

Nathan Tout
CST 356
Week 2 Lab
Screenshots
Exercise 1 - Hello World

1. Run hello-world.

```
natet@LAPTOP-SI8MO72I MINGW64 /c/Program Files/Docker Toolbox
$ docker run hello-world

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
 1. The Docker client contacted the Docker daemon.
 2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
    (amd64)
 3. The Docker daemon created a new container from that image which runs the
    executable that produces the output you are currently reading.
 4. The Docker daemon streamed that output to the Docker client, which sent it
    to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/
```

2. Run the following command to list the local images

```
$ docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
ntout/trainingapi	v1	681176d27e6d	5 weeks ago	237MB
<none>	<none>	d529c389a1ab	5 weeks ago	1.16GB
flask-practice	latest	46c9b7c1aab9	2 months ago	122MB
<none>	<none>	88043129a363	2 months ago	191MB
flask-sample-one	latest	eb7039fdffca	2 months ago	436MB
python	3-alpine	204216b3821e	2 months ago	111MB
lab3	latest	5e07272570a1	3 months ago	237MB
<none>	<none>	cd7a2233fc04	3 months ago	1.16GB
python	3.6-slim	879952dab949	3 months ago	174MB
mongo	3.4	51887872890b	3 months ago	430MB
mcr.microsoft.com/dotnet/core/sdk	3.0-buster	170a7f2ec51a	3 months ago	689MB
mcr.microsoft.com/dotnet/core/aspnet	3.0-buster-slim	930743cb4e19	3 months ago	207MB
dpage/pgadmin4	latest	177213947c28	3 months ago	265MB
ntout/myfirstapp	latest	c3b1cd45b742	3 months ago	57MB
ubuntu	latest	2ca708c1c9cc	4 months ago	64.2MB
alpine	latest	961769676411	5 months ago	5.58MB
mcr.microsoft.com/mssql/server	2017-latest	d9b9b96627b7	5 months ago	1.36GB
mcr.microsoft.com/mssql/server	2017-latest-ubuntu	d9b9b96627b7	5 months ago	1.36GB

3. Run the following command to list the containers

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CONTAINER ID	IMAGE	NAMES	COMMAND	CREATED	STATUS
7773e8f71acd	hello-world	hopeful_burnell	"/hello"	3 minutes ago	Exited (0) 3 minutes ago
837a9377abf7	flask-practice	flask-practice	"python app.py"	2 months ago	Exited (0) 2 months ago
85999fa61b06	88043129a363	cranky_ride	"/bin/sh -c 'apt-get...'"	2 months ago	Exited (100) 2 months ago
6ae3eeb704db	88043129a363	brave_lehmann	"/bin/sh -c 'apt-get...'"	2 months ago	Exited (100) 2 months ago
bef507742a21	mysql:5.7.22	mysql	"docker-entrypoint.s..."	2 months ago	Exited (0) 2 months ago
561f3177fd2d	redis:2.8	silly_goldstine	"docker-entrypoint.s..."	2 months ago	Exited (0) 2 months ago
054fef1ae85e	flask-sample-one	nervous_vaughan	"python app.py"	2 months ago	Exited (0) 2 months ago
c1ef1bfe2cf1	lab3	hopeful_lumiere	"dotnet TrainingApi..."	3 months ago	Exited (255) 2 months ago
443/tcp, b9ce41a386ba	0.0.0.0:8888->80/tcp	alpine	"/bin/sh"	3 months ago	Exited (0) 3 months ago
6871a42610f7	alpine	trusting_dirac	"/bin/sh"	3 months ago	Exited (0) 3 months ago
b799af94bf5e	alpine	vibrant_blackwell	"echo 'hello from al..."	3 months ago	Exited (0) 3 months ago
98ee528a572e	alpine	sad_herschel	"ls -l"	3 months ago	Exited (0) 3 months ago

Exercise 2 - Running a Container

1.0

```
natet@LAPTOP-SI8MO72I MINGW64 /c/Program Files/Docker Toolbox
$ docker pull alpine
Using default tag: latest
latest: Pulling from library/alpine
c9b1b535fdd9: Pull complete
Digest: sha256:ab00606a42621fb68f2ed6ad3c88be54397f981a7b70a79db3d1172b11c4367d
Status: Downloaded newer image for alpine:latest
```

1.1

