LaTeX

Three Day Workshop on Documentation Skills using Latex

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Introduction

What is LaTeX[1]

- Latex is pronounced as ”Lay”-”Tech”

[1] Courtesy : https://www.latex-project.org

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- It includes features designed for the production of technical and scientific documentation.

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Introduction

What is LaTeX[1]

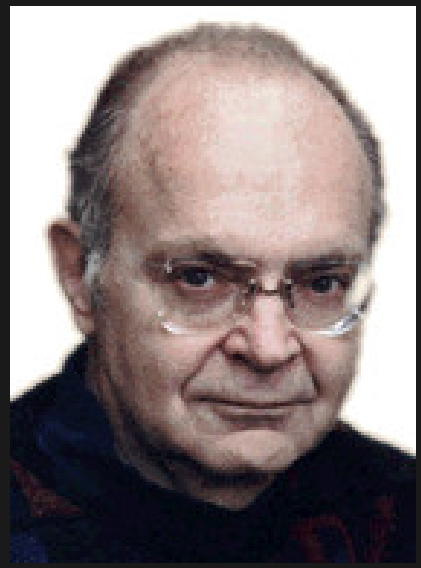
- Latex is pronounced as "Lay"-"Tech"
- Latex is high quality type setting system
- It includes features designed for the production of technical and scientific documentation.
- TEX systems produce output — on paper or on the computer screen — of the highest typographic quality.

[1] Courtesy : https://www.latex-project.org

Introduction

History [1]

- The TEX project was started in 1978 by Donald E. Knuth.

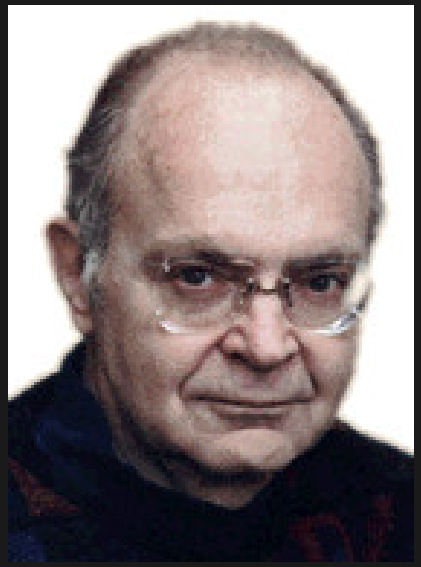


[1] Courtesy : https://www.ctan.org

Introduction

History [1]

- The TEX project was started in 1978 by Donald E. Knuth.
- In 1985 LATEX was introduced by Leslie Lamport.



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Introduction

Ten Good Reasons[1]

1. TEX has best output

Explanation

- The highest quality that a non-professional can produce.
- Produce complex documents such as ones with mathematics,flowcharts, programs etc.Example

[1] Courtesy : https://www.ctan.org

Introduction

Ten Good Reasons[1]

1. TEX has best output
2. TEX knows about typesetting

Explanation

- TEX sizes superscripts and subscripts, radicals, brackets and many other things.
- Automatically classifies each mathematical symbol and sets them with appropriate amounts of surrounding space.

[1] Courtesy : https://www.ctan.org

Introduction

Ten Good Reasons[1]

1. TEX has best output
2. TEX knows about typesetting
3. TEX is fast

Explanation

- On today's machines TEX is very fast.
- It is easy on memory and disk space too.

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Introduction

Ten Good Reasons[1]

1. TEX has best output
2. TEX knows about typesetting
3. TEX is fast
4. TEX is stable

Explanation

- It is in wide use, with a long history.
- It has been tested by millions of users, on demanding input.
- "Stable" means that it will continue to work, forever.

[1] Courtesy : https://www.ctan.org

Introduction

Ten Good Reasons[1]

1. TEX has best output
2. TEX knows about typesetting
3. TEX is fast
4. TEX is stable
5. TEX is stable, but not rigid.

Explanation

- TEX is extendible, so that innovations can be added on.
- Thousands of "style files" can be created and adapted to the demanding needs.

