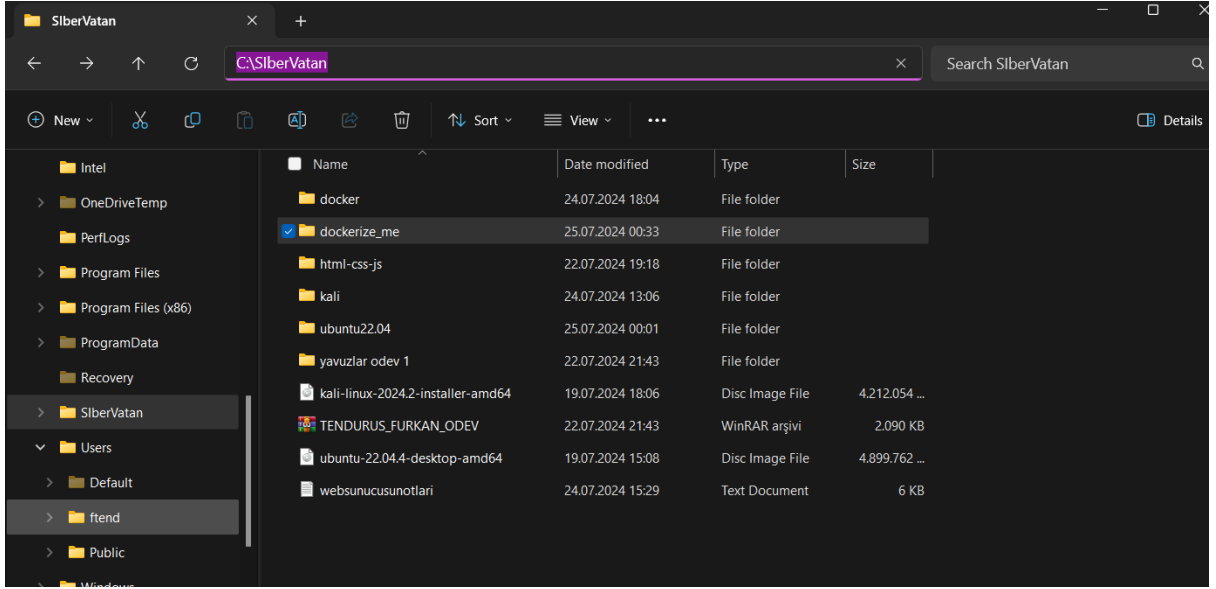


FURKAN TENDURUS ODEV

Bu path altinda calistim



- **docker search image:tag:** Docker Hub'tan bir imaj arar.

```

C:\SiberVatan>docker search debian
NAME                                DESCRIPTION                                STARS    OFFI
debian                             Debian is a Linux distribution that's compos... 5046     [OK]
ubuntu                             Ubuntu is a Debian-based Linux operating sys... 17178    [OK]
neurodebian                         NeuroDebian provides neuroscience research s... 111
bellsoft/liberica-openjdk-debian    Liberica is a 100% open-source Java implemen... 27
bitnami/debian-base-buildpack       Debian base compilation image                2
bellsoft/liberica-openjre-debian    Liberica is a 100% open-source Java implemen... 4
rancher/os-debianconsole            This image is part of the balena.io base ima... 1
balenalib/am571x-evm-debian-node     This image is part of the balena.io base ima... 0
balenalib/raspberrypi3-debian       This image is part of the balena.io base ima... 11
balenalib/fincm3-debian-node        This image is part of the balena.io base ima... 1
balenalib/apalis-imx6q-debian-node   This image is part of the balena.io base ima... 0
datastax/ds-base-debian-openjdk-8   This image is part of the balena.io base ima... 1
balenalib/hummingboard-debian-node   This image is part of the balena.io base ima... 0
kasmweb/debian-bullseye-desktop      Debian Bullseye desktop for Kasm Workspaces    8
balenalib/amd64-debian-node         This image is part of the balena.io base ima... 0
balenalib/beaglebone-black-debian-node This image is part of the balena.io base ima... 0
balenalib/artik5-debian-node        This image is part of the balena.io base ima... 0
balenalib/beaglebone-green-debian-node This image is part of the balena.io base ima... 0
balenalib/colibri-imx6dl-debian-node This image is part of the balena.io base ima... 0
balenalib/aarch64-debian-node       This image is part of the balena.io base ima... 0
balenalib/artik10-debian-node       This image is part of the balena.io base ima... 0
balenalib/artik533s-debian-node     This image is part of the balena.io base ima... 0
balenalib/intel-nuc-debian          This image is part of the balena.io base ima... 0
balenalib/raspberrypi3-debian-node   This image is part of the balena.io base ima... 1
balenalib/bananapi-m1-plus-debian-node This image is part of the balena.io base ima... 0

