# The `isodate` package<sup>*</sup>

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### Abstract

This package provides commands to switch between different date formats (standard, ISO, numeric, LaTeX package). They are used by the `\today` command, by the `\printdate` and `\printdateTeX` commands that print any date, and by the `\daterange` command that prints a date range. At the moment, this package supports German (old and new orthography, Austrian), British, US, Australian as well as New Zealand English,[1] French, Danish, Swedish, and Norwegian.

The idea for this package was taken from the akletter class.

## Contents

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<sup>*</sup>This file has version v2.27 last revised 2005-03-11.

[1] In order to use Australian or New Zealand, you need a version of babel that supports the used language. It should be available, soon.

# Acknowledgements

First of all I have to thank Axel Kielhorn who wrote the package `akletter` which inspired me to write `isodate`. The help of Heiko Oberdiek was necessary to handle characters in substrings which resulted in the package `substr`. David Sanderson found the bug which disabled `isodate` to work without `babel`. He also helped me to improve the documentation and sent me a link to the ISO 8601 norm [1]. Svend Tollak Munkejord has added the Norwegian language, Christian Schlauer has added Swedish.

# Requirements

The package `isodate` needs the package `substr.sty` which can be obtained from `CTAN:macros/latex/contrib/substr/`.

# 1  Commands

## 1.1  Switching the date output format

This package provides five commands to switch the output format of all commands that print dates (described later):

| | |
|---|---|
| \isodate | date format described in ISO 8601 and DIN 5008 [1] (yyyy-mm-dd) |
| \numdate | numeric date format with four digits of the year |
| \shortdate | short numeric date format with two digits of the year |
| \TeXdate | date format used for version description of packages (yyyy/mm/dd) |
| \origdate | original LaTeX format |
| \shortorigdate | original LaTeX format with two instead of four digits of the year |
| \Romandate | As \numdate but with uppercase Roman numerals for the month |

*Margin notes:* \isodate \numdate \shortdate \TeXdate \origdate \shortorigdate \Romandate \romandate \shortRomandate \shortromandate

| | |
|---|---|
| \romandate | As \numdate but with lowercase Roman numerals for the month |
| \shortRomandate | As \shortdate but with uppercase Roman numerals for the month |
| \shortromandate | As \shortdate but with lowercase Roman numerals for the month |

These commands *do not* print any dates and they don't take an argument. They just switch the format for later usage of the date-printing commands \today, \printdate, \printdateTeX, and \daterange.

The numeric and short numeric as well as the Roman numbered formats change their behaviour depending on the current language:

| | | | |
|---|---|---|---|
| German, nGerman | dd.\,mm.~yyyy | resp. | dd.\,mm.\,yy |
| US English | mm/dd/yyyy | resp. | mm/dd/yy |
| other languages | dd/mm/yyyy | resp. | dd/mm/yy |

This package supports German (old and new rules, Austrian), US English, French, Danish, Swedish, and Norwegian. Switching the language by using \selectlanguage does *not* switch back to the original date format. So the current date format stays active when changing the language.

The change of the date format works locally. So it is possible to change it locally inside a group; e.g.,

```
\today, {\origdate\today}, \today
```

leads to "2005-03-11, 11th March 2005, 2005-03-11".

\printyearoff
\printyearon
By default, all formats print the day, month, and year. Sometimes, you may want to print the date without the year. This can be reached by using the command \printyearoff. You can switch back with \printyearon or by using \printyearoff inside a group (e.g., an environment). To switch globally, preceed the command by \global. An example:

```
\today, {\printyearoff\today}, \today
```

leads to "11th March 2005, 11th March, 11th March 2005".

## 1.2 Printing today's date

\today As usual, the command \today prints the date of today. Its appearance is influenced by the current date format

## 1.3 Printing any date

\printdate The command \printdate{#1} prints any date in the current format. The argument may be a date in German, British English, or ISO format, e.g.,

```
\printdate{24.12.2000}
\printdate{24/12/2000}
\printdate{2000-12-24}
```

**\printdateTeX**  The command `\printdateTeX{#1}` prints any date in the actual format. The argument must be in the LaTeX format `yyyy/mm/dd`, e.g.,

```
\printdateTeX{2000/12/24}
```

This command is useful for printing version information stored in a macro. For example the version of this package is stored in the macro `\filedate` ("2005/03/11"). To print it with the actual date format you can use the command `\printdateTeX{\filedate}` which leads to e.g., "2005-03-11" or "11th March 2005". Another possibility is to switch the input format to `tex` using `\dateinputformat`, described below.

## 1.4 Printing date ranges

**\daterange**  The command `\daterange{#1}{#2}` prints a date range in the current format. The arguments may be a date in German, British English, or ISO format (see above). But there is a limitation: Both arguments must have the same input format.

Depending on the language and date format, this commands leaves out some of the data. The simplest way to understand it is to watch some examples:

```
{\isodate
\daterange{1999-05-03}{1999-05-31} ⟶ 1999-05-03 to 31
\daterange{1999-05-03}{1999-11-03} ⟶ 1999-05-03 to 11-03
\daterange{1999-05-03}{2000-04-07} ⟶ 1999-05-03 to 2000-04-07
}
{\origdate
\daterange{1999-05-03}{1999-05-31} ⟶ 3rd to 31st May 1999
\daterange{1999-05-03}{1999-11-03} ⟶ 3rd May to 3rd November 1999
\daterange{1999-05-03}{2000-04-07} ⟶ 3rd May 1999 to 7th April 2000
}
```

## 1.5 Changing the ISO format

**\isodash**  The ISO norm says that the date format is "yyyy-mm-dd" or "yyyymmdd" [1]. By default I use the hyphen "-" as separator. You can change this using the `\isodash`[2] command, e.g.,

```
\printdate{24/12/2000},
\isodash{--}%
\printdate{24/12/2000},
\isodash{}%
\printdate{24/12/2000}
```

---

[2] The name "isodash" is a little bit confusing and was chosen due to my limited knowledge in English. It should be named "isoseparator" or "isosep". But for compatiblity reasons I will not change it.

leads to "2000-12-24, 2000–12–24, 20001224". Or for example

```
\isodash{$\cdot$}
\printdate{24/12/2000}
```

leads to "2000·12·24".

## 1.6 Changing the short original format

<div style="float:left">\shortyearsign</div>

The short original format normally prints the year with two digits, e.g., "19th May 01". Some people want to add an additional sign before the year, e.g., "19th May '01". This can be achieved by using the command \shortyearsign, e.g.,

```
\printdate{24/12/2000},
\shortyearsign{'}%
\printdate{24/12/2000}
```

leads to "24 december 00, 24 december '00" in English.

This only effects the shortorig format. The short numerical format stays unchanged.

## 1.7 Changing the German format

The spacings for the numerical formats in the German language (24. 12. 2000 resp. 24. 12. 00) were taken from the Duden [2] and are the defaults when using one of the German derivatives. Some people want to use different spacings. Thus from version 2.03 on it is possible to change them. You can change the spacing between the day and the month using the command \daymonthsepgerman. Using the command \monthyearsepgerman you can change the spacing between the month and the year for the long and the short format, e.g.,

```
\daymonthsepgerman{\quad}%
\monthyearsepgerman{\qquad}{\quad}%
{\numdate\printdate{24.12.2000}}, {\shortdate\printdate{24.12.2000}}
```

leads to "24. 12.     2000, 24.  12.   00".

The default values are "\," for the separator between day and month resp. "\," between month and year in the short format and "~" in the long format.

## 1.8 User defined month formatting

Internally, the formats using Roman numerals for the month are just links to the \numdate and \shortdate formats with a changed format for printing the month. Therefore, the command \Romandate calls \numdate by following sequence:

```
\numdate[Roman]%
\isotwodigitdayfalse
```

5

This tells \numdate to format the month using the \Roman command and to type-set the day without a leading zero if it is less than ten.

You may do similar things, e.g.,

```
\numdate[Alph]
```

prints the months with the command \Alph, "A", "B", ... The day is printed with two digits since every call of \numdate or \shortdate calls \isotwodigitdaytrue which switches printing the day with two digits on. This does not make any sence but may serve as example. If you want to enable days with one digit, append \isotwodigitdaytrue:

```
\numdate[Alph]%
\isotwodigitdaytrue
```

You may declare any command that typesets a counter that is given as its mandatory argument (e.g., \alph, \Alph, \arabic, ...) in the optional argument of the \numdate, \shortdate, \isodate, and \TeXdate commands, without the leading backslash. You can, of course, define own commands that do it. For instance,

```
{\def\boldnum#1{\textbf{\twodigitarabic{#1}}}%
\numdate[boldnum]%
\printdate{24.3.2000}}
```

\twodigitarabic    leas to "24/**03**/2000". Here, the \twodigitarabic command has been used that prints a positive number with at least two digits.[3]

If you, for example want a numerical date format with the day and month printed with the "natural" number of digits rather than with two digits, you may do it as follows:

```
{\numdate[arabic]\isotwodigitdayfalse
\printdate{1.2.2000}}
```

which leads to "1/2/2000".

Using one of the other date formats reset the numerical format to its standard settings with arabic numerals (with two digits), e.g.,

```
{\numdate[Alph]\printdate{6.12.2000};
\isodate\printdate{6.12.2000};
\numdate\printdate{6.12.2000}}
```

leads to "6/L/2000; 2000-12-06; 06/12/2000".

## 1.9   Switching the date input format

\dateinputformat    As described above, the date can be given in different formats. For the German format dd.mm.yyyy and the ISO format yyyy-mm-dd, the input format is definite. But when using slashes to seperate the day, month, and year, different formats

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[3]This command is also used for the numerical date formats.

exist. British people use `dd/mm/yyyy`, American people use `mm/dd/yyyy`, while TEX uses `yyyy/mm/dd` which in fact is an ISO format with slashes instead of dashes.

By default, the British format is used. If the user wants to give the American or TEX format as argument of the `\printdate` or `\daterange` commands, the macro `\dateinputformat` can be used to change the behaviour. This macro takes the name of the input format as single parameter, e.g., `\dateinputformat{american}`, for switching to American behaviour, e.i., `mm/dd/yyyy`. For example,

```
\numdate
\selectlanguage{UKenglish}%
\dateinputformat{american}%
\printdate{12/31/2004}
```

gives 31/12/2004. In this example, *input* format is American while the *output* format is English.

Valid arguments for the `\dateinputformat` command are `english`, `UKenglish`, `british`, `american`, `USenglish`, `tex`, `latex`, `TeX`, `LaTeX`. The meaning of most possibilities should be clear; `english` means British English.

Beware that the input format may only be changed for the date format using slashes. Thus, you don't have to and are not allowed to specify input formats other than these described above. For example, `\dateinputformat{german}` is not allowed (and not necessary).

## 2 Calling the package

The package is called using the `\usepackage` command:
`\usepackage[option]{isodate}`.

The possible package options can be seen in table 2.

*Be aware that at least one language option must be set when calling isodate.* The last language in the option list is the default language.

The package isodate works well together with `babel.sty`, `german.sty`, or `ngerman.sty`. It does not matter if `isodate` is loaded before or after the used language package.

It is also possible to use isodate without one of the language packages. Then it is not possible to switch between languages using the `\selectlanguage` command.[4] Then the default language is the last one in the option list. If an error occurs when using isodate without one of the packages `babel.sty`, `german.sty`, and `ngerman.sty` please run `tstlang.tex` through latex and send the file `tstlang.log` to the address `h.harders@tu-bs.de`.

