

Отчет по лабораторной работе №1

Дисциплина: Computer Skills for Scientific Writing

Нирдоши Всеволод Раджендер

Содержание

Цель работы

Установить дистрибутив LaTeX TeX Live в среде Windows 10 с помощью пакетного менеджера Chocolatey и вручную, проверить успешность установки и подготовить систему к созданию и компиляции документов в рамках последующих лабораторных работ.

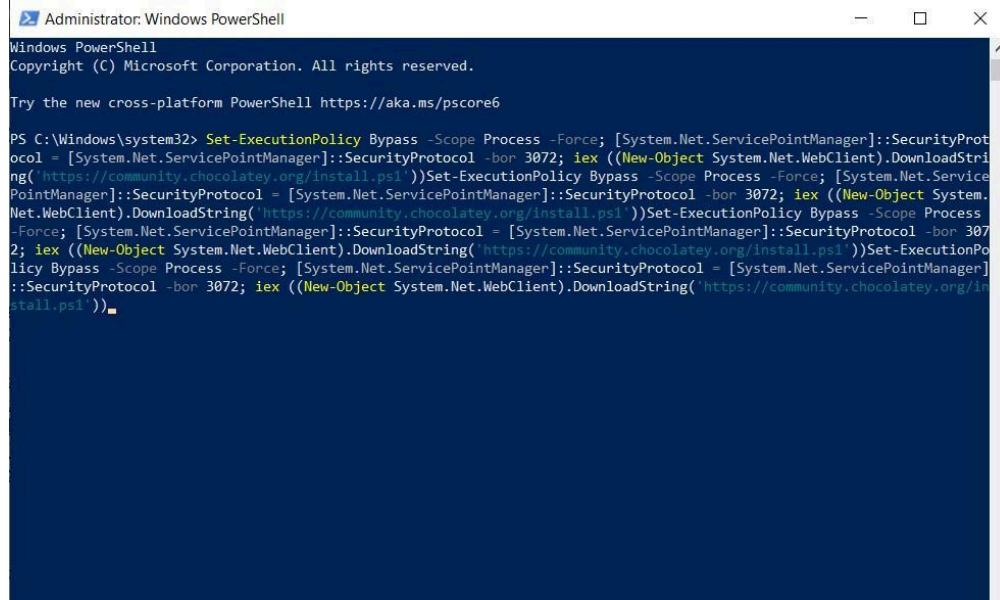
Задание

1. Установить Chocolatey в Windows 10 (официальный сайт: <https://chocolatey.org/install>).
2. С помощью Chocolatey установить дистрибутив TeX Live.
3. Проверить успешность установки.
4. Ознакомиться с альтернативным способом установки — через ручной запуск `install-tl-windows.exe` (официальный сайт: <https://www.tug.org/texlive/windows.html>).

Выполнение лабораторной

1. **Установка Chocolatey**
 - Перешёл на официальный сайт Chocolatey: <https://chocolatey.org/install>.

- Скопировал команду установки и выполнил её в PowerShell с правами администратора.

