**Create the Angular project in Visual Studio:**

* Here, I have chosen the Online Test Angular project.
* Create a folder E:\SimpliLearn\_Labs\Docker\_AWS\_Angular\_NodeJS\_Deployment\_Project
  + Install the *npm init*
  + Install the angular.
  + Create a folder using *npm new angular\_online\_test\_proj*
  + Run: *npm i*
  + Add the components:
    - *header, questions, services, welcome.* (Design the application that creates the online test)
    - Add the *app-routing.module.ts*
    - Modify the *app.component.html*
  + In the assets folder:
    - Add the required images folder.
    - Add the *questions.json* file.
  + Modify the *index.html.*
  + Save all the files.
  + Check whether the application is running or not. Use the command: *ng serve.*
  + Check in the local host whether the application is running as per the requirement.
* Run the Docker Desktop.
* Create the *Dockerfile* under the project where the angular project is created. Write the commands as follows:

1. FROM node as node
2. ENV NODE\_OPTIONS="--openssl-legacy-provider"
3. WORKDIR /app
4. COPY . .
5. RUN npm install
6. RUN npm run build --prod
7. FROM nginx:alpine
8. COPY --from=node /app/dist/angular\_onlinetest\_proj /usr/share/nginx/html

* Save the file.
* At the terminal.
  + Login into docker*: docker login*
  + Next build image: *docker build -t soujanyamadanu1310/docker-angular-test:latest .*
  + Push the docker image: *docker push soujanyamadanu1310/docker-angular-test:latest*
  + Run the Docker: *docker run -d -p 80:80 soujanyamadanu1210/docker-angular-test:latest*

**Creation of EC2 instance:**

* In AWS:
* Go to EC2
* Press launch instance
  + Give the name as: *my-ec2-instance*
  + Select: *AWS linux 2 AMI*
  + Add the key pair:
    - Set the name as *my-new-keys*
  + Click on *launch instances*
* Now once the instance is selected, select the instances and click on connect.
* Under SSH client tab, copy the ssh link
  + *ssh -i "my-new-keys.pem" ec2-user@ec2-52-91-166-198.compute-1.amazonaws.com*

**Open Gitbash to Deploy the Docker for angular project.**

* Save the key in the project folder.
* Install git by using the command: *sudo yum install git -y*
* Next install the docker by using the command: *sudo amazon-linux-extras docker*
* To check whether docker is successfully installed: *sudo docker --version*
* To add the services of docker use the command: *sudo service docker start*
* To start the services*: start docker.service*
* Check for the images in the docker: *sudo docker images*
* To pull the docker image which is already created, use the command as:
  + *sudo docker pull soujanyamadanu1310/docker-angular-test*
* To check whether the image is successfully installed, use the command as:
  + *sudo docker images*
* To run the docker:
  + *sudo docker run -d -p 8082:80 soujanyamadanu1310/docker-angular-test*

**At AWS practice lab:**

* Click on the created instances
* Select the security tab.
  + Click on security groups
  + Select the inbound rules:
    - Add rules
      * set the rule type: Custome TCP
      * range: 8080-9999
      * Source: anywhere-IPv4
      * Save rules
* Now go back to EC2 instances
* Under details tab:
  + Public IPv4 address click on it.
* IN the browser: *http://52.91.166.198:8082/*