

Assignment -4

Assignment Date	19 September 2022
Student Name	Thirupathi T
Student Roll Number	211219104014
Maximum Marks	2 Marks

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

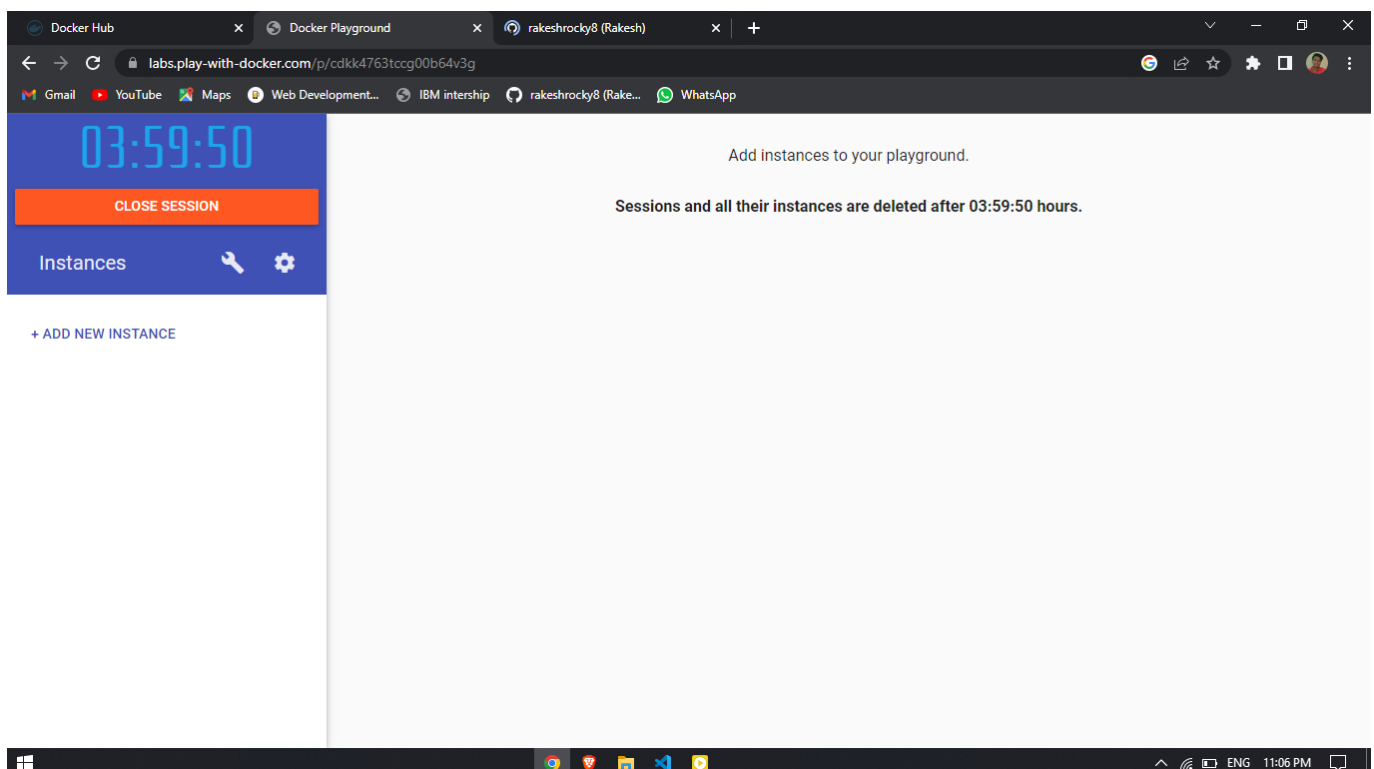
```
Windows PowerShell
PS C:\Users\Rakesh> docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ibm/alpine latest 9c6f07244728 3 months ago 5.54MB
alpine latest 9c6f07244728 3 months ago 5.54MB
PS C:\Users\Rakesh> docker push ibm/alpine
Using default tag: latest
The push refers to repository [docker.io/ibm/alpine]
994393dc58e7: Preparing
denied: requested access to the resource is denied
PS C:\Users\Rakesh> docker tag alpine
"docker tag" requires exactly 2 arguments.
See 'docker tag --help'.

Usage: docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
PS C:\Users\Rakesh> docker tag alpine:latest saravanan/alpine
"docker tag" requires exactly 2 arguments.
See 'docker tag --help'.

Usage: docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
PS C:\Users\Rakesh> docker tag alpine:latest saravanan/alpine
PS C:\Users\Rakesh> docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ibm/alpine latest 9c6f07244728 3 months ago 5.54MB
alpine latest 9c6f07244728 3 months ago 5.54MB
saravanan/alpine latest 9c6f07244728 3 months ago 5.54MB
PS C:\Users\Rakesh> docker tag alpine:latest saravanan0310/alpine
PS C:\Users\Rakesh> docker push saravanan0310/alpine
Using default tag: latest
The push refers to repository [docker.io/saravanan0310/alpine]
994393dc58e7: Pushed
```



