

## Assignment -4

### Assignment Kubernetes / Docker

Assignment Date	2 November 2022
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Student Roll Number	962319104034
Maximum Marks	2 Marks

#### Question-1:

- 1.Pull an Image from docker hub and run it in docker playground.
- 2.Create a docker file for the jobportal application and deploy it in Docker desktop application
- 3.Create a IBM container registry and deploy helloworld app or jobportalapp.
- 4.Create a Kubernetes cluster in IBM cloud and deploy helloworld image or jobportal image and also expose the same app to run in nodeport.

#### Solution:

### Base.html:

```
<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta http-equiv="X-UA-Compatible" content="IE=edge">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>{% block title %}{% endblock %}</title>

  <link rel="stylesheet" href="{{ url_for('static', filename='css/style.css') }}" />

  <link rel="preconnect" href="https://fonts.googleapis.com">

<link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>

<link href="https://fonts.googleapis.com/css2?family=Michroma&display=swap" rel="stylesheet">

</head>

<body>

  {% block main %}

  {% endblock %}

</body>

</html>
```

## Index.html:

```
{% extends 'base.html' %}
```

```
{% block title %}
```

```
    Welcome
```

```
{% endblock %}
```

```
{% block main %}
```

```
    <div>
```

```
        <h2>Hello World!</h2>
```

```
        <p>The Hello World Program is Printed Successfully</p>
```

```
    </div>
```

```
{% endblock %}
```

## \_\_init\_\_.py:

```
from flask import Flask
```

```
def create_app():
```

```
    app = Flask(__name__)
```

```
    # registering the blue print with the app    from .views
```

```
    import blue_print
```

```
    app.register_blueprint(blueprint=blue_print, appendix='/')
```

```
    return app
```

## Views.py:

```
from flask import Blueprint, render_template
```

```
blue_print = Blueprint("print", __name__)
```

```
@blue_print.route('/') def
```

```
home():
```

```
    return render_template('index.html')
```

## App.py:

```
from venv import create from
```

```
hello import create_app
```

```
if __name__ == "__main__":    app =
```

```
create_app()
```

```
app.run(host="0.0.0.0", port=5000)
```

## Dockerfile:

```
FROM python:3.7
```

```
WORKDIR /app
```

```
ADD . /app
```

```
COPY requirements.txt /app
```

```
RUN python -m pip install -r requirements.txt
```

```
EXPOSE 5000
```

```
ENTRYPOINT [ "python" ]
```

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

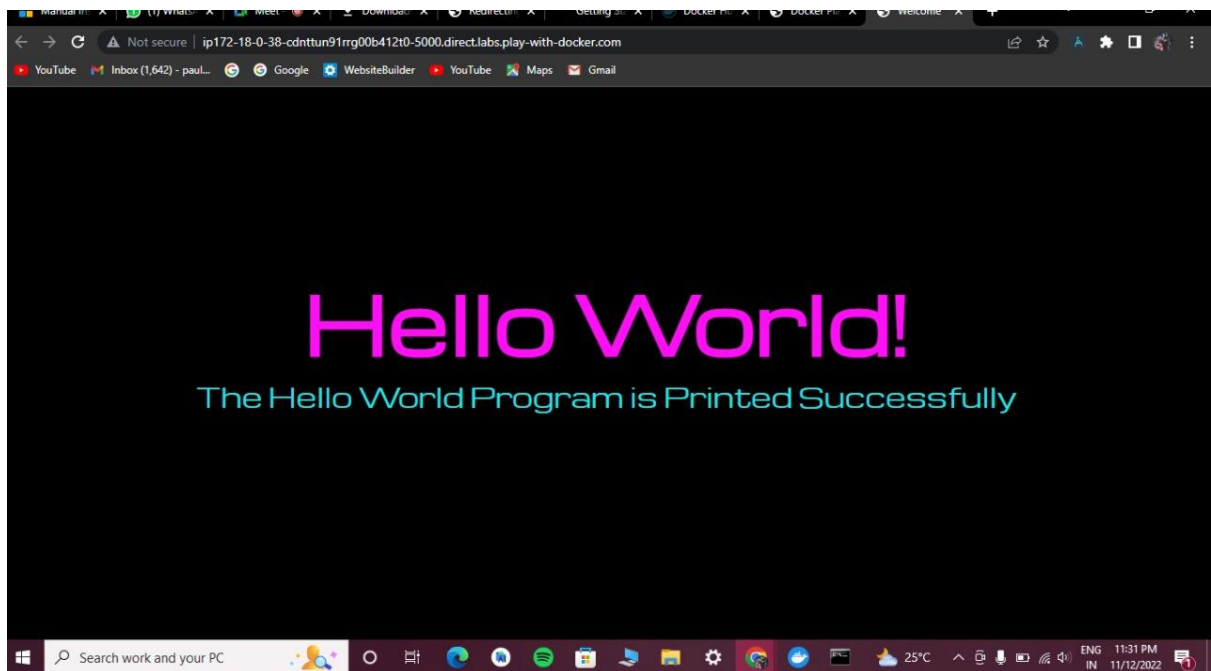
## Requirements.txt:

```
flask
```

```
Command Prompt - docker run -p 5000:5000 hello
sha256:17c9eb141f0d3387e9d1c87d4f9b4a9ac148e9e029fa3ea547bd45ea77770 55.85MB / 55.85MB
sha256:de4a4c6caea8801bb0b7377e1022ba914da403bc93fa79663cbf2dcf1800b6f1 5.16MB / 5.16MB
sha256:4edced8587e6c18412817019074f5e04a8ede4e2fc89d06af13df3f80d78a70d 10.88MB / 10.88MB
sha256:a7969cfff46e6a91291fd76b19ecbe93c03ea4ded8d14042aebc4c0c4211a43 54.59MB / 54.59MB
sha256:74fbf06eaf91271fb88fba1716224dce5c0e0ead3609943792a9cb6ba4d5d3d 196.87MB / 196.87MB
extracting sha256:17c9eb141f0d3387e9d1c87d4f9b4a9ac148e9e029fa3ea547bd45ea77770 20.7%
sha256:16fe51aed099f360176a1b590b1a81202ebec3622e02c13df14c78025eb37 5.29MB / 5.29MB
sha256:a418194ab798a49183d44546168794c9f6b567784a90c25fd7d0002a1ed5ab 15.49MB / 15.49MB
sha256:e1b0101d5fa4fec5e61844a0e5d90fb5ab37e0ec33862f43abd43d760493d073 233B / 233B
sha256:c0b070a4672cd4adddeaf7a317016fb903a2a10b26c6de19c65e4fff80e57d2 2.80MB / 2.80MB
extracting sha256:de4a4c6caea8801bb0b7377e1022ba914da403bc93fa79663cbf2dcf1800b6f1 2.1%
sha256:4edced8587e6c18412817019074f5e04a8ede4e2fc89d06af13df3f80d78a70d 2.2%
extracting sha256:a7969cfff46e6a91291fd76b19ecbe93c03ea4ded8d14042aebc4c0c4211a43 8.8%
sha256:74fbf06eaf91271fb88fba1716224dce5c0e0ead3609943792a9cb6ba4d5d3d 22.4%
sha256:16fe51aed099f360176a1b590b1a81202ebec3622e02c13df14c78025eb37 0.9%
sha256:a418194ab798a49183d44546168794c9f6b567784a90c25fd7d0002a1ed5ab 1.6%
sha256:e1b0101d5fa4fec5e61844a0e5d90fb5ab37e0ec33862f43abd43d760493d073 0.8%
extracting sha256:c0b070a4672cd4adddeaf7a317016fb903a2a10b26c6de19c65e4fff80e57d2 1.1%
[2/5] WORKDIR /app
[3/5] ADD . /app
[4/5] COPY requirements.txt /app
[5/5] RUN python -m pip install -r requirements.txt
exporting to image
exporting layers
writing image sha256:2966458110f195bf63ff60567d338d63eab52475b0fd2a1cc150d7405cf50c75 0.8%
naming to docker.io/library/hello 0.0%

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them

C:\Users\USER\Desktop\Hello World>docker run -p 5000:5000 hello
* Serving Flask app 'hello'
* 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://172.17.0.3:5000
Press CTRL+C to quit
```



Manual insta x (1) WhatsApp x Downloads x Redirecting... x Getting Start... x Docker Hub x Docker Playg x Welcome x + -

labs.play-with-docker.com/p/cdntun91rrg00b412t0#cdntun9\_cdntu0m0qau000ccnd60

YouTube Inbox (1,642) - paul... Google WebsiteBuilder YouTube Maps Gmail

03:51:46

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.28 node1

cdntun9\_cdntu0m0qau000ccnd60

IP 192.168.0.28 OPEN PORT 5000

Memory 27.51% (1.074GiB / 3.906GiB) CPU 0.56%

SSH ssh ip172-18-0-38-cdntun91rrg00b412t0@direct.labs.playw

DELETE EDITOR

```
$ docker pull binoypaul/binoy
Using default tag: latest
latest: Pulling from binoypaul/binoy
17c9e6141fdb: Pull complete
de4a4c6cae8: Pull complete
4edced8587e6: Pull complete
a7969c9ffbf46: Pull complete
748fde6a191: Pull complete
16fe51aed899: Pull complete
a418194ab798: Pull complete
e1b9101d5fa4: Pull complete
c0b070a4672c: Pull complete
99ebd73c4c29: Pull complete
903c1a4e3af1: Pull complete
afad8dd9531: Pull complete
d4a754d99c3b: Pull complete
Digest: sha256:42e4f7972b1f69155337e338163ce93534d5f48a84262eb8470fc09ba17446c2
Status: Downloaded newer image for binoypaul/binoy:latest
docker.io/binoypaul/binoy:latest
[node1] (local) root@192.168.0.28 ~
```

Search work and your PC

Command Prompt

Login Succeeded

Logging in with your password grants your terminal complete access to your account.  
For better security, log in with a limited-privilege personal access token. Learn more at <https://docs.docker.com/go/access-tokens/>

C:\Users\USER>docker tag hello binoypaul

C:\Users\USER>/

/' is not recognized as an internal or external command,  
operable program or batch file.

C:\Users\USER>docker tag hello binoypaul/binoy

C:\Users\USER>docker push binoypaul/binoy

Using default tag: latest  
The push refers to repository [docker.io/binoypaul/binoy]  
5a63ad59f58d: Pushed  
9c115d8f26a6: Pushed  
05542b8884cb: Pushed  
af0e1e962ec1: Pushed  
0ec8f78a199d: Pushed  
d612c04719be: Mounted from library/python  
12a48b761eaf: Mounted from library/python  
60183c62e3d7: Pushed  
882fd36bfd35: Mounted from library/python  
d1dec9917839: Mounted from library/python  
d38adf39e1dd: Pushed  
4ed121b04368: Mounted from library/python  
d9d07d703dd5: Mounted from library/python  
latest: digest: sha256:42e4f7972b1f69155337e338163ce93534d5f48a84262eb8470fc09ba17446c2 size: 3054

C:\Users\USER>

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