

# INT-332 Practical-3

## Example 1: Python App with Flask

Windows PowerShell

Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

```
PS C:\Users\sr302> cd dockerfile_python
```

```
cd : Cannot find path 'C:\Users\sr302\dockerfile_python' because it does not exist.
```

```
At line:1 char:1
```

```
+ cd dockerfile_python
```

```
+ ~~~~~
```

```
+ CategoryInfo          : ObjectNotFound: (C:\Users\sr302\dockerfile_python:String) [Set-Location],  
ItemNotFoundException
```

```
ion
```

```
+ FullyQualifiedErrorId : PathNotFound,Microsoft.PowerShell.Commands.SetLocationCommand
```

```
PS C:\Users\sr302> mkdir dockerfile_python
```

```
Directory: C:\Users\sr302
```

Mode	LastWriteTime	Length	Name
d----	2/17/2026 12:31 PM		dockerfile_python

```
PS C:\Users\sr302> cd dockerfile_python
```

```
PS C:\Users\sr302\dockerfile_python> cat App.py
```

```
cat : Cannot find path 'C:\Users\sr302\dockerfile_python\App.py' because it does not exist.
```

```
At line:1 char:1
```

```
+ cat App.py
```

```
+ ~~~~~
```

```
+ CategoryInfo          : ObjectNotFound: (C:\Users\sr302\dockerfile_python\App.py:String) [Get-Content], ItemNotFound
```

```
Exception
```

```
+ FullyQualifiedErrorId : PathNotFound,Microsoft.PowerShell.Commands.GetContentCommand
```

```
PS C:\Users\sr302\dockerfile_python> notepad app.py
```

```
PS C:\Users\sr302\dockerfile_python> cat App.py
```

```
wdfgdfsa
```

```
PS C:\Users\sr302\dockerfile_python> notepad requirement.txt
```

```
PS C:\Users\sr302\dockerfile_python> cat requirement.txt
```

```
ewfdd
```

```
PS C:\Users\sr302\dockerfile_python> notepad dockerfile.txt
```

```
PS C:\Users\sr302\dockerfile_python> cat dockerfile.txt
```

```
zdsf
```

```
PS C:\Users\sr302\dockerfile_python> dir
```

```
Directory: C:\Users\sr302\dockerfile_python
```

Mode	LastWriteTime	Length	Name
----	-----	-----	----
-a----	2/17/2026 12:42 PM	148	app.py

```
-a----    2/17/2026 12:35 PM    4 dockerfile.txt
-a----    2/17/2026 12:34 PM    5 requirement.txt
```

```
PS C:\Users\sr302\dockerfile_python> ren dockerfile.txt dockerfile
```

```
PS C:\Users\sr302\dockerfile_python> dir
```

```
Directory: C:\Users\sr302\dockerfile_python
```

Mode	LastWriteTime	Length	Name
----	-----	-----	----
-a----	2/17/2026 12:42 PM	148	app.py
-a----	2/17/2026 12:35 PM	4	dockerfile
-a----	2/17/2026 12:34 PM	5	requirement.txt

```
PS C:\Users\sr302\dockerfile_python> notepad dockerfile
```

```
PS C:\Users\sr302\dockerfile_python> cat dockerfile
```

```
# 1. Base image
```

```
FROM python:3.11-slim
```

```
# 2. Set working directory
```

```
WORKDIR /app
```

```
# 3. Copy dependency file
```

**COPY requirements.txt**

**.# 4. Install dependenciesR**

**UN pip install --no-cache-dir -r requirements.txt**

**# 5. Copy application code**

**COPY . .**

**# 6. Expose port**

**EXPOSE 5000**

**# 7. Run the app**

**CMD ["python", "app.py"]**

**PS C:\Users\sr302\dockerfile\_python> dir**

**Directory: C:\Users\sr302\dockerfile\_python**

Mode	LastWriteTime	Length	Name
----	-----	-----	----
-a----	2/17/2026 12:42 PM	148	app.py
-a----	2/17/2026 12:45 PM	349	dockerfile
-a----	2/17/2026 12:45 PM	5	requirement.txt

```
PS C:\Users\sr302> cd dockerfile_python
```

```
PS C:\Users\sr302\dockerfile_python> ren requirement.txt requirements.txt
```

```
>>
```

```
PS C:\Users\sr302\dockerfile_python> dockerfile
```

```
>>
```

**dockerfile** : The term 'dockerfile' is not recognized as the name of a cmdlet, function, script file, or operable program. Check the spelling of the name, or if a path was included, verify that the path is correct

and try again.