The screenshot shows the Docker Playground interface in a web browser. The top navigation bar includes links to Docker Hub, Docker Playground, and a user profile for 'rakeshrocky8 (Rakesh)'. The main content area displays the details of a container named 'cdkk9m79_cdkkd5n91rrg00fsv1ng'. The container's IP is 192.168.0.28, and it has a memory usage of 0.92% (37MiB / 3.906GiB) and CPU usage of 0.80%. The SSH command is 'ssh ip172-18-0-5-cdkk9m791rrg00fsv1d0@direct.labs.play-'. The container is running on a host named 'node1' with IP 192.168.0.28. The terminal output shows a warning message: 'WARNING!!!! This is a sandbox environment. Using personal credentials is HIGHLY discouraged. Any consequences of doing so are completely the user's responsibilities. The PWD team.' The terminal prompt is '[node1] (local) root@192.168.0.28 ~\$'.

2. Create a docker file for the jobportal application and deploy it in Docker desktop application.

```
Windows PowerShell
PS C:\Users\Rakesh> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
ibm/alpine    latest   9c6f07244728   3 months ago   5.54MB
alpine        latest   9c6f07244728   3 months ago   5.54MB
PS C:\Users\Rakesh> docker push ibm/alpine
Using default tag: latest
The push refers to repository [docker.io/ibm/alpine]
994393dc58e7: Preparing
denied: requested access to the resource is denied
PS C:\Users\Rakesh> docker tag alpine
"docker tag" requires exactly 2 arguments.
See 'docker tag --help'.

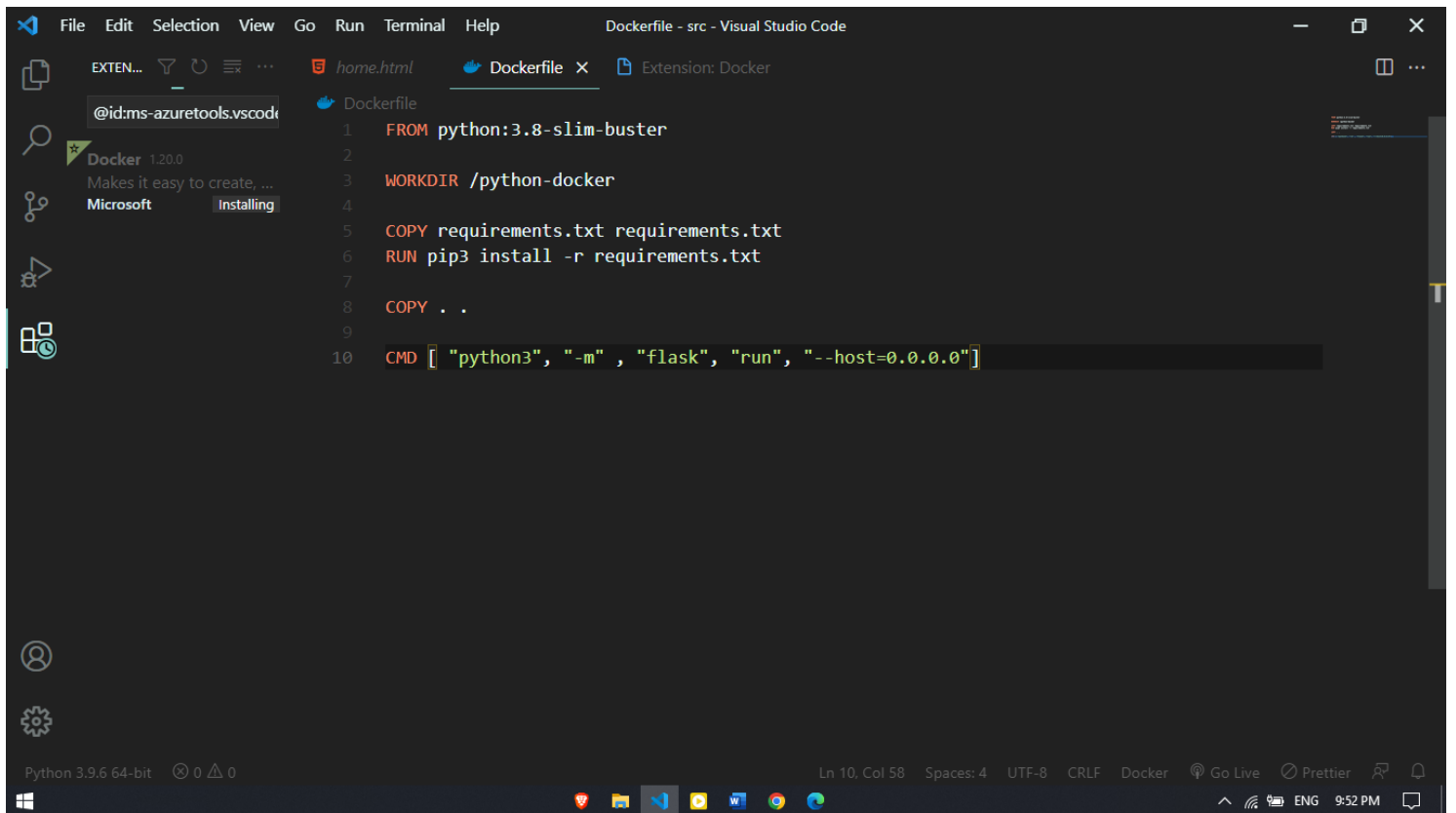
Usage: docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
PS C:\Users\Rakesh> docker tag alpine:latest saravanan/alpine
"docker tag" requires exactly 2 arguments.
See 'docker tag --help'.

Usage: docker tag SOURCE_IMAGE[:TAG] TARGET_IMAGE[:TAG]

Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE
PS C:\Users\Rakesh> docker tag alpine:latest saravanan0310/alpine
PS C:\Users\Rakesh> docker images
REPOSITORY    TAG       IMAGE ID       CREATED        SIZE
ibm/alpine    latest   9c6f07244728   3 months ago   5.54MB
alpine        latest   9c6f07244728   3 months ago   5.54MB
saravanan/alpine  latest   9c6f07244728   3 months ago   5.54MB
PS C:\Users\Rakesh> docker tag alpine:latest saravanan0310/alpine
PS C:\Users\Rakesh> docker push saravanan0310/alpine
Using default tag: latest
The push refers to repository [docker.io/saravanan0310/alpine]
994393dc58e7: Pushed
```