[1] Courtesy : https://www.ctan.org

Introduction

Ten Good Reasons[1]

6 The input is plain text.

Explanation

- TEX's source files are portable to any computing platform.
- There are even ways to run TEX directly from XML input, which many people think is the standard input format of the future

[1] Courtesy : https://www.ctan.org

Introduction

Ten Good Reasons[1]

6 The input is plain text.

7 The output can be anything.

Explanation

- TEX's outputting step is separate from its typesetting.
- TEX engine's results can be converted to a printer language such as PostScript or to PDF or HTML, or, probably, to whatever will appear in the future.

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Introduction

Ten Good Reasons[1]

6 The input is plain text.

7 The output can be anything.

8 TEX is free.

Explanation

The source of the main tex engine is open

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Introduction

Ten Good Reasons[1]

6 The input is plain text.

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8 TEX is free.

9 TEX runs anywhere.

Explanation

- Windows
- Mac
- Variety of Unix

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Introduction

Ten Good Reasons[1]

6 The input is plain text.

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10 TEX is the standard.

Explanation

- Most scientists, especially academic scientists, know TEX.
- Research preprints, drafts of textbooks, and conference proceedings, all are regularly produced with TEX.
- TEX is used by many people outside of the sciences also.

[1] Courtesy : https://www.ctan.org

Installation

Installing of LaTeX

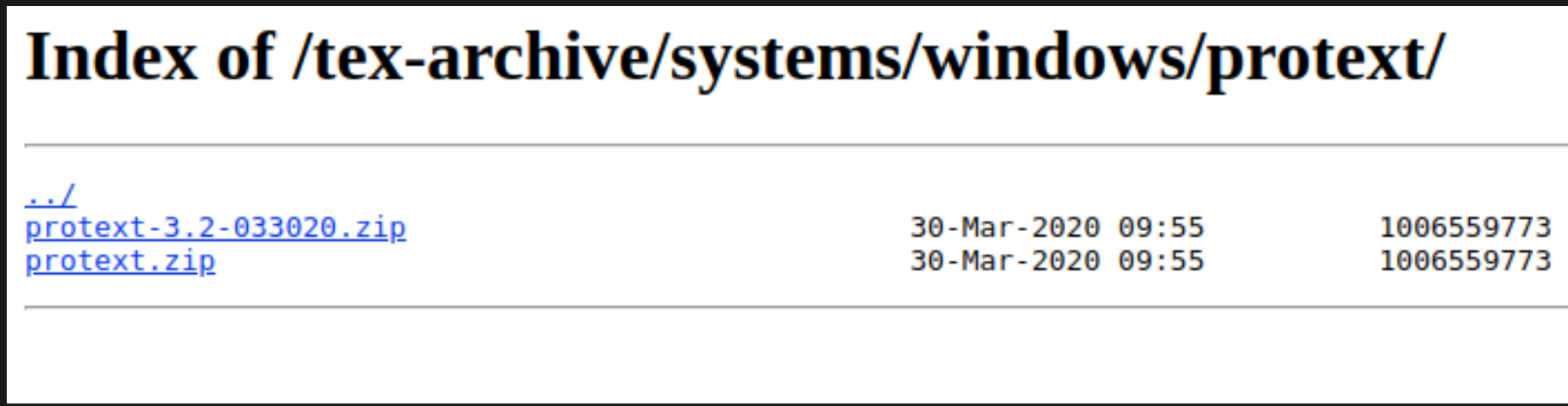
Latex installation is done in two stages

1. **MikTex**: the library/packges which are Tex files needed for typesetting
2. **TexStudio**: Editor software for editing latex document

Installation

Installing on Windows [1]

1. Visit `http://mirror.ctan.org/systems/windows/protext/` and click on the protext.zip file to download it.



Index of /tex-archive/systems/windows/protext/

../		
protext-3.2-033020.zip	30-Mar-2020 09:55	1006559773
protext.zip	30-Mar-2020 09:55	1006559773

This is the proTeXt installer, and it's quite large (~1 GB), so be prepared to wait a bit while it downloads.

