ASSIGNMENT – 4

Docker and Kubernetes

Assignment Date	10 October 2022
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Maximum Marks	2 Marks

Docker File :
```
FROM python:3.10.6
COPY requirements.txt ./app/requirements.txt
WORKDIR /app
RUN pip install -r requirements.txt
COPY . .
EXPOSE 5000
CMD ["python","./app.py"]
```

Requirements :
Flask

app.py :
```
from flask import Flask, render_template

app = Flask(__name__)
app.config['SECRET_KEY'] =
'df3asd24sfasd4asd26@45tas0331cefc6c2b9a5d0208a726a5d1c0fd37324feba25506'

@app.route("/")
def home():
    return render_template("home.html")

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

TEMPLATES :
Index.html :
```
<!doctype html>
<html lang="en">

<head>
    <title>Candidate Dashboard</title>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1">
    <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=0">

    <link rel="stylesheet" href="assets/vendor/bootstrap/css/bootstrap.min.css">
    <link rel="stylesheet" href="assets/vendor/font-awesome/css/font-awesome.min.css">
    <link rel="stylesheet" href="assets/vendor/linearicons/style.css">
    <link rel="stylesheet" href="assets/vendor/chartist/css/chartist-custom.css">
```

```html
    <link rel="stylesheet" href="dashboard.css">
    <link rel="stylesheet" href="assets/css/main.css">

    <link rel="stylesheet" href="assets/css/demo.css">

    <link href="https://fonts.googleapis.com/css?family=Source+Sans+Pro:300,400,600,700"
rel="stylesheet">

    <link rel="apple-touch-icon" sizes="76x76" href="assets/img/apple-icon.png">
    <link rel="icon" type="image/png" sizes="96x96" href="assets/img/favicon.png">
</head>

<body>
    <div id="wrapper">
            <div id="sidebar-nav" class="sidebar">
                    <div class="sidebar-scroll">
                            <nav>
                                    <ul class="nav">
                                            <li><a href="index.html" class="active"><i class="lnr lnr-
home"></i> <span>Dashboard</span></a></li>
                                            <li><a href="page-profile.html" class=""><i class="lnr lnr-
user"></i> <span>Profile</span></a></li>
                                            <li><a href="panels.html" class=""><i class="lnr lnr-
cog"></i> <span>Applied Jobs</span></a></li>
                                            <li><a href="panels.html" class=""><i class="lnr lnr-
cog"></i> <span>Available Jobs</span></a></li>
                                            <li><a href="notifications.html" class=""><i class="lnr lnr-
alarm"></i> <span>Notifications</span></a></li>
                                    </ul>
                            </nav>
                    </div>
            </div>

            <div class="main">

            </div>
            <!-- END MAIN -->
            <div class="clearfix"></div>
            <footer>
                    <div class="container-fluid">
                            <p class="copyright">&copy; 2018 <a href="https://www.themeineed.com"
target="_blank">Theme I Need</a>. All Rights Reserved.</p>
                    </div>
            </footer>
    </div>
    <!-- END WRAPPER -->
    <!-- Javascript -->
    <script src="assets/vendor/jquery/jquery.min.js"></script>
    <script src="assets/vendor/bootstrap/js/bootstrap.min.js"></script>
    <script src="assets/vendor/jquery-slimscroll/jquery.slimscroll.min.js"></script>
    <script src="assets/vendor/jquery.easy-pie-chart/jquery.easypiechart.min.js"></script>
```

```html
    <script src="assets/vendor/chartist/js/chartist.min.js"></script>
    <script src="assets/scripts/klorofil-common.js"></script>

</body>

</html>
```

PageLogin.html :
```html
<!doctype html>
<html lang="en" class="fullscreen-bg">

<head>
    <title>Candidate Login</title>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1">
    <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=0">
    <!-- VENDOR CSS -->
    <link rel="stylesheet" href="login.css">
    <link rel="stylesheet" href="assets/css/bootstrap.min.css">
    <link rel="stylesheet" href="assets/vendor/font-awesome/css/font-awesome.min.css">
    <link rel="stylesheet" href="assets/vendor/linearicons/style.css">
    <!-- MAIN CSS -->

    <link rel="stylesheet" href="assets/css/main.css">
    <!-- FOR DEMO PURPOSES ONLY. You should remove this in your project -->
    <link rel="stylesheet" href="assets/css/demo.css">
    <!-- GOOGLE FONTS -->
    <link href="https://fonts.googleapis.com/css?family=Source+Sans+Pro:300,400,600,700" rel="stylesheet">
    <!-- ICONS -->
    <link rel="apple-touch-icon" sizes="76x76" href="assets/img/apple-icon.png">
    <link rel="icon" type="image/png" sizes="96x96" href="assets/img/favicon.png">
</head>

<body>
    <!-- WRAPPER -->
    <div id="wrapper">
            <div class="vertical-align-wrap">
                    <div class="vertical-align-middle">
                            <div class="auth-box ">
                                    <div class="left">
                                            <div class="content">
                                                    <div class="header">

                                                            <p class="lead">Login to your account</p>
                                                    </div>
                                                    <form class="form-auth-small" action="index.php">
                                                            <div class="form-group">
                                                                    <label for="signin-email"
class="control-label sr-only">Email</label>
```

```html
                                                            <input type="email" class="form-
control" id="signin-email" placeholder="Enter Email....">
                                                </div>
                                                <div class="form-group">
                                                        <label for="signin-password"
class="control-label sr-only">Password</label>
                                                        <input type="password"
class="form-control" id="signin-password"  placeholder="Enter Password....">
                                                </div>
                                                <div class="form-group clearfix">
                                                        <label class="fancy-checkbox
element-left">
                                                                <input type="checkbox">
                                                                <span>Remember
me</span>
                                                        </label>
                                                </div>
                                                <button type="submit" class="btn btn-
primary btn-lg btn-block">LOGIN</button>

                                                <div class="bottom">
                                                        <span><a href="#">Not A member?
SignUp Now!</a></span><br>

                                                        <span class="helper-text"><i
class="fa fa-lock"></i> <a href="#">Forgot password?</a></span>
                                                </div>
                                        </form>
                                </div>
                        </div>
                        <div class="right">
                                <div class="overlay"></div>
                                <div class="content text">
                                        <h1 class="heading">Signup for free to experience
your dream job! </h1>

                                        <p>by Job Portal</p>
                                </div>
                        </div>
                        <div class="clearfix"></div>
                </div>
        </div>
    </div>
    <!-- END WRAPPER -->
</body>

</html>
```

KUBERNETES :

FlaskDeployment.yaml :
```yaml
apiVersion: apps/v1
kind: Deployment
```

```yaml
metadata:
  name: flask-app

spec:
  replicas: 3
  selector:
    matchLabels:
      app: flask-app
  template:
    metadata:
      labels:
        app: flask-app

    spec:
      containers:
        - name: job-portal-1
          image: jp.icr.io/ponni_ntp/job
          imagePullPolicy: Always
          ports:
            - containerPort: 5000
              protocol: TCP
```

Service.yaml :
```yaml
apiVersion: v1
kind: Service
metadata:
  name: flask-app-service
spec:
  type: ClusterIP
  ports:
    - port: 5000
  selector:
    app: flask-app
```