Dockerfile



The screenshot shows the Visual Studio Code interface with a Dockerfile open. The left sidebar displays the Explorer view with a file named 'Dockerfile' and the Docker extension installed. The main editor area shows the following Dockerfile content:

```
1 FROM python:3.8-slim-buster
2
3 WORKDIR /python-docker
4
5 COPY requirements.txt requirements.txt
6 RUN pip3 install -r requirements.txt
7
8 COPY . .
9
10 CMD ["python3", "-m", "flask", "run", "--host=0.0.0.0"]
```

The status bar at the bottom indicates the Python version is 3.9.6 64-bit, and the current file is 'Dockerfile' at line 10, column 58. The system tray shows the time as 9:52 PM.

Email address

Password

Sign in

Not a member? [Signup](#)

Sign up

Your Name

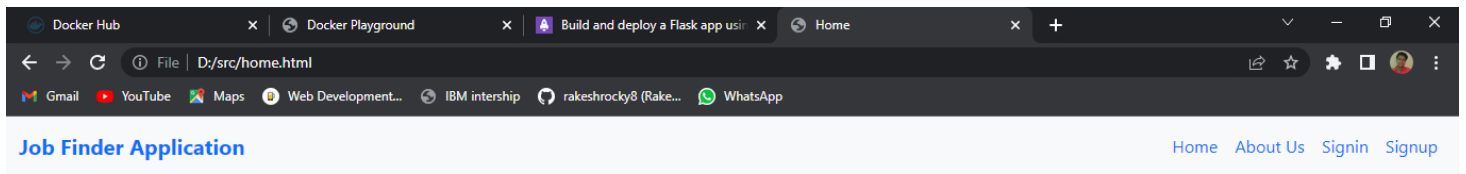
Your Email

Password

Repeat your password

☐ I agree all statements in [Terms of service](#)





