Assignment-IV

Name	DHEVA M
Team ID	PNT2022TMID18844
Roll No	MECR20CS502
Project Name	Customer Care Registry

1. Pull an Image from docker hub and run it in docker playground.

2. Create a docker file for the hello world application and deploy it in Docker desktop application.
Building the image from the file: docker build -t helloworld:0.1 .

Docker desktop app:

Run the container:


```
C:\Users\Lenovo\Desktop\HelloWorld>docker run -p 5000:5000 be2758ec1e56
 * Serving Flask app 'app.py'
 * Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on all addresses (0.0.0.0)
 * Running on http://127.0.0.1:5000
 * Running on http://172.17.0.2:5000
Press CTRL+C to quit
172.17.0.1 - - [10/Nov/2022 16:38:10] "GET / HTTP/1.1" 200 -
```

Output:

Hello World! from Flask.

3. Create a IBM container registry and deploy helloworld app.

```
C:\Users\Lenovo>ibmcloud plugin install container-registry
Looking up 'container-registry' from repository 'IBM Cloud'...
Plug-in 'container-registry[cr] 1.0.2' found in repository 'IBM Cloud'
Attempting to download the binary file...
 11.90 MiB / 11.90 MiB [=================================================================================] 100.00% 0s
12476416 bytes downloaded
Installing binary...
OK
Plug-in 'container-registry 1.0.2' was successfully installed into C:\Users\Lenovo\.bluemix\plugins\container-registry. Use 'ibmcloud plugin show container-registry' to sho
w its details.

C:\Users\Lenovo>ibmcloud cr region-set global
