

LAPORAN PRAKTIKUM 1
PENGOLAHAN CITRA DIGITAL
INSTALASI *TOOLS*



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Kelas : D4RPL.3

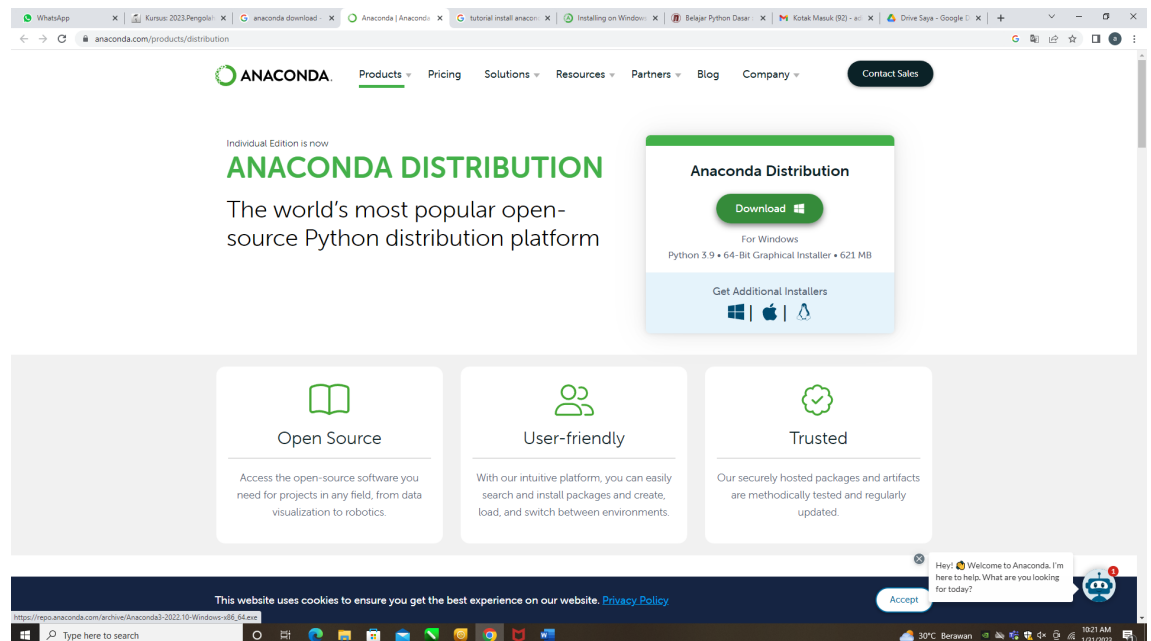
Mata Kuliah : Pengolahan Citra Digital

Tanggal Praktikum : 31 Januari 2023

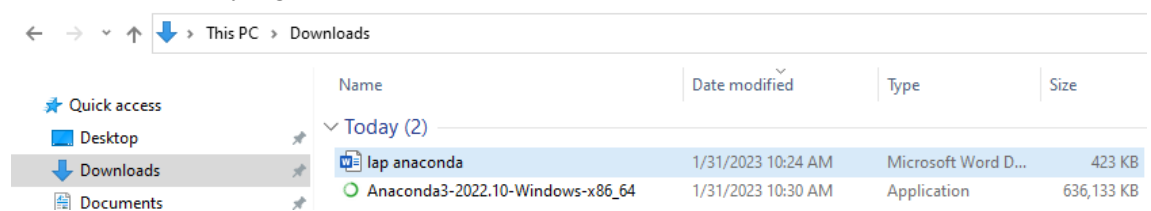
PROGRAM STUDI REKAYASA PERANGKAT LUNAK
JURUSAN TEKNIK INFORMATIKA
POLITEKNIK NEGERI INDRAMAYU

