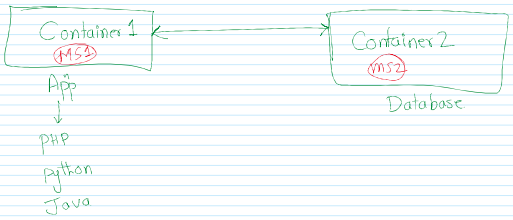
53.13Jun. Containers & Application

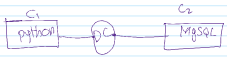
Tuesday, June 13, 2023 7:09 PM



Docker D K

1] Docker Swarm = orchestration tool ——→ K8S (Service)

2] Docker Compose = Manage multiple Containers ——→ K8S (Deployment)



 # Install Docker-Compose:

$ sudo curl -L "https://github.com/docker/compose/releases/download/1.26.2/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose

$ sudo chmod +x /usr/local/bin/docker-compose

$ docker-compose --version

 # Create Project on Python[Flask] + MySQL

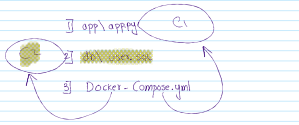
$ mkdir python-mysql-project && cd python-mysql-project

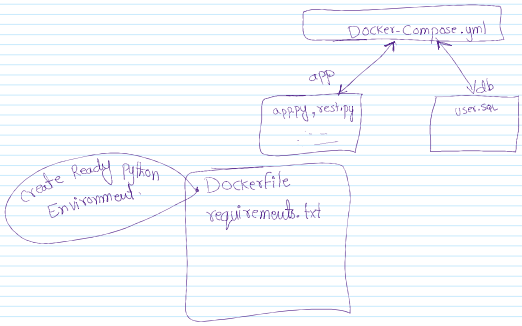
 # Prepare Database SQL Script

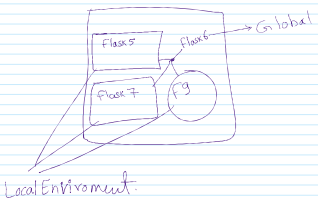
```
$ mkdir db
$ cat > db/user.sql
CREATE DATABASE lmsdb;
use lmsdb;

CREATE TABLE `user` (
  `id` int unsigned NOT NULL AUTO_INCREMENT,
  `name` varchar(50) NOT NULL,
  `email` varchar(100) NOT NULL,
  `phone` int unsigned NOT NULL,
  `address` varchar(250) NOT NULL,
  PRIMARY KEY (`id`)
) ENGINE=InnoDB AUTO_INCREMENT=7 DEFAULT CHARSET=utf8mb4 COLLATE=utf8mb4_unicode_ci;

insert into `user`(`id`,`name`,`email`,`phone`,`address`) values
(1,'test pqr','sroy@gmail.com',2147483647,'Earth'),
(2,'abc xyz','rahul@gmail.com',34256780,'Mars');
```

 # Create Python Flask Application

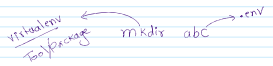
```
$ mkdir app
$ cat > app/app.py
from flask import Flask
app = Flask(__name__)
```

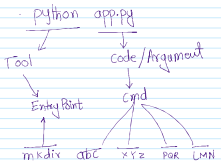






$ pip install flask





Entrypoint ["mkdir"]

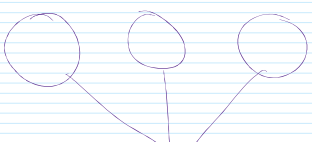
CMD ["abc" , "xyz", - - - -]

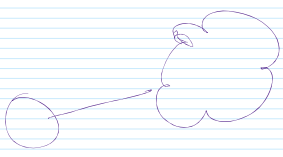
1] Clone Project

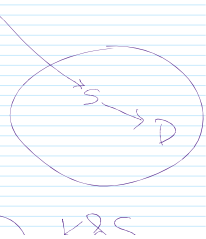
2] Create Docker Custom Image ⟶ Dockerfile. (img.py)

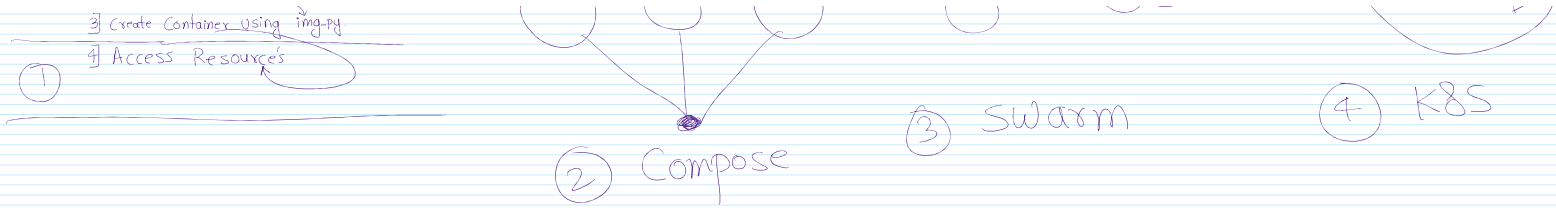
3] Create Container Using img.py

4] Access Resource's








3] Create Container Using img.py
4] Access Resource's
1
2 Compose
3 Swarm
4 K8S