[1] https://www.wellesley.edu/lts/techsupport/latex/latexwin

Installation

Installing on Windows

2. Create a folder ***protext*** on Desktop

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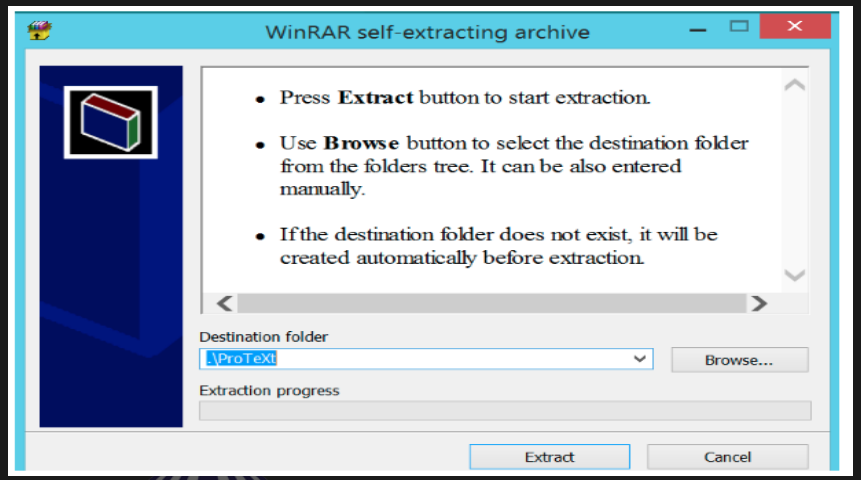
Installing on Windows

2. Create a folder ***protext*** on Desktop
3. Extract the installation files to your Desktop
4. In the extracting window, select the destination folder as protext
   It's important to extract the files to a new folder on your Desktop because about 20 files will be extracted!



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5. Double-click on protext.exe. If you see a security warning, click Run.
6. Once the files have been extracted , the window will close.
7. Go to your desktop and then double-click on the protext folder to open it.

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Installation

Installing on Windows

8. Double-click on *Setup.exe* to begin the installation.

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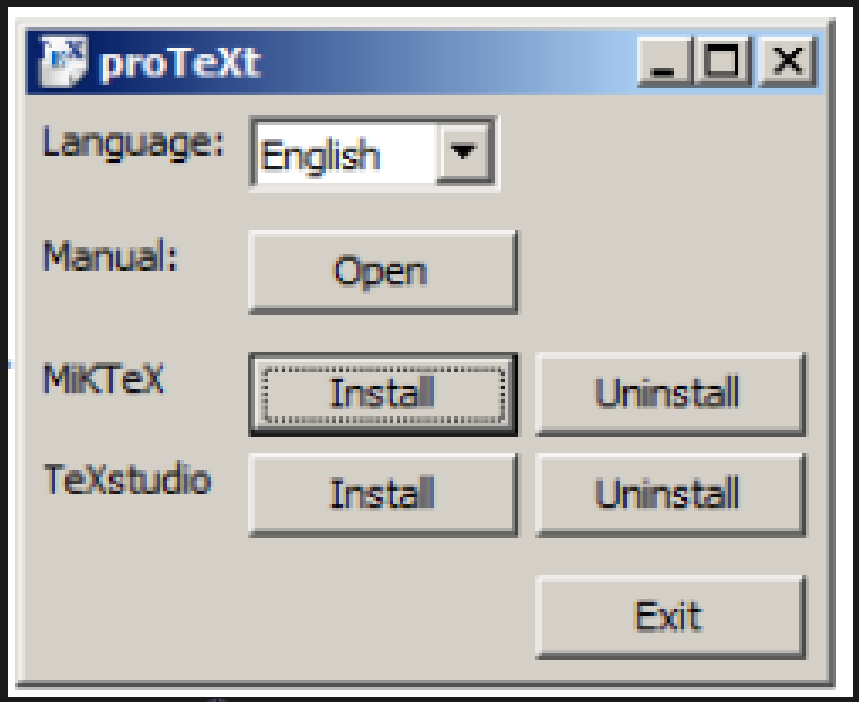
9. In the proTeXt pop-up window, click the Install button next to MiKTeX.



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10. Read and accept the conditions by checking the box, then click Next.

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11. Choose to install Basic MikTeX, then click Next.