2023

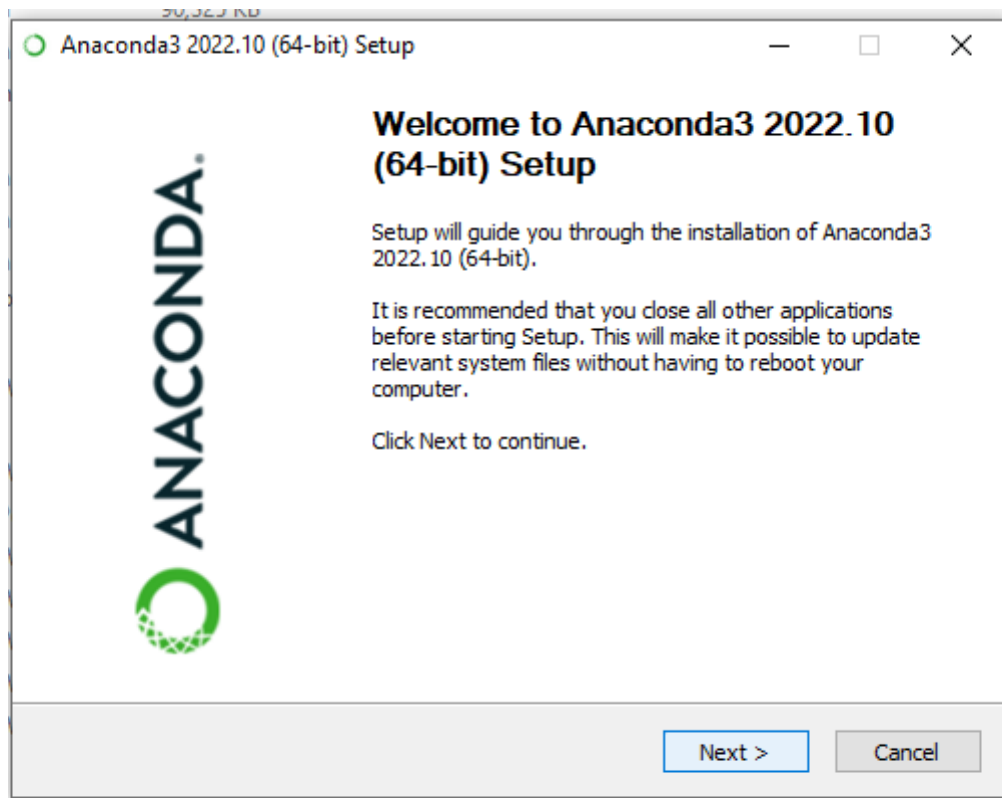
1. Pertama, akses halaman resmi Anaconda di <https://www.anaconda.com/products/distribution> untuk *download installer for windows*. Kemudian, pilih **Download**. Tunggu sampai proses *download* selesai.



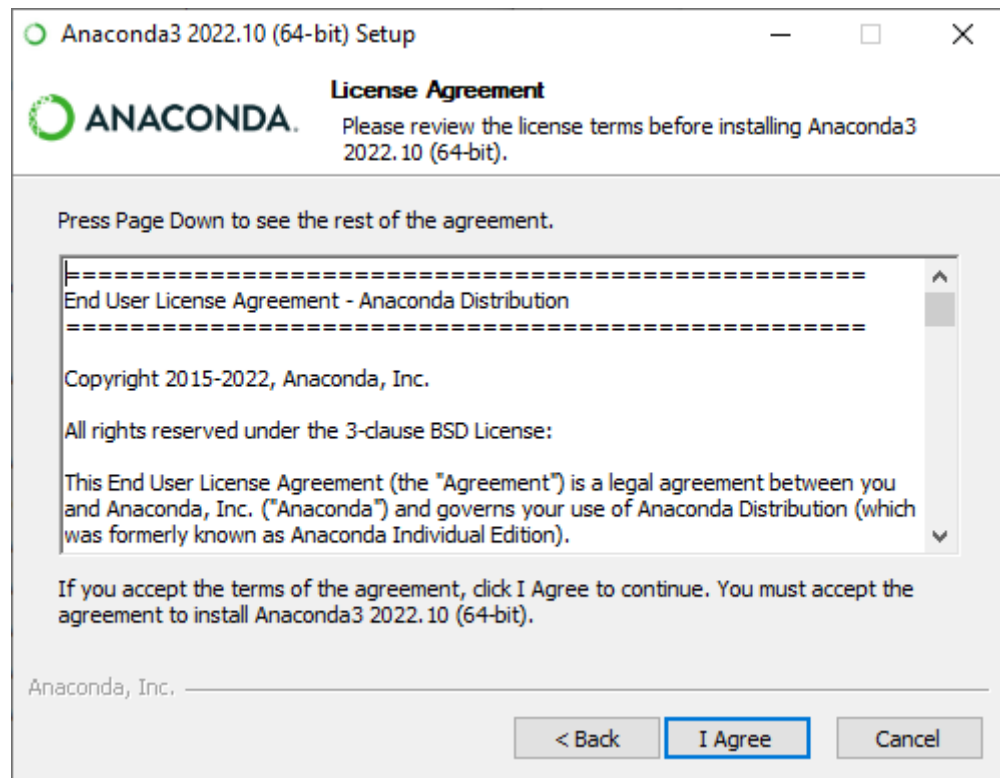
2. Selanjutnya, buka *file manager* dan *folder download*. kemudian *double-click file anaconda installer* yang telah di-*download*.



