1 Package header

We load the required packages needed for LaTeX3, and the package header.

```
1 ⟨*package⟩
2 ⟨@@=yoin⟩
```

Necessary packages: First, LaTeX3 stuff.

```
3 \RequirePackage{expl3,l3keys2e,l3regex,xparse}
```

From `zref` bundle, for computing the total number of pages.

```
4 \RequirePackage{zref-totpages}
```

We need the absolute paths. This also means we need `-recorder` option to `pdflatex`.

```
5 \RequirePackage[abspath]{currfile}
```

Package header.

```
6 \ProvidesExplPackage{yoin}{2016/02/28}{v0.0.1}{Joining articles into issues}
```

2 General macros

Macros not necessarily related to the package; moreorless an addition to LaTeX3.

`\yoin_seq_gappend_clist:Nn` Globally append `clist` `#2` to `seq` `#1`.

```
7 \cs_new_protected:Nn \yoin_seq_gappend_clist:Nn {
8   \seq_set_from_clist:Nn \l__yoin_tmpa_seq { #2 }
9   \seq_gconcat:NNN #1 #1 \l__yoin_tmpa_seq
10 }
```

(*End definition for* `\yoin_seq_gappend_clist:Nn`*. This function is documented on page* ??.)

`\yoin_keys_set_from_file:nn` Read a file `#2` containing a key–value list and set the keys for `#1`. No checks are done here, nothing like comments could be used, the keys should be separated by a comma (and spaces of course as needed).

```
11 \cs_new_protected:Nn \yoin_keys_set_from_file:nn {
12   \tl_set_from_file:Nnn \l_tmpa_tl { } { #2 }
13   \keys_set:nV { #1 } \l_tmpa_tl
14 }
15 \cs_generate_variant:Nn \keys_set:nn { nV }
```

(*End definition for* `\yoin_keys_set_from_file:nn`*. This function is documented on page* ??.)

3 Key–value interface for the package setup

First, we define the variables to store the keys.

\g_yoin_subprocess_bool
\g_yoin_article_bool
\g_yoin_dryrun_bool
\g_yoin_onlyflags_bool
\g_yoin_onlytags_bool

Booleans:

```
\bool_new:N \g_yoin_subprocess_bool
\bool_new:N \g_yoin_article_bool
\bool_new:N \g_yoin_dryrun_bool
\bool_new:N \g_yoin_onlyflags_bool
\bool_new:N \g_yoin_onlytags_bool
```

(*End definition for* `\g_yoin_subprocess_bool` *and others. These functions are documented on page* **??**.)

\g_yoin_flags_seq
\g_yoin_tags_seq
\g_yoin_onlyflags_seq
\g_yoin_onlytags_seq

Sequences for flags, tags and their filtering:

```
\seq_new:N \g_yoin_flags_seq
\seq_new:N \g_yoin_tags_seq
\seq_new:N \g_yoin_onlyflags_seq
\seq_new:N \g_yoin_onlytags_seq
```

(*End definition for* `\g_yoin_flags_seq` *and others. These functions are documented on page* **??**.)

msg: unknown-flag
msg: unknown-tag

Two messages, for unknown flags and unknown tags.

```
\msg_new:nnnn { yoin } { unknown-flag }
   { The ~ flag ~ ‘#1’ ~ is ~ unknown ~ to ~ ‘yoin’. }
   { You ~ either ~ misspelled ~ it ~ or ~forgot ~ to ~ declare ~ it. }

\msg_new:nnnn { yoin } { unknown-tag }
   { The ~ tag ~ ‘#1’ ~ is ~ unknown ~ to ~ ‘yoin’. }
   { You ~ either ~ misspelled ~ it ~ or ~forgot ~ to ~ declare ~ it. }
```

(*End definition for* `msg: unknown-flag` *and* `msg: unknown-tag`. *These functions are documented on page* **??**.)