The region is set to 'global', the registry is 'icr.io'.

OK
```

```
C:\Users\Lenovo>ibmcloud cr namespace-add apphelloworld
No resource group is targeted. Therefore, the default resource group for the account ('Default') is targeted.

Adding namespace 'apphelloworld' in resource group 'Default' for account Aswin Venkat's Account in registry icr.io...

Successfully added namespace 'apphelloworld'

OK

C:\Users\Lenovo>
```

```
C:\Users\Lenovo>ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK
```

```
C:\Users\Lenovo>docker tag helloworld:1.0 icr.io/apphelloworld/helloworld:1.0

C:\Users\Lenovo>docker push icr.io/apphelloworld/helloworld:1.0
The push refers to repository [icr.io/apphelloworld/helloworld]
6710d00f007c: Pushed
0be4a798de9f: Pushed
7504a231c5f8: Pushed
a406de449b24: Pushed
680c5f8d2408: Pushed
ed37f306c964: Pushed
31e0f81c5bec: Pushed
b3aede2981e3: Pushed
6666686122fd: Pushed
994393dc58e7: Pushed
1.0: digest: sha256:d521cb0ae002ab12a99e28e7c3873cbc2032a1a4e15a7d9cab72cfbd60b3250e size: 2412

C:\Users\Lenovo>
```
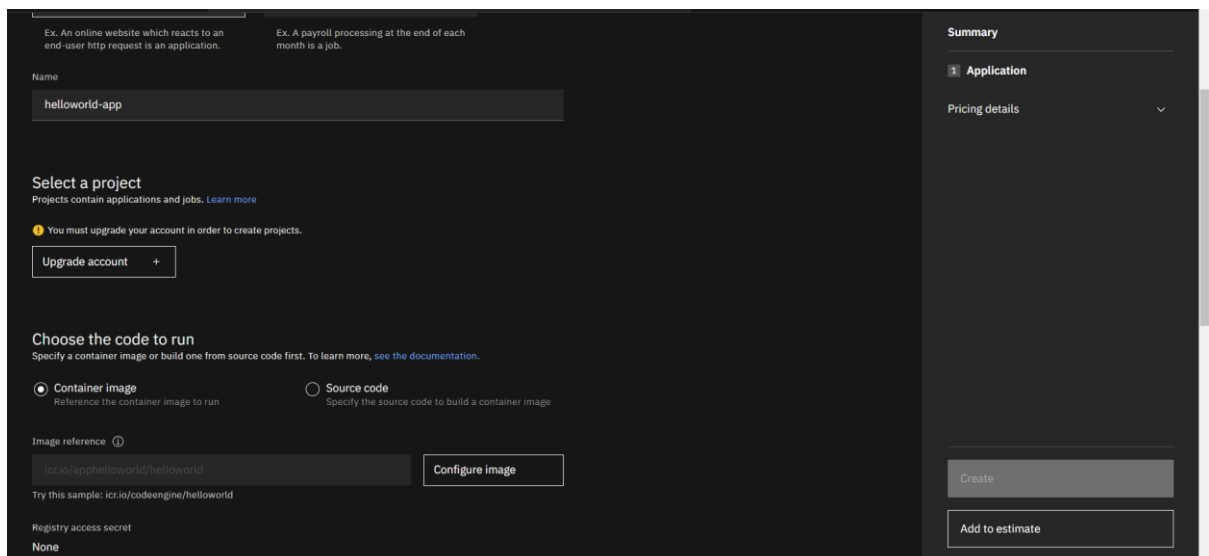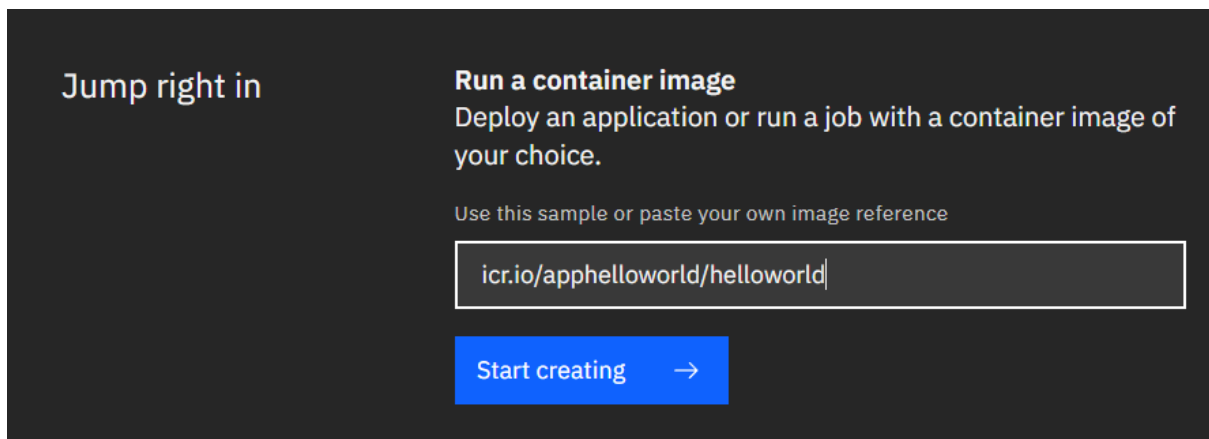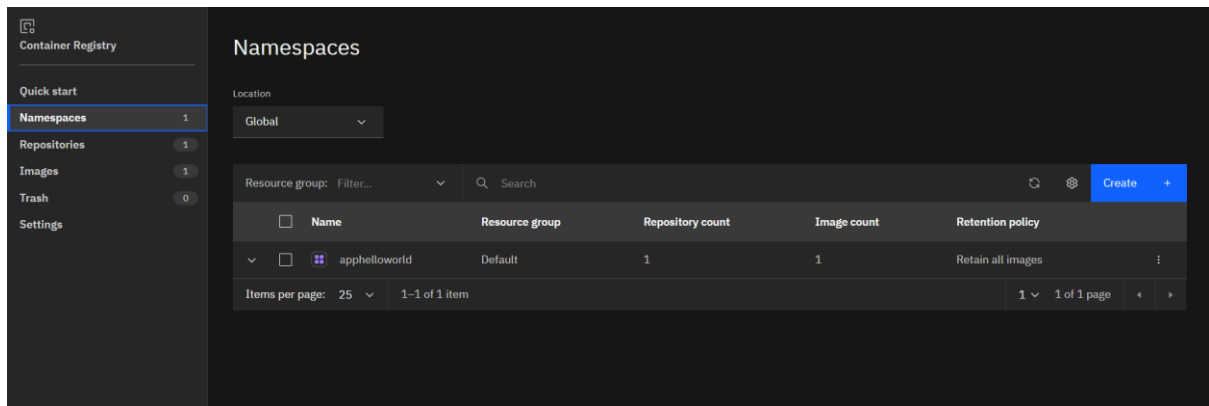
```
C:\Users\Lenovo>ibmcloud cr image-list
Listing images...

Repository                          Tag   Digest         Namespace       Created      Size    Security status
icr.io/apphelloworld/helloworld     1.0   d521cb0ae002   apphelloworld   1 hour ago   68 MB   -

OK
```