searching



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

```
C:\Windows\System32\cmd.exe - docker build .
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker build .
[+] Building 06.3s (7/19)
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 199B
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [internal] load metadata for docker.io/library/python:3.7-alpine
=> [auth] library/python:pull token for registry-1.docker.io
=> [1/5] FROM docker.io/library/python:3.7-alpine@sha256:6e24a01708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f
=> => resolve docker.io/library/python:3.7-alpine@sha256:6e24a01708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f
=> => sha256:6e24a01708ffd8a4a99c1f4c357a96190b7efe47230c3bed184b8f4ad368fb9f 1.65kB / 1.65kB
=> => sha256:c7f521e75ec40f0260cb22ee68c13d0337a1aafefb724e015c4629347152c01bf 1.37kB / 1.37kB
=> => sha256:caace8ae014d1c9f31120c0a96a2ee9bb257daab97791c80780712ed7e90948 7.71kB / 7.71kB
=> => sha256:47858ae13bf9c7c2b62cfacdc9ce2524efe339df0e0e08935c6587a376d60 673.19kB / 673.19kB
=> => sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 11.16MB / 11.16MB
=> => sha256:17ac4101fac6ced0416dec3e04584d913e58bfd5a585dff62f684807d10ac77e 230B / 230B
=> => extracting sha256:47858ae13bf9c7c2b62cfacdc9ce2524efe339df0e0e08935c6587a376d60 5.85MB
=> => sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fbd0d08f08abe21971d18b 2.89MB / 2.89MB
=> => extracting sha256:21d1eb95d7874516e8447cc3067020af49c4fb512abc36162c174c0d0c22bf50 2.65MB
=> => extracting sha256:17ac4101fac6ced0416dec3e04584d913e58bfd5a585dff62f684807d10ac77e 0.05MB
=> => extracting sha256:a4cc00d82d4786274c2a21d71815bfc13e37a86d9fbd0d08f08abe21971d18b 1.05MB
=> [internal] load build context
=> => transferring context: 5.65kB
=> [2/5] WORKDIR /app
=> [3/5] RUN pip install pipenv 13.75s
```

```