yoin / general

The keys themselves:

```
\keys_define:nn { yoin / general } {
```

Booleans:

```
   dryrun .bool_gset:N = \g_yoin_dryrun_bool,
   dryrun .initial:n = { false },

   article .bool_gset:N = \g_yoin_article_bool,
   article .initial:n = { false },
```

```
    subprocess .bool_gset:N = \g_yoin_subprocess_bool,
    subprocess .initial:n = { false },
```

Keys whose `clist` values are appended to a `seq`:

```
    defineflags .code:n = \yoin_seq_gappend_clist:Nn \g_yoin_flags_seq { #1 },
    definetags .code:n = \yoin_seq_gappend_clist:Nn \g_yoin_tags_seq { #1 },
```

A `clist` key is stored in a `seq`, also, a corresponding `bool` is set true. (The point is, if `onlyflags`/`onlytags` is not ever set up, we want to know it since we treat it as if we use all flags/tags.

```
    onlyflags .code:n =
       \seq_gset_from_clist:Nn \g_yoin_onlyflags_seq { #1 }
       \bool_gset_true:N \g_yoin_onlyflags_bool
       ,
    onlytags .code:n =
       \seq_gset_from_clist:Nn \g_yoin_onlytags_seq { #1 }
       \bool_gset_true:N \g_yoin_onlytags_bool
       ,
}
```

(*End definition for `yoin / general`. This function is documented on page* **??**.)

`\ProcessKeysPackageOptions` Process key options given to the package. We *do not want to process any options given to the class.* Whence `\ProcessKeysPackageOptions` and not `\ProcessKeysOptions`.

```
\ProcessKeysPackageOptions { yoin / general }
```

(*End definition for `\ProcessKeysPackageOptions`. This function is documented on page* **??**.)

`\yoin_setup:n` `\yoinSetup` Allow keys to be set later. We define both a LaTeX3 interface and an xparse UI wrapper.

```
\cs_new_protected:Nn \yoin_setup:n {
   \keys_set:nn { yoin / general } { #1 }
}
\NewDocumentCommand \yoinSetup { R[]{} } {
   \yoin_setup:n { #1 }
}
```

(*End definition for `\yoin_setup:n` and `\yoinSetup`. These functions are documented on page* **??**.)

4 \yoinAdd macro — adding articles to the issue

The key–value interface. In this case, we basically only store the keys for each article in a prop. First, an interface for setting the keys for the articles. \yoin_yoinadd_prop:n returns the name of the prop for the given article; *no check for existence is done at this place.*

\g_yoin_yoinadd_seq A sequence for storing the list of the existing articles.

```
\seq_new:N \g_yoin_yoinadd_seq
```

(*End definition for* \g_yoin_yoinadd_seq. *This function is documented on page* ??.)

\yoin_yoinadd_prop:n
\yoin_yoinadd_prop:V
\yoin_yoinadd_prop_item:nn
\yoin_yoinadd_prop_item:Vn

\yoin_yoinadd_prop:n returns the name of the prop for the given article; *no check for existence is done at this place.* \yoin_yoinadd_prop:nn returns property #2 of article #1, or \q_no_value if the property is not set.

```
\cs_new:Nn \yoin_yoinadd_prop:n {
   g__yoin_article_#1_prop
}
\cs_generate_variant:Nn \yoin_yoinadd_prop:n { V }

\cs_new:Nn \yoin_yoinadd_prop_item:nn {
   \prop_item:cn { \yoin_yoinadd_prop:n { #1 } } { #2 }
}
\cs_generate_variant:Nn \yoin_yoinadd_prop_item:nn { V }
```

(*End definition for* \yoin_yoinadd_prop:n *and others. These functions are documented on page* ??.)

For processing \yoinAdd, we first set up a tl to contain the name of the article, then create the prop, and finally use l3keys to fill in the prop. Note that if an article is added twice, an error is issued, if the error is ignored, the article is not added but the properties are set.

