is FALSE

Value

A data frame containing the puzzle input for the day and year.

See Also

[aoc_input_vector\(\)](#) [aoc_input_matrix\(\)](#)

Examples

```
## Not run: aoc_input_data_frame(8, 2020)
```

aoc_input_matrix	<i>Read puzzle input as a matrix</i>
------------------	--------------------------------------

Description

Read in the puzzle input, or other file, as a matrix, one row per line, by default one character per column. It assumes that the file is stored in the directory ". /YYYY/day/DD", where YYYY and DD are the values of year and day. By default, the file name is "input". This file will exist in this location if the post was created using [aoc_new_day\(\)](#). The initial reading is done by [readLines\(\)](#).

Usage

```
aoc_input_matrix(  
  day,  
  year = NULL,  
  file = "input",  
  mode = c("character", "numeric"),  
  split = "",  
  view = FALSE  
)
```

Arguments

day	An integer between 1 and 25
year	An integer representing the year, from 2015 to the current year. Defaults to the current year.
file	Character string. The name of a file that exists in the directory ". /YYYY/day/DD", where YYYY and DD are the values of year and day. Defaults to "input".
mode	Character string. One of 'character' or 'numeric'. Default is 'character'.
split	character. The string to split the input on. Default is "", i.e. one character per column
view	logical. If TRUE, calls utils::View() to view the returned input. Default is FALSE

Value

A matrix containing the puzzle input for the day and year.

See Also

[aoc_input_vector\(\)](#) [aoc_input_data_frame\(\)](#)

Examples

```
## Not run: aoc_input_matrix(3, 2020)
```

aoc_input_vector	<i>Read puzzle input as a vector</i>
------------------	--------------------------------------

Description

Read in the puzzle input, or other file, as a vector, one element per line. It assumes that the file is stored in the directory `"/YYYY/day/DD"`, where YYYY and DD are the values of year and day. By default, the file name is `"input"`. This file will exist in this location if the post was created using [aoc_new_day\(\)](#). The reading is done by [readLines\(\)](#).

Usage

```
aoc_input_vector(  
  day,  
  year = NULL,  
  file = "input",  
  mode = c("character", "numeric")  
)
```

Arguments

day	An integer between 1 and 25
year	An integer representing the year, from 2015 to the current year. Defaults to the current year.
file	Character string. The name of a file that exists in the directory <code>"/YYYY/day/DD"</code> , where YYYY and DD are the values of year and day. Defaults to <code>"input"</code> .
mode	Character string. One of <code>'character'</code> or <code>'numeric'</code> . Default is <code>'character'</code> .

Value

A vector containing the puzzle input for the day and year.

See Also

[aoc_input_data_frame\(\)](#) [aoc_input_matrix\(\)](#)

Examples

```
## Not run: aoc_input_vector(1, 2020, "numeric")
```

```
aoc_new_conclusion      Create a conclusion post
```

Description

Create a conclusion post with relative path `./YYYY/day/conclusion` (where `YYYY` is the value of year) by copying the template at `./_templates/YYYY-conclusion` and substituting `YYYY` for the value of year, both in the new file name and in the file itself.

Usage

```
aoc_new_conclusion(year = NULL)
```

Arguments

`year` An integer representing the year, from 2015 to the current year. Defaults to the current year.

Value

The path to the conclusion post (invisibly)

See Also

[aoc_delete_conclusion\(\)](#)

Examples

```
## Not run: aoc_new_introduction(2022)
```

```
aoc_new_day            Set up a new day
```

Description

Create the necessary directories for a new post, copy in template files and make them relevant to the day and year (see Details).

Usage

```
aoc_new_day(day, year = NULL)
```

```
aoc_new_post(day, year = NULL)
```

Arguments

day	An integer between 1 and 25
year	An integer representing the year, from 2015 to the current year. Defaults to the current year.

Details

`aoc_new_post()` and `aoc_new_day()` both assume they being called from a project with a directory `_templates`, with a subdirectory `post-template` that contains, at minimum, the file `index.qmd`. They will copy all the files in `post-template` into a directory `./YYYY/day/DD` where `YYYY` is the value of the year parameter and `DD` is value of the day parameter (creating these directories if they do not already exist). This path echoes the URL structure of the Advent of Code website. Additionally, they replace any instances of `YYYY` and `DD` in the `index.qmd` and (if present) `script.R` files with the values of the year and day parameters, respectively. In addition, `aoc_new_day()` will also run `aoc_get_input()` to download the puzzle input and save it into the `post` directory.

If you have your Advent of Code session token set in your `.Renviro` file, we recommend using `aoc_new_day()` over `aoc_new_post()`. If you wish to download and save your puzzle input separately, use `aoc_new_post()`.

Value

The path to the new day (invisibly)

See Also

[aoc_get_input\(\)](#)

Examples

```
## Not run: aoc_new_day(1, 2022)
## Not run: aoc_new_post(1, 2022)
```

aoc_new_intro

Create an introduction post

Description

Create an introduction post with relative path `./YYYY/day/introduction` (where `YYYY` is the value of year) by copying the template at `./_templates/YYYY-intro` and substituting `YYYY` for the value of year, both in the new file name and in the file itself.

Usage

```
aoc_new_intro(year = NULL)
```

Arguments

`year` An integer representing the year, from 2015 to the current year. Defaults to the current year.

