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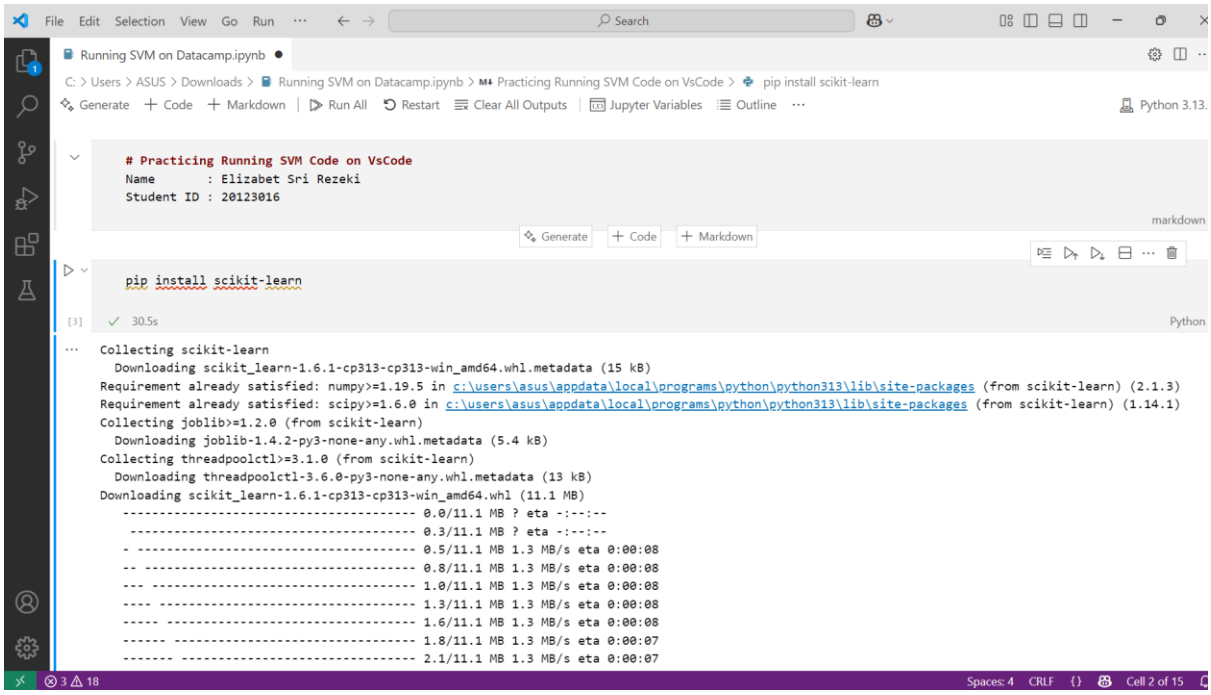
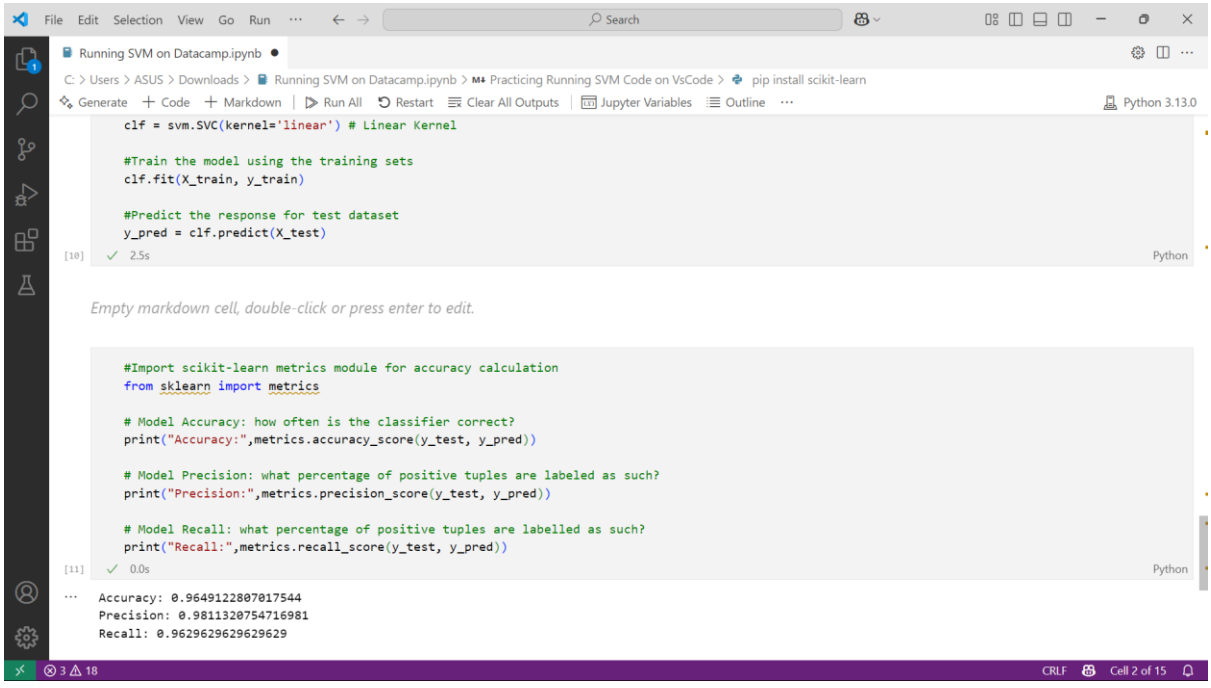
2. Practicing Running SVM on VsCode

The program executed in VsCode runs as smoothly as it did when executed online on DataCamp.