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[4]Yes, there is a way to change the date language, but it is a little bit tricky:
```
\makeatletter
\def\iso@languagename{german}%
\dategerman%
\makeatother
```

Table 2: Package options

| option | function |
|---|---|
| iso | start with ISO date format |
| num | start with numeric date format with 4 digits of the year |
| short | start with numeric date format with 2 digits of the year |
| TeX | start with LaTeX numeric date format (yyyy/mm/dd) |
| orig | start with normal LaTeX date format (default[a]) |
| shortorig | start with short normal LaTeX date format (2 digits) |
| Roman | start with numeric date format (month in uppercase Roman numerals) |
| roman | start with numeric date format (month in lowercase Roman numerals) |
| shortRoman | start with short Roman format |
| shortroman | start with short roman format |
| american | support American English date format |
| austrian | support Austrian date format |
| british | support British English date format |
| danish | support Danish date format |
| english | support British English date format |
| french | support French date format |
| german | support German date format |
| naustrian | support new Austrian date format |
| ngerman | support new German date format |
| norsk | support Norwegian date format |
| norwegian | support Norwegian date format |
| swedish | support Swedish date format |
| UKenglish | support British English date format |
| USenglish | support American English date format |
| inputenglish | English date input format (default) |
| inputbritish | English date input format (default) |
| inputUKenglish | English date input format (default) |
| inputamerican | American date input format |
| inputUSenglish | American date input format |
| inputtex | TeX date input format |
| inputTeX | TeX date input format |
| inputlatex | TeX date input format |
| inputLaTeX | TeX date input format |

[a]The original format is used as default in order to avoid a different document output by just including the package.

If using isodate together with babel it can be useful to put the language options as global options into the optional parameters of the `\documentclass` command. Then automatically the available languages are the same for the text and the dates, and the default language is also the same. For example:

```
\documentclass[english,german]{article}
\usepackage{babel}
\usepackage[num]{isodate}
```

The input format options specify the input format that is used at the begin of the document. You don't have to define multiple options if you want to change the input format in the document using `\dateinputformat`. For example,

```
\documentclass[american,german,british]{article}
\usepackage{babel}
\usepackage[iso,inputamerican]{isodate}
\begin{document}
D \printdate{28.2.2000}\par
ISO \printdate{2000-2-28}\par
US \printdate{2/28/2000}\par
\dateinputformat{british}UK \printdate{28/2/2000}\par
\dateinputformat{tex}\TeX\ \printdate{2000/2/28}
\end{document}
```

works as expected.

Beware that only the mentioned input formats are defined. For example, `inputgerman` does not exist because it is not necessary.

## 3 Add new languages to the package

The easiest way to add new languages to the package is to copy one of the simple language files `danish.idf` or `french.idf` to the new language name, e.g., `plattdeutsch.idf`, and change it as necessary.

This new file can be used without changing `isodate.sty` if you use its name explicitly in the optional parameter of the `\usepackage` command. If you have added support for a new language please mail me.

## A Licence

## B Known errors

- The `\printdate` and `\printdateTeX` commands are not very good in checking the argument for correct syntax.

- The language definition files `french.idf` and `german.idf` are not yet commented.

- Isodate and draftcopy do not work together.

## C   Planned features and changes

- Of course eliminate the errors.

- Add other languages. Please help me with this topic. I don't know the date formats in other languages.

- Add a command that prints only the month and the year of a date.

- Format short given years to four digits and calculate reasonable first and second digits.

## References

[1] International Standard: ISO 8601. `http://www.iso.ch/markete/8601.pdf`, 1988-06-15.

[2] DUDEN Band 1. Die deutsche Rechtschreibung. 21. Auflage, Dudenverlag, Mannheim, Germany, 1996.

## D   The implementation

### D.1   Package file isodate.sty

Heading of the files:

```
 1 ⟨isodate⟩\NeedsTeXFormat{LaTeX2e}
 2 ⟨isodate⟩\ProvidesPackage{isodate}
 3 ⟨danish⟩\ProvidesFile{danish.idf}
 4 ⟨english⟩\ProvidesFile{english.idf}
 5 ⟨french⟩\ProvidesFile{french.idf}
 6 ⟨german⟩\ProvidesFile{german.idf}
 7 ⟨norsk⟩\ProvidesFile{norsk.idf}
 8 ⟨swedish⟩\ProvidesFile{swedish.idf}
 9 ⟨isodate⟩  [2005/03/11  v2.27  Print dates with different formats (HH)]
10 ⟨language⟩  [2005/03/11  v2.27  Language definitions for isodate package (HH)]
```

The package:

```
11 ⟨∗isodate⟩
12 \RequirePackage{ifthen}
13 \IfFileExists{substr.sty}{\RequirePackage{substr}%
14 }{\PackageError{isodate.sty}{Package file substr.sty not found}
15   {This version of isodate.sty needs the package substr.sty.^^J%
16     You can download it from
```

```
17      CTAN:/macros/latex/contrib/substr/^^J%
18      e.g., one CTAN node is ftp.dante.de.
19      Install substr.sty into your TeX tree.}}
```

Declare the options for the default date format.

```
20 \DeclareOption{iso}{\AtEndOfPackage{\isodate}}
21 \DeclareOption{num}{\AtEndOfPackage{\numdate}}
22 \DeclareOption{short}{\AtEndOfPackage{\shortdate}}
23 \DeclareOption{TeX}{\AtEndOfPackage{\TeXdate}}
24 \DeclareOption{orig}{\AtEndOfPackage{\origdate}}
25 \DeclareOption{shortorig}{\AtEndOfPackage{\shortorigdate}}
26 \DeclareOption{Roman}{\AtEndOfPackage{\Romandate}}
27 \DeclareOption{roman}{\AtEndOfPackage{\romandate}}
28 \DeclareOption{shortRoman}{\AtEndOfPackage{\shortRomandate}}
29 \DeclareOption{shortroman}{\AtEndOfPackage{\shortromandate}}
```

Declare the options for the default date input format.

```
30 \DeclareOption{inputenglish}{\AtEndOfPackage{\dateinputformat{english}}}
31 \DeclareOption{inputbritish}{\AtEndOfPackage{\dateinputformat{english}}}
32 \DeclareOption{inputUKenglish}{\AtEndOfPackage{\dateinputformat{english}}}
33 \DeclareOption{inputamerican}{\AtEndOfPackage{\dateinputformat{american}}}
34 \DeclareOption{inputUSenglish}{\AtEndOfPackage{\dateinputformat{american}}}
35 \DeclareOption{inputtex}{\AtEndOfPackage{\dateinputformat{tex}}}
36 \DeclareOption{inputTeX}{\AtEndOfPackage{\dateinputformat{tex}}}
37 \DeclareOption{inputlatex}{\AtEndOfPackage{\dateinputformat{tex}}}
38 \DeclareOption{inputLaTeX}{\AtEndOfPackage{\dateinputformat{tex}}}
```

Declare the options for language support.

```
39 \DeclareOption{american}{\input{english.idf}}
40 \DeclareOption{australian}{\input{english.idf}}
41 \DeclareOption{austrian}{\input{german.idf}}
42 \DeclareOption{danish}{\input{danish.idf}}
43 \DeclareOption{english}{\input{english.idf}}
44 \DeclareOption{british}{\input{english.idf}}
45 \DeclareOption{french}{\input{french.idf}}
46 \DeclareOption{frenchb}{\input{french.idf}}
47 \DeclareOption{german}{\input{german.idf}}
48 \DeclareOption{naustrian}{\input{german.idf}}
49 \DeclareOption{newzealand}{\input{english.idf}}
50 \DeclareOption{ngerman}{\input{german.idf}}
51 \DeclareOption{norsk}{\input{norsk.idf}}
52 \DeclareOption{norwegian}{\input{norsk.idf}}
53 \DeclareOption{swedish}{\input{swedish.idf}}
54 \DeclareOption{UKenglish}{\input{english.idf}}
55 \DeclareOption{USenglish}{\input{english.idf}}
```

Make it possible to load language definition files that are not known by this package.

```
56 \DeclareOption*{%
57   \InputIfFileExists{\CurrentOption.idf}{}{%
58     \PackageError{isodate}{%
```

```
59        Isodate definition file \CurrentOption.idf not found}{%
60        Maybe you misspelled the language option?}}%
61   }
```

Set default option to `orig`.

```
62 \ExecuteOptions{orig}
```

Process the options.

```
63 \ProcessOptions*
```

Handle the case that no language was given. Throw an error message. Each language definition file `*.idf` must contain a line

```
\let\iso@languageloaded\active
```

that defines the command `\iso@languageloaded`.

```
64 \ifx\iso@languageloaded\@undefined
65   \PackageError{isodate}{%
66     You haven't specified a language option}{%
67     You need to specify a language, either as a global
68     option\MessageBreak
69     or as an optional argument to the \string\usepackage\space
70     command.\MessageBreak
71     If you have used the old isodate package (version <=1.06) you can
72     change the\MessageBreak
73     usepackage command to \protect\usepackage{isodate}.\MessageBreak
74     You shouldn't try to proceed from here, type x to quit.}
75 \fi
```

`\iso@printday`  Prints a day.

```
76 \newcommand*\iso@printday[1]{%
77   \ifisotwodigitday
78     \ifthenelse{\number#1<10}{0}{}%
79   \fi
80   \number#1%
81 }%
```

`\twodigitarabic`  Typesets the given counter with at least two digits. This command is very simple and does only work for positive numbers below 100.

```
82 \newcommand*\twodigitarabic[1]{%
83   \ifthenelse{\number\arabic{#1}<10}{0}{}%
84   \arabic{#1}%
85 }
```

`\iso@printmonth`  Prints a month using `\theiso@tmpmonth` as output fourmat.

```
86 \newcommand*\iso@printmonth[1]{%
87   \setcounter{iso@tmpmonth}{#1}%
88   \theiso@tmpmonth%
89 }
```

Define the help counter that prints the month and initialize it to print arabic numbers.

```
90 \newcounter{iso@tmpmonth}
91 %\def\theiso@tmpmonth{\arabic{iso@tmpmonth}}
```

\iso@yeartwo   Prints the argument of the command with two digits.
        Example: \iso@yeartwo{1873} ⟶ 73.

```
92 \newcounter{iso@yeartwo}%
93 \newcommand*\iso@yeartwo[1]{%
94    \setcounter{iso@yeartwo}{\number#1}%
95    \whiledo{\theiso@yeartwo>99}{%
96       \addtocounter{iso@yeartwo}{-100}}{}%
97    \ifthenelse{\number\theiso@yeartwo<10}{0}{}\theiso@yeartwo
98 }
```

\iso@yearfour   Prints the argument of the command with four digits.

```
99 \newcommand*\iso@yearfour[1]{%
100    \ifthenelse{\number#1<1000}{0}{}%
101    \ifthenelse{\number#1<100}{0}{}%
102    \ifthenelse{\number#1<10}{0}{}%
103    \number#1%
104 }%
```

\ifisotwodigitday   Print day with two digits or natural number of digits?

```
105 \newif\ifisotwodigitday
```

\iso@dateformat   In this command, the current active date format ist stored. Possible values are: numeric, short, iso, orig, shortorig, TeX.

```
106 \def\iso@dateformat{numeric}
```

