README

xint v1.1a

2014/11/07 (doc 2015/03/07)

```
Source:  xint.dtx (v1.1a 2014/11/07, doc of 2015/03/07)
Author:  Jean-Francois Burnol
Info:    Expandable operations on big integers, decimals, fractions
License: LPPL 1.3c or later
```

This README is also available as README.pdf and README.html.

Change log is in CHANGES.pdf and CHANGES.html.

Usage

With LaTeX

```
\usepackage{xint}       % expandable arithmetic with big integers
\usepackage{xintfrac}   % decimal numbers, fractions, floats
\usepackage{xintexpr}   % expressions with infix operators
```

Further packages: `xintbinhex`, `xintgcd`, `xintseries` and `xintcfrac`. All dependencies are handled automatically. For example `xintexpr` automatically loads `xintfrac` which itself loads `xint`. Package `xintcore` is the subset of `xint` providing only the five operations on big integers: `\xintiiAdd`, `\xintiiMul`, . . . There is also `xinttools` which is a separate package providing, among others, expandable and non-expandable loops such as `\xintFor`.

With TeX

One does for example:

`\input xintexpr.sty\relax`

Again, all dependencies are handled automatically. The packages may be loaded in any catcode context such that letters, digits, \ and % have their standard catcodes.

`xintcore.sty` and `xinttools.sty` both import `xintkernel.sty` which has the catcode handler and package identifier and defines a few utilities such as `\oodef` or `\xint_dothis/\xint_orthat`.

Installation

Method A: using the package manager of your TeX distribution

`xint` is included in [TeXLive](#) (hence also [MacTeX](#)) and [MikTeX](#).

There can be a few days of delay between apparition of a new version on [CTAN](#) and availability via the distribution package manager.

Method B: manual installation using `xint.tds.zip` and `unzip`

Assumes a GNU/Linux-like system (or Mac OS X).

1. obtain `xint.tds.zip` from CTAN: http://mirror.ctan.org/install/macros/generic/xint.tds.zip

2. cd to the download repertory and issue:

   `unzip xint.tds.zip -d <TEXMF>`

   where <TEXMF> is a suitable TDS-compliant destination repertory. For example, with TeXLive:

   - Linux, standard access rights, hence sudo is needed, installation into the "local" tree:

     ```
     sudo unzip xint.tds.zip -d /usr/local/texlive/texmf-local
     sudo texhash /usr/local/texlive/texmf-local
     ```

   - Mac OS X, installation into user home folder (no sudo needed, and it is recommended to not have a ls-R file there, hence no texhash):

     `unzip xint.tds.zip -d  ~/Library/texmf`

Method C: manual installation using `Makefile` and `xint.dtx`

The Makefile automatizes rebuilding from `xint.dtx` all documentation files as well as `xint.tds.zip`. It is for GNU/Linux-like (inc. Mac OS X) systems, with a teTeX like installation such as TeXLive. Furthermore the [Pandoc](#) software is required.

1. obtain `xint.dtx` and `Makefile` from http://www.ctan.org/pkg/xint.

2. put them in an otherwise empty working repertory, run make or equivalently make help for further instructions.

Method D: installation starting with only `xint.dtx`

Run "`tex xint.dtx`" or "`etex xint.dtx`" to extract from `xint.dtx` all packages as well as these files:

README.md the current README with Markdown formatting.

CHANGES.md the changes across successive releases.

xint.tex used to generate `xint.pdf` via `"latex xint.tex"` (thrice) then `"dvipdfmx xint.dvi"`. For successful compilation, packages `newtxtt`, `newtxmath`, `etoc`, `mathastext` are needed. Inclusion of the source code is off by default, but the toggle can be set in `xint.tex`.

It is also possible to compile `xint.tex` with `pdflatex`.

A third option is to generate `xint.pdf` via `pdflatex xint.dtx`. Source code is then included by default.

Makefile.mk this is for UNIX-like systems. Note: this file is only produced with `"etex xint.dtx"`, not with `"tex xint.dtx"`. Rename it to `Makefile` and run `make` on the command line for further help.

doHTMLs.sh and doPDFs.sh these are scripts (for UNIX-like systems) which can be used to convert the `README.md` and `CHANGES.md` to HTML and PDF formats. They require Pandoc.

pandoctpl.latex a Pandoc template used by `doPDFs.sh`.

Finishing the installation in a TDS hierarchy:

- move the style files to `TDS:tex/generic/xint/`

- `xint.dtx` goes to `TDS:source/generic/xint/`

- the documentation (xint.pdf, README.md,. . .) goes to `TDS:doc/generic/xint/`

Depending on the destination, it may then be necessary to refresh a filename database.

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http://www.latex-project.org/lppl/lppl-1-3c.txt
```

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```

and version 1.3 or later is part of all distributions of LaTeX version 2005/12/01 or later.

This Work has the LPPL maintenance status `author-maintained`.

The Author of this Work is Jean-Francois Burnol.

This Work consists of the source file xint.dtx and of its derived files: xintkernel.sty, xintcore.sty, xint.sty, xintfrac.sty, xintexpr.sty, xintbinhex.sty, xintgcd.sty, xintseries.sty, xintcfrac.sty, xinttools.sty, xint.ins, xint.tex, README, README.md, README.html, README.pdf, CHANGES.md, CHANGES.html, CHANGES.pdf, pandoctpl.latex, doHTMLs.sh, doPDFs.sh, xint.dvi, xint.pdf, Makefile.mk.