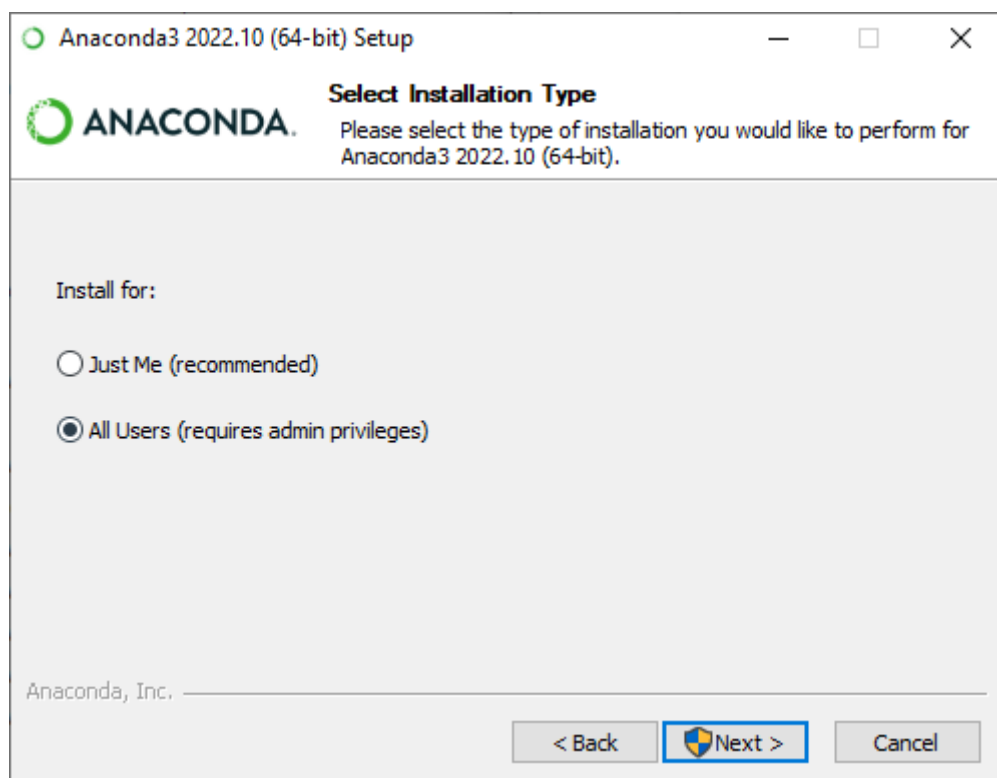
3. Pilih **Next**



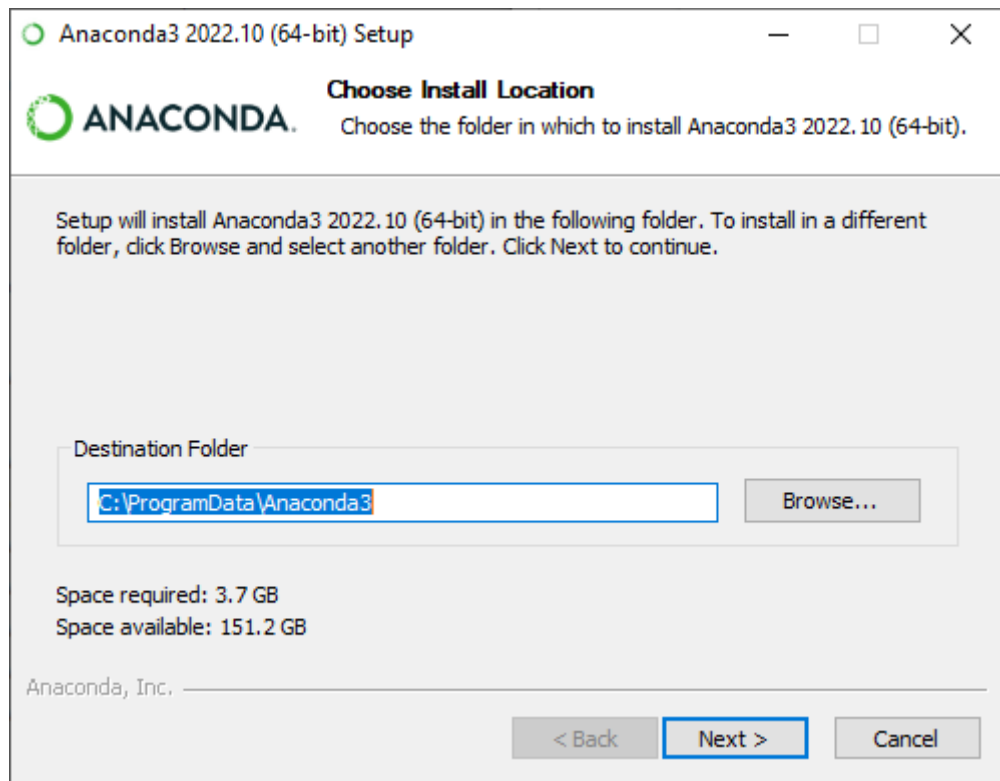
4. Pilih *I Agree*



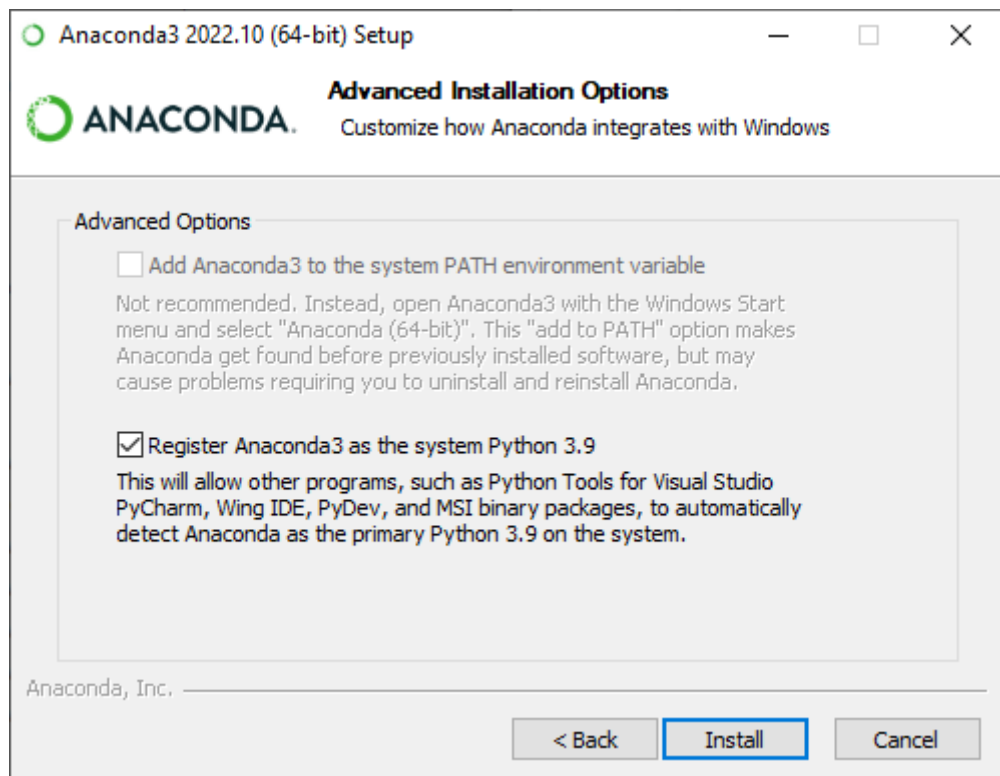
5. Pilih *All Users*, kemudian pilih *Next*



