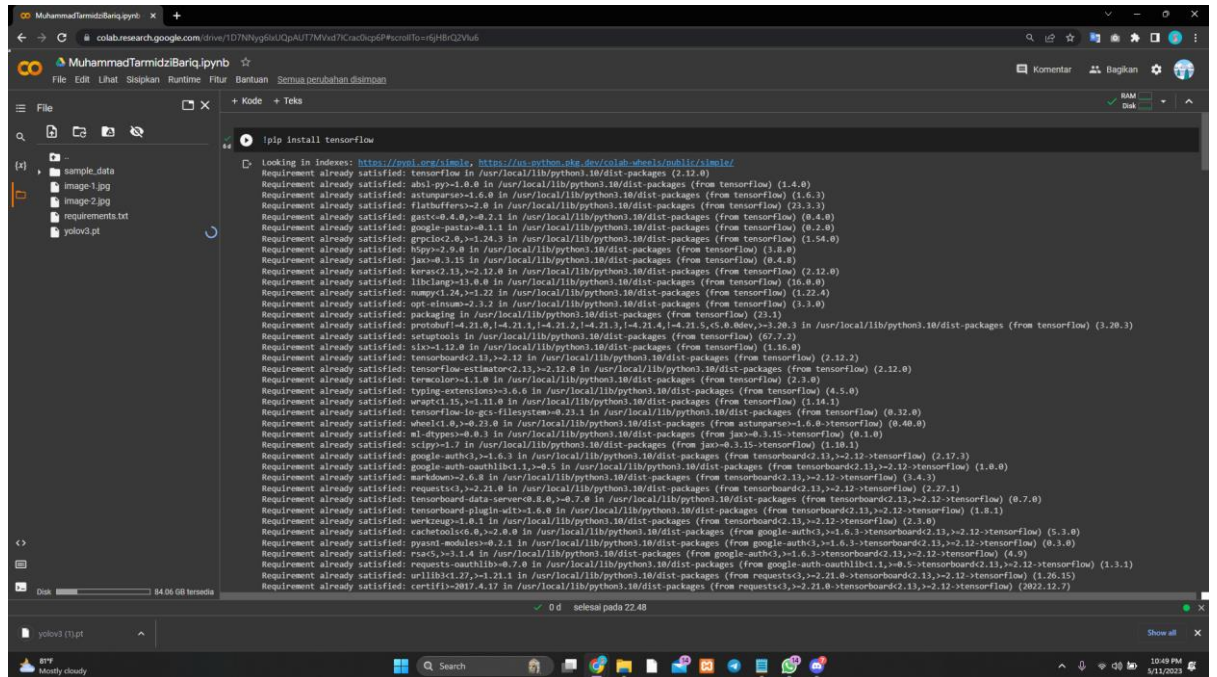


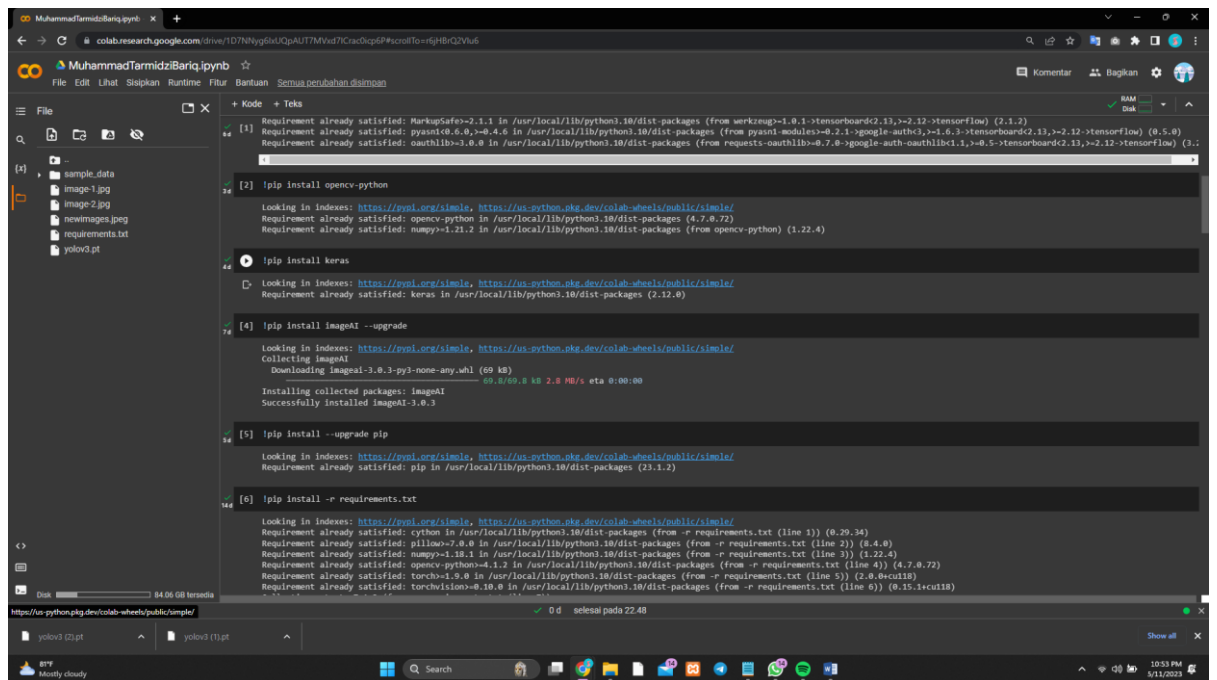
TUGAS PRAKTIKUM PERTEMUAN 7

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KELAS : IIA13
NPM : 51422161



```
[1] !pip install tensorflow

Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: tensorflow in /usr/local/lib/python3.10/dist-packages (2.12.0)
Requirement already satisfied: absl-py==1.6.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (1.4.0)
Requirement already satisfied: astunparse==1.6.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (1.6.3)
Requirement already satisfied: flatbuffers==2.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (23.3.3)
Requirement already satisfied: gast==0.4.0, >=0.2.1 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (0.4.0)
Requirement already satisfied: google-pasta==0.1.1 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (0.2.0)
Requirement already satisfied: grpcio==2.0, >=1.24.3 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (1.54.0)
Requirement already satisfied: h5py==2.9.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (1.8.0)
Requirement already satisfied: jax==0.3.15 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (0.4.4)
Requirement already satisfied: keras==2.13, >=2.12.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (2.12.0)
Requirement already satisfied: libclang==13.0.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (16.0.6)
Requirement already satisfied: numpy==1.24, >=1.12.1 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (1.12.4)
Requirement already satisfied: opt-einsum==2.3.2 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (3.3.0)
Requirement already satisfied: packaging in /usr/local/lib/python3.10/dist-packages (from tensorflow) (1.16.0)
Requirement already satisfied: protobuf==4.21.0, >=4.21.1, <4.21.3, <4.21.4, <4.21.5, <5.0.dev, >=3.20.3 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (3.20.3)
Requirement already satisfied: setuptools in /usr/local/lib/python3.10/dist-packages (from tensorflow) (67.7.2)
Requirement already satisfied: six==1.12.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (1.16.0)
Requirement already satisfied: tensorflow==2.13, >=2.12 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (2.12.2)
Requirement already satisfied: tensorflow-estimator==2.13, >=2.12.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (2.12.0)
Requirement already satisfied: termcolor==1.1.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (2.3.0)