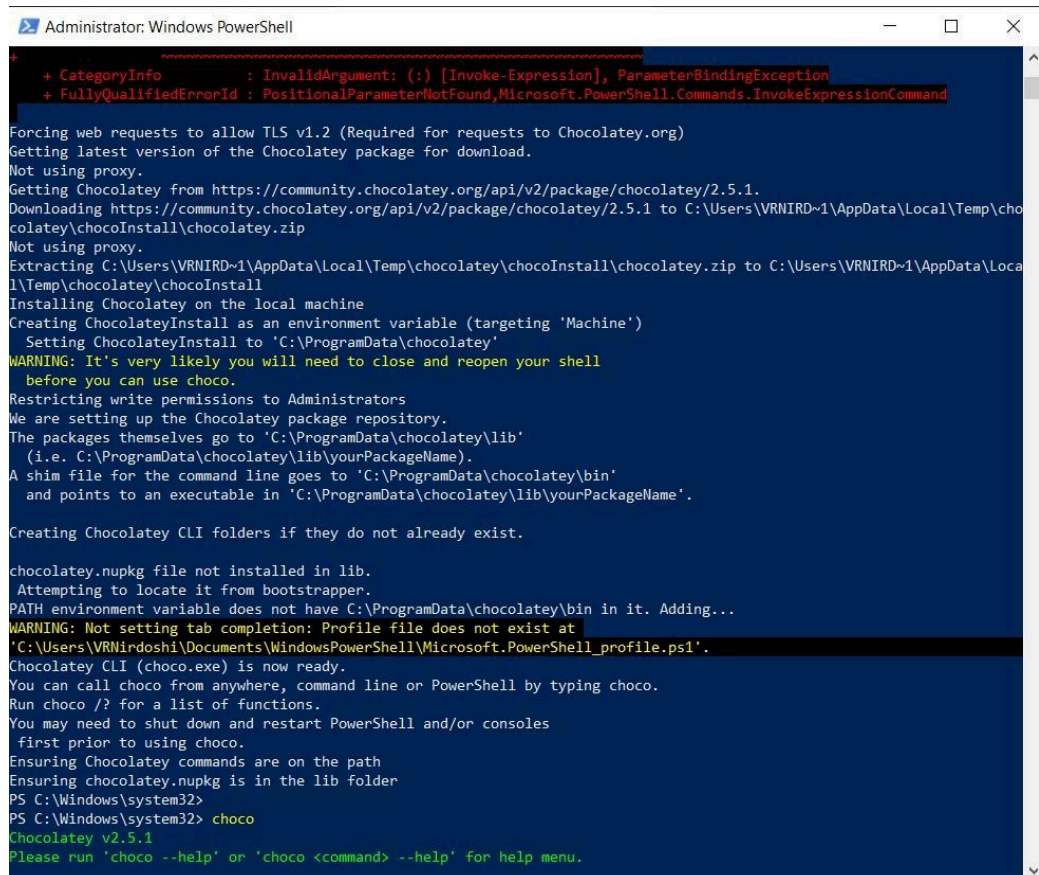


```
Administrator: Windows PowerShell
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Windows\system32> Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServicePointManager]::SecurityProtocol = [System.Net.ServicePointManager]::SecurityProtocol -bor 3072; iex ((New-Object System.Net.WebClient).DownloadString('https://community.chocolatey.org/install.ps1'))Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServicePointManager]::SecurityProtocol = [System.Net.ServicePointManager]::SecurityProtocol -bor 3072; iex ((New-Object System.Net.WebClient).DownloadString('https://community.chocolatey.org/install.ps1'))Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServicePointManager]::SecurityProtocol = [System.Net.ServicePointManager]::SecurityProtocol -bor 3072; iex ((New-Object System.Net.WebClient).DownloadString('https://community.chocolatey.org/install.ps1'))Set-ExecutionPolicy Bypass -Scope Process -Force; [System.Net.ServicePointManager]::SecurityProtocol = [System.Net.ServicePointManager]::SecurityProtocol -bor 3072; iex ((New-Object System.Net.WebClient).DownloadString('https://community.chocolatey.org/install.ps1'))
```

- В процессе появились ошибки, но в итоге установка завершилась.



```
Administrator: Windows PowerShell
+ CategoryInfo          : InvalidArgument: (:) [Invoke-Expression], ParameterBindingException
+ FullyQualifiedErrorId : PositionalParameterNotFound,Microsoft.PowerShell.Commands.InvokeExpressionCommand

Forcing web requests to allow TLS v1.2 (Required for requests to Chocolatey.org)
Getting latest version of the Chocolatey package for download.
Not using proxy.
Using Chocolatey from https://community.chocolatey.org/api/v2/package/chocolatey/2.5.1.
Downloading https://community.chocolatey.org/api/v2/package/chocolatey/2.5.1 to C:\Users\VRNIRD~1\AppData\Local\Temp\chocolatey\chocoInstall\chocolatey.zip
Not using proxy.
Extracting C:\Users\VRNIRD~1\AppData\Local\Temp\chocolatey\chocoInstall\chocolatey.zip to C:\Users\VRNIRD~1\AppData\Local\Temp\chocolatey\chocoInstall
Installing Chocolatey on the local machine
Creating ChocolateyInstall as an environment variable (targeting 'Machine')
Setting ChocolateyInstall to 'C:\ProgramData\chocolatey'
WARNING: It's very likely you will need to close and reopen your shell
before you can use choco.
Restricting write permissions to Administrators
We are setting up the Chocolatey package repository.
The packages themselves go to 'C:\ProgramData\chocolatey\lib'
(i.e. C:\ProgramData\chocolatey\lib\yourPackageName).
A shim file for the command line goes to 'C:\ProgramData\chocolatey\bin'
and points to an executable in 'C:\ProgramData\chocolatey\lib\yourPackageName'.

Creating Chocolatey CLI folders if they do not already exist.

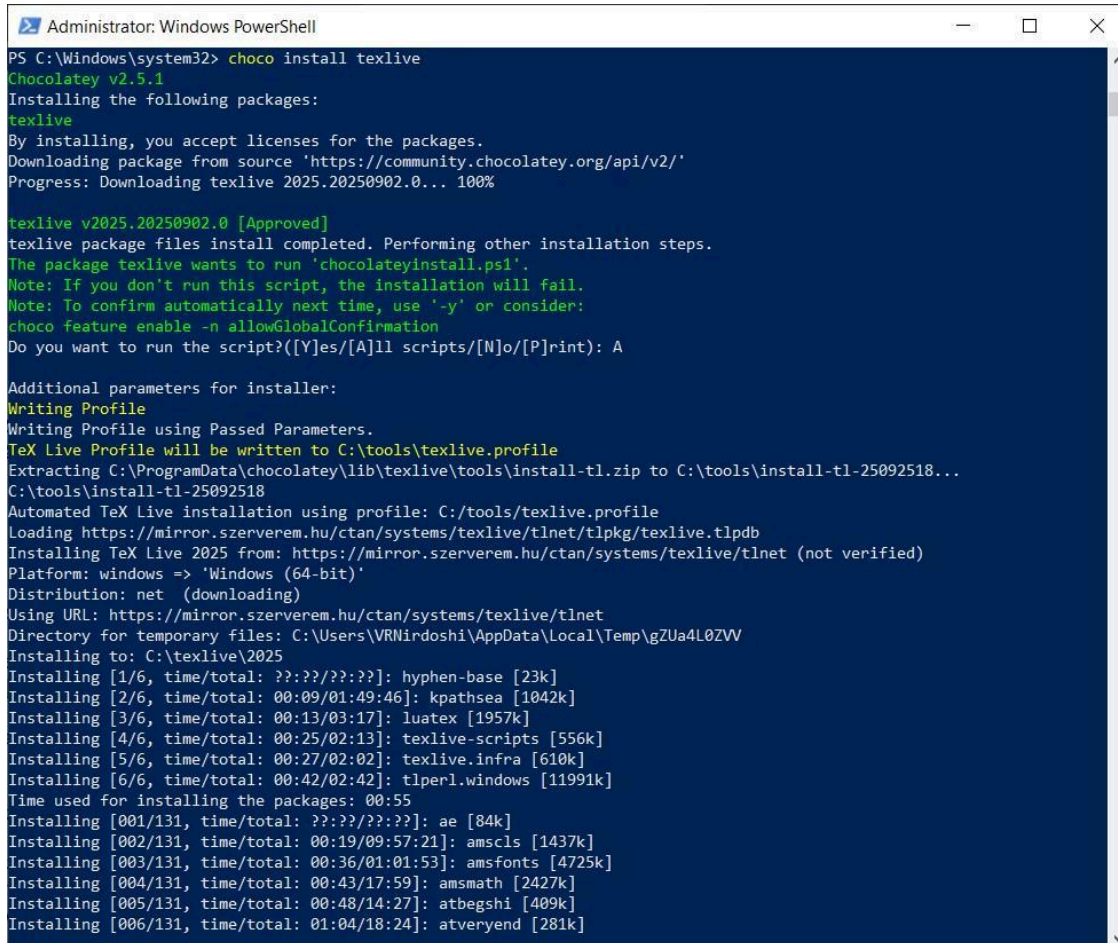
chocolatey.nupkg file not installed in lib.
Attempting to locate it from bootstrapper.
PATH environment variable does not have C:\ProgramData\chocolatey\bin in it. Adding...
WARNING: Not setting tab completion: Profile file does not exist at
'C:\Users\VRNIRDoshi\Documents\WindowsPowerShell\Microsoft.PowerShell_profile.ps1'.
Chocolatey CLI (choco.exe) is now ready.
You can call choco from anywhere, command line or PowerShell by typing choco.
Run choco /? for a list of functions.
You may need to shut down and restart PowerShell and/or consoles
first prior to using choco.
Ensuring Chocolatey commands are on the path
Ensuring chocolatey.nupkg is in the lib folder
PS C:\Windows\system32>
PS C:\Windows\system32> choco
Chocolatey v2.5.1
Please run 'choco --help' or 'choco <command> --help' for help menu.
```