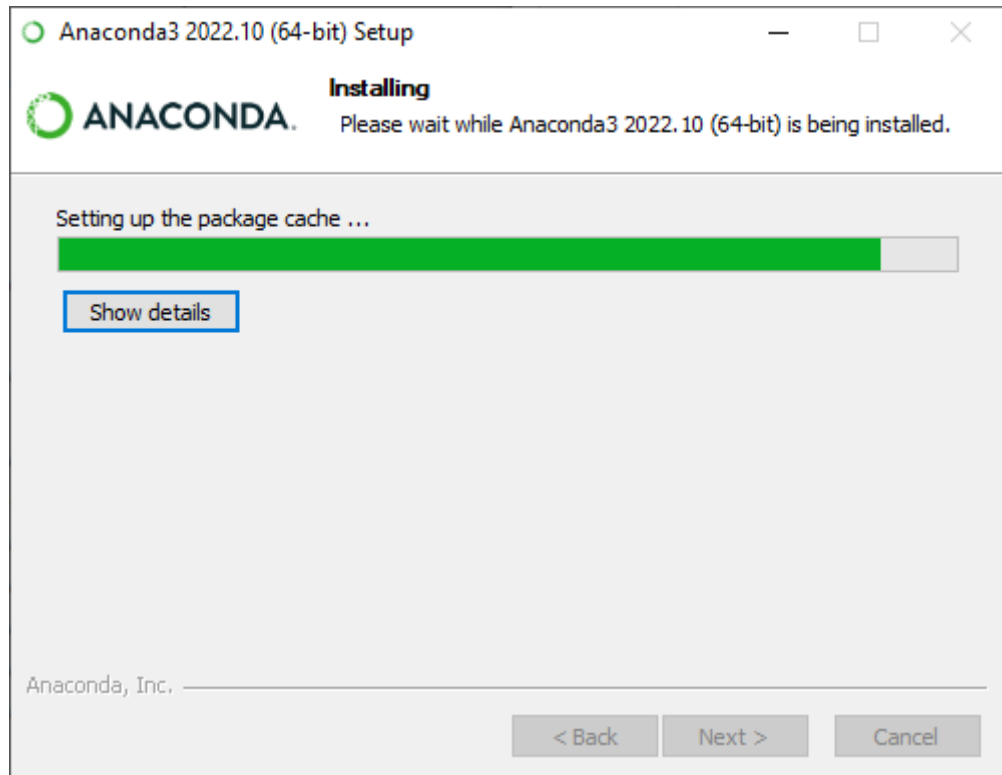
6. Pilih *Next*



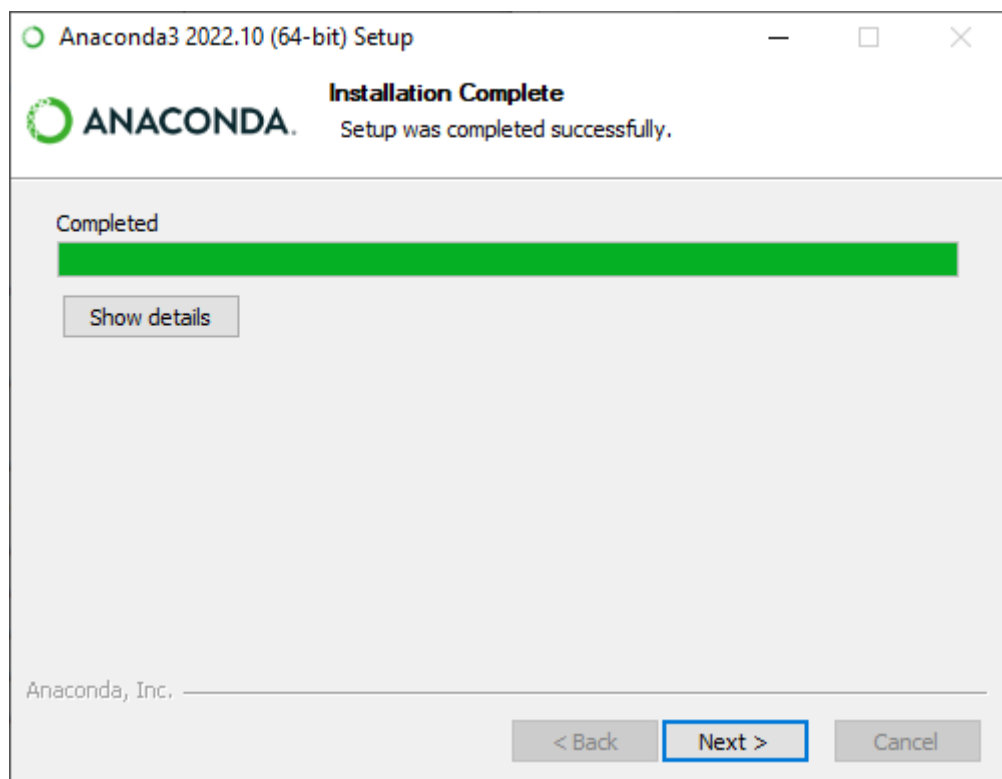
7. Pilih *Install*



8. Tunggu sampai proses instalasi selesai



9. Proses instalasi selesai



10. Buka **Anaconda Prompt**, kemudian lakukan beberapa konfigurasi sebagai berikut :

- **conda env list**
- **conda update conda**

```

Administrator: Anaconda Prompt (Anaconda3) - jupyter-lab

(base) C:\Windows\system32>conda env list
# conda environments:
#
base                  * C:\ProgramData\Anaconda3

(base) C:\Windows\system32>conda update conda
Collecting package metadata (current_repodata.json): done
Solving environment: done

## Package Plan ##

  environment location: C:\ProgramData\Anaconda3

  added / updated specs:
    - conda

The following packages will be downloaded:



| package                       | build          | size   |
|-------------------------------|----------------|--------|
| conda-23.1.0                  | py39haa95532_0 | 946 KB |
| conda-package-handling-2.0.2  | py39haa95532_0 | 286 KB |
| conda-package-streaming-0.7.0 | py39haa95532_0 | 27 KB  |
| conda-repo-cli-1.0.27         | py39haa95532_0 | 130 KB |
| ruamel.yaml-0.17.21           | py39h2bbff1b_0 | 174 KB |
| ruamel.yaml.clib-0.2.6        | py39h2bbff1b_1 | 101 KB |
