Session 2

Creating Custom images (Partial)
Review

Business Training

1

Dockerfile

■ A receipt to create an image...

■ Example

```
FROM ubuntu
RUN apt-get –y update
RUN apt-get install figlet
```

■ Build it …

$ docker build -t figlet .

■ **-t** indicates the tag to apply to the image.
■ . indicates the location of the build context.

M.Romdhani, 2020

2

2

1

Image Layers

■ **Each instruction creates a new Layer**

■ Docker spins up an intermediate container to create the layer

```
FROM busybox:latest  ──────▶    8c2e06607696

MAINTAINER brian     ──────▶    5bd9073989ff

RUN touch foo        ──────▶    0437ee5cf42c

CMD ["/bin/sh"]      ──────▶    350e4f999b25
```

3

Dockerfile instructions

■ **FROM**

■ **RUN**

■ **COPY/ADD**

■ **ARG/ENV**

■ **VOLUME**

■ **USER**

■ **EXPOSE**

■ **LABEL**

■ **HEALTHCHECK**

■ **WORKDIR**

■ **ONBUILD**

■ **STOPSIGNAL**

■ **CMD/ENTRYPOINT**

4

Dockerfile instructions

- **CMD vs. ENTRYPOINT**
  - ENTRYPOINT CANNOT be overridden
  - CMD Can be overriden

- **COPY vs. ADD**
  - COPY Copies local files and directories
  - ADD Copies local files and directories, can additionally copy from remote URL and can copy tarballs

- **ARG vs. ENV**
  - ARG is just scoped to the build phase
  - ENV is scoped to build and Run phases

M.Romdhani, 2020

5

5

Dockerfile best practices

- **Use official base images**

- **Prefer COPY over ADD**

- **Group RUN instructions in on line**

- **Define a USER**

- **ADD a .dockerignore file**

- **Use Multi-stage builds**

M.Romdhani, 2020

6

6