Build a Custom Docker Image.
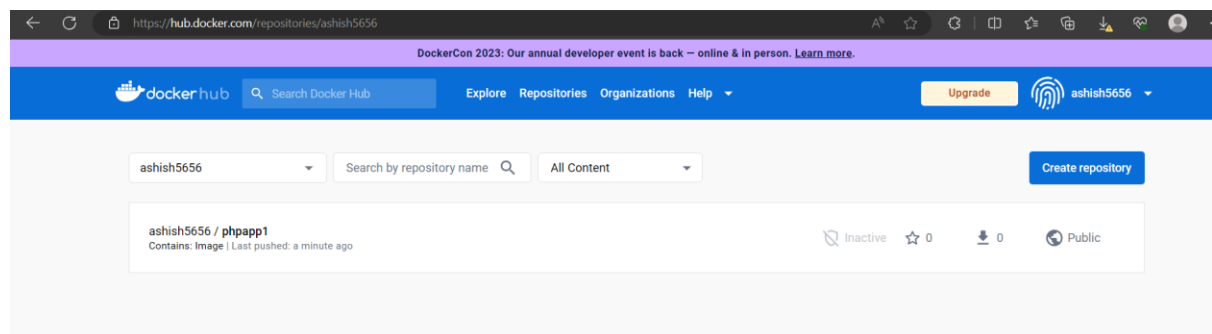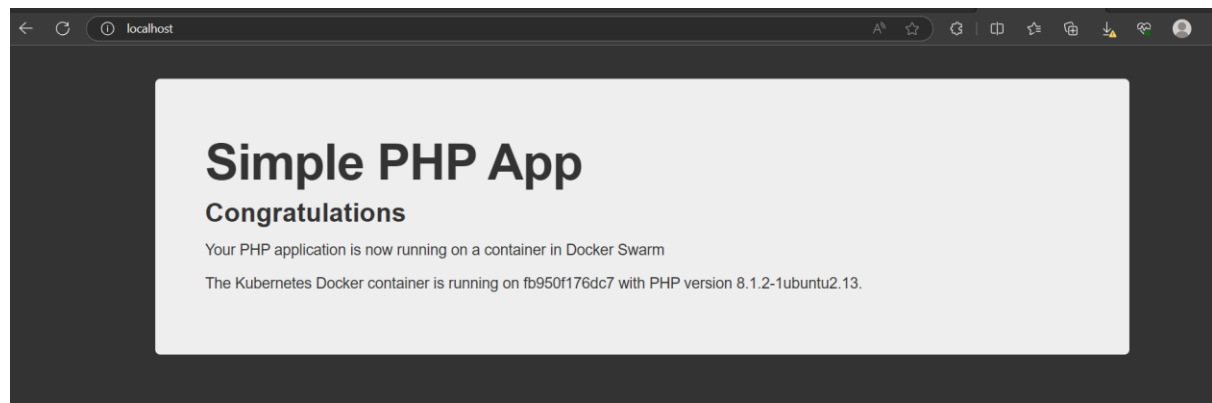
Push an Image to Docker Hub

```
C:\Users\Manish Kumar\project1\Docker>docker tag phpapp1 ashish5656/phpapp1

C:\Users\Manish Kumar\project1\Docker>docker push ashish5656/phpapp1
Using default tag: latest
The push refers to repository [docker.io/ashish5656/phpapp1]
7451e610fa1b: Pushed
db3ee357295c: Pushed
6b6f69f22075: Pushed
9fd4b4764405: Pushed
8d0419a77f6e: Pushing   65.26MB/155.8MB
8d0419a77f6e: Pushed
5f42a5ca776d: Pushed
/42.33MBntu
latest: digest: sha256:1abee45c1a086814d0ab2a306908804582819d354540edef8400868b0e3773d8 size: 1785

C:\Users\Manish Kumar\project1\Docker>
```

C:\WINDOWS\system... | C:\WINDOWS\system... | C:\WINDOWS\system... | C:\WINDOWS\system... | C:\WINDOWS\system... | C:\WINDOWS\system...
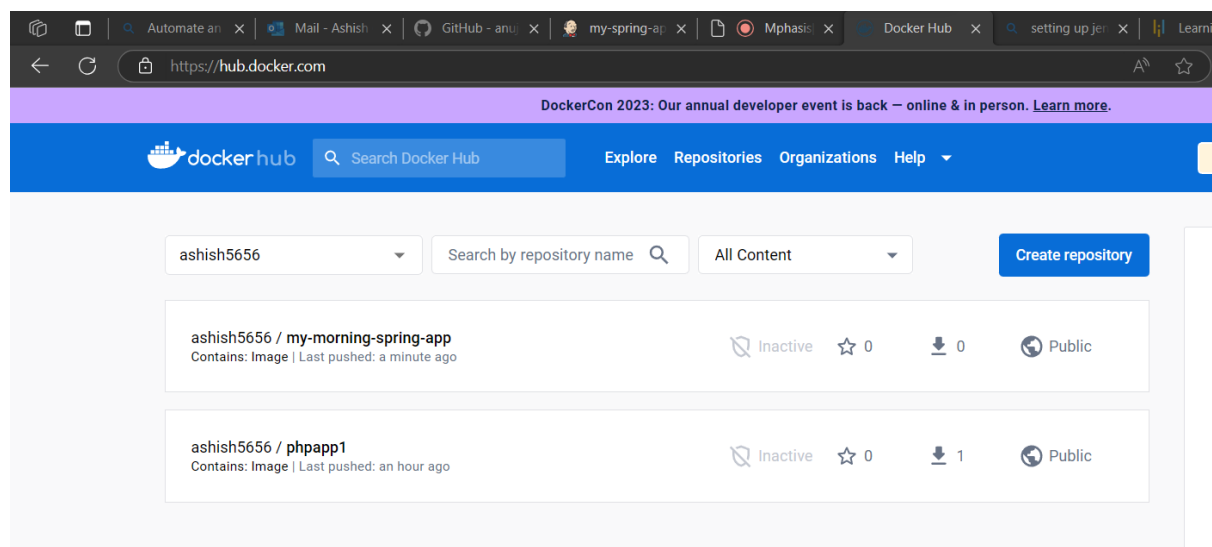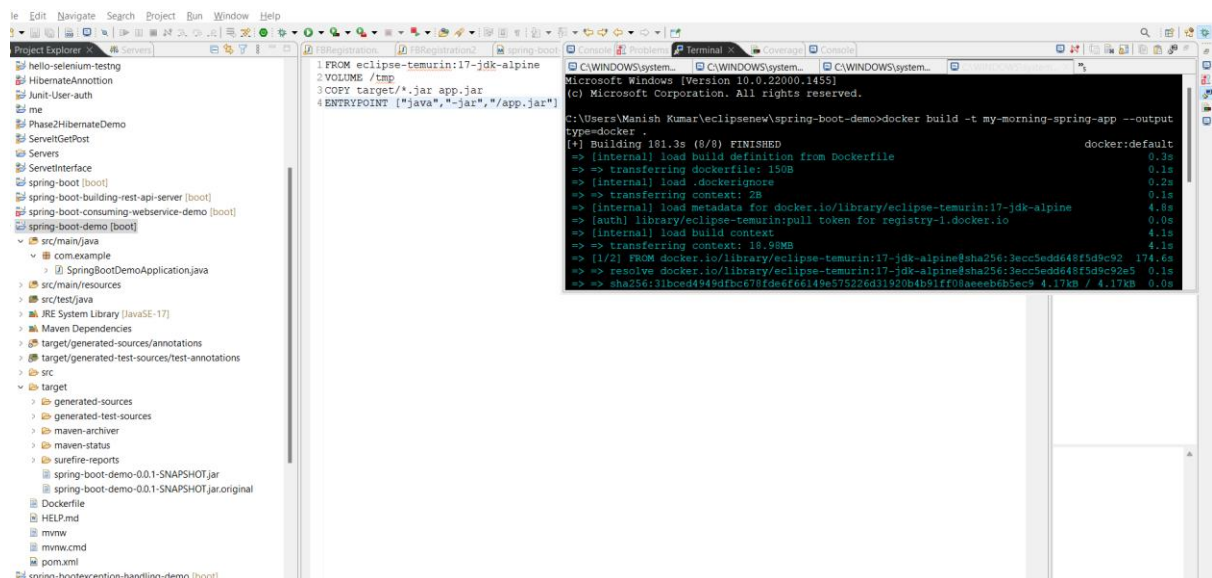
```
C:\Users\Manish Kumar\eclipsenew\spring-boot-demo>docker tag          ashish5656/phpapp1

C:\Users\Manish Kumar\eclipsenew\spring-boot-demo>docker tag my-morning-spring-app ashish5656/my-morning-spring-app

C:\Users\Manish Kumar\eclipsenew\spring-boot-demo>docke      my-morning-spring-app ashish5656/my-morning-spring-app

C:\Users\Manish Kumar\eclipsenew\spring-boot-demo>docker push ashish5656/my-morning-spring-app
Using default tag: latest
The push refers to repository [docker.io/ashish5656/my-morning-spring-app]
901b18376477: Pushed
23d7182b8e52: Mounted from library/eclipse-temurin
644a85248299: Mounted from library/eclipse-temurin
4aab2363d488: Mounted from library/eclipse-temurin
78a822fe2a2d: Mounted from library/eclipse-temurin
latest: digest: sha256:8990751fc311ed8805aa4bad7544637c7b9bb311e682536b7779d048550c2287 size: 1371

C:\Users\Manish Kumar\eclipsenew\spring-boot-demo>
```

Container Deployment Using Docker Swarm.

```
Command Prompt
REPOSITORY                       TAG        IMAGE ID        CREATED        SIZE
ashish5656/my-morning-spring-app latest     8c0b636a9b2e    2 hours ago    319MB
my-morning-spring-app            latest     8c0b636a9b2e    2 hours ago    319MB
ashish5656/phpapp1               latest     dff131b1a9f5    23 hours ago   276MB
phpapp1                          latest     dff131b1a9f5    23 hours ago   276MB
phpcode                          latest     dff131b1a9f5    23 hours ago   276MB

C:\Users\Manish Kumar\project1\Docker>docker service create -p 8080:8080 --name my-spring-webapp my-morning-spring-app
image my-morning-spring-app:latest could not be accessed on a registry to record
its digest. Each node will access my-morning-spring-app:latest independently,
possibly leading to different nodes running different
versions of the image.

j4mh23hxh5wgpf024a4yhtv5o
overall progress: 1 out of 1 tasks
1/1: running
verify: Service converged
stable...
C:\Users\Manish Kumar\project1\Docker>docker service ls
ID              NAME             MODE         REPLICAS    IMAGE                           PORTS
j4mh23hxh5wg    my-spring-webapp replicated   1/1         my-morning-spring-app:latest    *:8080->8080/tcp

C:\Users\Manish Kumar\project1\Docker>
```

Automate × | Mail - Ashi × | my-spring- × | Mpha × | GitHub - a ×

← C ⓘ localhost:8080
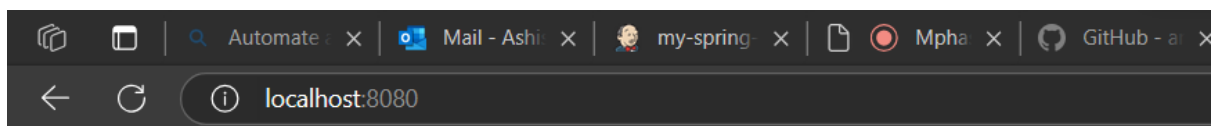
[WEBAPPID java.util.Random@75f65e45] Hello World from Spring

Container Scaling with Docker Swarm.

```
Command Prompt
ID              NAME            MODE        REPLICAS  IMAGE                       PORTS
j4mh23hxh5wg    my-spring-webapp  replicated  1/1       my-morning-spring-app:latest  *:8080->8080/tcp

C:\Users\Manish Kumar\project1\Docker>docker service scale my-spring-webapp
Invalid scale specifier 'my-spring-webapp'.
See 'docker service scale --help'.

Usage:  docker service scale SERVICE=REPLICAS [SERVICE=REPLICAS...]

Scale one or multiple replicated services

C:\Users\Manish Kumar\project1\Docker>docker service scale my-spring-webapp=2
my-spring-webapp scaled to 2
overall progress: 2 out of 2 tasks
1/2: running
2/2: running
verify: Service converged
stable...
C:\Users\Manish Kumar\project1\Docker>docker service ls
ID              NAME            MODE        REPLICAS  IMAGE                       PORTS
j4mh23hxh5wg    my-spring-webapp  replicated  2/2       my-morning-spring-app:latest  *:8080->8080/tcp

C:\Users\Manish Kumar\project1\Docker>
```

```
Scale one or multiple replicated services

C:\Users\Manish Kumar\project1\Docker>docker service scale my-spring-webapp=2
my-spring-webapp scaled to 2
overall progress: 2 out of 2 tasks
1/2: running
2/2: running
verify: Service converged
stable...
C:\Users\Manish Kumar\project1\Docker>docker service ls
ID              NAME            MODE        REPLICAS  IMAGE                       PORTS
j4mh23hxh5wg    my-spring-webapp  replicated  2/2       my-morning-spring-app:latest  *:8080->8080/tcp

C:\Users\Manish Kumar\project1\Docker>docker service scale my-spring-webapp=0
my-spring-webapp scaled to 0
overall progress: 0 out of 0 tasks
verify: Service converged
stable...
C:\Users\Manish Kumar\project1\Docker>docker service rm j4mh23hxh5wg
j4mh23hxh5wg

C:\Users\Manish Kumar\project1\Docker>
```

Setting up a Jenkins Pipeline

pipeline{

    agent any

    tools{

      maven "Maven-3.9.3"

    }

```
    stages {

    stage('Checkout from GitHub') {
        steps {
            git branch: 'main', url: "https://github.com/awtraining1/sl.git"
        }
    }


     stage('Maven Build') {

        steps {
            dir('PHASE5/my/spring-boot-demo') {
                                bat "mvn -Dmaven.test.skip=true clean package"

                                }
        }
    }
    stage('Build Docker Image') {

        steps {
            dir('PHASE5/my/spring-boot-demo') {
                                bat "docker build -t my-morning-spring-app-1 --output type=docker
."
                                }
        }
    }
    stage('Push Docker Image') {

        steps {
                                bat "docker tag my-morning-spring-app-1 ashish5656/my-morning-spring-
app-1"
                                bat "docker push ashish5656/my-morning-spring-app-1"
```
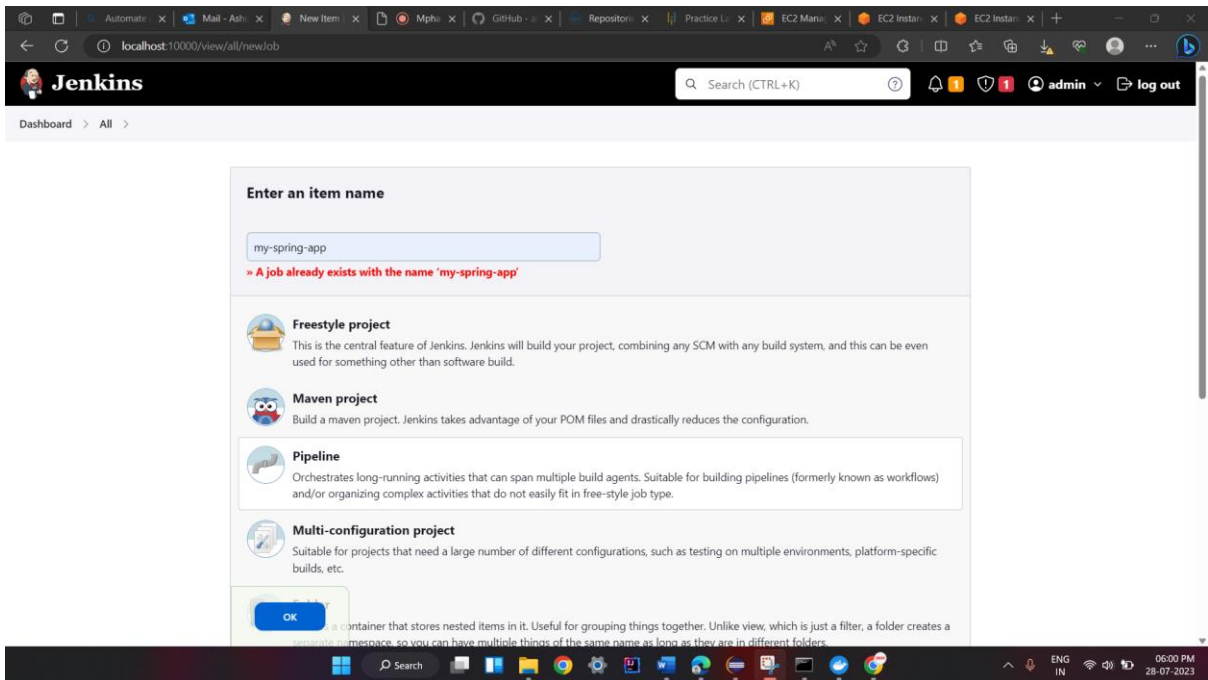
```
            }

        }




        }




}
```

```
#5 transferring context: 8.69MB 7.0s
#5 transferring context: 18.98MB 10.5s done
#5 DONE 10.6s

#4 [1/2] FROM docker.io/library/eclipse-temurin:17-jdk-alpine@sha256:3ecc5edd648f5d9c92e53e8eb6361cfcfaf626220f8308332f239dfb03418c1c
#4 CACHED

#6 [2/2] COPY target/*.jar app.jar
#6 DONE 1.7s

#7 exporting to image
#7 exporting layers
#7 exporting layers 1.7s done
#7 writing image sha256:25ff577f9103f6e105Gddb948d9f02a9980b6649abd4ba249c6ef287df8f2907 0.0s done
#7 naming to docker.io/library/my-morning-spring-app-1 0.0s done
#7 DONE 1.8s
[Pipeline] }
[Pipeline] // dir
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // stage
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // node
[Pipeline] End of Pipeline
Finished: SUCCESS
```


▷ Build Now

⚙ Configure

🗑 Delete Pipeline

🔍 Full Stage View

✎ Rename

? Pipeline Syntax

☁ **Build History**   trend ⌄

🔍 Filter builds...   /

✓ #5   Jul 28, 2023, 4:59 PM

✓ #4   Jul 28, 2023, 4:37 PM

✓ #3   Jul 28, 2023, 4:03 PM

⊗ #2   Jul 28, 2023, 4:01 PM

✓ #1   Jul 28, 2023, 3:58 PM

localhost:10000/job/my-afternoon-spring-app/5/failures

Stage View

	Declarative: Tool Install	Checkout from GitHub	Maven Build	Build Docker Image
Average stage times: (Average full run time: ~1min 35s)	718ms	13s	1min 2s	27s
#5 Jul 28 16:59 No Changes	231ms			
#4 Jul 28 16:37 No Changes	775ms	14s	58s	27s
#3 Jul 28 16:03 No Changes	1s	12s	1min 5s	