\iso@inputformat   This macro stores which input format is used for dates given with slashes. Valid formats are english (dd/mm/yyyy), american (mm/dd/yyyy), and tex (yyyy/mm/dd). By default, English is used.

```
107 \DeclareRobustCommand*\dateinputformat[1]{%
108    \ifthenelse{%
109       \equal{#1}{english}\or
110       \equal{#1}{british}\or
111       \equal{#1}{UKenglish}}{%
112       \def\iso@inputformat{english}%
113    }{%
114       \ifthenelse{%
115          \equal{#1}{american}\or
116          \equal{#1}{USenglish}}{%
117          \def\iso@inputformat{american}%
118       }{%
119          \ifthenelse{%
120             \equal{#1}{tex}\or
121             \equal{#1}{TeX}\or
```

13

```
122        \equal{#1}{latex}\or
123        \equal{#1}{LaTeX}}{%
124        \def\iso@inputformat{tex}%
125      }{%
126        \PackageError{isodate}{Invalid date input format}{%
127          Maybe you misspelled the language option (english, american,
128          tex)?}%
129      }%
130    }%
131  }%
132 }
```

\iso@inputformat  This macro stores which input format is used for dates given with slashes. Valid formats are english (dd/mm/yyyy), american (mm/dd/yyyy), and tex (yyyy/mm/dd). By default, English is used.

```
133 \dateinputformat{english}
```

\numdate  Switches to long numerical date format.

```
134 \DeclareRobustCommand*\numdate[1][twodigitarabic]{%
135   \def\iso@dateformat{numeric}%
136   \isotwodigitdaytrue
137   \def\theiso@tmpmonth{\csname #1\endcsname{iso@tmpmonth}}%
138 }
```

\shortdate  Switches to short numerical date format.

```
139 \DeclareRobustCommand*\shortdate[1][twodigitarabic]{%
140   \def\iso@dateformat{short}%
141   \isotwodigitdaytrue
142   \def\theiso@tmpmonth{\csname #1\endcsname{iso@tmpmonth}}%
143 }
```

\isodate  Switches to ISO date format.

```
144 \DeclareRobustCommand*\isodate[1][twodigitarabic]{%
145   \def\iso@dateformat{iso}%
146   \isotwodigitdaytrue
147   \def\theiso@tmpmonth{\csname #1\endcsname{iso@tmpmonth}}%
148 }
```

\origdate  Switches to the original date format.

```
149 \DeclareRobustCommand*\origdate{%
150   \def\iso@dateformat{orig}%
151   \isotwodigitdayfalse
152   \def\theiso@tmpmonth{\twodigitarabic{iso@tmpmonth}}%
153 }
```

\shortorigdate   Switches to the short original date format.

```
154 \DeclareRobustCommand*\shortorigdate{%
155   \def\iso@dateformat{shortorig}%
156   \isotwodigitdayfalse
157   \def\theiso@tmpmonth{\twodigitarabic{iso@tmpmonth}}}%
158 }
```

q

\TeXdate   Switches to LaTeX date format.

```
159 \DeclareRobustCommand*\TeXdate[1][twodigitarabic]{%
160   \def\iso@dateformat{TeX}%
161   \isotwodigitdaytrue
162   \def\theiso@tmpmonth{\csname #1\endcsname{iso@tmpmonth}}}%
163 }
```

\Romandate   Switches to long numerical date format with month printed in uppercase Roman numerals.

```
164 \DeclareRobustCommand*\Romandate{%
165   \numdate[Roman]%
166   \isotwodigitdayfalse
167 }
```

\romandate   Switches to long numerical date format with month printed in lowercase Roman numerals.

```
168 \DeclareRobustCommand*\romandate{%
169   \numdate[roman]%
170   \isotwodigitdayfalse
171 }
```

\shortRomandate   Switches to short numerical date format with month printed in uppercase Roman numerals.

```
172 \DeclareRobustCommand*\shortRomandate{%
173   \shortdate[Roman]%
174   \isotwodigitdayfalse
175 }
```

\shortromandate   Switches to short numerical date format with month printed in lowercase Roman numerals.

```
176 \DeclareRobustCommand*\shortromandate{%
177   \shortdate[roman]%
178   \isotwodigitdayfalse
179 }
```

\isodash   Changes the dash in the ISO date format. The default is "-".

```
180 \def\iso@isodash{-}%
181 \DeclareRobustCommand*\isodash[1]{\def\iso@isodash{#1}}%
```

Define the sign that is printed before a two digit year in the short original format. Default is nothing.

\shortyearsign

```
182 \def\iso@twodigitsign{}
183 \DeclareRobustCommand*\shortyearsign[1]{\def\iso@twodigitsign{#1}}%
```

\isorangesign   Defines the sign or word that is printed between the two dates in a date range. e.g., in English the default is " to ".

```
184 \def\iso@rangesign{\csname iso@rangesign@\iso@languagename\endcsname}%
185 \DeclareRobustCommand*\isorangesign[1]{\def\iso@rangesign{#1}}%
```

\printyearoff   Switches printing of the year on or off. Default is to print the year.
\printyearon
```
186 \newif\ifiso@printyear
187 \DeclareRobustCommand*\printyearon{\iso@printyeartrue}
188 \DeclareRobustCommand*\printyearoff{\iso@printyearfalse}
189 \printyearon
```

\iso@printdate   Defines the command `iso@printdate` which takes three arguments (year, month, day) and prints the date by using the \today command.

```
190 \newcommand*\iso@printdate[3]{%
191   \begingroup%
```

Generate a warning if the active language is not known by `isodate`.

```
192   \@ifundefined{iso@printdate@\iso@languagename}{%
193     \PackageWarning{isodate}{Language \iso@languagename\space unknown
194       to isodate.\MessageBreak
195       Using default format.}%
196   }{}%
```

The counters \year, \month, and \day are preserved as counters instead of changed to macros (as it has been done until version 2.25) to avoid problems with languages that are not defined in `isodate.sty`.

```
197   \year=#1 %
198   \month=#2 %
199   \day=#3 %
200   \today%
201   \endgroup%
202 }
```

\printdate   Prints a date that is given as one argument in one of these formats: `yyyy-mm-dd`, `dd/mm/yyyy`, `dd.mm.yyyy`.

```
203 \DeclareRobustCommand*\printdate[1]{%
```

Define \iso@date command to expand the argument #1.

```
204   \edef\iso@date{#1}%
```

Count appearances of "/", "-", and "." in the argument.

```
205   \SubStringsToCounter{iso@slash}{/}{\iso@date}%
206   \SubStringsToCounter{iso@minus}{-}{\iso@date}%
207   \SubStringsToCounter{iso@dot}{.}{\iso@date}%
```

16

If number of "." in the argument is equal to 2 then the German format `dd.mm.yyyy` is used.

```
208     \ifthenelse{\equal{\theiso@dot}{2}}{%
209       \expandafter\iso@input@german\iso@date\@empty}{%
```

If number of "-" in the argument is equal to 2 then the ISO format `yyyy-mm-dd` is used.

```
210       \ifthenelse{\equal{\theiso@minus}{2}}{%
211         \expandafter\iso@input@iso\iso@date\@empty}{%
```

If number of "/" in the argument is equal to 2 then the British English format `dd/mm/yyyy` is used.

```
212         \ifthenelse{\equal{\theiso@slash}{2}}{%
213           \expandafter\iso@input@english\iso@date\@empty}{%
```

Else no of the formats above is used an thus an error message is thrown.

```
214           ????\iso@isodash ??\iso@isodash ??%
215           \PackageError{isodate}{unrecognized date format}{Use one of
216             the following formats as macro argument:^^J%
217             \space\space dd.mm.yyyy^^J%
218             \space\space dd/mm/yyyy^^J%
219             \space\space yyyy-mm-dd^^J%
220             Don't use any spaces or commands like \protect\, or
221             \protect~ inside the argument.}%
222         }}}%
223 }
```

\iso@input@iso     Converts a string with the format `yyyy-mm-dd` to three arguments `{#1}{#2}{#3}` and calls `\iso@printdate`.

```
224 \def\iso@input@iso#1-#2-#3\@empty{\iso@printdate{#1}{#2}{#3}}
```

\iso@input@german     Converts a string with the format `dd.mm.yyyy` to three arguments `{#3}{#2}{#1}` and calls `\iso@printdate`.

```
225 \def\iso@input@german#1.#2.#3\@empty{\iso@printdate{#3}{#2}{#1}}
```

\iso@input@english     Converts a string with the format `dd/mm/yyyy` to three arguments `{#3}{#2}{#1}` and calls `\iso@printdate`.

```
226 \def\iso@input@english#1/#2/#3\@empty{%
227   \ifthenelse{\equal{\iso@inputformat}{tex}}{%
228     \iso@printdate{#1}{#2}{#3}%
229   }{%
230     \ifthenelse{\equal{\iso@inputformat}{american}}{%
231       \iso@printdate{#3}{#1}{#2}%
232     }{%
233       \iso@printdate{#3}{#2}{#1}%
234     }%
235   }%
236 }
```

**\printdateTeX**  Prints a date that is given as one argument in the format yyyy/mm/dd.

237 \DeclareRobustCommand*\printdateTeX[1]{%

Define \iso@date command to expand the argument #1.

238   \edef\iso@date{#1}%

Count appearances of "/" in the argument.

239   \SubStringsToCounter{iso@slash}{/}{\iso@date}%

If number of "/" in the argument is equal to 2 then the LATEX format yyyy/mm/dd is used.

240   \ifthenelse{\equal{\theiso@slash}{2}}{%
241     \expandafter\iso@input@TeX\iso@date\@empty}{%

Else no of the formats above is used an thus an error message is thrown.

242     ????\iso@isodash ??\iso@isodash ??%
243     \PackageError{isodate}{unrecognized date format}{Use one of
244       the following formats as macro argument:^^J%
245       \space\space dd.mm.yyyy^^J%
246       \space\space dd/mm/yyyy^^J%
247       \space\space yyyy-mm-dd^^J%
248       Don't use any spaces or commands like \protect\, or
249       \protect~ inside the argument.}%
250   }}

**\iso@input@TeX**  Converts a string with the format yyyy/mm/dd to three arguments {#1}{#2}{#3} and calls \iso@printdate.

251 \def\iso@input@TeX#1/#2/#3\@empty{\iso@printdate{#1}{#2}{#3}}

**\daterange**  Prints a date range.

252 \DeclareRobustCommand*\daterange[2]{%

Define \iso@date and \iso@@date commands to expand the argument #1 and #2. Define \iso@@@date which contains both arguments devided by a komma.

253   \edef\iso@date{#1}%
254   \edef\iso@@date{#2}%
255   \edef\iso@@@date{\iso@date,\iso@@date}%

Count appearances of "/", "-", and "." in the arguments.

256   \SubStringsToCounter{iso@slash}{/}{\iso@date}%
257   \SubStringsToCounter{iso@minus}{-}{\iso@date}%
258   \SubStringsToCounter{iso@dot}{.}{\iso@date}%
259   \SubStringsToCounter{iso@@slash}{/}{\iso@@date}%
260   \SubStringsToCounter{iso@@minus}{-}{\iso@@date}%
261   \SubStringsToCounter{iso@@dot}{.}{\iso@@date}%

If number of "." in both arguments is equal to 2 then the German format dd.mm.yyyy is used.