The image is pushed to the namespace.

Namespaces

Quick start

Namespaces	1
Repositories	1
Images	1
Trash	0
Settings	

Namespaces

Location

Global

Resource group: Filter...   Search   Create +

	Name	Resource group	Repository count	Image count	Retention policy
	apphelloworld	Default	1	1	Retain all images

Items per page: 25   1–1 of 1 item   1 ˅   1 of 1 page

Jump right in

Run a container image
Deploy an application or run a job with a container image of your choice.

Use this sample or paste your own image reference

icr.io/apphelloworld/helloworld

Start creating →

Ex. An online website which reacts to an end-user http request is an application.   Ex. A payroll processing at the end of each month is a job.

Name

helloworld-app

Select a project
Projects contain applications and jobs. Learn more

⚠ You must upgrade your account in order to create projects.

Upgrade account +

Choose the code to run
Specify a container image or build one from source code first. To learn more, see the documentation.

● Container image
Reference the container image to run

○ Source code
Specify the source code to build a container image

Image reference ⓘ

icr.io/apphelloworld/helloworld   Configure image

Try this sample: icr.io/codeengine/helloworld

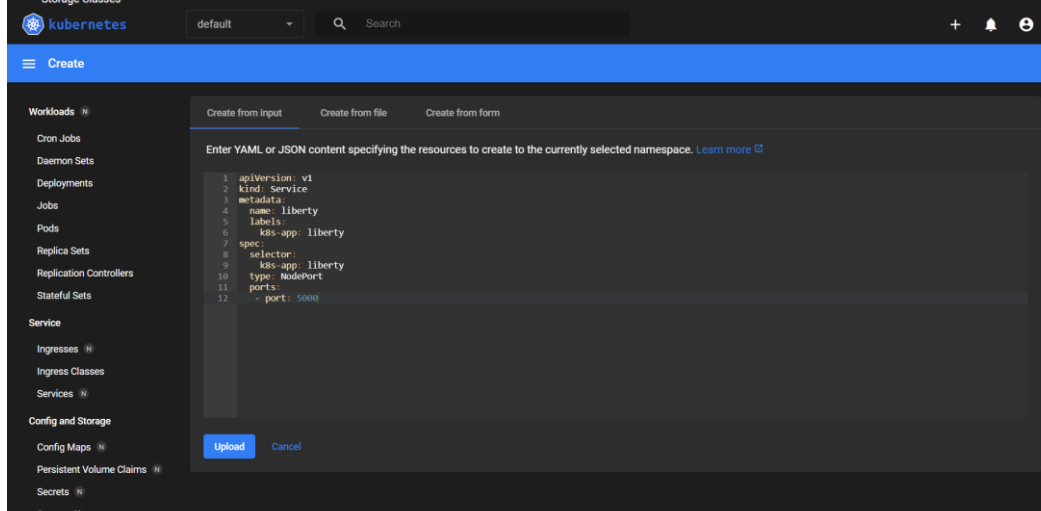Registry access secret
None

Summary

1 Application

Pricing details   ˅

Create
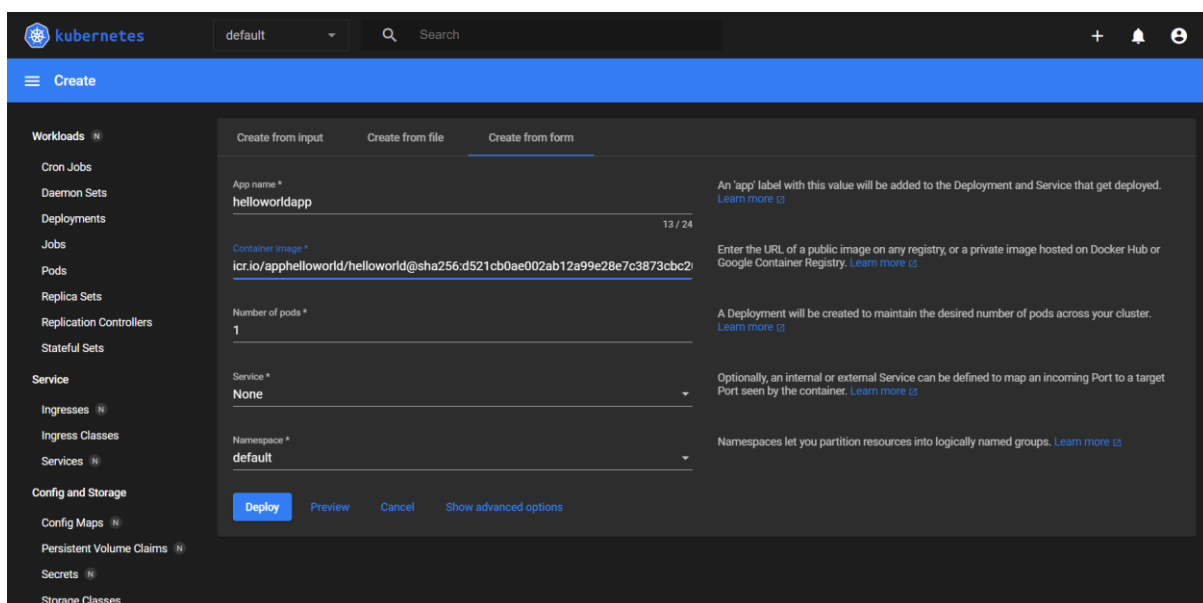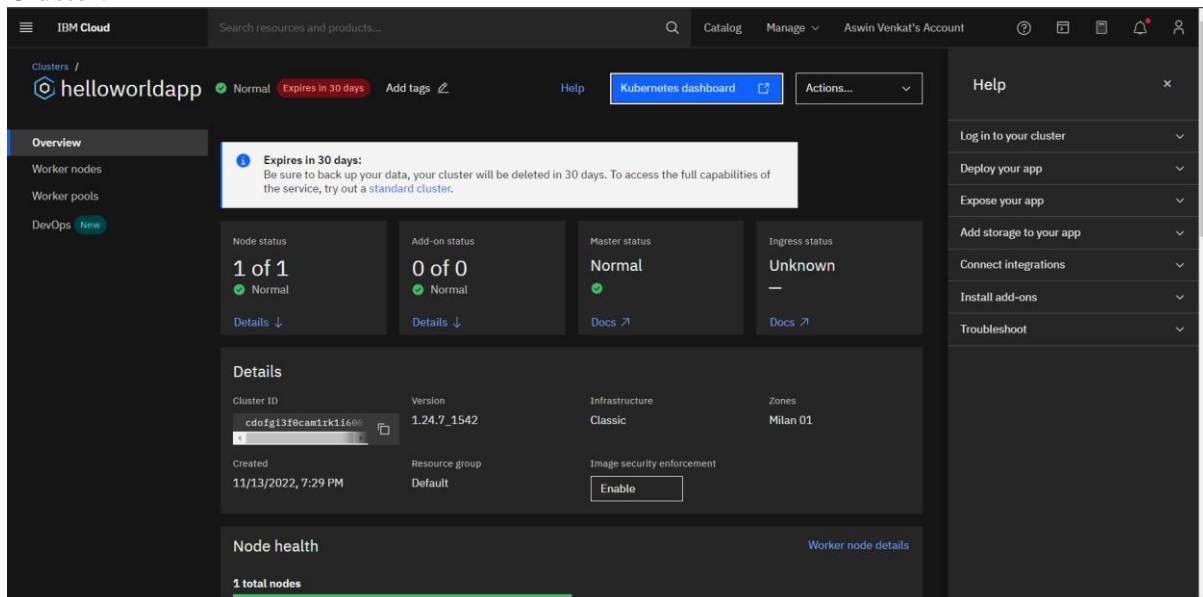
Add to estimate

4. Create a Kubernetes cluster in IBM cloud and deploy helloworld image and also expose the same app to run in nodeport.

Cluster:

Search resources and products...

Catalog   Manage ⌄   Aswin Venkat's Account

Clusters /
◎ **helloworldapp**   ● Normal   Expires in 30 days   Add tags ✎

Help   Kubernetes dashboard ⧉   Actions... ⌄

Overview
Worker nodes
Worker pools
DevOps New

Pool: Filter... ⌄   🔍 Search   ⚙   Add +

	Name	Status	Worker pool	Zone	Private IP	Public IP	Version
⌄ ☐	000000ae	● Normal	default	Milan 01	10.144.213.179	169.51.203.142	1.24.7_1543

Items per page: 25 ⌄   1–1 of 1 item   1 ⌄   1 of 1 page   ‹ ›

⚙ **kubernetes**   default ⌄   🔍 Search   + 🔔 👤

≡ **Workloads**

Workloads N
Cron Jobs
Daemon Sets
Deployments
Jobs
Pods
Replica Sets
Replication Controllers
Stateful Sets
Service
Ingresses N
Ingress Classes
Services N
Config and Storage
Config Maps N
Persistent Volume Claims N
Secrets N
Storage Classes

Workload Status ▲

Running: 1
Deployments

Running: 1
Pods

Running: 1
Replica Sets

Deployments ▲

Name	Images	Labels	Pods	Created ↑	
● helloworldapp	Show all	Show all	1 / 1	an hour ago	⋮

Pods ▲

Deployments ▲

Name	Images	Labels	Pods	Created ↑	
● helloworldapp	Show all	Show all	1 / 1	an hour ago	⋮

Pods ▲

Name	Images	Labels	Node	Status	Restarts	CPU Usage (cores)	Memory Usage (bytes)	Created ↑	
● helloworldapp-5df9ff585b-tc6rl	Show all	Show all	10.144.213.179	Running	0	1.00m	19.79Mi	an hour ago	⋮

Replica Sets ▲

Name	Images	Labels	Pods	Created ↑	
● helloworldapp-5df9ff585b	Show all	Show all	1 / 1	an hour ago	⋮

Search resources and products...

Catalog   Manage ∨   Aswin Venkat's Account

helloworldapp   ✔ Normal   Expires in 30 days   Add tags ✎

Help   Kubernetes dashboard ⬈   Actions... ∨

Overview
Worker nodes
Worker pools
DevOps New

ℹ **Expires in 30 days:**
Be sure to back up your data, your cluster will be deleted in 30 days. To access the full capabilities of the service, try out a standard cluster.

Node status
1 of 1
✔ Normal
Details ↓

Add-on status
0 of 0
✔ Normal
Details ↓

Master status
Normal
✔
Docs ⬈

Ingress status
Unknown
—
Docs ⬈

Details

Cluster ID
cdofg13f0cam1rk1i600 ⧉

Version
1.24.7_1542

Infrastructure
Classic

Zones
Milan 01

Created
11/13/2022, 7:29 PM

Resource group
Default

Image security enforcement
Enable

Node health   Worker node details

1 total nodes

■ Critical 0% ■ Warning 0% ■ Normal 100% ■ Pending 0%

169.51.203.142:31857

Hello World! from Flask.