| zstandard-0.18.0              | py39h2bbff1b_0 | 310 KB |


```

- **conda create --name adinda --clone base**

```

Administrator: Anaconda Prompt (Anaconda3) - jupyter-lab

conda-script.py create: error: one of the arguments -n/--name -p/--prefix is required

(base) C:\Windows\system32>conda create --name adinda --clone base
Source: C:\ProgramData\Anaconda3
Destination: C:\ProgramData\Anaconda3\envs\adinda
The following packages cannot be cloned out of the root environment:
- defaults/win-64::conda-23.1.0-py39haa95532_0
- defaults/win-64::conda-build-3.22.0-py39haa95532_0
- defaults/win-64::conda-env-2.6.0-haa95532_1
- defaults/noarch::conda-token-0.4.0-pyhd3eb1b0_0
- defaults/win-64::navigator-updater-0.3.0-py39haa95532_0
- defaults/win-64::anaconda-2022.10-py39_0
- defaults/win-64::anaconda-navigator-2.3.1-py39haa95532_0
- defaults/win-64::console_shortcut-0.1.1-4
- defaults/win-64::powershell_shortcut-0.0.1-3
Packages: 390
Files: 8

Downloading and Extracting Packages

Downloading and Extracting Packages

Preparing transaction: done
Verifying transaction: done
Executing transaction: -

Windows 64-bit packages of scikit-learn can be accelerated using scikit-learn-intelex.
More details are available here: https://intel.github.io/scikit-learn-intelex