262   \ifthenelse{\equal{\theiso@dot}{2}\and\equal{\theiso@@dot}{2}}{%
263     \expandafter\iso@range@input@german\iso@@@date\@empty}{%

18

If number of "-" in both arguments is equal to 2 then the ISO format `yyyy-mm-dd` is used.

```
264        \ifthenelse{\equal{\theiso@minus}{2}\and\equal{\theiso@@minus}{2}}{%
265          \expandafter\iso@range@input@iso\iso@@@date\@empty}{%
```

If number of "/" in both arguments is equal to 2 then the British English format `dd/mm/yyyy` is used.

```
266          \ifthenelse{\equal{\theiso@slash}{2}\and%
267                      \equal{\theiso@@slash}{2}}{%
268            \expandafter\iso@range@input@english\iso@@@date\@empty}{%
```

Else no of the formats above is used an thus an error message is thrown.

```
269            ????\iso@isodash ??\iso@isodash ??%
270            \PackageError{isodate}{unrecognized date format}{Use one of
271              the following formats as macro argument:^^J%
272              \space\space dd.mm.yyyy^^J%
273              \space\space dd/mm/yyyy^^J%
274              \space\space yyyy-mm-dd^^J%
275              Don't use any spaces or commands like \protect\, or
276              \protect~ inside the argument.^^J
277              Use the same format for both arguments.}%
278          }}}%
279 }
```

`\iso@range@input@iso`    Converts a string with the format `yyyy-mm-dd,yyyy-mm-dd` to six arguments `{#1}{#2}{#3}{#4}{#5}{#6}` and calls `\iso@daterange@language`.

```
280 \def\iso@range@input@iso#1-#2-#3,#4-#5-#6\@empty{%
281   \begingroup
```

Generate a warning if the active language is not known by `isodate`.

```
282      \@ifundefined{iso@daterange@\iso@languagename}{%
283        \PackageWarning{isodate}{Language \iso@languagename\space unknown
284          to isodate.\MessageBreak
285          Using default date range with range sign --.}%
286        \expandafter\def\csname iso@printdate@\iso@languagename\endcsname{}%
```

Print date range in fall-back format.

```
287          \iso@printdate{#1}{#2}{#3}--\iso@printdate{#4}{#5}{#6}%
288        }{%
```

Print date range in the chosen `isodate` format.

```
289          \ifthenelse{\equal{\number#1}{\number#4}}{}{\printyearon}%
290          \csname iso@daterange@\iso@languagename\endcsname{%
291            #1}{#2}{#3}{#4}{#5}{#6}%
292        }%
293    \endgroup
294 }
```

`\iso@range@input@german`    Converts a string with the format `dd.mm.yyyy,dd.mm.yyyy` to six arguments `{#3}{#2}{#1}{#6}{#5}{#4}` and calls `\iso@daterange@language`.

```
295 \def\iso@range@input@german#1.#2.#3,#4.#5.#6\@empty{%
296   \begingroup
```

19

Generate a warning if the active language is not known by `isodate`.

```
297    \@ifundefined{iso@daterange@\iso@languagename}{%
298      \PackageWarning{isodate}{Language \iso@languagename\space unknown
299        to isodate.\MessageBreak
300        Using default date range with range sign --.}%
301      \expandafter\def\csname iso@printdate@\iso@languagename\endcsname{}%
```

Print date range in fall-back format.

```
302    \iso@printdate{#3}{#2}{#1}--\iso@printdate{#6}{#5}{#4}%
303    }{%
```

Print date range in the chosen `isodate` format.

```
304    \ifthenelse{\equal{\number#3}{\number#6}}{}{\printyearon}%
305    \csname iso@daterange@\iso@languagename\endcsname{%
306      #3}{#2}{#1}{#6}{#5}{#4}%
307    }%
308  \endgroup
309 }
```

`\iso@range@input@english`  Converts a string with the format `dd/mm/yyyy,dd/mm/yyyy` to six arguments `{#3}{#2}{#1}{#6}{#5}{#4}` and calls `\iso@daterange@`language.

```
310 \def\iso@range@input@english#1/#2/#3,#4/#5/#6\@empty{%
311  \begingroup
```

Generate a warning if the active language is not known by `isodate`.

```
312    \@ifundefined{iso@daterange@\iso@languagename}{%
313      \PackageWarning{isodate}{Language \iso@languagename\space unknown
314        to isodate.\MessageBreak
315        Using default date range with range sign --.}%
316      \expandafter\def\csname iso@printdate@\iso@languagename\endcsname{}%
```

Print date range in fall-back format.

```
317    \ifthenelse{\equal{\iso@inputformat}{tex}}{%
318      \iso@printdate{#1}{#2}{#3}--\iso@printdate{#4}{#5}{#6}%
319    }{%
320      \ifthenelse{\equal{\iso@inputformat}{american}}{%
321        \iso@printdate{#3}{#1}{#2}--\iso@printdate{#6}{#4}{#5}%
322      }{%
323        \iso@printdate{#3}{#2}{#1}--\iso@printdate{#6}{#5}{#4}%
324      }%
325    }%
326    }{%
```

Print date range in the chosen `isodate` format.

```
327    \ifthenelse{\equal{\number#3}{\number#6}}{}{\printyearon}%
328    \ifthenelse{\equal{\iso@inputformat}{tex}}{%
329      \csname iso@daterange@\iso@languagename\endcsname{%
330        #1}{#2}{#3}{#4}{#5}{#6}%
331    }{%
332      \ifthenelse{\equal{\iso@inputformat}{american}}{%
333        \csname iso@daterange@\iso@languagename\endcsname{%
```

```
334              #3}{#1}{#2}{#6}{#4}{#5}%
335          }{%
336            \csname iso@daterange@\iso@languagename\endcsname{%
337              #3}{#2}{#1}{#6}{#5}{#4}%
338          }%
339        }%
340      }%
341    \endgroup
342 }
```

Define the counters for conting the appearances of ".", "-", and "/" in the arguments.

```
343 \newcounter{iso@slash}
344 \newcounter{iso@minus}
345 \newcounter{iso@dot}
346 \newcounter{iso@@slash}
347 \newcounter{iso@@minus}
348 \newcounter{iso@@dot}
```

The command `\iso@languagename` is defined to be able to use this package without loading one of the language packages babel.sty, german.sty, or ngerman.sty.

If neither babel.sty nor german.sty nor ngerman.sty is loaded my computer returns "nohyphenation" when using `\languagename`. So this is the indication that none of the above packages is loaded.

```
349 \AtBeginDocument{%
350    \@tempswafalse
351    \@ifpackageloaded{babel}{%
352      \@tempswatrue
353      \typeout{isodate: babel.sty has been loaded}%
354    }{}%
355    \@ifpackageloaded{german}{%
356      \@tempswatrue
357      \typeout{isodate: german.sty has been loaded}%
358    }{}%
359    \@ifpackageloaded{ngerman}{%
360      \@tempswatrue
361      \typeout{isodate: ngerman.sty has been loaded}%
362    }{}%
```

The language is not equal "nohyphenation". So one of the language packages is loaded. Replace the internal language name `\iso@languagename` by the global language name `\languagename`.

```
363    \if@tempswa
364      \gdef\iso@languagename{\languagename}%
```

Reload language to surely switch to new date format. The languagename gets first expanded because of errors that would occur otherwise.

```
365      \edef\iso@tmplang{\languagename}%
366      \expandafter\selectlanguage\expandafter{\iso@tmplang}%
367    \else
```

At the end of the preamble still none of the language packages are loaded. So no language switching is possible. Set the date language manually to the last language that was loaded for isodate.

```
368    \typeout{isodate: babel.sty, (n)german.sty have not been loaded}%
369    \csname date\iso@languagename\endcsname%
370  \fi
371 }
372 ⟨/isodate⟩
```

## D.2  Language definition file danish.idf

\iso@languageloaded    Define the command \iso@languageloaded in order to enable isodate.sty to determine if at least one language is loaded.

```
373 ⟨*danish⟩
374 \let\iso@languageloaded\active
375 \typeout{Define commands for Danish date format}
```

\month@danish    Prints the name of today's month in the long form for the original date format.

```
376 \def\month@danish{\ifcase\month\or
377    januar\or februar\or marts\or april\or maj\or juni\or
378    juli\or august\or september\or oktober\or november\or december\fi}
```

\iso@printmonthday@danish    Prints the month and the day given as two arguments ({mm}{dd}) in the current date format.

```
379  \def\iso@printmonthday@danish#1#2{%
```

Numeric and short date format: dd/mm/

```
380    \ifthenelse{\equal{\iso@dateformat}{numeric}\or%
381      \equal{\iso@dateformat}{short}}{%
382      \iso@printday{#2}/\iso@printmonth{#1}\ifiso@printyear/\fi}{%
```

ISO date format: -mm-dd

```
383      \ifthenelse{\equal{\iso@dateformat}{iso}}{%
384        \ifiso@printyear\iso@isodash\fi\iso@printmonth{#1}%
385        \iso@isodash\iso@printday{#2}}{%
```

LaTeX date format: /mm/dd

```
386        \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
387          \ifiso@printyear/\fi\iso@printmonth{#1}/\iso@printday{#2}}{%
```

Original date format: d. mmm

```
388          \ifthenelse{\equal{\iso@dateformat}{orig}\or
389                      \equal{\iso@dateformat}{shortorig}}{%
390        \iso@printday{#2}.~\begingroup
391        \edef\lmonth{#1}\def\month{\lmonth}%
392        \month@danish%
393        \endgroup
394        }{}}}}%
395    }
```

22

**\iso@printdate@danish**  Prints the date given as three arguments ({yyyy}{mm}{dd}) in the actual date format

```
396   \def\iso@printdate@danish#1#2#3{%
```

ISO or LATEXdate format: yyyy\iso@printmonthday@danish

```
397     \ifthenelse{\equal{\iso@dateformat}{iso}\or%
398       \equal{\iso@dateformat}{TeX}}{%
399       \ifiso@printyear
400         \number#1%
401       \fi}{}%
402     \iso@printmonthday@danish{\number#2}{\number#3}%
403     \ifiso@printyear
```

numeric date format: \iso@printmonthday@danish yyyy

```
404       \ifthenelse{\equal{\iso@dateformat}{numeric}}{\iso@yearfour{\number#1}}{%
```

original date format: \iso@printmonthday@danish~yyyy

```
405         \ifthenelse{\equal{\iso@dateformat}{orig}}{~\iso@yearfour{\number#1}}{%
```

short original date format: \iso@printmonthday@danish~yy

```
406           \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
407             ~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
```

short date format: \iso@printmonthday@danish yy

```
408             \ifthenelse{\equal{\iso@dateformat}{short}}{%
409               \iso@yeartwo{\number#1}}{%
410               }}}}%
411       \fi
412     }
```

**\iso@datedanish**  This command redefines the \today command to print in the actual date format.

```
413   \def\iso@datedanish{%
414     \def\today{\iso@printdate@danish{\year}{\month}{\day}}}%
```

**\iso@daterange@...**  Define date-range commands for dialects.

```
415   \expandafter\def\csname iso@daterange@\CurrentOption\endcsname{%
416     \iso@daterange@danish}%
```

**\iso@daterange@danish**  This command takes six arguments ({yyyy1}{mm1}{dd1}{yyyy2}{mm2}{dd2}) and prints the corrosponding date range in the actual date format.

```
417 \def\iso@daterange@danish#1#2#3#4#5#6{%
```

ISO or LATEX date format.

```
418   \ifthenelse{\equal{\iso@dateformat}{iso}\or%
419               \equal{\iso@dateformat}{TeX}}{%
```

Print the start date.

```
420     \csname iso@printdate@\iso@languagename\endcsname{%
421       #1}{#2}{#3}\iso@rangesign%
```

If year and month are equal, only print the day of the end date. If only the year is equal, only print month and day of the end date. Otherwise print the whole end date.

```
422     \ifthenelse{\equal{\number#1}{\number#4}}{%
423       \ifthenelse{\equal{\number#2}{\number#5}}{\iso@printday{#6}%
424         }{\iso@printmonthday@danish{#5}{#6}}}{%
425       \csname iso@printdate@\iso@languagename\endcsname{#4}{#5}{#6}}%
426   }{%
```

Numeric, short, or original date format.