Requirement already satisfied: typing-extensions==3.6.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (4.5.0)
Requirement already satisfied: wrapt==1.15, >=1.11.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (1.14.1)
Requirement already satisfied: tensorflow-io-gcs-filesystem==0.23.1 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (0.32.0)
Requirement already satisfied: wheel==1.4, >=0.21.0, <0.21.1, <0.21.3, <0.21.4, <0.21.5, <5.0.dev, >=0.40.0 in /usr/local/lib/python3.10/dist-packages (from tensorflow) (0.40.0)
Requirement already satisfied: ml-dtypes==0.8.0 in /usr/local/lib/python3.10/dist-packages (from jax==0.3.15->tensorflow) (0.1.0)
Requirement already satisfied: scipy==1.7 in /usr/local/lib/python3.10/dist-packages (from jax==0.3.15->tensorflow) (1.10.1)
Requirement already satisfied: google-auth==2, >=1.6.3 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.13, >=2.12->tensorflow) (2.17.3)
Requirement already satisfied: google-auth-oauthlib==1, >=0.5 in /usr/local/lib/python3.10/dist-packages (from tensorflow==2.13, >=2.12->tensorflow) (1.0.0)
Requirement already satisfied: markdown==2.6.8 in /usr/local/lib/python3.10/dist-packages (from tensorboard==2.13, >=2.12->tensorflow) (3.4.3)
Requirement already satisfied: requests==3, >=2.21.0 in /usr/local/lib/python3.10/dist-packages (from tensorboard==2.13, >=2.12->tensorflow) (2.27.1)
Requirement already satisfied: tensorboard-data-server==0.8.0, >=0.7.0 in /usr/local/lib/python3.10/dist-packages (from tensorboard==2.13, >=2.12->tensorflow) (0.7.0)
Requirement already satisfied: tensorboard-plugin-wit==1.6.0 in /usr/local/lib/python3.10/dist-packages (from tensorboard==2.13, >=2.12->tensorflow) (1.8.1)
Requirement already satisfied: werkzeug==1.6.0 in /usr/local/lib/python3.10/dist-packages (from tensorboard==2.13, >=2.12->tensorflow) (2.3.0)
Requirement already satisfied: cachetools==5.0, >=2.0.0 in /usr/local/lib/python3.10/dist-packages (from google-auth==2, >=1.6.3->tensorflow==2.13, >=2.12->tensorflow) (5.3.0)
Requirement already satisfied: pyasn1-modules==0.2.1 in /usr/local/lib/python3.10/dist-packages (from google-auth==2, >=1.6.3->tensorflow==2.13, >=2.12->tensorflow) (0.3.0)
Requirement already satisfied: rsa==4, >=1.4 in /usr/local/lib/python3.10/dist-packages (from google-auth==2, >=1.6.3->tensorflow==2.13, >=2.12->tensorflow) (4.0)
Requirement already satisfied: requests-oauthlib==0.7.0 in /usr/local/lib/python3.10/dist-packages (from google-auth-oauthlib==1, >=0.5->tensorflow==2.13, >=2.12->tensorflow) (1.3.1)
Requirement already satisfied: urllib3==1.27, >=1.21.1 in /usr/local/lib/python3.10/dist-packages (from requests==3, >=2.21.0->tensorflow==2.13, >=2.12->tensorflow) (1.26.15)
Requirement already satisfied: certifi==2017.4.17 in /usr/local/lib/python3.10/dist-packages (from requests==3, >=2.21.0->tensorflow==2.13, >=2.12->tensorflow) (2022.12.7)
```



```
[1] Requirement already satisfied: MarkupSafe==2.1.1 in /usr/local/lib/python3.10/dist-packages (from werkzeug==1.0.1->tensorflow==2.13, >=2.12->tensorflow) (2.1.2)
Requirement already satisfied: werkzeug==1.6.0, >=0.4.0 in /usr/local/lib/python3.10/dist-packages (from pyasn1-modules==0.2.1->google-auth==2, >=1.6.3->tensorflow==2.13, >=2.12->tensorflow) (0.5.0)
Requirement already satisfied: oauthlib==3.0.0 in /usr/local/lib/python3.10/dist-packages (from requests-oauthlib==0.7.0->google-auth-oauthlib==1, >=0.5->tensorflow==2.13, >=2.12->tensorflow) (3.1.0)

[2] !pip install opencv-python

Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: opencv-python in /usr/local/lib/python3.10/dist-packages (4.7.0.72)
Requirement already satisfied: numpy==1.21.2 in /usr/local/lib/python3.10/dist-packages (from opencv-python) (1.22.4)

[3] !pip install keras

Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: keras in /usr/local/lib/python3.10/dist-packages (2.12.0)

[4] !pip install imageai --upgrade

Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Collecting imageai
  Downloading imageai-3.0.3-py3-none-any.whl (69 kB)
  69.0/69.0 KB 2.8 MB/s eta 0:00:00
Installing collected packages: imageai
Successfully installed imageai-3.0.3

[5] !pip install --upgrade pip

Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: pip in /usr/local/lib/python3.10/dist-packages (23.1.2)

[6] !pip install -r requirements.txt

Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: python in /usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 1)) (0.20.34)
Requirement already satisfied: pillow==7.0.0 in /usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 2)) (8.4.0)
Requirement already satisfied: numpy==1.18.1 in /usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 3)) (1.22.4)
Requirement already satisfied: opencv-python==4.12 in /usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 4)) (4.7.0.72)
Requirement already satisfied: torch==1.9.0 in /usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 5)) (2.0.0cu118)
Requirement already satisfied: torchvision==0.10.0 in /usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 6)) (0.15.1cu118)
```