- Проверка командой choco показала версию установленного менеджера пакетов.

2. Установка TeX Live через Chocolatey

- Введите команду для установки TeX Live:

`choco install texlive`



```
Administrator: Windows PowerShell
PS C:\Windows\system32> choco install texlive
Chocolatey v2.5.1
Installing the following packages:
texlive
By installing, you accept licenses for the packages.
Downloading package from source 'https://community.chocolatey.org/api/v2/'
Progress: Downloading texlive 2025.20250902.0... 100%

texlive v2025.20250902.0 [Approved]
texlive package files install completed. Performing other installation steps.
The package texlive wants to run 'chocolateyinstall.ps1'.
Note: If you don't run this script, the installation will fail.
Note: To confirm automatically next time, use '-y' or consider:
choco feature enable -n allowGlobalConfirmation
Do you want to run the script?([Y]es/[A]ll scripts/[N]o/[P]rint): A

Additional parameters for installer:
Writing Profile
Writing Profile using Passed Parameters.
TeX Live Profile will be written to C:\tools\texlive.profile
Extracting C:\ProgramData\chocolatey\lib\texlive\tools\install-tl.zip to C:\tools\install-tl-25092518...
C:\tools\install-tl-25092518
Automated TeX Live installation using profile: C:/tools/texlive.profile
Loading https://mirror.szerverem.hu/ctan/systems/texlive/tlnet/tlpkg/texlive.tlpdb
Installing TeX Live 2025 from: https://mirror.szerverem.hu/ctan/systems/texlive/tlnet (not verified)
Platform: windows => 'Windows (64-bit)'
Distribution: net (downloading)
Using URL: https://mirror.szerverem.hu/ctan/systems/texlive/tlnet
Directory for temporary files: C:\Users\VRNirdoshi\AppData\Local\Temp\gZUa4L0ZW
Installing to: C:\texlive\2025
Installing [1/6, time/total: ??:??:??]: hyphen-base [23k]
Installing [2/6, time/total: 00:09/01:49:46]: kpathsea [1042k]
Installing [3/6, time/total: 00:13/03:17]: luatex [1957k]
Installing [4/6, time/total: 00:25/02:13]: texlive-scripts [556k]
Installing [5/6, time/total: 00:27/02:02]: texlive.infra [610k]
Installing [6/6, time/total: 00:42/02:42]: tlpel.windows [11991k]
Time used for installing the packages: 00:55
Installing [001/131, time/total: ??:??:??]: ae [84k]
Installing [002/131, time/total: 00:19/09:57:21]: amscs [1437k]
Installing [003/131, time/total: 00:36/01:01:53]: amsfnts [4725k]
Installing [004/131, time/total: 00:43/17:59]: amsmath [2427k]
Installing [005/131, time/total: 00:48/14:27]: atbegshi [409k]
Installing [006/131, time/total: 01:04/18:24]: atveryend [281k]
```

- Подтвердите выполнение (если появится запрос Do you want to run the script? введите A и нажмите Enter).
- Дождитесь окончания процесса загрузки и установки (установка может занять 30–90 минут).
- После завершения в PowerShell появится сообщение **"The install of texlive was successful"**.

```
Administrator: Windows PowerShell
PS C:\Windows\system32> choco install texlive
Chocolatey v2.5.1
Installing the following packages:
texlive
By installing, you accept licenses for the packages.
Downloading package from source 'https://community.chocolatey.org/api/v2/'
Progress: Downloading texlive 2025.20250902.0... 100%

texlive v2025.20250902.0 [Approved]
texlive package files install completed. Performing other installation steps.
The package texlive wants to run 'chocolateyinstall.ps1'.
Note: If you don't run this script, the installation will fail.
Note: To confirm automatically next time, use '-y' or consider:
choco feature enable -n allowGlobalConfirmation
Do you want to run the script?([Y]es/[A]ll scripts/[N]o/[P]rint): A

Additional parameters for installer:
Writing Profile
Writing Profile using Passed Parameters.
TeX Live Profile will be written to C:\tools\texlive.profile
Extracting C:\ProgramData\chocolatey\lib\texlive\tools\install-tl.zip to C:\tools\install-tl-25092518...
C:\tools\install-tl-25092518
Automated TeX Live installation using profile: C:\tools\texlive.profile
Loading https://mirror.szerverem.hu/ctan/systems/texlive/tlnet/tlpkg/texlive.tlpdb
Installing TeX Live 2025 from: https://mirror.szerverem.hu/ctan/systems/texlive/tlnet (not verified)
Platform: windows => 'Windows (64-bit)'
Distribution: net (downloading)
Using URL: https://mirror.szerverem.hu/ctan/systems/texlive/tlnet
Directory for temporary files: C:\Users\VRNirdoshi\AppData\Local\Temp\gZUa4L0ZW
Installing to: C:\texlive\2025
Installing [1/6, time/total: ??:??/??:??]: hyphen-base [23k]
Installing [2/6, time/total: 00:09/01:49:46]: kpathsea [1042k]
Installing [3/6, time/total: 00:13/03:17]: luatex [1957k]
Installing [4/6, time/total: 00:25/02:13]: texlive-scripts [556k]
Installing [5/6, time/total: 00:27/02:02]: texlive.infra [610k]
Installing [6/6, time/total: 00:42/02:42]: tlppl.windows [11991k]
Time used for installing the packages: 00:55
Installing [001/131, time/total: ??:??/??:??]: ae [84k]
Installing [002/131, time/total: 00:19/09:57:21]: amscs [1437k]
Installing [003/131, time/total: 00:36/01:01:53]: amsmath [4725k]
Installing [004/131, time/total: 00:43/17:59]: atbegshi [2427k]
Installing [005/131, time/total: 00:48/14:27]: atveryend [409k]
Installing [006/131, time/total: 01:04/18:24]: atveryend [281k]
```

3. Альтернативная установка вручную

- Второй способ установки — через официальный сайт TeX Live: <https://www.tug.org/texlive/windows.html>.
- На странице загрузки предлагается установить файл `install-tl-windows.exe`.

TeX Live on Windows

Contents

- [Easy install](#)
- [Other options](#)
- [64- and 32-bit binaries](#)
- [Perl and Tk/Tk on Windows](#)
- [Multiple TeX distributions](#)
- [Security](#)
- [Administrator privileges](#)
- [Network installations and the TeX Live launcher](#)
- [Fixing permission problems, especially with texmf-local](#)
- [Non-ascii characters in TEXDIR](#)
- [Troubleshooting other problems](#)

Easy install

When installing from the internet, we recommend downloading and running [install-tl-windows.exe](#).