If year and month are equal, only print the day of the start date. If only the year is equal, only print month and day of the start date. Otherwise print the whole start date.

```
427     \ifthenelse{\equal{\number#1}{\number#4}}{%
428       \ifthenelse{\equal{\number#2}{\number#5}}{%
429         \ifthenelse{\equal{\iso@dateformat}{orig}\or
430                     \equal{\iso@dateformat}{shortorig}}{%
431         \iso@printday{#3}.}{\iso@printday{#3}}%
432       }{\iso@printmonthday@danish{#2}{#3}}}{%
433     \begingroup
434       \printyearon
435       \csname iso@printdate@\iso@languagename\endcsname{%
436         #1}{#2}{#3}%
437     \endgroup}%
```

Print the end date.

```
438     \iso@rangesign\csname iso@printdate@\iso@languagename\endcsname{%
439       #4}{#5}{#6}%
440   }{%
441   }%
442 }
```

\iso@rangesign@danish  Sets the word between start and end date in a date range to " til ".

```
443 \expandafter\def\csname iso@rangesign@\CurrentOption\endcsname{~til~}
```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command \languagename that will always return the current used language.

```
444 \def\iso@languagename{danish}%
```

Redefine the command \datedanish that is used by babel to switch to the original Danish date format to enable the use of different date formats. This has to be done after the preamble in order to ensure to overwrite the babel command.

```
445 \AtBeginDocument{%
446   \ifx\undefined\iso@datedanish\else
447     \def\datedanish{\iso@datedanish}%
448   \fi
```

24

```
449 }
450 ⟨/danish⟩
```

## D.3   Language definition file english.idf

\iso@languageloaded Define the command \iso@languageloaded in order to enable isodate.sty to
determine if at least one language is loaded.

```
451 ⟨*english⟩
452 \let\iso@languageloaded\active
```

\month@english Prints the name of today's month in the long form for the original date format.

```
453 \def\month@english{\ifcase\month\or
454     January\or February\or March\or April\or May\or June\or
455     July\or August\or September\or October\or November\or December\fi}
```

British and American English dates are very different. So handle them seperately.
It might have been easier to put them in different files but I wanted to organize
my files analogous to babel.
    First handle British English.

```
456 \ifthenelse{\equal{\CurrentOption}{english}\or
457             \equal{\CurrentOption}{british}\or
458             \equal{\CurrentOption}{UKenglish}}{%
459 \typeout{Define commands for English date format}
```

\day@english Prints today's day for the original date format.

```
460     \def\day@english{\ifcase\day\or
461     1st\or 2nd\or 3rd\or 4th\or 5th\or
462     6th\or 7th\or 8th\or 9th\or 10th\or
463     11th\or 12th\or 13th\or 14th\or 15th\or
464     16th\or 17th\or 18th\or 19th\or 20th\or
465     21st\or 22nd\or 23rd\or 24th\or 25th\or
466     26th\or 27th\or 28th\or 29th\or 30th\or
467     31st\fi}
```

\iso@printmonthday@english Prints the month and the day given as two arguments ({mm}{dd}) in the current
date format.

```
468     \def\iso@printmonthday@english#1#2{%
```

Numeric and short date format: dd/mm/

```
469         \ifthenelse{\equal{\iso@dateformat}{numeric}\or%
470         \equal{\iso@dateformat}{short}}{%
471         \iso@printday{#2}/\iso@printmonth{#1}\ifiso@printyear/\fi}{%
```

ISO date format: mm-dd

```
472         \ifthenelse{\equal{\iso@dateformat}{iso}}{%
473         \iso@printmonth{#1}\iso@isodash\iso@printday{#2}}{%
```

LaTeX date format: mm/dd

```
474         \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
475         \iso@printmonth{#1}/\iso@printday{#2}}{%
```

Original date format: `ddd mmm`

```
476          \ifthenelse{\equal{\iso@dateformat}{orig}\or
477                      \equal{\iso@dateformat}{shortorig}}{%
478          \begingroup
479          \edef\lday{#2}\def\day{\lday}%
480          \edef\lmonth{#1}\def\month{\lmonth}%
481          \day@english~\month@english%
482          \endgroup
483          }{}}}}%
484      }
```

\iso@printdate@english    Prints the date given as three arguments (`{yyyy}{mm}{dd}`) in the actual date format.

```
485    \def\iso@printdate@english#1#2#3{%
```

ISO date format: `yyyy-\iso@printmonthday@english`

```
486      \ifthenelse{\equal{\iso@dateformat}{iso}}{%
487        \ifiso@printyear\iso@yearfour{\number#1}\iso@isodash\fi}{%
```

LaTeX date format: `yyyy/\iso@printmonthday@english`

```
488        \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
489          \ifiso@printyear\iso@yearfour{\number#1}/\fi}{}}%
490    \iso@printmonthday@english{\number#2}{\number#3}%
```

Numeric date format: `\iso@printmonthday@english yyyy`

```
491      \ifiso@printyear
492        \ifthenelse{\equal{\iso@dateformat}{numeric}}{\iso@yearfour{\number#1}}{%
```

Original date format: `\iso@printmonthday@english~yyyy`

```
493          \ifthenelse{\equal{\iso@dateformat}{orig}}{~\iso@yearfour{\number#1}}{%
```

Short original date format: `\iso@printmonthday@english~yy`

```
494            \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
495              ~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
```

Short date format: `\iso@printmonthday@english yy`

```
496            \ifthenelse{\equal{\iso@dateformat}{short}}{%
497              \iso@yeartwo{\number#1}}{%
498              }}}%
499        }%
500      \fi
501    }
```

\iso@printdate@UKenglish    Just a second name for `\iso@printdate@UKenglish`.

```
502    \def\iso@printdate@UKenglish{\iso@printdate@english}
503    \def\iso@printdate@british{\iso@printdate@english}
```

\iso@dateenglish    This command redefines the `\today` command to print in the actual date format.

```
504    \def\iso@dateenglish{%
505      \def\today{\iso@printdate@english{\year}{\month}{\day}}}%
```

\iso@daterange@...    Define date-range commands for dialects of English.

```
506    \expandafter\def\csname iso@daterange@\CurrentOption\endcsname{%
507        \iso@daterange@english}%
```

\iso@daterange@english    This command takes six arguments ({yyyy1}{mm1}{dd1}{yyyy2}{mm2}{dd2}) and prints the corrosponding date range in the actual date format.

```
508    \def\iso@daterange@english#1#2#3#4#5#6{%
```

ISO or LATEX date format.

```
509        \ifthenelse{\equal{\iso@dateformat}{iso}\or%
510                    \equal{\iso@dateformat}{TeX}}{%
```

Print the start date.

```
511        \csname iso@printdate@\iso@languagename\endcsname{%
512            #1}{#2}{#3}\iso@rangesign%
```

If year and month are equal, only print the day of the end date. If only the year is equal, only print month and day of the end date. Otherwise print the whole end date.

```
513        \ifthenelse{\equal{\number#1}{\number#4}}{%
514            \ifthenelse{\equal{\number#2}{\number#5}}{\iso@printday{#6}%
515                }{\iso@printmonthday@english{#5}{#6}}}{%
516            \csname iso@printdate@\iso@languagename\endcsname{#4}{#5}{#6}}}{%
```

Numeric, short, or original date format.

   If year and month are equal, only print the day of the start date. If only the year is equal, only print month and day of the start date. Otherwise print the whole start date.

```
517        \ifthenelse{\equal{\number#1}{\number#4}}{%
518            \ifthenelse{\equal{\number#2}{\number#5}}{%
519                \ifthenelse{\equal{\iso@dateformat}{orig}\or
520                            \equal{\iso@dateformat}{shortorig}}{%
521                \begingroup
522                    \edef\lday{#3}\def\day{\lday}%
523                    \day@english\endgroup}{\iso@printday{#3}}%
524                }{\iso@printmonthday@english{#2}{#3}}}{%
525            \csname iso@printdate@\iso@languagename\endcsname{#1}{#2}{#3}}%
```

Print the end date.

```
526        \iso@rangesign\csname iso@printdate@\iso@languagename\endcsname{%
527            #4}{#5}{#6}%
528    }{%
529    }%
530    }
```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command \languagename that will always return the current used language.

```
531    \def\iso@languagename{english}%
```

The end of the British section.

Second handle Australian and New Zealand.

```
532 }{%
533     \ifthenelse{\equal{\CurrentOption}{australian}\or%
534              \equal{\CurrentOption}{newzealand}}{%
535     \typeout{Define commands for Australian date format}
```

`\iso@printmonthday@australian`    Prints the month and the day given as two arguments (`{mm}{dd}`) in the current date format.

```
536       \def\iso@printmonthday@australian#1#2{%
```

Numeric and short date format: `dd/mm/`

```
537         \ifthenelse{\equal{\iso@dateformat}{numeric}\or%
538           \equal{\iso@dateformat}{short}}{%
539           \iso@printday{#2}/\iso@printmonth{#1}\ifiso@printyear/\fi}{%
```

ISO date format: `mm-dd`

```
540           \ifthenelse{\equal{\iso@dateformat}{iso}}{%
541             \iso@printmonth{#1}\iso@isodash\iso@printday{#2}}{%
```

LATEX date format: `mm/dd`

```
542             \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
543               \iso@printmonth{#1}/\iso@printday{#2}}{%
```

Original date format: `ddd mmm`

```
544               \ifthenelse{\equal{\iso@dateformat}{orig}\or
545                        \equal{\iso@dateformat}{shortorig}}{%
546                 \begingroup
547 %                 \edef\lday{#2}\def\day{\lday}%
548                 \edef\lmonth{#1}\def\month{\lmonth}%
549                 \iso@printday{#2}~\month@english%
550                 \endgroup
551                 }{}}}}%
552         }
```

`\iso@printdate@australian`    Prints the date given as three arguments (`{yyyy}{mm}{dd}`) in the actual date format.

```
553       \def\iso@printdate@australian#1#2#3{%
```

ISO date format: `yyyy-\iso@printmonthday@australian`

```
554         \ifiso@printyear
555           \ifthenelse{\equal{\iso@dateformat}{iso}}{%
556             \iso@yearfour{\number#1}\iso@isodash}{%
```

LATEX date format: `yyyy/\iso@printmonthday@australian`

```
557             \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
558               \iso@yearfour{\number#1}/}{}%
559           }%
560         \fi
561         \iso@printmonthday@australian{\number#2}{\number#3}%
```

Numeric date format: \iso@printmonthday@australian yyyy

```
562        \ifiso@printyear
563          \ifthenelse{\equal{\iso@dateformat}{numeric}}{%
564            \iso@yearfour{\number#1}}{%
```

Original date format: \iso@printmonthday@australian~yyyy

```
565          \ifthenelse{\equal{\iso@dateformat}{orig}}{%
566            ~\iso@yearfour{\number#1}}{%
```

Short original date format: \iso@printmonthday@australian~yy

```
567          \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
568            ~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
```

Short date format: \iso@printmonthday@australian yy

```
569          \ifthenelse{\equal{\iso@dateformat}{short}}{%
570            \iso@yeartwo{\number#1}}{%
571              }}}%
572        }%
573      \fi
574    }
```

\iso@printdate@newzealand    Just a second name for \iso@printdate@UKenglish.

```
575      \def\iso@printdate@newzealand{\iso@printdate@australian}
```

\iso@dateaustralian    This command redefines the \today command to print in the actual date format.

```
576      \def\iso@dateaustralian{%
577        \def\today{\iso@printdate@australian{\year}{\month}{\day}}}%
```

\iso@daterange@...    Define date-range commands for dialects of Australian.

```
578      \expandafter\def\csname iso@daterange@\CurrentOption\endcsname{%
579        \iso@daterange@australian}%
```

\iso@daterange@australian    This command takes six arguments ({yyyy1}{mm1}{dd1}{yyyy2}{mm2}{dd2}) and prints the corrosponding date range in the actual date format.

```
580      \def\iso@daterange@australian#1#2#3#4#5#6{%
```

ISO or LaTeX date format.

```
581      \ifthenelse{\equal{\iso@dateformat}{iso}\or%
582                 \equal{\iso@dateformat}{TeX}}{%
```

Print the start date.

```
583        \csname iso@printdate@\iso@languagename\endcsname{%
584          #1}{#2}{#3}\iso@rangesign%
```

If year and month are equal, only print the day of the end date. If only the year is equal, only print month and day of the end date. Otherwise print the whole end date.

```
585        \ifthenelse{\equal{\number#1}{\number#4}}{%
586          \ifthenelse{\equal{\number#2}{\number#5}}{\iso@printday{#6}%
587            }{\iso@printmonthday@australian{#5}{#6}}}{%
588          \csname iso@printdate@\iso@languagename\endcsname{#4}{#5}{#6}}}{%
```

29

Numeric, short, or original date format.