At line:1 char:1

+ dockerfile

+ ~~~~~

+ CategoryInfo : ObjectNotFound: (dockerfile:String) [], CommandNotFoundException

+ FullyQualifiedErrorId : CommandNotFoundException

**Suggestion [3,General]:** The command dockerfile was not found, but does exist in the current location. Windows PowerShell does not load commands from the current location by default. If you trust this command, instead type: ".\dockerfile". See "get-help about\_Command\_Precedence" for more details.

```
PS C:\Users\sr302\dockerfile_python> ren dockerfile Dockerfile
```

```
>>
```

```
PS C:\Users\sr302\dockerfile_python> dir
```

Directory: C:\Users\sr302\dockerfile\_python

Mode	LastWriteTime	Length	Name
------	---------------	--------	------

```

-----
-a----    2/18/2026 10:00 AM    150 app.py
-a----    2/18/2026 11:42 AM    338 Dockerfile
-a----    2/17/2026 12:45 PM    5 requirements.txt

```

PS C:\Users\sr302\dockerfile\_python> docker build -t python-flask-app .

>>

```

[+] Building 1.9s (10/10) FINISHED                                docker:desktop-linux
=> [internal] load build definition from Dockerfile                0.0s
=> => transferring dockerfile: 377B                                0.0s
=> [internal] load metadata for docker.io/library/python:3.11-slim 1.1s
=> [internal] load .dockerignore                                    0.0s
=> => transferring context: 2B                                       0.0s
=> [1/5] FROM docker.io/library/python:3.11-slim@sha256:0b23cfb7425d065008b778022a17b1551c82f8b4866ee5 0.1s
=> => resolve docker.io/library/python:3.11-slim@sha256:0b23cfb7425d065008b778022a17b1551c82f8b4866ee5 0.1s
=> [internal] load build context                                    0.1s
=> => transferring context: 289B                                       0.0s
=> CACHED [2/5] WORKDIR /app                                        0.0s
=> CACHED [3/5] COPY requirements.txt .                             0.0s
=> CACHED [4/5] RUN pip install --no-cache-dir -r requirements.txt 0.0s
=> [5/5] COPY . .                                                  0.1s
=> exporting to image                                              0.3s
=> => exporting layers                                                0.1s
=> => exporting manifest
sha256:2a1c8520db7cead61ab867d1575d44caa8d5f1992c34a8037d10d009f3079b7b 0.0s
=> => exporting config
sha256:23baa6620f31356c41ebce3543931f947a1dbcbb0d90588c57df36b238dc61f4 0.0s
=> => exporting attestation manifest
sha256:e025632e055a83b5f9c17a128f305e6e28ca50229c084c69e300d777b6 0.0s

```

=> => exporting manifest list

sha256:a11e5a4931bfbea6a4d5fdf2c90235516b308ac76cc916aa8119688748178bf8 0.0s

=> => naming to docker.io/library/python-flask-app:latest

0.0s

=> => unpacking to docker.io/library/python-flask-app:latest

0.0s

PS C:\Users\sr302\dockerfile\_python> docker run -p 5000:5000 python-flask-app

>>

\* Serving Flask app 'app'

\* Debug mode: off

**WARNING:** This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.

\* Running on all addresses (0.0.0.0)

\* Running on http://127.0.0.1:5000

\* Running on http://172.17.0.2:5000

Press CTRL+C to quit

172.17.0.1 -- [18/Feb/2026 06:16:06] "GET / HTTP/1.1" 200 -

172.17.0.1 -- [18/Feb/2026 06:16:06] "GET /favicon.ico HTTP/1.1" 404 -

PS C:\Users\sr302\dockerfile\_python>

## Output:

