OPENSHIFT

OpenShift is a cloud-enabled application Platform as a Service (PaaS). OpenShift supports a very large variety of applications, which can be easily developed and deployed on OpenShift cloud platform.

Why we need to use open shift:

OpenShift provides a common platform for enterprise units to host their applications on cloud without worrying about the underlying operating system. This makes it very easy to use, develop, and deploy applications on cloud.

Features of OpenShift:

- Multiple Language Support
- Multiple Database Support
- Extensible Cartridge System
- Source Code Version Management
- One-Click Deployment
- Multi Environment Support and much more

Steps to build and deploy a spring boot application:

Before going to the steps, first we need to create a docker hub and openshift (Redhat) account by using the given link.
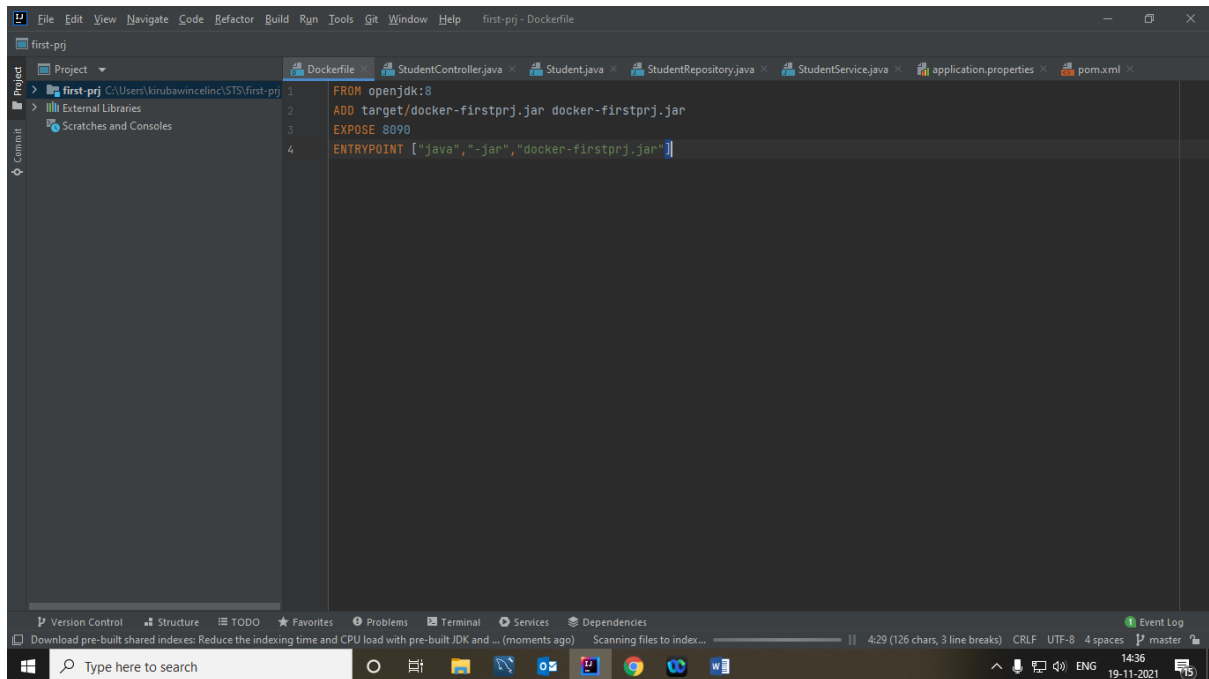
Docker hub : https://hub.docker.com/

Openshift   : https://www.redhat.com/en/technologies/cloud-computing/openshift/try-it

STEP 1:

Create one sample spring boot application in STS or Intellij, After Creating the application build the jar for this application.

STEP 2:

After that create one file called **Dockerfile** in your application, that file will look like below image.

STEP: 3

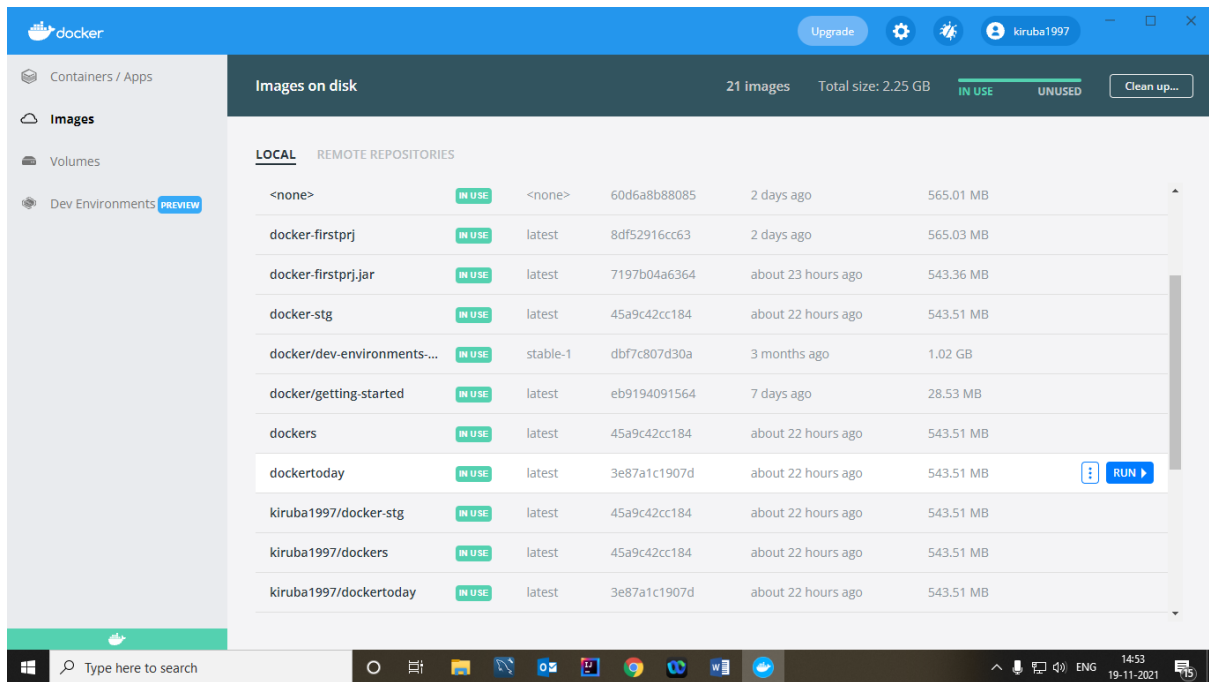After creating the file we need to run the following command in terminal.

docker build –f Dockerfile –t docker-stg

here,

 -f represents the filename,

-t represents the docker image name (Tagname).

Now the image will be created on docker desktop,check below image

STEP: 4

After the command runs successful .Need to start the application in docker by using the following command

docker run -p 8070:8070 docker-stg

here,

the left side port number represents the docker container port

the right side port number represents the our spring application port.

STEP 5:

       Now the docker image has been created, After this we need to push the image to docker hub for that,

    I.   Open your command prompt
   II.   Type **docker login**, now the docker login will be succeeded.
 III.   Then give docker images , the list of **docker images** from your app will be listed .
 IV.   After that need to tag the docker image for that use this command docker tag
                 docker-stg:latest kiruba1997/docker-stg

     here,

     docker-stg will represents the docker image name,

     latest will represents the application version,

     kiruba1997 will represents the docker id.

   V.   Now we need to push the image to docker hub by using this command
                 docker push kiruba1997/docker-stg
 VI.   Now our image will be push to our docker repository
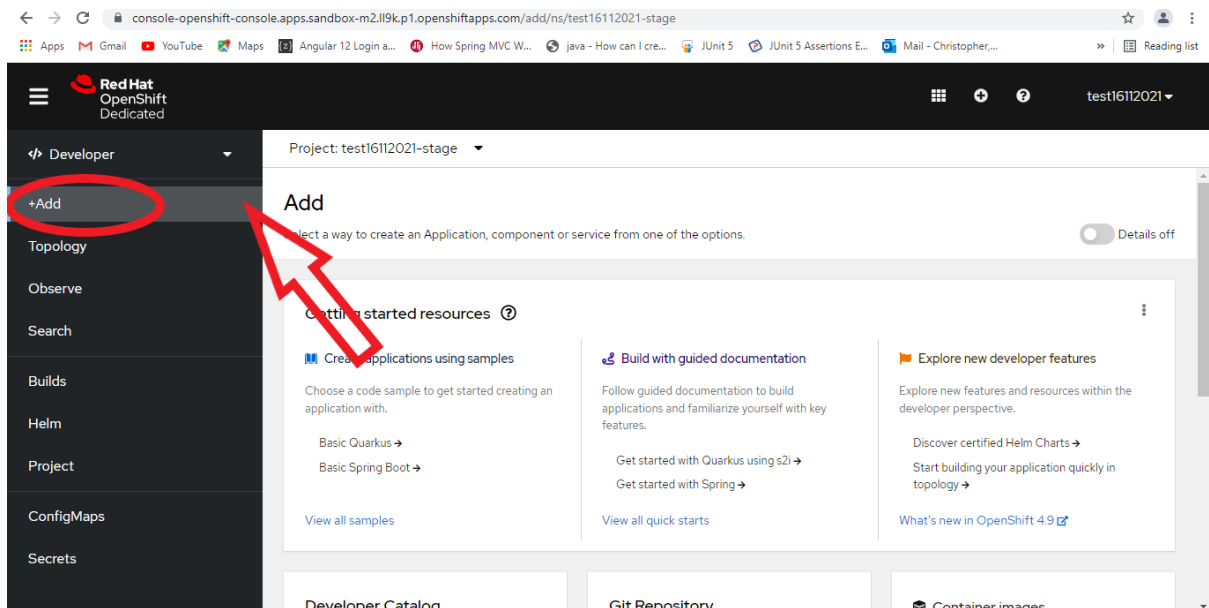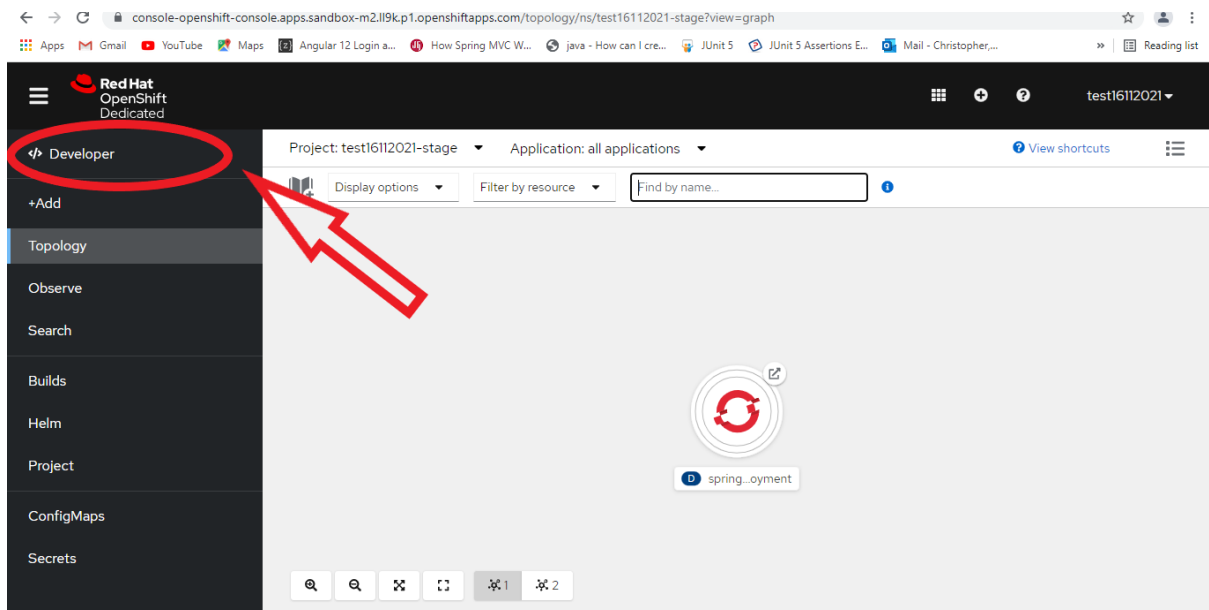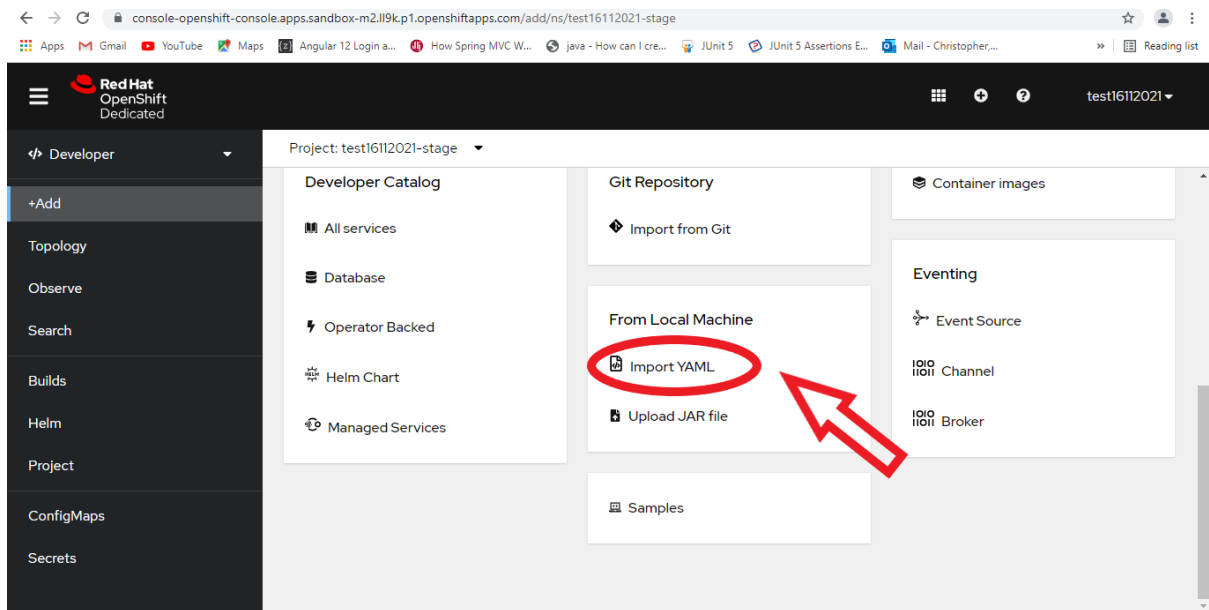
STEP 6.