```

docker pull image:tag : Docker Hub'tan bir imajı indirir.

```

C:\SiberVatan>docker pull debian
Using default tag: latest
latest: Pulling from library/debian
ca4e5d672725: Pull complete
Digest: sha256:45f2e735295654f13e3be10da2a6892c708f71a71be845818f6058982761a6d3
Status: Downloaded newer image for debian:latest
docker.io/library/debian:latest

What's next:
  View a summary of image vulnerabilities and recommendations → docker scout quickview debian

```

Network

- **docker network create name:** Kendi ağınızı oluşturur.
- **docker network ls:** Oluşturulan tüm ağları listeler.
- **docker network rm network_id:** Belirtilen ağı siler.

```

C:\SiberVatan>docker network create furkan
7047c3037edb334dafa32fac0d9dd19cf549e522fa6ad1a35c02e9b9a69c632

C:\SiberVatan>docker network ls
NETWORK ID        NAME        DRIVER        SCOPE
976d41916586     bridge     bridge        local
7047c3037edb     furkan     bridge        local
8d6b621c941f     host       host          local
0847da294b3a     none      null          local

C:\SiberVatan>docker network rm 7047c3037edb
7047c3037edb

C:\SiberVatan>docker network ls
NETWORK ID        NAME        DRIVER        SCOPE
976d41916586     bridge     bridge        local
8d6b621c941f     host       host          local
0847da294b3a     none      null          local

```

Image

- **docker images / docker image ls:** Bilgisayarınıza yüklenmiş tüm imajları listeler.
 - **docker image rm image_id:** Belirtilen imajı siler.

```
Command Prompt

C:\SiberVatan>docker image ls
REPOSITORY TAG IMAGE ID CREATED SIZE
debian latest 2e5b8d3ef33e 40 hours ago 117MB

C:\SiberVatan>docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
debian latest 2e5b8d3ef33e 40 hours ago 117MB

C:\SiberVatan>docker image rm 2e5b8d3ef33e
Untagged: debian:latest
Untagged: debian@sha256:45f2e735295654f13e3be10da2a6892c708f71a71be845818f6058982761a6d3
Deleted: sha256:2e5b8d3ef33ebde2b2a943fadb241a63de1535a007a7bd185e7037abfff99f63
Deleted: sha256:f6faf32734e0870d82ea890737958fe33ce9ddfed27b3b157576d2aadbab3322

C:\SiberVatan>docker images
REPOSITORY TAG IMAGE ID CREATED SIZE

C:\SiberVatan>
```

- **docker image inspect <image>:** İmaj hakkında detaylı bilgi sağlar.

```
Command Prompt

C:\SiberVatan>docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
debian latest 2e5b8d3ef33e 40 hours ago 117MB

C:\SiberVatan>docker image inspect 2e5b8d3ef33e
[
  {
    "Id": "sha256:2e5b8d3ef33ebde2b2a943fadb241a63de1535a007a7bd185e7037abfff99f63",
    "RepoTags": [
      "debian:latest"
    ],
    "RepoDigests": [
      "debian@sha256:45f2e735295654f13e3be10da2a6892c708f71a71be845818f6058982761a6d3"
    ],
    "Parent": "",
    "Comment": "",
    "Created": "2024-07-23T05:24:03.820662594Z",
    "DockerVersion": "23.0.11",
    "Author": "",
    "Config": {
      "Hostname": "",
      "Domainname": "",
      "User": "",
      "AttachStdin": false,
      "AttachStdout": false,
      "AttachStderr": false,
      "Tty": false,
      "OpenStdin": false,
      "StdinOnce": false,

