

## INT-332 Practical-3

### **Example 1: Python App with Flask**

Windows PowerShell

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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
+ 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], ItemNotFoundException

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:

