Lab 8 - Creating a Docker Container on Jenkins Server Locally using Pipeline script

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In this document:

Pre-requisites

1. Adding Github Credentials: Lab 2 - Integrate Jenkins with Github
2. Adding Dockerhub Cerdentials: Lab 3 - Integrate Jenkins with Dockerhub

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Create a New Github Repository

In my case: https://github.com/CloudWithRaghu/jenkins-docker-react-app.git

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Create a Dockerfile in the Github Repo

```
FROM ubuntu
RUN apt update
RUN apt install -y apache2
RUN apt install -y apache2-utils
RUN apt clean
RUN rm -rf /var/www/html/index.html
COPY . /var/www/html
EXPOSE 80
CMD ["apache2ctl", "-D", "FOREGROUND"]
```

Create an App.js file in Github Repo

```
// Heading has the content and the tag
// Root has the content in the DOM
// Heading is rendered in the root


const heading = React.createElement("h1", {

    id : "heading",
```

```
},"Azure DevOps")



const gparent = React.createElement("div", {id: "gparent"},
 React.createElement("div", {id: "parent"},
[React.createElement("h1", {id: "child"}, "Azure Devops")]))


const root = ReactDOM.createRoot(document.getElementById("root"));

root.render(gparent);
```

Create an index.html in Github Repo

```
<!DOCTYPE html>
<html lang="en">
<head>
<style>
body{
color:red;
}
</style>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
    <link rel="stylesheet" href="./index.css" />
</head>
<body>
    <div id = "root"></div>

    <script crossorigin src="https://unpkg.com/react@18/umd/react.development.js"></script>
<script crossorigin src="https://unpkg.com/react-dom@18/umd/react-dom.development.js"></script>

<script src="./App.js" >


</script>
</body>
</html>
```

Create a Jenkins Pipeline and paste this code

Befor creating Pipeline, execute this command to give jenkins permission to access Docker:

```
sudo usermod -aG docker jenkins
sudo chmod 777 /var/run/docker.sock
```

```
node {
    stage('Clone Github repository') {
        git credentialsId: 'github-creds', url: 'https://github.com/CloudWithRaghu/jenkins-docker-react-app.git'
    }

    stage('Build image') {
       dockerImage = docker.build("cloudwithraghu/react-app:latest")
    }

```

```
    stage('Push image') {
       withDockerRegistry([ credentialsId: "dockerhub-creds", url: "" ]) {
       dockerImage.push()
        }
    }

    stage('Stop and Kill existing container with same name if any') {
        sh "docker rm -f react-app"
    }

    stage('Run the container Locally on the Jenkins server') {
        sh "docker run -itd --name react-app -p 80:80 cloudwithraghu/react-app:latest"

    }
  }
```

Access the Container from the Jenkins Server IP:

http://JenkinsIP