```

- **docker image build dockerFilePath / docker build dockerFilePath:** Docker Dosyası kullanarak özel bir imaj oluşturmanızı sağlar.

```
Command Prompt

C:\SiberVatan>docker image build dockerize_me
[*] Building 67.6s (11/11) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 232B
=> [internal] load metadata for docker.io/library/php:7.4-apache
=> [internal] load .dockerignore
=> => transferring context: 2B
=> [1/6] FROM docker.io/library/php:7.4-apache@sha256:c9d7e608f73832673479770d66aacc8100011ec751d1985ff63fae3fe2
=> resolve docker.io/library/php:7.4-apache@sha256:c9d7e608f73832673479770d66aacc8100011ec751d1985ff63fae3fe2
=> sha256:c9d7e608f73832673479770d66aacc8100011ec751d1985ff63fae3fe2e0ca6d 1.86kB / 1.86kB
=> sha256:18b3497ee7f2099a90b66c23a0bc3d5261b12bab367263e1b40e9b004c39e882 3.04kB / 3.04kB
=> sha256:156740b07ef8a632f9f7bea4e57e4ee5541ade376ad9f169351a1265382e39de 91.63MB / 91.63MB
=> sha256:20a3732f42b7b28dcf99e8597f993a8c135efca62ff0dc82a2d92d916369419 12.51kB / 12.51kB
=> sha256:c428f1a49423885254a2a5957cc5199c36c8b483385e0e877d580bd0ec9e763 226B / 226B
=> sha256:a683fa5e3b4127f218503aaa6189abf6286ee5a73deaaab460f8f33ebc6b64e2 31.41MB / 31.41MB
=> sha256:fb5a4c8af2f00738b7427e47bda7f76cea2e2b9aea421750bc9025aface98d8 270B / 270B
=> sha256:25f85b498fd5bf6ccce951513219fe480850daba71e6e997741e904d18483971 19.25MB / 19.25MB
=> extracting sha256:a683fa5e3b4127f218503aaa6189abf6286ee5a73deaaab460f8f33ebc6b64e2 2.9s
=> sha256:9b233e28ac7bbca645bb82c213829762acf1742400c076360dc383213c309d5 475B / 475B
=> sha256:fa42207c4ecfc9833acc09cd1391238f7ea39d13827a25cfa78727fa5d208e9 51MB / 51MB
=> sha256:d1eb2e1e17ae08f5fcb40b0d5622867c081c20727829c2cf4043fc409342fa 10.76MB / 10.76MB
=> extracting sha256:c428f1a49423885254a2a5957cc5199c36c8b483385e0e877d580bd0ec9e763 0.8s
=> sha256:66d98f73ac62e86c9c226f9eedcb7eda395df0c1e171ca5caf81cb8b1c40cb 491B / 491B
=> sha256:d2c43c5efbc861f83ee6565c7102ca660d6f35e158324fbb042de5017e43afe8 10.20MB / 10.20MB
=> sha256:ab590b48ea476386dd7b07c34de9eff7cf2103c4668ade985fe31e59f15deee8 2.46kB / 2.46kB
=> sha256:88692ae2d067c358112c56498a2a97f69ef395fd8f7662a31498644ca813ef 246B / 246B
=> sha256:05e4655aaa99a38add4accededf39083809060f31feab2015332a69a908da 092B / 092B
=> extracting sha256:156740b07ef8a632f9f7bea4e57e4ee5541ade376ad9f169351a1265382e39de 4.7s
=> extracting sha256:fb5a4c8af2f00738b7427e47bda7f76cea2e2b9aea421750bc9025aface98d8 0.0s
```

docker run [OPTIONS] image [COMMANDS]: Bir imajı kullanarak bir konteyner oluşturur. [COMMANDS] tamamlandıktan sonra kapanır.

○ **OPTIONS:**

- --name: Konteynera özel bir isim atar.
- --rm: Konteyner işini bitirdikten sonra otomatik olarak kendini siler.
- -it: Konteyneri interaktif modda başlatır ve terminali size bağlar.
- -p: Konteynerin belirli bir portunu ana makineye yönlendirmek için kullanılır.
- -d: Konteyneri arkaplanda çalıştırır.
- -e: Çevresel değişkenleri belirlemek için kullanılır.
- -v: Ana makinedeki bir dizini veya dosyayı konteynere bağlamak için kullanılır.
- --network <name>: Konteynerin bağlı olduğu ağı belirtir.
- --security-opt PROFILES: Konteynerin bağlı olduğu ağı belirtir.
- --privileged: Konteyneri ana makinenin kernel düzeyinde ayrıcalıklı bir modda çalıştırır ve tüm yetkilere sahip olur.
- --cap-add capability: Konteyner'a yetenek ekler.
- --cap-drop capability: Konteyner'dan yetenek çıkarır.
 - ALL: yazılırsa eğer capability yerine bütün belirli yetenekleri ekler/çıkarır.