```

- **conda activate adinda**

```
Administrator: Anaconda Prompt (Anaconda3) - jupyter-lab

(base) C:\Windows\system32>conda activate adinda

(adinda) C:\Windows\system32>jupyter -lab
usage: jupyter [-h] [--version] [--config-dir] [--data-dir] [--runtime-dir] [--paths] [--json] [--debug] [subcommand]

Jupyter: Interactive Computing

positional arguments:
  subcommand      the subcommand to launch

optional arguments:
  -h, --help            show this help message and exit
  --version              show the versions of core jupyter packages and exit
  --config-dir           show Jupyter config dir
  --data-dir             show Jupyter data dir
  --runtime-dir          show Jupyter runtime dir
  --paths               show all Jupyter paths. Add --json for machine-readable format.
  --json                output paths as machine-readable json
  --debug               output debug information about paths

Available subcommands: bundlerextension console dejavu execute kernel kernelspec lab labextension labhub migrate
nbclassic nbconvert nbextension notebook qtconsole run script server serverextension troubleshoot trust

Please specify a subcommand or one of the optional arguments.

(adinda) C:\Windows\system32>jupyter-lab
Note: NumExpr detected 12 cores but "NUMEXPR_MAX_THREADS" not set, so enforcing safe limit of 8.
NumExpr defaulting to 8 threads.
[I 2023-01-31 10:53:31.276 ServerApp] jupyterlab | extension was successfully linked.
```

- Pindah direktori menuju D:\, kemudian buat folder dengan nama **praktikum_adinda** dan masuk ke folder tersebut.
- **jupyter-lab**, maka akan otomatis membuka *browser*

```
Administrator: Anaconda Prompt (Anaconda3) - jupyter-lab

(base) C:\Windows\system32>conda activate adinda

(adinda) C:\Windows\system32>jupyter -lab
usage: jupyter [-h] [--version] [--config-dir] [--data-dir] [--runtime-dir] [--paths] [--json] [--debug] [subcommand]

Jupyter: Interactive Computing

positional arguments:
  subcommand      the subcommand to launch

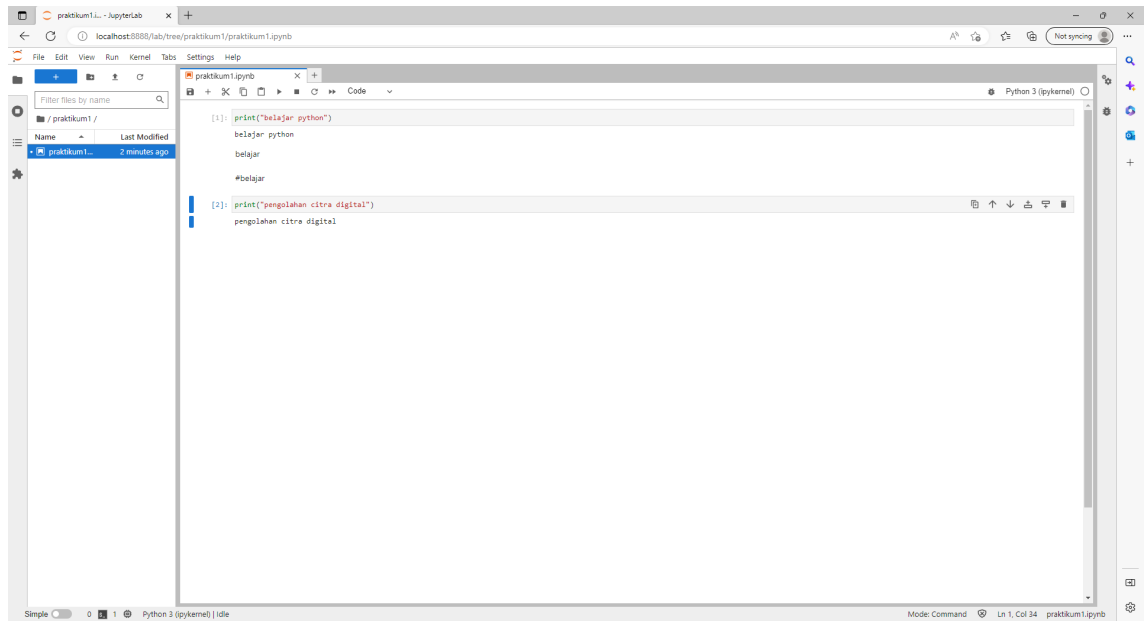
optional arguments:
  -h, --help            show this help message and exit
  --version              show the versions of core jupyter packages and exit
  --config-dir           show Jupyter config dir
  --data-dir             show Jupyter data dir
  --runtime-dir          show Jupyter runtime dir
  --paths               show all Jupyter paths. Add --json for machine-readable format.
  --json                output paths as machine-readable json
  --debug               output debug information about paths

Available subcommands: bundlerextension console dejavu execute kernel kernelspec lab labextension labhub migrate
nbclassic nbconvert nbextension notebook qtconsole run script server serverextension troubleshoot trust

Please specify a subcommand or one of the optional arguments.

(adinda) C:\Windows\system32>jupyter-lab
Note: NumExpr detected 12 cores but "NUMEXPR_MAX_THREADS" not set, so enforcing safe limit of 8.
NumExpr defaulting to 8 threads.
[I 2023-01-31 10:53:31.276 ServerApp] jupyterlab | extension was successfully linked.
```