\l__yoin_yoinadd_currentarticle_tl A tl that stores the name of the article that is being processed by \yoinAdd.

```
\tl_new:N \l__yoin_yoinadd_currentarticle_tl
```

(*End definition for* \l__yoin_yoinadd_currentarticle_tl. *This function is documented on page* ??.)

__yoin_yoinadd_storekey:nn Internal macro for storing a key in the prop.

```
\cs_new_protected:Nn \__yoin_yoinadd_storekey:nn {
   \prop_gput:cnn { \yoin_yoinadd_prop:V \l__yoin_yoinadd_currentarticle_tl } { #1 } { #2 }
}
```

(*End definition for* __yoin_yoinadd_storekey:nn. *This function is documented on page* ??.)

\yoin_yoinadd:nn
\yoinAdd

The macro \yoinAdd itself. We first set \l_@@_yoinadd_currentarticle_tl, then check whether the same article has not been processed before (issuing an error in that case and finishing). Then, the article is added in \g_yoin_yoinadd_seq, the prop created, the article's name added in the prop with key article and the keys are set. If the article has a .yoin file in its sub-directory, the key–values in it is added to the prop. If the file does not exist, it means things are wrong (the article should first be set up, before being added to its issue by \yoinAdd).

```
\cs_new_protected:Nn \yoin_yoinadd:nn {
   \tl_set:Nn \l__yoin_yoinadd_currentarticle_tl { #1 }
   \seq_if_in:NnTF \g_yoin_yoinadd_seq { #1 } {
      \msg_error:nnn { yoin } { yoinadd-duplicatearticle } { #1 }
   } {
      \seq_gput_right:Nn \g_yoin_yoinadd_seq { #1 }
      \prop_new:c { \yoin_yoinadd_prop:n { #1 } }
      \__yoin_yoinadd_storekey:nn { article } { #1 }
      \keys_set:nn { yoin / yoinadd } { #2 }
      \file_if_exist:nTF { #1 / #1 .yoin } {
         \yoin_keys_set_from_file:nn { yoin / yoinaddfromarticle } { #1 / #1 .yoin }
      } {
         \msg_error:nnn { yoin } { yoinadd-dotyoinmissing } { #1 }
      }
   }
}

\NewDocumentCommand \yoinAdd { m O{} } {
   \yoin_yoinadd:nn { #1 } { #2 }
}
```

(*End definition for* \yoin_yoinadd:nn *and* \yoinAdd*. These functions are documented on page* ??.)

msg: yoinadd-duplicatearticle
msg: yoinadd-dotyoinmissing

The error messages: for adding a duplicate article and for adding an article with no #1/#1.yoin file.

```
\msg_new:nnn { yoin } { yoinadd-duplicatearticle }
   { The ~ article ~ "#1" ~ has ~ been ~ already ~ processed ~ by ~ \token_to_str:N \yoinAdd ~.}
\msg_new:nnn { yoin } { yoinadd-dotyoinmissing }
   { The ~ article ~ "#1" ~ has ~ no ~ file "#1/#1.yoin" ~ and ~ was ~ not ~ properly ~ set ~ up.}
```

(*End definition for* msg: yoinadd-duplicatearticle *and* msg: yoinadd-dotyoinmissing*. These functions are documented on page* ??.)

The keys here are pretty simple; each defined key just stores its value in the prop. We recall that #1 is the key and ##1 is the value.

```
\clist_map_inline:nn { forceopenany, forceopenright, ignore } {
   \keys_define:nn { yoin / yoinadd } {
      #1 .code:n = \__yoin_yoinadd_storekey:nn { #1 } { ##1 },
```

```
    }
}
```

However, for the `tag` key, we additionally check that the tag exists.

```
\keys_define:nn { yoin / yoinadd } {
   tag .code:n =
      \__yoin_error_if_tag_undefined:n { #1 }
      \__yoin_yoinadd_storekey:nn { tag } { #1 }
      ,
}
\keys_define:nn { yoin / yoinaddfromarticle } {
   unknown .code:n =
      \__yoin_yoinadd_storekey:Vn \l_keys_key_tl { #1 }
      ,
}
```