● **COMMANDS**

- Aslında buradaki komutlar terminalde yazabileceğiniz her şey olabilir.
- ls -l
- sleep 3600

```
C:\SIberVatan>docker run --name furkan --rm -it -p 8080:80 -d -e ENV_VAR=value -v /host/directory:/container/directory --network furkan --security-opt seccomp=unconfined --privileged --cap-add SYS_ADMIN b3dc23f05cd4 sleep 3600
0f0be35112e75343ef56cb10fe7e55a0a8c0231b37fb6a5d3839c83dc8d0d894
C:\SIberVatan>
```

Containers

- **docker ps:** Çalışan konteyner'ları listeler.
 - **-a:** Çalışan çalışmayan tüm konteyner'ları listeler.
- **docker start container_id/name:** Belirli bir Konteyner'ı çalıştırır.
- **docker stop container_id/name:** Belirli bir Konteyner'ı durdurur.
- **docker restart container_id/name:** Belirli bir konteyner'ı yeniden başlatır.
 - **docker rm container_id/name:** Belirli bir konteyner'ı siler.
- **docker exec [OPTIONS] <container_id> [COMMAND]:** Çalışan bir konteyner'da komut çalıştırmamızı sağlar. Kullanımı docker run ... ile benzerdir.
 - **docker exec my_container ls -l:** my_container içinde ls -l komutunu çalıştırır.

```
C:\SiberVatan>docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
0f0be35112e7   b3dc23f05cd4   "docker-php-entrypoi..." 3 minutes ago  Up 3 minutes  0.0.0.0:8080->80/tcp

C:\SiberVatan>docker start 0f0be35112e7
0f0be35112e7

C:\SiberVatan>docker stop 0f0be35112e7
0f0be35112e7
```

```
C:\SiberVatan>docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
ef979ee71919   b3dc23f05cd4   "docker-php-entrypoi..." 6 seconds ago  Up 5 seconds  0.0.0.0:8080->80/tcp

C:\SiberVatan>docker restart ef979ee71919
ef979ee71919

C:\SiberVatan>docker rm ef979ee71919
Error response from daemon: cannot remove container "/furkan": container is running: stop the container before removing it

C:\SiberVatan>docker stop ef979ee71919
ef979ee71919

C:\SiberVatan>docker rm ef979ee71919
Error response from daemon: No such container: ef979ee71919

C:\SiberVatan>docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS        NAMES
0f0be35112e7   b3dc23f05cd4   "docker-php-entrypoi..." 3 minutes ago  Up 3 minutes  0.0.0.0:8080->80/tcp  furkan

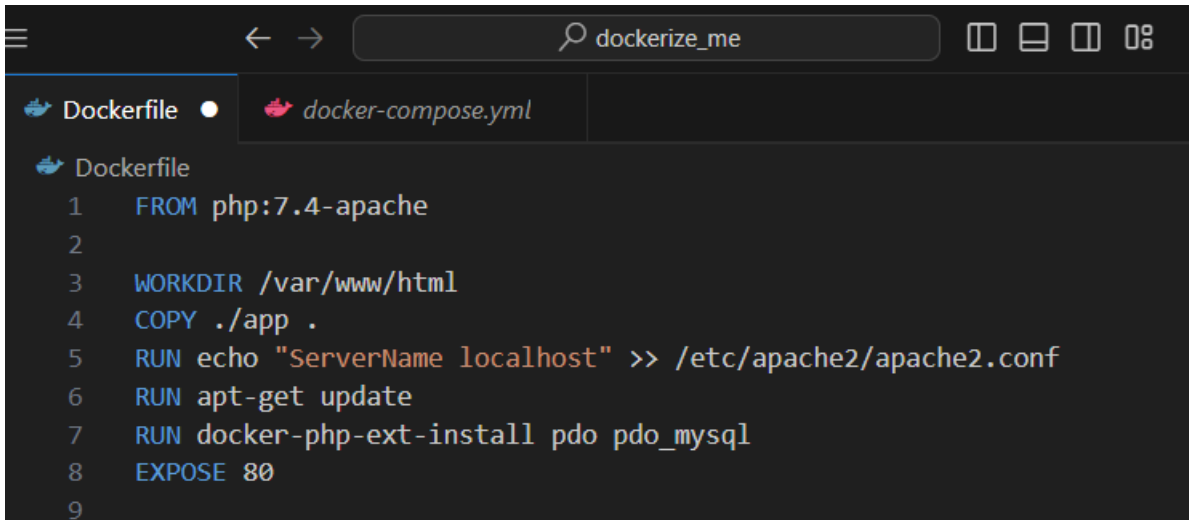
C:\SiberVatan>
```

```
C:\SiberVatan>docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS        NAMES
e79e97b19a6a   b3dc23f05cd4   "docker-php-entrypoi..." 5 seconds ago  Up 4 seconds  0.0.0.0:8080->80/tcp  furkan

C:\SiberVatan>docker exec e79e97b19a6a ls -l
total 12
-rwxr-xr-x 1 root root 471 Jul 24 20:09 app.js
-rwxr-xr-x 1 root root 669 Jul 24 20:09 backend.php
-rwxr-xr-x 1 root root 287 Jul 24 20:09 index.php

C:\SiberVatan>
```