       Now go to open shift in developer side there will be Add option select that and click import 3 yaml file.

For sample code check this link https://github.com/pmgysel/cloud-stack_openshift-kubernetes-ressources
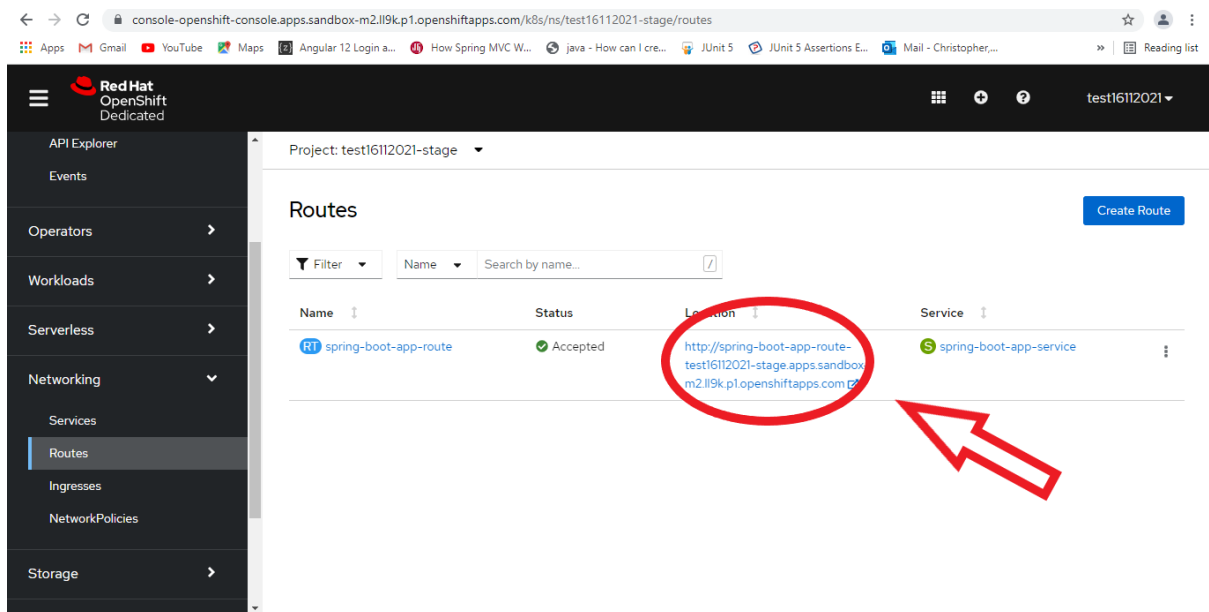
And follow the steps from the above link to understand it deeply.

ScreenShots:

Now give the code from the above link in the yaml file.

Now clicking this url you can check the output