Part 1

What are docker image, container, and registry?

- Docker image is what is used to create the running container
- Docker container is a standard component that allows you to package your application and its dependencies in a easy-to-share way
- Server side application that lets you store and deliver docker images

List the Docker commands used in the video with a brief description for each command and option.

- docker run hello-world:1.0

At the end of the video, there are two running containers, what commands can be used to stop and delete those two containers?

- Docker rm -f

Part 2

What's a multi-container Docker application?

- Different containers doing different things that are able to communicate together

How are these containers communicated together?

- Network protocols

What command can be used to stop the Docker application and delete its images?

- Control C to stop the docker application and you could use rm -f image name to delete it

List the new docker commands used in the video with a brief description for each command and option.

-docker pull mysq

-docker run --name app-db -d -e MYSQL_R

OOT_PASSWORD=password -e MYSQL_DATABASE=myDB mysql

-docker ps

-mvn clean install

-docker build -t my-web-app:1.0 .

-docker run --name app -d -p 8080:8080 my-web-app:1.0

-docker network create app-network

-docker network connect app-network app-db

-mvn clean install

-docker build -t my-web-app:1.0 .

-docker run --name app -d -p 8080:8080 my-web-app:1.0

-docker rm -f app

-docker-compose up -d

Part 3

List all used GCP shell commands and their description in your report.

```
gcloud config set project confident-key-340205
docker run -d -p 8080:80 nginx:latest
docker cp index.html 754661c232bf:/usr/share/nginx/html/
docker commit 754661c232bf cad/web:version1
docker tag cad/web:version1 us.gcr.io/confident-key-340205/cad-site:version1
docker push us.gcr.io/confident-key-340205/cad-site:version1
gcloud config set project confident-key-340205
 gcloud config set compute/zone us-central1-a
gcloud services enable artifactregistry.googleapis.com container.googleapis.com
gcloud container clusters create gk-cluster --num-nodes=1
 gcloud container clusters get-credentials gk-cluster
kubectl create deployment web-server --image
kubectl expose deployment web-server --typeLoadBalancer --port 80 --target-port 80
kubectl get pods
kubectl get service web-server
```

Part 4

Answer the following question:

What is Kubernetes' pod, service, node, and deployment?

- Pods are the smallest, most basic deployable object that also contain shared networking and storage
- Kubernetes service is a method to deploy group of pods in a cluster
- Nodes are machines that managed by the control plane which are created during the cluster creation process

What's meant by replicas?

- A process where the same copies of pods are running

What are the types of Kubernetes' services? what is the purpose of each?

- ClusterIP
- NodePort
- Load Balancer
- ExternalName

Cloud computing videos:
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