11. Coba *script* python menggunakan jupyter notebook



12. Instalasi opencv

- **conda update --all**

```
Administrator: Anaconda Prompt (Anaconda3) - conda deactivate - conda update --all - conda install -c conda-forge opencv
(adinda) C:\Windows\system32>conda update --all
Collecting package metadata (current_repodata.json): done
Solving environment: \
Warning: 4 possible package resolutions (only showing differing packages):
- defaults/win-64::cython-0.29.28-py39hd77b12b_0, defaults/win-64::dask-2022.5.0-py39haa95532_0, defaults/win-64::dask
-core-2022.5.0-py39haa95532_0, defaults/win-64::distributed-2022.5.0-py39haa95532_0, defaults/win-64::gensim-4.2.0-py39h
d77b12b_0, defaults/win-64::jupyter_client-7.4.8-py39haa95532_0, defaults/win-64::tornado-6.2-py39h2bbff1b_0
- defaults/win-64::cython-0.29.32-py39hd77b12b_0, defaults/win-64::dask-2022.5.0-py39haa95532_0, defaults/win-64::dask
-core-2022.5.0-py39haa95532_0, defaults/win-64::distributed-2022.5.0-py39haa95532_0, defaults/win-64::gensim-4.1.2-py39h
d77b12b_0, defaults/win-64::jupyter_client-7.4.8-py39haa95532_0, defaults/win-64::tornado-6.2-py39h2bbff1b_0
- defaults/win-64::cython-0.29.32-py39hd77b12b_0, defaults/win-64::dask-2022.7.0-py39haa95532_0, defaults/win-64::dask
-core-2022.7.0-py39haa95532_0, defaults/win-64::distributed-2022.7.0-py39haa95532_0, defaults/win-64::gensim-4.1.2-py39h
d77b12b_0, defaults/win-64::jupyter_client-7.3.4-py39haa95532_0, defaults/win-64::tornado-6.1-py39h2bbff1b_0
- defaults/win-64::cython-0.29.28-py39hd77b12b_0, defaults/win-64::dask-2022.7.0-py39haa95532_0, defaults/win-64::dask
-core-2022.7.0-py39haa95532_0, defaults/win-64::distributed-2022.7.0-py39haa95532_0, defaults/win-64::gensim-4.2.0-py39h
d77b12b_0, defaults/win-64::jupyter_client-7.3.4-py39haa95532_0, defaults/win-64::tornado-6.1-py39h2bbff1bdone

## Package Plan ##

  environment location: C:\ProgramData\Anaconda3\envs\adinda

The following packages will be downloaded:

package                                     | build                                | size
-----|-----|-----
arrow-1.2.3                                | py39haa95532_0                      | 145 KB
dask-2022.5.0                              | py39haa95532_0                      | 20 KB
dask-core-2022.5.0                         | py39haa95532_0                      | 1.6 MB
dill-0.3.6                                 | py39haa95532_0                      | 186 KB
```

```
Administrator: Anaconda Prompt (Anaconda3) - conda deactivate - conda update --all - conda install -c conda-forge opencv

tornado                6.1-py39h2bfff1b_0 --> 6.2-py39h2bfff1b_0
traitlets              pkgs/main/noarch::traitlets-5.1.1-pyhd~ --> pkgs/main/win-64::traitlets-5.7.1-py39haa95532_0
typing-extensions      4.3.0-py39haa95532_0 --> 4.4.0-py39haa95532_0
typing_extensions      4.3.0-py39haa95532_0 --> 4.4.0-py39haa95532_0
tzdata                 2022c-h04d1e81_0 --> 2022g-h04d1e81_0
urllib3                1.26.11-py39haa95532_0 --> 1.26.14-py39haa95532_0
werkzeug              pkgs/main/noarch::werkzeug-2.0.3-pyhd~ --> pkgs/main/win-64::werkzeug-2.2.2-py39haa95532_0
xarray                pkgs/main/noarch::xarray-0.20.1-pyhd3~ --> pkgs/main/win-64::xarray-2022.11.0-py39haa95532_0
xz                    5.2.6-h8cc25b3_0 --> 5.2.10-h8cc25b3_1
zipp                   3.8.0-py39haa95532_0 --> 3.11.0-py39haa95532_0
zlib                   1.2.12-h8cc25b3_3 --> 1.2.13-h8cc25b3_0

The following packages will be DOWNGRADED:

cython                 0.29.32-py39hd77b12b_0 --> 0.29.28-py39hd77b12b_0
dask                   2022.7.0-py39haa95532_0 --> 2022.5.0-py39haa95532_0
dask-core              2022.7.0-py39haa95532_0 --> 2022.5.0-py39haa95532_0
distributed            2022.7.0-py39haa95532_0 --> 2022.5.0-py39haa95532_0

Proceed ([y]/n)? y

Downloading and Extracting Packages
Preparing transaction: done
Verifying transaction: done
Executing transaction: done

(adinda) C:\Windows\system32>conda install -c conda-forge opencv
```