5 Conditionals for checking the existence of tags and flags

```
\prg_new_protected_conditional:Nnn \yoin_if_tag_defined:n { T, F, TF } {
   \seq_if_in:NnTF \g_yoin_tags_seq { #1 } { \prg_return_true: } { \prg_return_false: }
}
\prg_new_protected_conditional:Nnn \yoin_if_flag_defined:n { T, F, TF } {
   \seq_if_in:NnTF \g_yoin_flags_seq { #1 } { \prg_return_true: } { \prg_return_false: }
}
\cs_new_protected:Nn \__yoin_error_if_tag_undefined:n {
   \yoin_if_tag_defined:nF { #1 } { \msg_error:nnn { yoin } { unknown-tag } { #1 } }
}
\cs_new_protected:Nn \__yoin_error_if_flag_undefined:n {
   \yoin_if_flag_defined:nF { #1 } { \msg_error:nnn { yoin } { unknown-flag } { #1 } }
}
```

6 Environment yoinshell

`\l_yoin_yoinshell_ignore_bool` A boolean for storing the `ignore` key's value.

(*End definition for* `\l_yoin_yoinshell_ignore_bool`. *This function is documented on page* ??.)

`yoin / yoinshell` Key–value interface to `yoinshell`.

```
\keys_define:nn { yoin / yoinshell } {
```

If `flag` is set and `onlyflags` is set but the flag is not amongst them, the whole `yoinshell` is ignored (by setting the `ignore` key).

```
    flag .code:n =
      \__yoin_error_if_flag_undefined:n { #1 }
      \bool_if:NT \g_yoin_onlyflags_bool {
        \seq_if_in:NnF \g_yoin_onlyflags_seq { #1 } {
          \keys_set:nn { yoin / yoinshell } {
            ignore = true
          }
        }
      }
      ,
```

The `ignore` key sets a boolean

```
    ignore .bool_set:N = \l_yoin_yoinshell_ignore_bool,
    ignore .initial:n = { false },
}
```

(*End definition for* `yoin / yoinshell`. *This function is documented on page* **??**.)

`shellesc.sty` A reasonable shell escape that should work in both `pdflatex` and `lualatex` in TeX Live 2016.

`\ShellEscape`

`\__yoin_yoinshell_shellescape:n`

```
\file_if_exist:nTF { shellesc.sty } {
  \RequirePackage { shellesc }
} {
  \def \ShellEscape #1 { \immediate \write 18 { #1 } }
}
\cs_new_protected:Nn \__yoin_yoinshell_shellescape:n {
  \ShellEscape { #1 }
}
```

(*End definition for* `shellesc.sty`, `\ShellEscape`, *and* `\__yoin_yoinshell_shellescape:n`. *These functions are documented on page* **??**.)

`\__yoin_yoinshell_begin:n` `\__yoin_yoinshell_end:` `{yoinshell}` Environment `yoinshell` (one key–value argument). We perform some local definitions that should stay local, so we put everything in a group. The keys are set. Then we define the macros — "shell commands". If `ignore` is set, these macros are declared to do nothing, otherwise they are simply wrappers to the LaTeX3 counterparts.

```
\cs_new_protected:Nn \__yoin_yoinshell_begin:n {
  \group_begin:
  \keys_set:nn { yoin / yoinshell } { #1 }
  \bool_if:NTF \l_yoin_yoinshell_ignore_bool {
    \DeclareDocumentCommand \RunForEach { O{} m } { }
    \DeclareDocumentCommand \Run { O{} m } { }
```

```
    } {
        \DeclareDocumentCommand \RunForEach { O{} m } { \yoin_yoinshell_runforeach:nn { ##1 } { ##2 } }
        \DeclareDocumentCommand \Run { O{} m } { \yoin_yoinshell_run:nn { ##1 } { ##2 } }
    }
}

\cs_new_protected:Nn \__yoin_yoinshell_end: {
    \group_end:
}

\NewDocumentEnvironment { yoinshell } { O{} } {
    \__yoin_yoinshell_begin:n { #1 }
} {
    \__yoin_yoin_yoinshell_end:
}
```

(*End definition for* `\__yoin_yoinshell_begin:n`, `\__yoin_yoinshell_end:`, *and* `{yoinshell}`. *These functions are documented on page* **??**.)

\RunForEach

```
\tl_new:N \l__yoin_yoinshell_runforarticle_tag_tl
\tl_new:N \l__yoin_yoinshell_runforeach_onlytag_tl
\tl_set:Nn \l__yoin_yoinshell_runforeach_onlytag_tl { \q_no_value }

\keys_define:nn { yoin / runforeach } {

    onlytag .code:n =
        \__yoin_error_if_tag_undefined:n { #1 }
        \tl_set:Nn \l__yoin_yoinshell_runforeach_onlytag_tl { #1 }
        ,

}

\tl_new:N \__yoin_yoinshell_runforarticle_tmpa_tl
\cs_new_protected:Nn \__yoin_yoinshell_runforarticle_keyfromprop:nNn {
    \prop_get:cnN { \yoin_yoinadd_prop:n { #1 } } { #3 } \l__yoin_yoinshell_runforarticle_tmpa_tl
    \let #2 \l__yoin_yoinshell_runforarticle_tmpa_tl
}

\cs_new_protected:Nn \__yoin_yoinshell_runforarticle:nn {
    \prop_get:cnN { \yoin_yoinadd_prop:n { #1 } } { tag } \l__yoin_yoinshell_runforarticle_tag_tl
    \bool_if:nT {
```

```
      \quark_if_no_value_p:N \l__yoin_yoinshell_runforarticle_tag_tl
      ||
      \quark_if_no_value_p:N \l__yoin_yoinshell_runforeach_onlytag_tl
      ||
      \tl_if_eq_p:NN \l__yoin_yoinshell_runforeach_onlytag_tl \l__yoin_yoinshell_runforarticle_tag_tl
   }{
      \group_begin:
      \__yoin_yoinshell_runforarticle_keyfromprop:nNn { #1 } \Article { article }
      \__yoin_yoinshell_runforarticle_keyfromprop:nNn { #1 } \Jobname { jobname }
      \__yoin_yoinshell_shellescape:n { #2 }
      \group_end:
   }
}

\cs_new_protected:Nn \yoin_yoinshell_runforeach:nn {
   \group_begin:
   \keys_set:nn { yoin / runforeach } { #1 }
   \seq_map_inline:Nn \g_yoin_yoinadd_seq { \__yoin_yoinshell_runforarticle:nn { ##1 } { #2 } }
   \group_end:
}
```