C:\Windows\System32\cmd.exe - docker push icr.io/smartfashionapp/ibm
Space:

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

OK

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>ibmcloud cr login
Logging 'docker' in to 'icr.io'...
Logged in to 'icr.io'.

OK

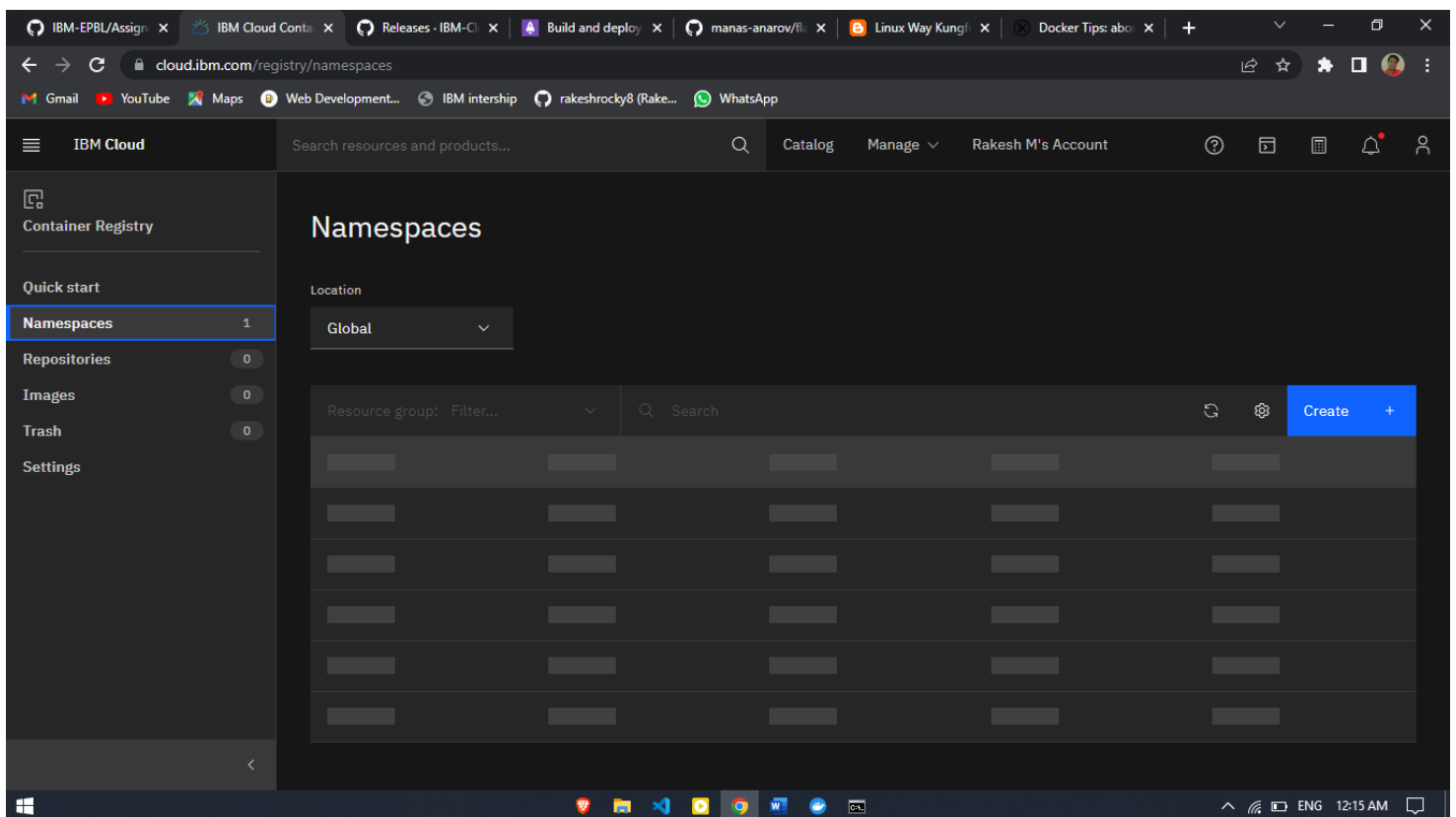
C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
myapp                1.0-recovere       95232a1151f8       18 minutes ago     97.9MB
myapp                1.0-recovered      95232a1151f8       18 minutes ago     97.9MB
icr.io/smartfashionapp/app  ibm                95232a1151f8       18 minutes ago     97.9MB
saravanan0310/alpine    latest             9c6f07244728       3 months ago       5.54MB
ibm/alpine              latest             9c6f07244728       3 months ago       5.54MB
alpine                  latest             9c6f07244728       3 months ago       5.54MB
saravanan/alpine        latest             9c6f07244728       3 months ago       5.54MB

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker tag myapp icr.io/smartfashionapp/ibm:
Error parsing reference: "icr.io/smartfashionapp/ibm:" is not a valid repository/tag: invalid reference format

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker tag myapp icr.io/smartfashionapp/ibm
Error response from daemon: No such image: myapp:latest

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker tag 95232a1151f8 icr.io/smartfashionapp/ibm

C:\Users\Rakesh\Downloads\flask_hello_docker-master\flask_hello_docker-master>docker push icr.io/smartfashionapp/ibm
Using default tag: latest
The push refers to repository [icr.io/smartfashionapp/ibm]
879dc0a7d13a: Preparing
45ca0a7778a1: Preparing
420a6604882f: Preparing
c49c12d42c1e: Preparing
ed37f306c964: Preparing
31e0f81c5bec: Waiting
b3aede2981e3: Waiting
6666686122fd: Waiting
994393dc58e7: Waiting
```