- conda install -c conda-forge opencv

```
Administrator: Anaconda Prompt (Anaconda3) - conda deactivate - conda update --all - conda install -c conda-forge opencv

Executing transaction: done

(adinda) C:\Windows\system32>conda install -c conda-forge opencv
Collecting package metadata (current_repodata.json): done
Solving environment: done

## Package Plan ##

  environment location: C:\ProgramData\Anaconda3\envs\adinda

  added / updated specs:
    - opencv

The following NEW packages will be INSTALLED:

eigen                  conda-forge/win-64::eigen-3.4.0-h2d74725_0
libprotobuf           pkgs/main/win-64::libprotobuf-3.20.1-h23ce68f_0
opencv                pkgs/main/win-64::opencv-4.6.0-py39h104de81_2

The following packages will be SUPERSEDED by a higher-priority channel:

ca-certificates       pkgs/main::ca-certificates-2023.01.10~ --> conda-forge::ca-certificates-2022.12.7-h5b45459_0
certifi               pkgs/main/win-64::certifi-2022.12.7-p~ --> conda-forge/noarch::certifi-2022.12.7-pyhd8ed1ab_0

Proceed ([y]/n)? y

Downloading and Extracting Packages
```

```
Administrator: Anaconda Prompt (Anaconda3) - conda deactivate - conda update --all - conda install -c conda-forge opencv

## Package Plan ##

  environment location: C:\ProgramData\Anaconda3\envs\adinda

  added / updated specs:
    - opencv

The following NEW packages will be INSTALLED:

  eigen                conda-forge/win-64::eigen-3.4.0-h2d74725_0
  libprotobuf          pkgs/main/win-64::libprotobuf-3.20.1-h23ce68f_0
  opencv               pkgs/main/win-64::opencv-4.6.0-py39h104de81_2

The following packages will be SUPERSEDED by a higher-priority channel:

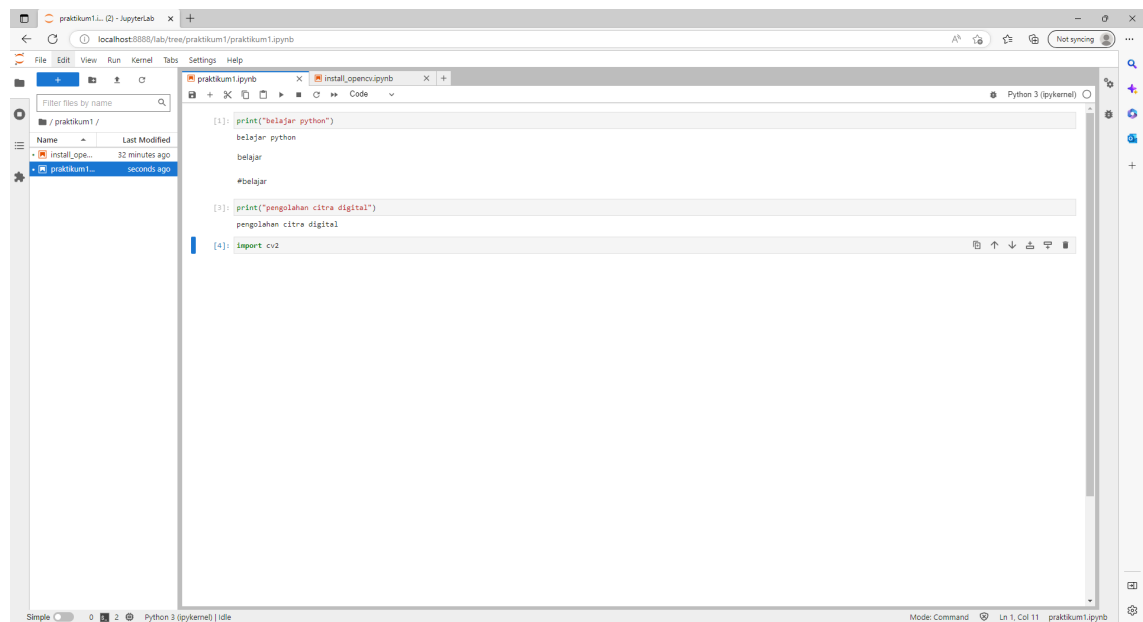
  ca-certificates      pkgs/main::ca-certificates-2023.01.10~ --> conda-forge::ca-certificates-2022.12.7-h5b45459_0
  certifi              pkgs/main/win-64::certifi-2022.12.7-p~ --> conda-forge/noarch::certifi-2022.12.7-pyhd8ed1ab_0

Proceed ([y]/n)? y

Downloading and Extracting Packages
Preparing transaction: done
Verifying transaction: done
Executing transaction: done

(adinda) C:\Windows\system32>
```

- **import cv2**, jika instalasi berhasil maka akan tampil [4]



```
praktikum1.ipynb | Python 3 (ipykernel) | Idle

[1]: print("belajar python")
    belajar python
    belajar
    #belajar

[2]: print("pengolahan citra digital")
    pengolahan citra digital

[4]: import cv2
```