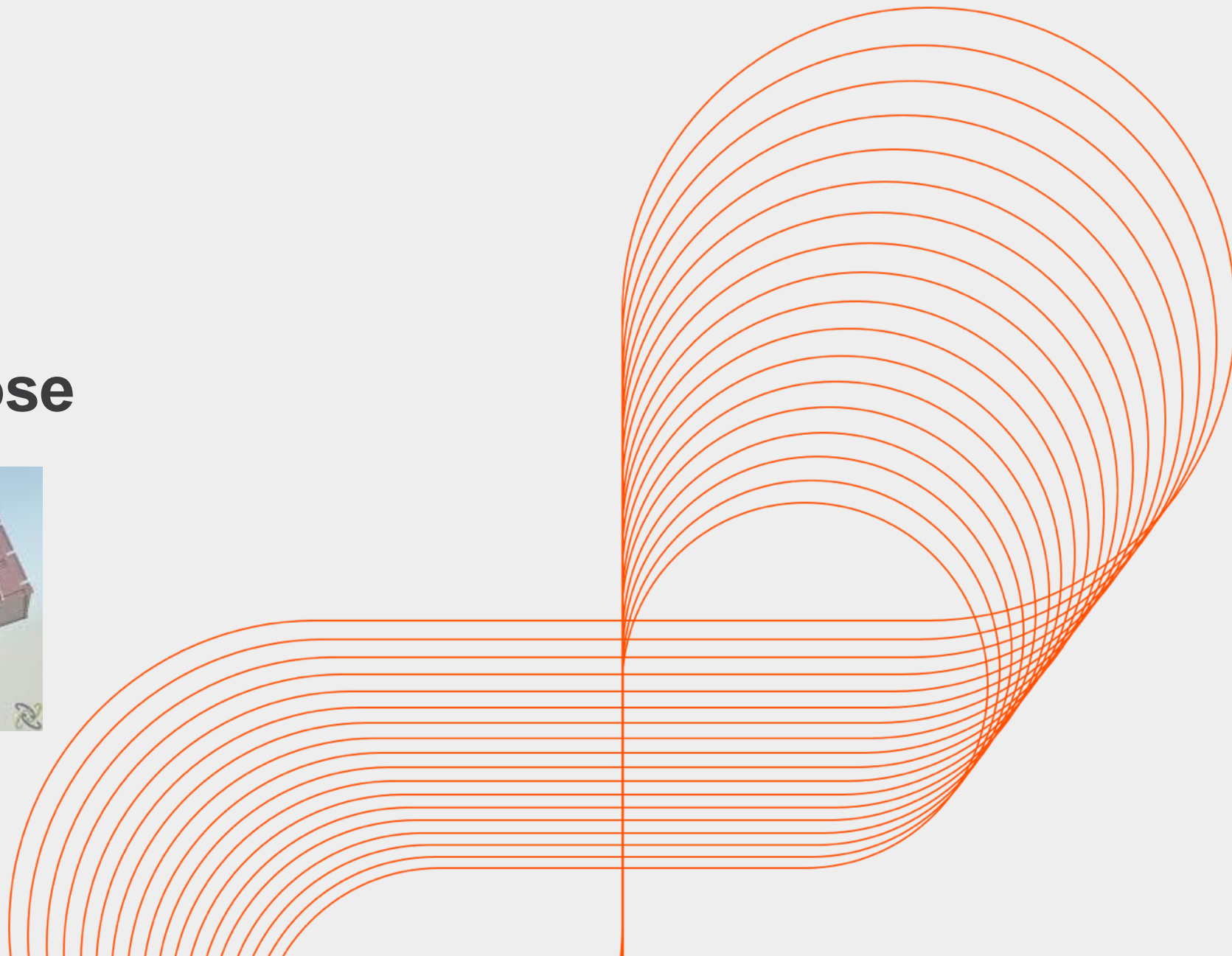# Docker compose

Overview of Docker Compose

- Compose is a tool for defining and running multi-container Docker applications.

- With Compose, you use a Compose file to configure your application's services.

- Using a single command, you create and start all the services from your configuration.

- The features of Compose that make it effective are .

  - Multiple isolated environments on a single host

  - Preserve volume data when containers are created

  - Only recreate containers that have changed

  - Variables and moving a composition between environments

Docker Compose

What is Docker Compose?

- Define and run multi-container applications

- Specify images and configuration in a simple YAML file:

  ```
  docker-compose.yml
  ```

- One command to get it all running:

  ```
  $ docker-compose up
  ```

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Docker Compose…

① Write your dockerfile

```
WORKDIR /code
ADD requirements.txt
/code/
RUN pip install -r
requirements.txt
ADD . /code
CMD python app.py
```

② Write your compose.yml file

```
web:
  build: .
  links:
  - db
  ports:
  - "8000:8000"
db:
  image: postgres
```

③ Run your app

```
$ docker-compose up
```

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Docker compose example : WordPress

- Define the project

- Create an empty project directory.

- Change directories into your project directory.

- Create a docker-compose.yml file that will start your Wordpress blog and a separate MySQL instance with a volume mount for data persistence.

- Build the project using command, $ docker-compose up –d

- Bring up WordPress in a web browser

- Here is the link for these steps.

https://docs.docker.com/compose/wordpress/

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A sample Docker compose file

```yaml
version: '2'
services:
  db:
    image: mysql:5.7
    volumes:
      - "./.data/db:/var/lib/mysql"
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: wordpress
      MYSQL_DATABASE: wordpress
      MYSQL_USER: wordpress
      MYSQL_PASSWORD: wordpress

  wordpress:
    depends_on:
      - db
    image: wordpress:latest
    links:
      - db
    ports:
      - "8000:80"
    restart: always
    environment:
      WORDPRESS_DB_HOST: db:3306
      WORDPRESS_DB_PASSWORD: wordpress
```

A sample Docker compose file…

Docker compose commands

Command line

- $ docker-compose build
- $ docker-compose create
- $ docker-compose up
- $ docker-compose start
- $ docker-compose run

Reference Material : Websites & Blogs

- https://docs.docker.com/compose/overview/

- https://www.youtube.com/watch?v=11jfxkuI0l4

- https://docs.docker.com/compose/wordpress/

Docker Interactive

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Thank you!

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