If year and month are equal, only print the day of the start date. If only the year is equal, only print month and day of the start date. Otherwise print the whole start date.

```
589        \ifthenelse{\equal{\number#1}{\number#4}}{%
590          \ifthenelse{\equal{\number#2}{\number#5}}{%
591            \ifthenelse{\equal{\iso@dateformat}{orig}}{%
592              \begingroup
593 %              \edef\lday{#3}\def\day{\lday}%
594              \iso@printday{#3}\endgroup}{\iso@printday{#3}}%
595            }{\iso@printmonthday@australian{#2}{#3}}}{%
596            \csname iso@printdate@\iso@languagename\endcsname{#1}{#2}{#3}}%
```

Print the end date.

```
597          \iso@rangesign\csname iso@printdate@\iso@languagename\endcsname{%
598            #4}{#5}{#6}%
599        }{%
600        }%
601      }
```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command \languagename that will always return the current used language.

```
602      \def\iso@languagename{australian}%
```

The end of the Australian section.

Third, handle American.

```
603    }{%
604    \typeout{Define commands for American date format}
```

\iso@printmonthday@american    Prints the month and the day given as two arguments ({mm}{dd}) in the current date format.

```
605      \def\iso@printmonthday@american#1#2{%
```

Numeric and short date format: mm/dd/

```
606        \ifthenelse{\equal{\iso@dateformat}{numeric}\or%
607        \equal{\iso@dateformat}{short}}{%
608        \iso@printmonth{#1}/\iso@printday{#2}\ifiso@printyear/\fi}{%
```

ISO date format: mm-dd

```
609        \ifthenelse{\equal{\iso@dateformat}{iso}}{%
610          \iso@printmonth{#1}\iso@isodash\iso@printday{#2}}{%
```

LaTeX date format: mm/dd

```
611          \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
612            \iso@printmonth{#1}/\iso@printday{#2}}{%
```

Original date format: `mmm d`

```
613            \ifthenelse{\equal{\iso@dateformat}{orig}\or
614                    \equal{\iso@dateformat}{shortorig}}{%
615          \begingroup%
616          \edef\lmonth{#1}%
617           \def\month{\lmonth}\month@english%
618          \endgroup
619          ~\iso@printday{#2}%
620          }{}}}%
621      }%
622    }
```

**\iso@printdate@american**  Prints the date given as three arguments (`{yyyy}{mm}{dd}`) in the actual date format.

```
623    \def\iso@printdate@american#1#2#3{%
```

ISO date format: `yyyy-\iso@printmonthday@american`

```
624      \ifiso@printyear
625        \ifthenelse{\equal{\iso@dateformat}{iso}}{%
626          \iso@yearfour{\number#1}\iso@isodash}{%
```

LaTeX date format: `yyyy/\iso@printmonthday@american`

```
627          \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
628            \iso@yearfour{\number#1}/}{}}%
629        \fi
630        \iso@printmonthday@american{\number#2}{\number#3}%
```

Numeric date format: `\iso@printmonthday@american yyyy`

```
631      \ifiso@printyear
632        \ifthenelse{\equal{\iso@dateformat}{numeric}}{%
633          \iso@yearfour{\number#1}}{%
```

Original date format: `\iso@printmonthday@american,~yyyy`

```
634          \ifthenelse{\equal{\iso@dateformat}{orig}}{%
635            ,~\iso@yearfour{\number#1}}{%
```

Short original date format: `\iso@printmonthday@american,~yyyy`

```
636          \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
637            ,~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
```

Short date format: `\iso@printmonthday@american yy`

```
638          \ifthenelse{\equal{\iso@dateformat}{short}}{%
639            \iso@yeartwo{\number#1}}{}}}%
640        }%
641      \fi
642    }
```

**\iso@printdate@USenglish**  Just a second name for `\iso@printdate@UKamerican`.

```
643    \def\iso@printdate@USenglish{\iso@printdate@american}
```

31

**\iso@dateamerican**  This command redefines the \today command to print in the actual date format.

```
644      \def\iso@dateamerican{%
645          \def\today{\iso@printdate@american{\year}{\month}{\day}}}%
```

**\iso@daterange@...**  Define date-range commands for dialects of American.

```
646      \expandafter\def\csname iso@daterange@\CurrentOption\endcsname{%
647          \iso@daterange@american}%
```

**\iso@daterange@american**  This command takes six arguments ({yyyy1}{mm1}{dd1}{yyyy2}{mm2}{dd2}) and prints the corrosponding date range in the actual date format.

```
648      \def\iso@daterange@american#1#2#3#4#5#6{%
```

ISO or LATEX date format.

```
649          \ifthenelse{\equal{\iso@dateformat}{iso}\or%
650                      \equal{\iso@dateformat}{TeX}}{%
```

Print the start date.

```
651              \csname iso@printdate@\iso@languagename\endcsname{#1}{#2}{#3}%
652              \iso@rangesign%
```

If year and month are equal, only print the day of the end date. If only the year is equal, only print month and day of the end date. Otherwise print the whole end date.

```
653              \ifthenelse{\equal{\number#1}{\number#4}}{%
654                  \ifthenelse{\equal{\number#2}{\number#5}}{\iso@printday{#6}%
655                  }{\iso@printmonthday@american{#5}{#6}}}{%
656                  \csname iso@printdate@\iso@languagename\endcsname{%
657                      #4}{#5}{#6}}}{%
```

Original date format.

If year and month are equal, print mmm d1 to d2, yyyy. If only the year is equal, print mmm1 d1 to mmm2 d2, yyyy. Otherwise print the whole start and end date.

```
658          \ifthenelse{\equal{\iso@dateformat}{orig}\or
659                      \equal{\iso@dateformat}{shortorig}}{%
660              \ifthenelse{\equal{\number#1}{\number#4}}{%
661                  \ifthenelse{\equal{\number#2}{\number#5}}{%
662                      \iso@printmonthday@american{#2}{#3}\iso@rangesign%
663                      \iso@printday{#6},~%
664                      \ifthenelse{\equal{\iso@dateformat}{orig}}{%
665                          \number#4}{\iso@twodigitsign\iso@yeartwo\number#4}}%
666                  }{%
667                      \iso@printmonthday@american{#2}{#3}\iso@rangesign%
668                      \csname iso@printdate@\iso@languagename\endcsname{%
669                          #4}{#5}{#6}}}{%
670                  \csname iso@printdate@\iso@languagename\endcsname{#1}{#2}{#3}%
671                  \iso@rangesign%
672                  \csname iso@printdate@\iso@languagename\endcsname{%
673                      #4}{#5}{#6}}}{%
```

Numeric or short date format.

If year and month are equal, only print the day of the end date. Otherwise print the whole end date.

```
674            \ifthenelse{\equal{\number#1}{\number#4}}{%
675              \iso@printmonthday@american{#2}{#3}}{%
676              \csname iso@printdate@\iso@languagename\endcsname{#1}{#2}{#3}}%
```

Print the end date.

```
677            \iso@rangesign\csname iso@printdate@\iso@languagename\endcsname{%
678              #4}{#5}{#6}}%
679       }%
680     }
```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command \languagename that will always return the current used language.

```
681     \def\iso@languagename{american}%
```

The end of the American section.

```
682   }
683 }
```

\iso@rangesign@...  Sets the word between start and end date in a date range to " to".

```
684 \expandafter\def\csname iso@rangesign@\CurrentOption\endcsname{~to~}
```

Redefine the command datelanguage that is used by babel.sty, german.sty, and ngerman.sty to switch to the original English/American date format to enable the use of different date formats. This has to be done after the preamble in order to ensure to overwrite the babel command.

Do this only if \iso@datelanguage is defined.

```
685 \AtBeginDocument{%
686   \ifx\undefined\iso@dateenglish\else
687     \def\dateenglish{\iso@dateenglish}%
688     \def\datebritish{\iso@dateenglish}%
689     \def\dateUKenglish{\iso@dateenglish}%
690   \fi
691   \ifx\undefined\iso@dateaustralian\else
692     \def\dateaustralian{\iso@dateaustralian}%
693     \def\datenewzealand{\iso@dateaustralian}%
694   \fi
695   \ifx\undefined\iso@dateamerican\else
696     \def\dateamerican{\iso@dateamerican}%
697     \def\dateUSenglish{\iso@dateamerican}%
698   \fi
699 }
700 ⟨/english⟩
```

33

## D.4 Language definition file french.idf

\iso@languageloaded Define the command \iso@languageloaded in order to enable isodate.sty to determine if at least one language is loaded.

```
701 ⟨∗french⟩
702 \let\iso@languageloaded\active
703 \typeout{Define commands for French date format}

704 \def\month@french{\ifcase\month\or
705   janvier\or f\'evrier\or mars\or avril\or mai\or juin\or
706   juillet\or ao\^ut\or septembre\or octobre\or novembre\or
707   d\'ecembre\fi}

708 \def\iso@printmonthday@french#1#2{%
709   \ifthenelse{\equal{\iso@dateformat}{numeric}\or%
710     \equal{\iso@dateformat}{short}}{%
711   \iso@printday{#2}/\iso@printmonth{#1}\ifiso@printyear/\fi}{%
712   \ifthenelse{\equal{\iso@dateformat}{iso}}{%
713     \ifiso@printyear\iso@isodash\fi\iso@printmonth{#1}%
714     \iso@isodash\iso@printday{#2}}{%
715     \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
716       \ifiso@printyear/\fi\iso@printmonth{#1}/\iso@printday{#2}}{%
717       \ifthenelse{\equal{\iso@dateformat}{orig}\or
718                 \equal{\iso@dateformat}{shortorig}}{%
719         \begingroup
720         \edef\lday{#2}\edef\day{\lday}%
721         \edef\lmonth{#1}\def\month{\lmonth}%
722         \number\day\ifnum1=\day \noexpand\ier\fi~\month@french%
723         \endgroup
724         }{}}}}%
725   }

726 \def\iso@printdate@french#1#2#3{%
727   \ifthenelse{\equal{\iso@dateformat}{iso}\or%
728     \equal{\iso@dateformat}{TeX}}{%
729   \ifiso@printyear\iso@yearfour{\number#1}\fi}{}%
730   \iso@printmonthday@french{\number#2}{\number#3}%
731   \ifiso@printyear
732     \ifthenelse{\equal{\iso@dateformat}{numeric}}{\iso@yearfour{\number#1}}{%
733       \ifthenelse{\equal{\iso@dateformat}{orig}}{~\iso@yearfour{\number#1}}{%
734         \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
735           ~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
736           \ifthenelse{\equal{\iso@dateformat}{short}}{%
737             \iso@yeartwo{\number#1}}{}}}}%
738   \fi
739 }

740 \def\iso@datefrench{%
741   \def\today{\iso@printdate@french{\year}{\month}{\day}}}%
```