Value

The path to the introduction post (invisibly)

See Also

[aoc_delete_intro\(\)](#) [aoc_new_year\(\)](#)

Examples

```
## Not run: aoc_new_intro(2022)
```

<code>aoc_new_year</code>	<i>Create directory and files for a new year</i>
---------------------------	--

Description

Creates a directory with relative path `./YYYY` (where `YYYY` is the value of `year`) and copies the listing template at `"./_templates/YYYY.qmd"` to `YYYY.qmd` and, for the latter, replaces `YYYY` with the value of `year`, both in the file name and in the file itself. Additionally, an introduction post and a `_metadata.yml` may be created. See Details for more information.

Usage

```
aoc_new_year(year = NULL, intro = TRUE)
```

Arguments

`year` An integer representing the year, from 2015 to the current year. Defaults to the current year.

`intro` Logical. Whether to include an introduction post.

Details

The listing page, `./YYYY.qmd` (where `YYYY` is the value of `year`) picks up posts which are in the subdirectory `./YYYY/day` (which echoes the URL structure of the Advent of Code website). Note that the website will fail to render if there are no posts under the day directory. To avoid that problem, by default an introduction post `introduction` is created, assuming that the directory `./_templates/YYYY-intro` exists (which it does in the website template <https://github.com/EllaKaye/advent-of-code-website-template>.) If you don't want an introduction post, set `intro = FALSE`. An introduction post can also be created separately with [aoc_new_intro\(\)](#) or deleted with [aoc_delete_intro\(\)](#). Without an introduction post, note that you will need at least one other post, e.g. through a call to [aoc_new_day\(\)](#) before rendering the website.

Additionally, if there is a file `./_templates/_metadata.yml`, this will be copied into `./YYYY/day/_metadata.yml`. This file is used to set the metadata only for the posts in the day directory.

If there is no intro post and no `_metadata.yml` file, then only the `./YYYY` directory will be created, not the subdirectory `./YYYY/day`. The latter will then be created on the first call to [aoc_new_day\(\)](#) for that year. In this case, the website will render after a call to [aoc_new_year\(\)](#).

Value

The path to the new year directory (invisibly)

See Also

[aoc_new_day\(\)](#), [aoc_new_intro\(\)](#), [aoc_delete_intro\(\)](#), [aoc_delete_year\(\)](#)

Examples

```
## Not run: aoc_new_year(2022)
```

aoc_url	<i>Get URLs from the Advent of Code website</i>
---------	---

Description

Get the URL from the Advent of Code website for the puzzle and the puzzle input for a given day and year.

Usage

```
aoc_url(day, year = NULL, browse = FALSE)
```

```
aoc_url_input(day, year = NULL, browse = FALSE)
```

Arguments

day	An integer between 1 and 25
year	An integer representing the year, from 2015 to the current year. Defaults to the current year.
browse	logical - should the URL be opened in the browser?

Value

A character string with the URL

Examples

```
aoc_url(1, 2022)
aoc_url_input(1, 2022)
```

`extract_numbers` *Extract all numbers from a string*

Description

Extract all numbers from a string

Usage

```
extract_numbers(x)
```

Arguments

`x` character. The string to extract numbers from.

Value

A numeric vector containing all numbers in the string.

Examples

```
extract_numbers("abc123def456")
extract_numbers("Game 1:")
extract_numbers("Cards: 1 3 16 136")
extract_numbers("1, -3, 16, -136")
```

`GCD` *Greatest Common Divisor (GCD) and Least Common Multiple (LCM)*

Description

Greatest Common Divisor (GCD) and Least Common Multiple (LCM)

Usage

```
GCD(x, y)
```

```
LCM(x, y)
```

Arguments

`x` A single integer

`y` A single integer

Value

The greatest common divisor of x and y

Examples

```
GCD(12, 18)
GCD(12, 0)
GCD(13, 2)
LCM(12, 18)
LCM(2, 6)
LCM(3, 5)
```

lines_to_matrix	<i>Convert vectors to a matrix</i>
-----------------	------------------------------------

Description

For the default split of " ", assumes that each element of lines has the same number of characters.

Usage

```
lines_to_matrix(lines, split = " ")
```

Arguments

lines	a vector
split	character. The string to split the input on. Default is " ", i.e. one character per column

Value

A matrix where the number of rows is the length of lines and, for a split on " ", the number of columns is the same as the number of characters in each element of lines.

Examples

```
lines_to_matrix(c("#.#.", "..#.", "##.."))
```

split_at_blanks	<i>Split input into groups</i>
-----------------	--------------------------------

Description

When the strings represent numbers, it's better to read them in as a character vector using `aoc_input_vector()`, then change mode to numeric as part of call to `split_at_blanks()`.

Usage

```
split_at_blanks(lines, mode = c("character", "numeric"), split = "")
```

Arguments

lines	A character vector
mode	Character string. One of 'character' or 'numeric'. Default is 'character'.
split	character. The string to split the input on. Default is "", i.e. split at blank lines

Value

A list, with one element per group originally separated by blank lines.

Examples

```
x <- c("123", "1234", "", "56", "567", "", "89")
split_at_blanks(x)
split_at_blanks(x, "numeric")
```

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