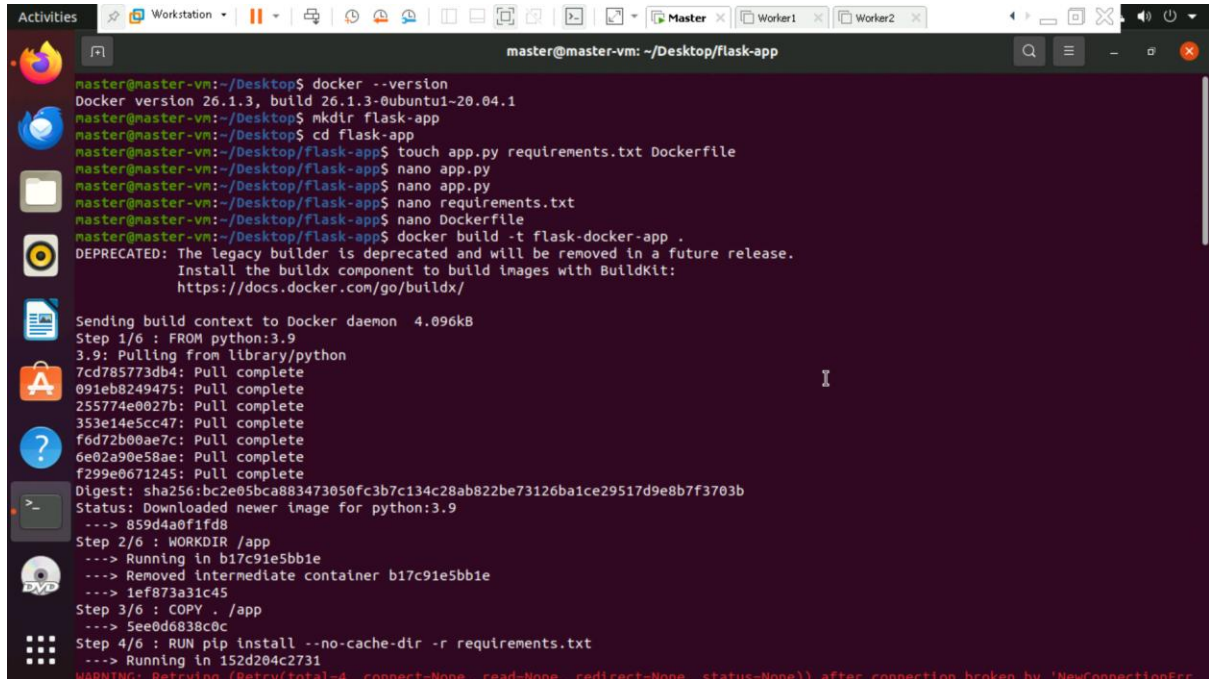


DOCKER DOCUMENT

1 Check for Docker --version



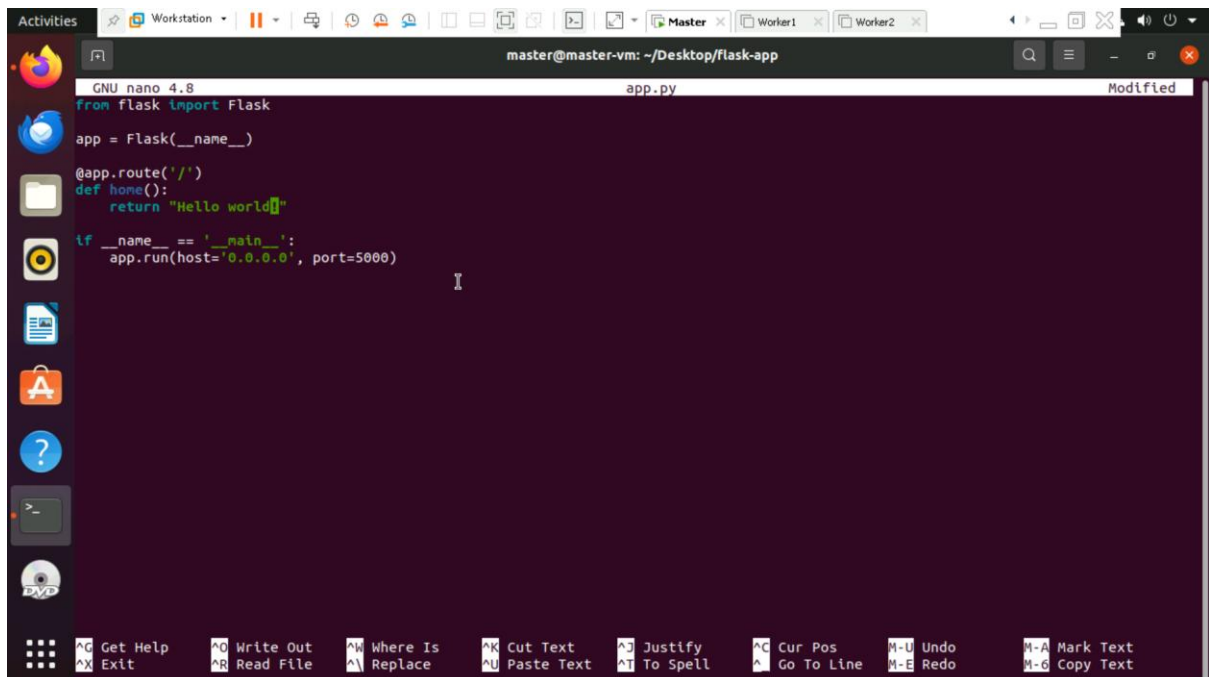
A terminal window titled 'master@master-vm: ~/Desktop/flask-app' showing the following commands and output:

```
master@master-vm:~/Desktop$ docker --version
Docker version 26.1.3, build 26.1.3-0ubuntu1-20.04.1
master@master-vm:~/Desktop$ mkdir flask-app
master@master-vm:~/Desktop$ cd flask-app
master@master-vm:~/Desktop/flask-app$ touch app.py requirements.txt Dockerfile
master@master-vm:~/Desktop/flask-app$ nano app.py
master@master-vm:~/Desktop/flask-app$ nano requirements.txt
master@master-vm:~/Desktop/flask-app$ nano Dockerfile
master@master-vm:~/Desktop/flask-app$ docker build -t flask-docker-app .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 4.096kB
Step 1/6 : FROM python:3.9
3.9: Pulling from library/python
7cd785773db4: Pull complete
091eb8249475: Pull complete
255774e0027b: Pull complete
353e14e5cc47: Pull complete
f6d72b00ae7c: Pull complete
6e02a90e58ae: Pull complete
f299e0671245: Pull complete
Digest: sha256:bc2e05bca883473050fc3b7c134c28ab822be73126ba1ce29517d9e8b7f3703b
Status: Downloaded newer image for python:3.9
--> 859d4a0f1fd8
Step 2/6 : WORKDIR /app
--> Running in b17c91e5bb1e
--> Removed intermediate container b17c91e5bb1e
--> 1ef873a31c45
Step 3/6 : COPY . /app
--> See0d6838c0c
Step 4/6 : RUN pip install --no-cache-dir -r requirements.txt
--> Running in 152d204c2731
WARNING: Retrying (Retry(total=4, connect=None, read=None, redirect=None, status=None)) after connection broken by 'NewConnectionErr
```

Create a Flask Application

Create app.py (Main Flask App File)



A terminal window titled 'master@master-vm: ~/Desktop/flask-app' showing the content of the file 'app.py' in nano editor:

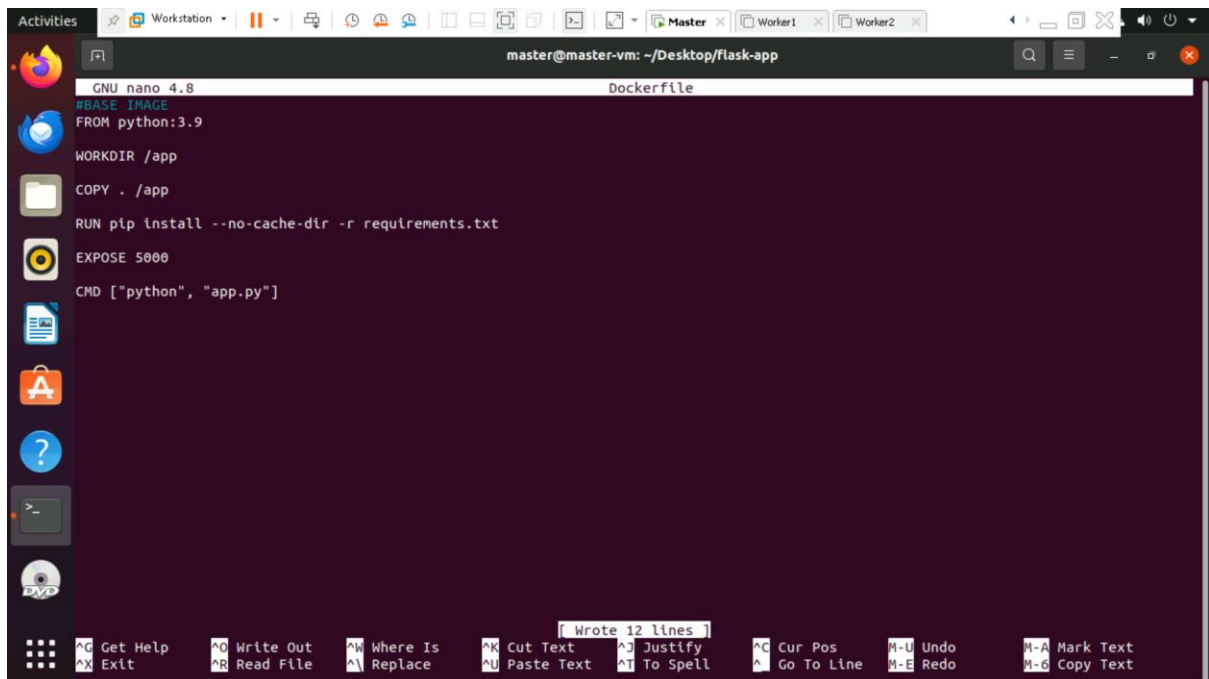
```
GNU nano 4.8 app.py
from flask import Flask

app = Flask(__name__)

@app.route('/')
def home():
    return "Hello world!"

if __name__ == '__main__':
    app.run(host='0.0.0.0', port=5000)
```

Create a Docker file



The screenshot shows a terminal window titled "master@master-vm: ~/Desktop/flask-app" with a nano editor open to create a Dockerfile. The Dockerfile content is as follows:

```
GNU nano 4.8 Dockerfile
#BASE IMAGE
FROM python:3.9

WORKDIR /app

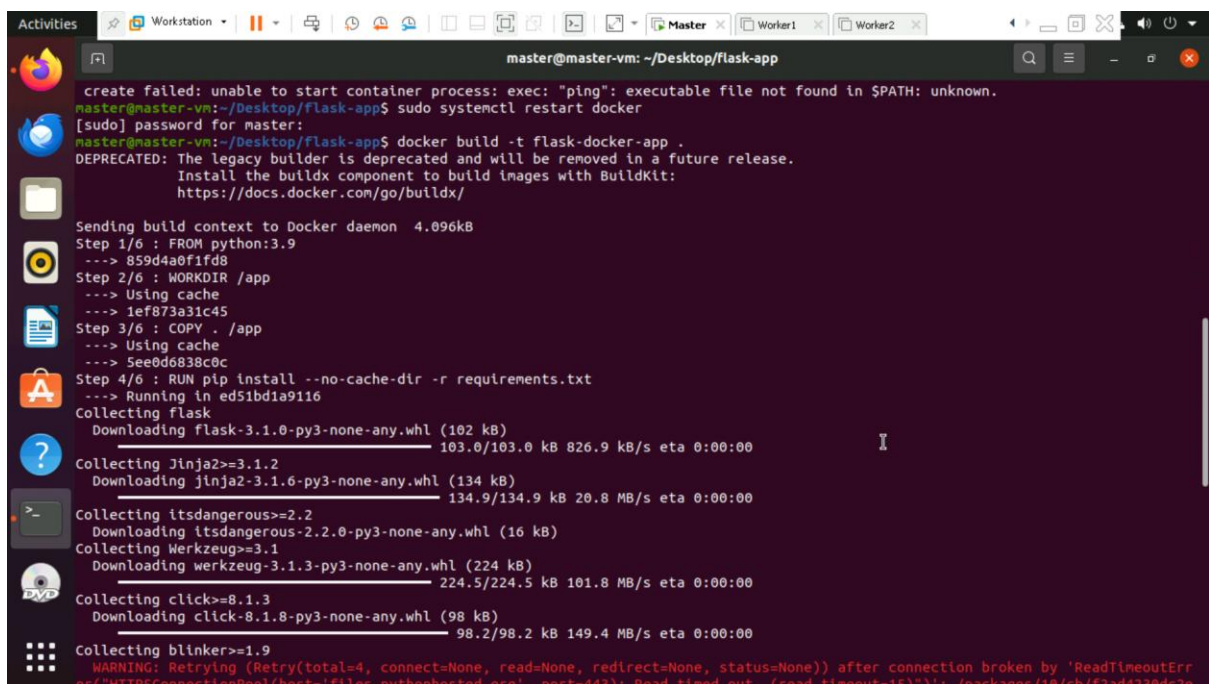
COPY . /app

RUN pip install --no-cache-dir -r requirements.txt

EXPOSE 5000

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

The bottom status bar of the nano editor indicates "Wrote 12 lines".



The screenshot shows the terminal output after running `docker build -t flask-docker-app .` in the `~/Desktop/flask-app` directory. The output includes the following information:

```
create failed: unable to start container process: exec: "ping": executable file not found in $PATH: unknown.
master@master-vm:~/Desktop/flask-app$ sudo systemctl restart docker
[sudo] password for master:
master@master-vm:~/Desktop/flask-app$ docker build -t flask-docker-app .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
             Install the buildx component to build images with BuildKit:
             https://docs.docker.com/go/buildx/

Sending build context to Docker daemon  4.096kB
Step 1/6 : FROM python:3.9
--> 859d4a0f1fd8
Step 2/6 : WORKDIR /app
--> Using cache
--> 1ef873a31c45
Step 3/6 : COPY . /app
--> Using cache
--> 5ee0d6838c0c
Step 4/6 : RUN pip install --no-cache-dir -r requirements.txt
--> Running in ed51bd1a9116
Collecting flask
  Downloading flask-3.1.0-py3-none-any.whl (102 kB)
    103.0/103.0 kB 826.9 kB/s eta 0:00:00
Collecting Jinja2>=3.1.2
  Downloading Jinja2-3.1.6-py3-none-any.whl (134 kB)
    134.9/134.9 kB 20.8 MB/s eta 0:00:00
Collecting itsdangerous>=2.2
  Downloading itsdangerous-2.2.0-py3-none-any.whl (16 kB)
Collecting Werkzeug>=3.1
  Downloading werkzeug-3.1.3-py3-none-any.whl (224 kB)
    224.5/224.5 kB 101.8 MB/s eta 0:00:00
Collecting click>=8.1.3
  Downloading click-8.1.8-py3-none-any.whl (98 kB)
    98.2/98.2 kB 149.4 MB/s eta 0:00:00
Collecting blinker>=1.9
  WARNING: Retrying (Retry(total=4, connect=None, read=None, redirect=None, status=None)) after connection broken by 'ReadTimeoutError: HTTPConnectionPool(host='files.pythonhosted.org', port=443): Read timed out. (read timeout=15)'
  /packages/16/ch/f2ad4238dc2e
```

```
--> Removed intermediate container ed51bd1a9116
--> 73082f32bc9e
Step 5/6 : EXPOSE 5000
--> Running in e7b652481ee5
--> Removed intermediate container e7b652481ee5
--> 5bb137a008a2
Step 6/6 : CMD ["python", "app.py"]
--> Running in 01c6794dd896
--> Removed intermediate container 01c6794dd896
--> e9e305b4725c
Successfully built e9e305b4725c
Successfully tagged flask-docker-app:latest
master@master-vm:~/Desktop/flask-app$ docker run -p 5000:5000 flask-docker-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 - - [27/Mar/2025 11:32:11] "GET / HTTP/1.1" 200 -
172.17.0.1 - - [27/Mar/2025 11:32:12] "GET /favicon.ico HTTP/1.1" 404 -
172.17.0.1 - - [27/Mar/2025 11:34:41] "GET / HTTP/1.1" 200 -
```