\iso@daterange@... Define date-range commands for dialects.

```
742   \expandafter\def\csname iso@daterange@\CurrentOption\endcsname{%
```

```
743      \iso@daterange@french}%

744  \def\iso@daterange@french#1#2#3#4#5#6{%
745    \ifthenelse{\equal{\iso@dateformat}{iso}\or%
746                \equal{\iso@dateformat}{TeX}}{%
747    \csname iso@printdate@\iso@languagename\endcsname{#1}{#2}{#3}%
748    \iso@rangesign%
749    \ifthenelse{\equal{\number#1}{\number#4}}{%
750      \ifthenelse{\equal{\number#2}{\number#5}}{\iso@printday{#6}%
751        }{\iso@printmonthday@french{#5}{#6}}}{%
752      \csname iso@printdate@\iso@languagename\endcsname{#4}{#5}{#6}}}{%

753    \ifthenelse{\equal{\number#1}{\number#4}}{%
754      \ifthenelse{\equal{\number#2}{\number#5}}{%
755        \ifthenelse{\equal{\iso@dateformat}{orig}}{%
756          \begingroup
757            \edef\lday{#3}\edef\day{\lday}%
758            \number\day\ifnum1=\day \noexpand\ier\fi
759            \endgroup}{\iso@printday{#3}}%
760        }{\iso@printmonthday@french{#2}{#3}}}{%
761      \csname iso@printdate@\iso@languagename\endcsname{#1}{#2}{#3}%
762    \iso@rangesign\csname iso@printdate@\iso@languagename\endcsname{%
763      #4}{#5}{#6}%
764  }{%
765    }%
766  }

767  \expandafter\def\csname iso@rangesign@\CurrentOption\endcsname{~au~}
```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command `\languagename` that will always return the current used language.

```
768  \def\iso@languagename{french}%
```

`\datefrenchb` has to be defined additionally because babel starts with language frenchb instead of french.

```
769  \AtBeginDocument{%
770    \ifx\undefined\iso@datefrench\else
771      \def\datefrench{\iso@datefrench}%
772      \def\datefrenchb{\iso@datefrench}%
773    \fi
774  }
775  ⟨/french⟩
```

## D.5   Language definition file german.idf

`\iso@languageloaded`  Define the command `\iso@languageloaded` in order to enable isodate.sty to determine if at least one language is loaded.

```
776  ⟨∗german⟩
```

```
777 \let\iso@languageloaded\active
778 \typeout{Define commands for German date format (\CurrentOption)}
```

Define spaces between day and month resp. month and year. `dm` stands for day-month and `my` for month-year. The defaults are taken from the Duden [2].

```
779 \def\iso@dmsepgerman{\,}%
780 \def\iso@mylongsepgerman{~}%
781 \def\iso@myshortsepgerman{\,}%
```

\daymonthsepgerman    Change space between day and month in numeric date formats for the German language. The only parameter is the new spacing.

```
782 \DeclareRobustCommand*\daymonthsepgerman[1]{\def\iso@dmsepgerman{#1}}
783 %     \begin{macrocode}
784 % \end{macro}
785 % \begin{macro}{\monthyearsepgerman}
786 % Change space between month and year in numeric date formats for the
787 % German language. The first parameter is the new spacing for the long
788 % format and the second for the short format.
789 %     \begin{macrocode}
790 \DeclareRobustCommand*\monthyearsepgerman[2]{%
791   \def\iso@mylongsepgerman{#1}%
792   \def\iso@myshortsepgerman{#2}}
```

```
793 \def\month@german{\ifcase\month\or
794   Januar\or Februar\or M\"arz\or April\or Mai\or Juni\or
795   Juli\or August\or September\or Oktober\or November\or Dezember\fi}
796 \def\month@ngerman{\month@german}
797 \def\month@austrian{\ifnum1=\month
798   J\"anner\else \month@german\fi}
799 \def\month@naustrian{\month@austrian}
```

```
800 \@namedef{iso@printmonthday@\CurrentOption}#1#2{%
801   \ifthenelse{\equal{\iso@dateformat}{numeric}\or%
802             \equal{\iso@dateformat}{short}}{%
803     \iso@printday{#2}.\iso@dmsepgerman\iso@printmonth{#1}.}{%
804     \ifthenelse{\equal{\iso@dateformat}{iso}}{%
805       \iso@printmonth{#1}\iso@isodash\iso@printday{#2}}{%
806       \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
807         \iso@printmonth{#1}/\iso@printday{#2}}{%
808         \ifthenelse{\equal{\iso@dateformat}{orig}\or
809                 \equal{\iso@dateformat}{shortorig}}{%
810         \iso@printday{#2}.~\begingroup
811         \edef\lmonth{#1}%
812         \def\month{\lmonth}\csname month@\iso@languagename\endcsname%
813         \endgroup
814         }{}}}}%
815 }
```

```
816 \@namedef{iso@printdate@\CurrentOption}#1#2#3{%
817   \ifiso@printyear
```

```
818    \ifthenelse{\equal{\iso@dateformat}{iso}}{%
819      \iso@yearfour{\number#1}\iso@isodash}{%
820      \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
821        \iso@yearfour{\number#1}/}{}}%
822    \fi
823    \csname iso@printmonthday@\iso@languagename\endcsname{%
824      \number#2}{\number#3}%
825    \ifiso@printyear
826      \ifthenelse{\equal{\iso@dateformat}{numeric}}{%
827        \iso@mylongsepgerman\iso@yearfour{\number#1}}{%
828        \ifthenelse{\equal{\iso@dateformat}{orig}}{~\iso@yearfour{\number#1}}{%
829          \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
830            ~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
831            \ifthenelse{\equal{\iso@dateformat}{short}}{%
832              \iso@myshortsepgerman\iso@yeartwo{\number#1}}{}}}}%
833    \fi
834 }

835 \@namedef{iso@daterange@\CurrentOption}#1#2#3#4#5#6{%
836    \ifthenelse{\equal{\iso@dateformat}{iso}\or%
837                \equal{\iso@dateformat}{TeX}}{%
838      \csname iso@printdate@\iso@languagename\endcsname{#1}{#2}{#3}%
839      \iso@rangesign%
840      \ifthenelse{\equal{\number#1}{\number#4}}{%
841        \ifthenelse{\equal{\number#2}{\number#5}}{\iso@printday{#6}%
842          }{\csname iso@printmonthday@\iso@languagename\endcsname{#5}{#6}}}{%
843        \csname iso@printdate@\iso@languagename\endcsname{#4}{#5}{#6}}}{%

844      \ifthenelse{\equal{\number#1}{\number#4}}{%
845        \ifthenelse{\equal{\number#2}{\number#5}}{%
846          \ifthenelse{\equal{\iso@dateformat}{orig}}{%
847            \iso@printday{#3}}{\iso@printday{#3}}.%
848          }{\csname iso@printmonthday@\iso@languagename\endcsname{%
849            #2}{#3}}}{%
850        \csname iso@printdate@\iso@languagename\endcsname{#1}{#2}{#3}%
851      \iso@rangesign\csname iso@printdate@\iso@languagename\endcsname{%
852        #4}{#5}{#6}%
853    }%
854 }

855 \expandafter\def\csname iso@rangesign@\CurrentOption\endcsname{~bis~}

856 \ifthenelse{\equal{\CurrentOption}{german}}{%
857    \def\iso@dategerman{%
858      \def\today{\iso@printdate@german{\year}{\month}{\day}}}%
```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command `\languagename` that will always return the current used language.

```
859    \def\iso@languagename{german}%
```

```
860 }{%
```

```
861 \ifthenelse{\equal{\CurrentOption}{ngerman}}{%
862   \def\iso@datengerman{%
863     \def\today{\iso@printdate@ngerman{\year}{\month}{\day}}}%
```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command `\languagename` that will always return the current used language.

```
864   \def\iso@languagename{ngerman}%
865 }{%
```

```
866 \ifthenelse{\equal{\CurrentOption}{austrian}}{%
867   \def\iso@dateaustrian{%
868     \def\today{\iso@printdate@austrian{\year}{\month}{\day}}}%
```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command `\languagename` that will always return the current used language.

```
869   \def\iso@languagename{austrian}%
870 }{%
```

```
871 \ifthenelse{\equal{\CurrentOption}{naustrian}}{%
872   \def\iso@datenaustrian{%
873     \def\today{\iso@printdate@naustrian{\year}{\month}{\day}}}%
```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command `\languagename` that will always return the current used language.

```
874   \def\iso@languagename{naustrian}%
875 }{%
876 }}}}
```

Redefine the command `date`language that is used by babel.sty, german.sty, and ngerman.sty to switch to the original German date format to enable the use of different date formats. This has to be done after the preamble in order to ensure to overwrite the babel command.

Do this only if `\iso@date`language is defined.

```
877 \AtBeginDocument{%
878   \ifx\undefined\iso@dategerman\else
879     \def\dategerman{\iso@dategerman}%
880   \fi
881   \ifx\undefined\iso@datengerman\else
882     \def\datengerman{\iso@datengerman}%
883   \fi
```

```
884    \ifx\undefined\iso@dateaustrian\else
885      \def\dateaustrian{\iso@dateaustrian}%
886    \fi
887    \ifx\undefined\iso@datenaustrian\else
888      \def\datenaustrian{\iso@datenaustrian}%
889    \fi
890 }
891 ⟨/german⟩
```

## D.6 Language definition file norsk.idf

This file was provided by Svend Tollak Munkejord (svend.t.munkejord@energy.sintef.no).