7 Article setting stuff

Information to be stored in an auxiliary file.

```
\cs_new_protected:Nn \__yoin_article_write:n {
   \immediate \write \@auxout { \token_to_str:N \@writefile { yoin } { #1 } }
}

\cs_new_protected:Nn \__yoin_article_write_keyval:nn {
   \__yoin_article_write:n { #1 ~ = ~ #2 , }
}
\cs_generate_variant:Nn \__yoin_article_write_keyval:nn { nx }

\cs_new_protected:Nn \yoin_article_write_meta:nn {
   \__yoin_article_write_keyval:nn { meta-#1 } { #2 }
}

\cs_new_protected:Nn \yoin_article_write_keys: {
   \__yoin_article_write_keyval:nx { jobname } { \jobname }
```

```
   \__yoin_article_write_keyval:nx { totpages } { \ztotpages }
   \__yoin_article_write_keyval:nx { currdir } { \l_yoin_article_currdir_tl }
   \__yoin_article_write_keyval:nx { firstpage } { \int_use:N \l_yoin_article_firstpage_int }
}

\prop_new:N \l__yoin_article_readkeys_prop

\cs_new_protected:Nn \yoin_article_set_readkey:nn {
   \prop_put:Nnn \l__yoin_article_readkeys_prop { #1 } { #2 }
}

\int_new:N \l_yoin_article_firstpage_int
\int_set:Nn \l_yoin_article_firstpage_int { 1 }

\keys_define:nn { yoin / toarticle } {
   firstpage .code:n =
      \int_set:Nn \l_yoin_article_firstpage_int { #1 }
      \yoin_article_set_readkey:nn { firstpage } { #1 }
      ,

   unknown .code:n =
      \yoin_article_set_readkey:nn { \l_keys_key_tl } { #1 }
      ,
}

\cs_new_protected:Nn \yoin_article_read_keys: {
   \file_if_exist:nT { ../ \l_yoin_article_currdir_tl .yoin } {
      \yoin_keys_set_from_file:nn { yoin / toarticle } { ../ \l_yoin_article_currdir_tl .yoin }
   }
}

\tl_new:N \l__yoin_tmpa_tl
\seq_new:N \l__yoin_tmpa_seq
\tl_new:N \l_yoin_article_currdir_tl
\cs_new_protected:Nn \yoin_article_getcurrdir:N {
   \tl_set:Nx \l__yoin_tmpa_tl { \currfileabsdir }
   \cs_generate_variant:Nn \regex_extract_once:nnNF { nV }
   \regex_extract_once:nVNF { /([^/]+)/\Z } \l__yoin_tmpa_tl \l__yoin_tmpa_seq { \error }
   \seq_get_right:NN \l__yoin_tmpa_seq #1
}
```

```
\AtBeginDocument{ \yoin_atbegindocument: }

\cs_new_protected:Nn \yoin_atbegindocument: {
   \expandafter \newwrite \csname tf@yoin\endcsname
   \bool_if:NTF \g_yoin_article_bool {
      \yoin_article_getcurrdir:N \l_yoin_article_currdir_tl
      \immediate \openout \csname tf@yoin\endcsname \l_yoin_article_currdir_tl .yoin\relax
      \yoin_article_read_keys:
      \setcounter { page } { \l_yoin_article_firstpage_int }
      \yoin_article_write_keys:
   } {
      \immediate \openout \csname tf@yoin\endcsname \jobname .yoin\relax
   }
}
```

8 yoinProcess

```
\int_new:N \g_yoin_page_int
\iow_new:N \g__yoin_yoinprocess_stream
\cs_new_protected:Nn \yoin_yoinprocess:n {
   \keys_set:nn { yoin / yoinprocess } { #1 }
   \seq_map_inline:Nn \g_yoin_yoinadd_seq {
      \cleardoublepage
      \int_gset:Nn \g_yoin_page_int { \value { page } }
      \includepdf [ pages = - ] { ##1 / \yoin_yoinadd_prop_item:nn { ##1 } { jobname } .pdf }
      \iow_open:Nn \g__yoin_yoinprocess_stream { ##1 .yoin }
      \iow_now:Nx \g__yoin_yoinprocess_stream { firstpage ~ = ~ \int_use:N \g_yoin_page_int , }
      \iow_close:N \g__yoin_yoinprocess_stream
      \int_gadd:Nn \g_yoin_page_int { \yoin_yoinadd_prop_item:nn { ##1 } { totpages } }
   }
}
\DeclareDocumentCommand \yoinProcess { O{} } { \yoin_yoinprocess:n { #1 } }
```

9 Experimental

\bla

```
\cs_new:Nn \yoin_blabla: {
   Blabla
```

```
}

```

(*End definition for* `\bla`. *This function is documented on page* **??**.)

```
⟨/package⟩
```