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11. Choose to install Basic MikTeX, then click Next.
12. Accept the defaults on the next 2 screens by clicking Next.

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Installing on Windows

8. Double-click on *Setup.exe* to begin the installation.
9. In the proTeXt pop-up window, click the Install button next to MiKTeX.
10. Read and accept the conditions by checking the box, then click Next.
11. Choose to install Basic MikTeX, then click Next.
12. Accept the defaults on the next 2 screens by clicking Next.
13. In the Settings, choose Letter as the preferred paper size. Make sure 'Ask Me First' is chosen for the package installation option. Click Next.

Installation

Installing on Windows

8. Double-click on *Setup.exe* to begin the installation.
9. In the proTeXt pop-up window, click the Install button next to MiKTeX.
10. Read and accept the conditions by checking the box, then click Next.
11. Choose to install Basic MikTeX, then click Next.
12. Accept the defaults on the next 2 screens by clicking Next.
13. In the Settings, choose Letter as the preferred paper size. Make sure 'Ask Me First' is chosen for the package installation option. Click Next.
14. Click Start to begin the installation. When it is complete, click Next and then Close.

Installation

Installing on Windows

15. Run setup.exe again to install editor (TexStudio)

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Installing on Windows

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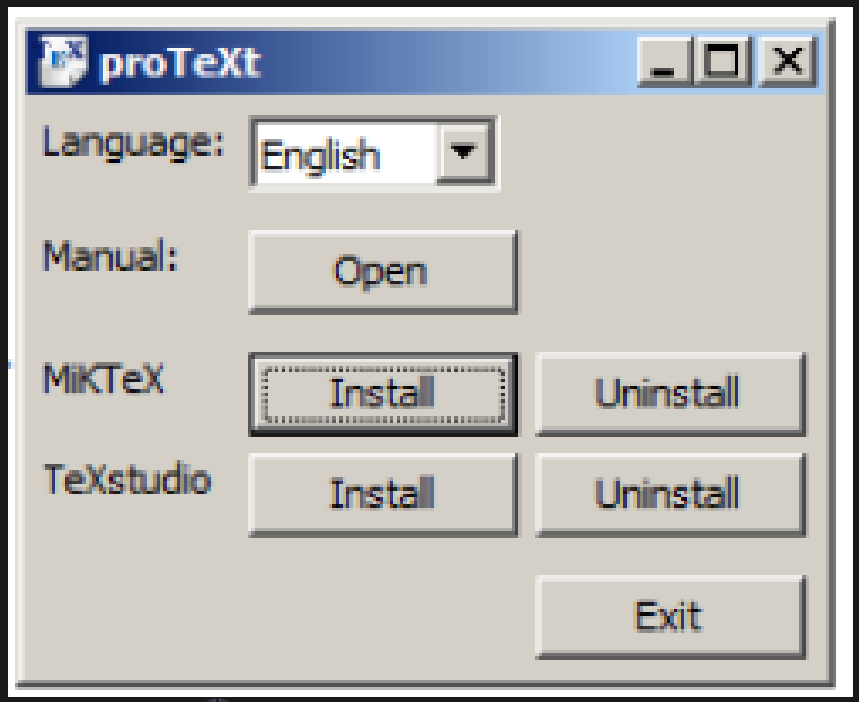
16. In the proTeXt pop-up window, click the Install button next to TeXstudio.



Installation

Installing on Windows

15. Run setup.exe again to install editor (TexStudio)
16. In the proTeXt pop-up window, click the Install button next to TeXstudio.
17. Click through the installer, leaving all the defaults.
18. Click Finish when the installer is complete.

Installation

You have now installed
both
LaTeX and the **editor**
On
Windows

Installation

Installation on Linux Machines

1. Open Terminal:
   Cntrl+Alt+T from Desktop

Installation

Installation on Linux Machines

1. Open Terminal:
   Cntrl+Alt+T from Desktop
2. Install Tex Live:
   sudo apt-get install texlive-full

Installation

Installation on Linux Machines

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   Cntrl+Alt+T from Desktop
2. Install Tex Live:
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3. Install TexStudio:
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Installation

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