\iso@languageloaded   Define the command \iso@languageloaded in order to enable isodate.sty to determine if at least one language is loaded.

```
892 ⟨*norsk⟩
893 \let\iso@languageloaded\active
894 \typeout{Define commands for Norwegian date format}
```

\month@norsk   Prints the name of today's month in the long form for the original date format.

```
895 \def\month@norsk{\ifcase\month\or
896     januar\or februar\or mars\or april\or mai\or juni\or
897     juli\or august\or september\or oktober\or november\or desember\fi}
```

\iso@printmonthday@norsk   Prints the month and the day given as two arguments ({mm}{dd}) in the current date format.

```
898    \def\iso@printmonthday@norsk#1#2{%
```

Numeric and short date format: dd/mm/

```
899      \ifthenelse{\equal{\iso@dateformat}{numeric}\or%
900        \equal{\iso@dateformat}{short}}{%
901        \iso@printday{#2}/\iso@printmonth{#1}\ifiso@printyear/\fi}{%
```

ISO date format: -mm-dd

```
902        \ifthenelse{\equal{\iso@dateformat}{iso}}{%
903          \ifiso@printyear\iso@isodash\fi
904          \iso@printmonth{#1}\iso@isodash\iso@printday{#2}}{%
```

LaTeX date format: /mm/dd

```
905          \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
906            \ifiso@printyear/\fi\iso@printmonth{#1}/\iso@printday{#2}}{%
```

Original date format: d. mmm

```
907            \ifthenelse{\equal{\iso@dateformat}{orig}\or
908                        \equal{\iso@dateformat}{shortorig}}{%
909            \iso@printday{#2}.~\begingroup
910            \edef\lmonth{#1}\def\month{\lmonth}%
911            \month@norsk%
912            \endgroup
913            }{}}}}%
914    }
```

\iso@printdate@norsk    Prints the date given as three arguments ({yyyy}{mm}{dd}) in the actual date format

```
915  \def\iso@printdate@norsk#1#2#3{%
```

ISO or LaTeXdate format: yyyy\iso@printmonthday@norsk

```
916    \ifthenelse{\equal{\iso@dateformat}{iso}\or%
917      \equal{\iso@dateformat}{TeX}}{%
918      \ifiso@printyear\iso@yearfour{\number#1}\fi}{}%
919    \iso@printmonthday@norsk{\number#2}{\number#3}%
```

numeric date format: \iso@printmonthday@norsk yyyy

```
920    \ifiso@printyear
921      \ifthenelse{\equal{\iso@dateformat}{numeric}}{\iso@yearfour{\number#1}}{%
```

original date format: \iso@printmonthday@norsk~yyyy

```
922        \ifthenelse{\equal{\iso@dateformat}{orig}}{~\iso@yearfour{\number#1}}{%
```

short original date format: \iso@printmonthday@norsk~yyyy

```
923          \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
924            ~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
```

short date format: \iso@printmonthday@norsk yy

```
925            \ifthenelse{\equal{\iso@dateformat}{short}}{%
926              \iso@yeartwo{\number#1}}{%
927            }}}}%
928    \fi
929  }
```

\iso@datenorsk    This command redefines the \today command to print in the actual date format.

```
930  \def\iso@datenorsk{%
931    \def\today{\iso@printdate@norsk{\year}{\month}{\day}}}%
```

\iso@daterange@...    Define date-range commands for dialects.

```
932  \expandafter\def\csname iso@daterange@\CurrentOption\endcsname{%
933    \iso@daterange@norsk}%
```

\iso@daterange@norsk    This command takes six arguments ({yyyy1}{mm1}{dd1}{yyyy2}{mm2}{dd2}) and prints the corrosponding date range in the actual date format.

```
934 \def\iso@daterange@norsk#1#2#3#4#5#6{%
```

ISO or LaTeX date format.

```
935    \ifthenelse{\equal{\iso@dateformat}{iso}\or%
936              \equal{\iso@dateformat}{TeX}}{%
```

Print the start date.

```
937    \csname iso@printdate@\iso@languagename\endcsname{#1}{#2}{#3}%
938    \iso@rangesign%
```

If year and month are equal, only print the day of the end date. If only the year is equal, only print month and day of the end date. Otherwise print the whole end date.

```
939    \ifthenelse{\equal{\number#1}{\number#4}}{%
```

40

```
940        \ifthenelse{\equal{\number#2}{\number#5}}{\iso@printday{#6}%
941          }{\iso@printmonthday@norsk{#5}{#6}}}{%
942        \csname iso@printdate@\iso@languagename\endcsname{#4}{#5}{#6}}}{%
```

Numeric, short, or original date format.

If year and month are equal, only print the day of the start date. If only the year is equal, only print month and day of the start date. Otherwise print the whole start date.

```
943        \ifthenelse{\equal{\number#1}{\number#4}}{%
944          \ifthenelse{\equal{\number#2}{\number#5}}{%
945            \ifthenelse{\equal{\iso@dateformat}{orig}\or
946              \equal{\iso@dateformat}{shortorig}}{%
947              \iso@printday{#3}.}{\iso@printday{#3}}%
948            }{\iso@printmonthday@norsk{#2}{#3}}}{%
949          \csname iso@printdate@\iso@languagename\endcsname{#1}{#2}{#3}}%
```

Print the end date.

```
950        \iso@rangesign\csname iso@printdate@\iso@languagename\endcsname{%
951          #4}{#5}{#6}%
952    }{%
953    }%
954 }
```

\iso@rangesign@norsk  Sets the word between start and end date in a date range to " til ".

```
955 \expandafter\def\csname iso@rangesign@\CurrentOption\endcsname{~til~}
```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command \languagename that will always return the current used language.

```
956 \def\iso@languagename{norsk}%
```

Redefine the command \datenorsk that is used by babel to switch to the original Norsk date format to enable the use of different date formats. This has to be done after the preamble in order to ensure to overwrite the babel command.

```
957 \AtBeginDocument{%
958   \ifx\undefined\iso@datenorsk\else
959     \def\datenorsk{\iso@datenorsk}%
960   \fi
961 }
962 ⟨/norsk⟩
```

## D.7   Language definition file swedish.idf

This file was provided by Christian Schlauer (christian.schlauer@web.de).

\iso@languageloaded  Define the command \iso@languageloaded in order to enable isodate.sty to determine if at least one language is loaded.

964 \let\iso@languageloaded\active
965 \typeout{Define commands for Swedish date format}

\month@swedish   Prints the name of today's month in the long form for the original date format.

966 \def\month@swedish{\ifcase\month\or
967     januari\or februari\or mars\or april\or maj\or juni\or
968     juli\or augusti\or september\or oktober\or november\or december\fi}

\iso@printmonthday@swedish   Prints the month and the day given as two arguments ({mm}{dd}) in the current date format.

969     \def\iso@printmonthday@swedish#1#2{%

Numeric and short date format: dd/mm/

970       \ifthenelse{\equal{\iso@dateformat}{numeric}\or%
971         \equal{\iso@dateformat}{short}}{%
972         \iso@printday{#2}/\iso@printmonth{#1}\ifiso@printyear/\fi}{%

ISO date format: -mm-dd

973         \ifthenelse{\equal{\iso@dateformat}{iso}}{%
974           \ifiso@printyear\iso@isodash\fi\iso@printmonth{#1}%
975           \iso@isodash\iso@printday{#2}}{%

LaTeX date format: /mm/dd

976           \ifthenelse{\equal{\iso@dateformat}{TeX}}{%
977             \ifiso@printyear/\fi\iso@printmonth{#1}/\iso@printday{#2}}{%

Original date format: d. mmm

978             \ifthenelse{\equal{\iso@dateformat}{orig}\or
979                     \equal{\iso@dateformat}{shortorig}}{%
980             \iso@printday{#2}.~\begingroup
981             \edef\lmonth{#1}\def\month{\lmonth}%
982             \month@swedish%
983             \endgroup
984             }{}}}}%
985     }

\iso@printdate@swedish   Prints the date given as three arguments ({yyyy}{mm}{dd}) in the actual date format

986     \def\iso@printdate@swedish#1#2#3{%

ISO or LaTeXdate format: yyyy\iso@printmonthday@swedish

987       \ifthenelse{\equal{\iso@dateformat}{iso}\or%
988         \equal{\iso@dateformat}{TeX}}{%
989         \ifiso@printyear\iso@yearfour{\number#1}\fi}{}%
990       \iso@printmonthday@swedish{\number#2}{\number#3}%

numeric date format: \iso@printmonthday@swedish yyyy

991       \ifiso@printyear
992         \ifthenelse{\equal{\iso@dateformat}{numeric}}{\iso@yearfour{\number#1}}{%

original date format: \iso@printmonthday@swedish~yyyy

```
993          \ifthenelse{\equal{\iso@dateformat}{orig}}{~\iso@yearfour{\number#1}}{%
```

short original date format: \iso@printmonthday@swedish~yy

```
994          \ifthenelse{\equal{\iso@dateformat}{shortorig}}{%
995            ~\iso@twodigitsign\iso@yeartwo{\number#1}}{%
```

short date format: \iso@printmonthday@swedish yy

```
996          \ifthenelse{\equal{\iso@dateformat}{short}}{%
997            \iso@yeartwo{\number#1}}{%
998            }}}}%
999      \fi
1000   }
```

\iso@dateswedish  This command redefines the \today command to print in the actual date format.

```
1001   \def\iso@dateswedish{%
1002     \def\today{\iso@printdate@swedish{\year}{\month}{\day}}}%
```

\iso@daterange@...  Define date-range commands for dialects.

```
1003   \expandafter\def\csname iso@daterange@\CurrentOption\endcsname{%
1004     \iso@daterange@swedish}%
```

\iso@daterange@swedish  This command takes six arguments ({yyyy1}{mm1}{dd1}{yyyy2}{mm2}{dd2}) and prints the corrosponding date range in the actual date format.

```
1005 \def\iso@daterange@swedish#1#2#3#4#5#6{%
```

ISO or LATEX date format.

```
1006     \ifthenelse{\equal{\iso@dateformat}{iso}\or%
1007                 \equal{\iso@dateformat}{TeX}}{%
```

Print the start date.

```
1008       \csname iso@printdate@\iso@languagename\endcsname{%
1009         #1}{#2}{#3}\iso@rangesign%
```

If year and month are equal, only print the day of the end date. If only the year is equal, only print month and day of the end date. Otherwise print the whole end date.

```
1010       \ifthenelse{\equal{\number#1}{\number#4}}{%
1011       \ifthenelse{\equal{\number#2}{\number#5}}{\iso@printday{#6}%
1012         }{\iso@printmonthday@swedish{#5}{#6}}}{%
1013       \csname iso@printdate@\iso@languagename\endcsname{#4}{#5}{#6}}}{%
```

Numeric, short, or original date format.

If year and month are equal, only print the day of the start date. If only the year is equal, only print month and day of the start date. Otherwise print the whole start date.

```
1014       \ifthenelse{\equal{\number#1}{\number#4}}{%
1015       \ifthenelse{\equal{\number#2}{\number#5}}{%
1016       \ifthenelse{\equal{\iso@dateformat}{orig}\or
1017                   \equal{\iso@dateformat}{shortorig}}{%
1018         \iso@printday{#3}.}{\iso@printday{#3}}%
```

43

```
1019          }{\iso@printmonthday@swedish{#2}{#3}}}{%
1020        \csname iso@printdate@\iso@languagename\endcsname{%
1021          #1}{#2}{#3}}%
```
Print the end date.
```
1022        \iso@rangesign\csname iso@printdate@\iso@languagename\endcsname{%
1023          #4}{#5}{#6}%
1024 }{%
1025      }%
1026 }
```

\iso@rangesign@swedish   Sets the word between start and end date in a date range to " till ".

```
1027 \expandafter\def\csname iso@rangesign@\CurrentOption\endcsname{~till~}
```

Define the language name that will the active language for isodate if none of the packages babel.sty, german.sty, and ngerman.sty is loaded and if this is the last language that is used for isodate. If one of the above packages is used this definition will be overridden by the command \languagename that will always return the current used language.

```
1028 \def\iso@languagename{swedish}%
```

Redefine the command \dateswedish that is used by babel to switch to the original Swedish date format to enable the use of different date formats. This has to be done after the preamble in order to ensure to overwrite the babel command.

```
1029 \AtBeginDocument{%
1030   \ifx\undefined\iso@dateswedish\else
1031     \def\dateswedish{\iso@dateswedish}%
1032   \fi
1033 }
1034 ⟨/swedish⟩
```

# Change History

```
```
```