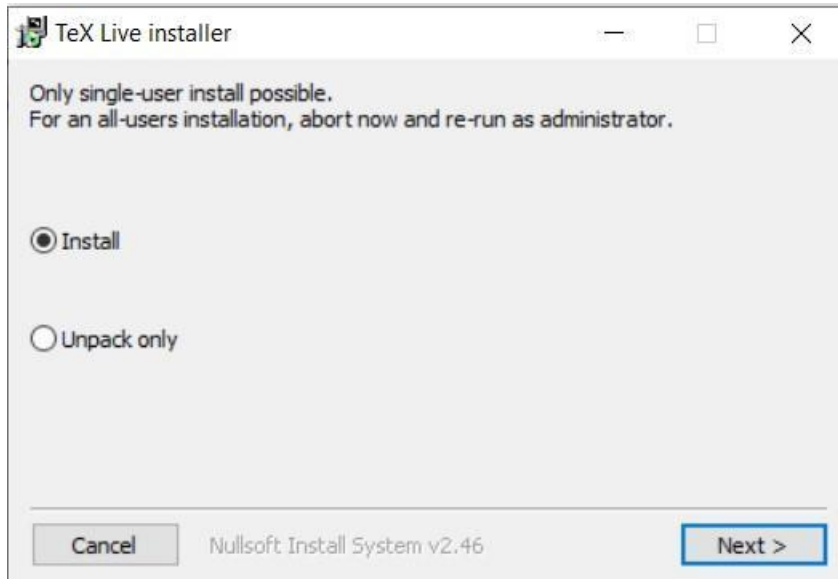
This installer first unpacks itself and then starts the installer proper, which is the same as for other platforms. An 'Advanced' button gives you many additional customization options. ([install-tl documentation](#).)

If you have MingW or Cygwin or similar installed, including an xz binary, and you get errors like "tar: Skipping to next file header", you can try setting the environment variable `TEXLIVE_PREFER_OWN=1` and restarting the installation.

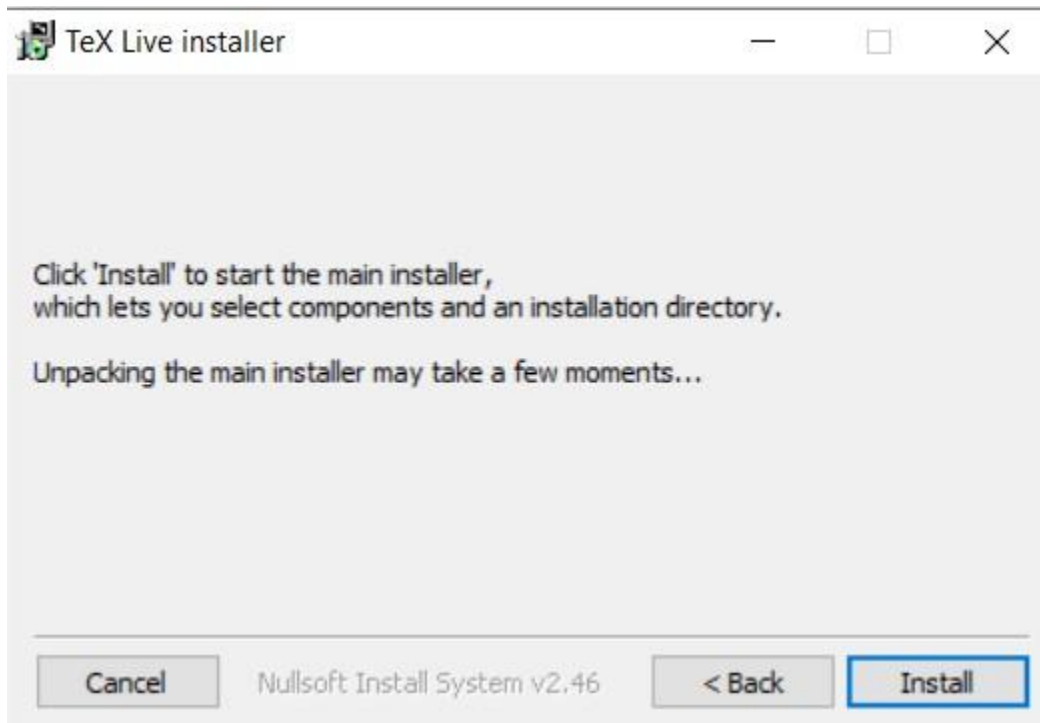
When successful, the installer tries to do the post-install things that are considered appropriate on Windows:

- Adds a TeX Live submenu of Windows' Start menu. Entries include a GUI for TeX Live Manager and the TeXworks editor if was installed.
- Optionally adds some filetypes and file associations.
- Adds the directory of TeX Live Windows binaries to the search path.