3. Create and Use Virtual Environment

Creating virtual environment “venv”

```
PS C:\Users\ASUS> python -m venv venv
PS C:\Users\ASUS> venv\Scripts\activate
(venv) PS C:\Users\ASUS> pip install scikit-learn pandas matplotlib
Collecting scikit-learn
  Using cached scikit_learn-1.6.1-cp313-cp313-win_amd64.whl.metadata (15 kB)
Collecting pandas
  Using cached pandas-2.2.3-cp313-cp313-win_amd64.whl.metadata (19 kB)
Collecting matplotlib
  Downloading matplotlib-3.10.1-cp313-cp313-win_amd64.whl.metadata (11 kB)
Collecting numpy>=1.19.5 (from scikit-learn)
  Downloading numpy-2.2.5-cp313-cp313-win_amd64.whl.metadata (60 kB)
Collecting scipy>=1.6.0 (from scikit-learn)
  Downloading scipy-1.15.2-cp313-cp313-win_amd64.whl.metadata (60 kB)
Collecting joblib>=1.2.0 (from scikit-learn)
  Using cached joblib-1.4.2-py3-none-any.whl.metadata (5.4 kB)
Collecting threadpoolctl>=3.1.0 (from scikit-learn)
  Using cached threadpoolctl-3.6.0-py3-none-any.whl.metadata (13 kB)
Collecting python-dateutil>=2.8.2 (from pandas)
  Using cached python_dateutil-2.9.0.post0-py2.py3-none-any.whl.metadata (8.4 kB)
Collecting pytz>=2020.1 (from pandas)
  Downloading pytz-2025.2-py2.py3-none-any.whl.metadata (22 kB)
Collecting tzdata>=2022.7 (from pandas)
  Downloading tzdata-2025.2-py2.py3-none-any.whl.metadata (1.4 kB)
Collecting contourpy>=1.0.1 (from matplotlib)
  Downloading contourpy-1.3.2-cp313-cp313-win_amd64.whl.metadata (5.5 kB)
Collecting cycler>=0.10 (from matplotlib)
  Using cached cycler-0.12.1-py3-none-any.whl.metadata (3.8 kB)
Collecting fonttools>=4.22.0 (from matplotlib)
```

Create a requirements.txt file to list all packages (scikit-learn, pandas, matplotlib) for easy reinstallation later.

```
Downloading contourpy-1.3.2-cp313-cp313-win_amd64.whl (223 kB)
Using cached cycler-0.12.1-py3-none-any.whl (8.3 kB)
Downloading fonttools-4.57.0-cp313-cp313-win_amd64.whl (2.2 MB)
   ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 2.2/2.2 MB 3.1 MB/s eta 0:00:00
Using cached joblib-1.4.2-py3-none-any.whl (301 kB)
Downloading kiwisolver-1.4.8-cp313-cp313-win_amd64.whl (71 kB)
Downloading numpy-2.2.5-cp313-cp313-win_amd64.whl (12.6 MB)
   ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 12.6/12.6 MB 3.0 MB/s eta 0:00:00
Downloading packaging-25.0-py3-none-any.whl (66 kB)
Downloading pillow-11.2.1-cp313-cp313-win_amd64.whl (2.7 MB)
   ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 2.7/2.7 MB 2.4 MB/s eta 0:00:00
Downloading pyparsing-3.2.3-py3-none-any.whl (111 kB)
Using cached python_dateutil-2.9.0.post0-py2.py3-none-any.whl (229 kB)
Downloading pytz-2025.2-py2.py3-none-any.whl (509 kB)
Downloading scipy-1.15.2-cp313-cp313-win_amd64.whl (41.0 MB)
   ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━ 41.0/41.0 MB 3.9 MB/s eta 0:00:00
Downloading six-1.17.0-py2.py3-none-any.whl (11 kB)
Installing collected packages: pytz, tzdata, threadpoolctl, six, pyparsing, pillow, packaging, numpy, kiwisolver, joblib, fonttools, cyc
ler, scipy, python-dateutil, contourpy, scikit-learn, pandas, matplotlib
Successfully installed contourpy-1.3.2 cycler-0.12.1 fonttools-4.57.0 joblib-1.4.2 kiwisolver-1.4.8 matplotlib-3.10.1 numpy-2.2.5 packag
ing-25.0 pandas-2.2.3 pillow-11.2.1 pyparsing-3.2.3 python-dateutil-2.9.0.post0 pytz-2025.2 scikit-learn-1.6.1 scipy-1.15.2 six-1.17.0 t
hreadpoolctl-3.6.0 tzdata-2025.2
(venv) PS C:\Users\ASUS> pip freeze > requirements.txt
```