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

The screenshot shows the IBM Cloud 'Create a Kubernetes cluster' page. The browser's address bar displays 'cloud.ibm.com/kubernetes/catalog/create'. The page header includes the IBM Cloud logo, a search bar, and navigation links for 'Catalog', 'Manage', and 'Rakesh M's Account'. The main content area is titled 'Kubernetes cluster' with 'Author: IBM' and links to 'Docs' and 'API docs'. There are 'Create' and 'About' tabs. A promotional banner for Red Hat OpenShift is visible. Under 'Plan details', there is a link to learn more about plan differences and a 'Pricing plan' dropdown set to 'Standard'. A 'Summary' sidebar on the right shows a tree view with 'Kubernetes cluster' and '3 Worker nodes'. It also displays the 'Total estimated cost' as '--/mo' with a note about additional charges for networking and bandwidth. A 'Create' button is at the bottom of the sidebar. The Windows taskbar at the bottom shows the time as 10:24 AM.

IBM Cloud interface showing the overview of a Kubernetes cluster named 'mycluster'. The cluster is in the 'Preparing master, workers...' state and expires in 30 days. The left sidebar shows navigation options: Overview, Worker nodes, Worker pools, and DevOps (New). The main content area displays the cluster status and details.

Cluster Status:

- Node status: 1 of 1 Pending
- Add-on status: 0 of 0 Normal
- Master status: Deploying
- Ingress status: Pending

Cluster Details:

Cluster ID	Version	Infrastructure	Zones
cd1ocfmf0p7m891i5cu0	1.24.7_1542	Classic	Milan 01

Additional Details:

Created	Resource group	Image security enforcement
11/9/2022, 4:21 PM		Enable

IBM Cloud interface showing the 'Namespaces' section of the Container Registry. The left sidebar shows navigation options: Container Registry, Quick start, Namespaces (1), Repositories (0), Images (0), Trash (0), and Settings. The main content area displays a table of namespaces.

Namespaces Table:

Name	Resource group	Repository count	Image count	Retention policy
smartfashionapp	Default	0	0	Retain all images

Table Controls:

- Items per page: 25
- 1-1 of 1 item
- 1 of 1 page