- После запуска установщика появляется окно выбора режима установки.

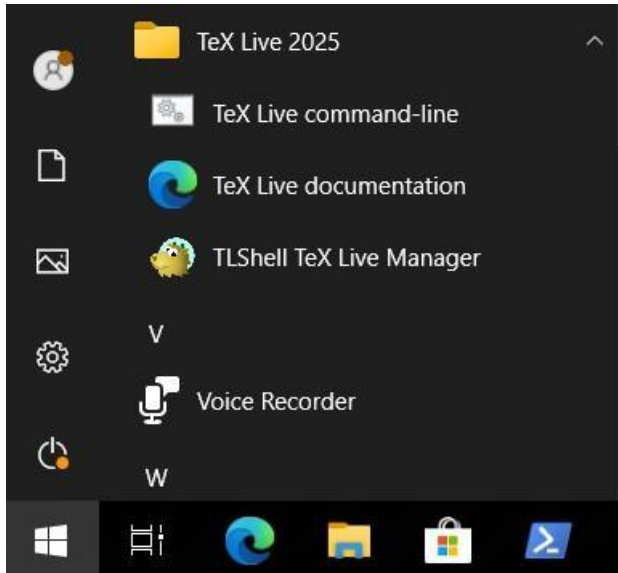


- Далее нужно подтвердить установку.



4. TeX Live Manager (TLShell)

- После установки в меню Пуск появилась папка **TeX Live 2025**.



- В ней доступны инструменты: командная строка, документация и TLShell TeX Live Manager.
- TLShell показывает список пакетов и позволяет их обновлять или удалять.

TeX Live Shell

File

Repository (Not loaded)
<https://mirror.szerverem.hu/ctan/systems/texlive/tlnet>
 TL Manager up to date? Unknown
 Last tlmgr command: info --data name,remoterev,rcat-version,category,shortdesc

Multi-user
 Root at C:/texlive/2025
 tlmgr: r75590
 tlshell: r75412

PACKAGE LIST

Status
☒ Installed
☐ Not installed
☐ All
☐ Updatable

Detail >> Global
☒ All
☐ Collections and schemes
☐ Only schemes

Search

☒ By name
☐ By name and description

Install marked
 Update marked
 Remove marked
 Update tlmgr
 Update all

Mark all displayed Mark none Only packages for installed platforms are displayed

Name	Local rev. (ver.)	Remote rev. (ver.)	Description
<input type="radio"/> ae	15878 (1.4)		Virtual fonts for T1 encoded CMR-fonts
<input type="radio"/> amscs	55378 (2.20.6)		AMS document classes for LaTeX
<input type="radio"/> amsfonts	61937 (3.04)		TeX fonts from the American Mathematical Society
<input type="radio"/> amsmath	75534 (2025-06-01 F		AMS mathematical facilities for LaTeX
<input type="radio"/> atbegshi	53051 (1.19)		Execute stuff at \shipout time
<input type="radio"/> atveryend	72507 (1.12)		Hooks at the very end of a document
<input type="radio"/> auxhook	53173 (1.6)		Hooks for auxiliary files
<input type="radio"/> babel	75958 (25.12)		Multilingual support for LaTeX, LuaLaTeX, XeLaTeX, and Pla

Running Show logs Restart tlmgr Restart self Quit

Выводы

В ходе лабораторной работы был установлен менеджер Chocolatey и через него установлен дистрибутив TeX Live 2025. Установка завершилась успешно, что подтверждено выводом команд в PowerShell. Также рассмотрен альтернативный способ установки с помощью `install-tl-windows.exe` и проверена работа графического менеджера TLShell. Система готова к выполнению следующей лабораторной работы по созданию и компиляции LaTeX-документа.