Dockerfile



```
1 FROM php:7.4-apache
2
3 WORKDIR /var/www/html
4 COPY ./app .
5 RUN echo "ServerName localhost" >> /etc/apache2/apache2.conf
6 RUN apt-get update
7 RUN docker-php-ext-install pdo pdo_mysql
8 EXPOSE 80
9
```

- **FROM image:tag** Konteyner'ın hangi image'ı temel alacağını belirtir.
- **RUN [command]** İmaj üzerinde komutları çalıştırmak için kullanılır.
- **COPY [hostPath] [containerPath]** Ana makinadan konteyner içine dosya kopyalamamızı sağlar.
- **WORKDIR** Çalışma dizinini belirtir.
- **EXPOSE** Konteyner'ın hangi portlarını dış dünyaya açacağını belirtir.

Docker-compose.yml

```
Edit Selection View ... dockerize_me
Dockerfile ● docker-compose.yml ●
docker-compose.yml
1  version: '3'
2
3  services:
4    app:
5      build:
6        context: .
7        dockerfile: Dockerfile
8      depends_on:
9        - db
10     ports:
11       - "80:80"
12     networks:
13       - net
14
15     db:
16       image: mysql:latest
17       environment:
18         - MYSQL_DATABASE=yavuzlar
19         - MYSQL_ROOT_PASSWORD=1
20       volumes:
21         - db_data:/var/lib/mysql
22         - ./yavuzlar_messages.sql:/docker-entrypoint-initdb.d/yavuzlar_messages.sql
23       ports:
24         - "8080:3306"
25       networks:
26         - net
27
28
29     networks:
30       net:
31         driver: bridge
32
33     volumes:
34       db_data:
```

- **services**

yml içinde Container'lar "**services:**" Tag'i ile belirtilir.

- **build**

Bu Tag'de oluşturulacak servisin Dockerfile'ının bulunduğu path verilir.

- **dockerfile**

Dockerfile dosyasının ismini belirtmek istersek

- **depends_on**

Docker Compose ayağa kalkarken bir diğer servise bağımlılığı var ise bu bağımlılıklara göre sırayla başlatır. İlişki sırası yoksa yml içindeki sıraya göre başlatır. Bir depends_on servis diğer servisin depends_on'u olabilir.

- **environment**

Servisler ayağa kalkarken Enviroment Variable'lar vermek için bu özellik kullanılır.

- **ports**

Container'dan İşletim Sistemi Host'una maplenecek portları belirlemek için kullanılır. İlk olarak Container'daki 80 portunu aynen yönlendirir. 2. satırda ise 18000–18500 arası portları yine 18000–18500 arasına mapler.

- **volumes**

İşletim Sistemi Host'undan Container'a klasör mount etmek için;

- **networks**

Container'ların bağlı olacakları ağı belirlemek için kullanılır.