```
$ docker run alpine ls -l
total 56
drwxr-xr-x  2 root    root    4096 Jan 16 21:52 bin
drwxr-xr-x  5 root    root    340 Jan 18 18:07 dev
drwxr-xr-x  1 root    root    4096 Jan 18 18:07 etc
drwxr-xr-x  2 root    root    4096 Jan 16 21:52 home
drwxr-xr-x  5 root    root    4096 Jan 16 21:52 lib
drwxr-xr-x  5 root    root    4096 Jan 16 21:52 media
drwxr-xr-x  2 root    root    4096 Jan 16 21:52 mnt
drwxr-xr-x  2 root    root    4096 Jan 16 21:52 opt
dr-xr-xr-x 132 root    root      0 Jan 18 18:07 proc
drwx----- 2 root    root    4096 Jan 16 21:52 root
drwxr-xr-x  2 root    root    4096 Jan 16 21:52 run
drwxr-xr-x  2 root    root    4096 Jan 16 21:52/sbin
drwxr-xr-x  2 root    root    4096 Jan 16 21:52/srv
dr-xr-xr-x 13 root    root      0 Jan 18 18:07 sys
drwxrwxrwt  2 root    root    4096 Jan 16 21:52 tmp
drwxr-xr-x  7 root    root    4096 Jan 16 21:52 usr
drwxr-xr-x 12 root    root    4096 Jan 16 21:52 var

natet@LAPTOP-SI8MO72I MINGW64 /c/Program Files/Docker Toolbox
$ docker run alpine echo "hello from alpine"
hello from alpine

natet@LAPTOP-SI8MO72I MINGW64 /c/Program Files/Docker Toolbox
$ docker run alpine /bin/sh
```

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```
natet@LAPTOP-SI8M072I MINGW64 /c/Program Files/Docker Toolbox
$ docker ps
CONTAINER ID        IMAGE               NAMES             COMMAND           CREATED           STATUS
PORTS
c7765140624d        alpine             thirsty_chaplygin  "/bin/sh"         About a minute ago Exited (0) About a minute ago
3b374ad75cfb        alpine             1..."          "echo 'hello from a
About a minute ago Exited (0) About a minute ago
serene_austin       alpine             e95e88301d2b      "ls -l"            2 minutes ago     Exited (0) 2 minutes ago
reverent_albattani   hello-world        7773e8f71acd      "/hello"           12 minutes ago     Exited (0) 12 minutes ago
hopeful_burnell      flask-practice     837a9377abf7      "python app.py"    2 months ago       Exited (0) 2 months ago
flask-practice
```

Exercise 3 - Sample Web Application in a Container

1

```
$ docker run -d dockersamples/static-site
7e9f565c7a6a3853c2b6fa6c9b7d69f94f703b3615a601c834f0b9f581362b62
```

2

```
$ docker ps
CONTAINER ID        IMAGE               COMMAND           CREATED           STATUS           PORTS
NAMES
7e9f565c7a6a        dockersamples/static-site  "/bin/sh -c 'cd /usr..." About a minute ago Up About a minute 80/tcp, 443/tcp
competent_kowalevski
```

3

```
$ docker stop 7e9f565
7e9f565
natet@LAPTOP-SI8M072I MINGW64 /c/Program Files/Docker Toolbox
$ docker rm 7e9f565
7e9f565
```

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```
$ docker run --name static-site -e AUTHOR="Nathan" -d -P dockersamples/static-site
849c839b4155fda1cabf4579a655c01b882c5d6463575ef3836f70a3fd49eb7c
natet@LAPTOP-SI8M072I MINGW64 /c/Program Files/Docker Toolbox
$ docker port static-site
443/tcp -> 0.0.0.0:32768
80/tcp -> 0.0.0.0:32769
```

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```
$ docker port static-site
443/tcp -> 0.0.0.0:32768
80/tcp -> 0.0.0.0:32769
natet@LAPTOP-SI8M072I MINGW64 /c/Program Files/Docker Toolbox
$ docker-machine ip default
192.168.99.101
```

Hello Your Name!

This is being served from a **docker**
container running Nginx.

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```
$ docker stop static-site
static-site

natet@LAPTOP-SI8MO72I MINGW64 /c/Program Files/Docker Toolbox
$ docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS
65b42d3333c6   dockersamples/static-site          "/bin/sh -c 'cd /usr..." 3 minutes ago   Up 3 minutes   443/tcp, 0.0.0.0:88
88->80/tcp     static-site-2

natet@LAPTOP-SI8MO72I MINGW64 /c/Program Files/Docker Toolbox
$ docker rm static-site
static-site

natet@LAPTOP-SI8MO72I MINGW64 /c/Program Files/Docker Toolbox
$ docker rm -f static-site-2
static-site-2

natet@LAPTOP-SI8MO72I MINGW64 /c/Program Files/Docker Toolbox
$ docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS        NAMES
```

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```
$ docker pull ubuntu:12.04
12.04: Pulling from library/ubuntu
Digest: sha256:18305429afa14ea462f810146ba44d4363ae76e4c8dfc38288cf73aa07485005
Status: Image is up to date for ubuntu:12.04

natet@LAPTOP-SI8MO72I MINGW64 /c/Program Files/Docker Toolbox
$ docker search
'docker search' requires exactly 1 argument.
see 'docker search --help'.

Usage: docker search [OPTIONS] TERM [flags]

Search the Docker Hub for images
```

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```
$ docker build -t ntout/myfirstapp356 .
Sending build context to Docker daemon 7.68kB
Step 1/8 : FROM alpine:3.5
----> f80194ae2e0c
Step 2/8 : RUN apk add --update py2-pip
----> Using cache
----> aa15bfc09fb2
Step 3/8 : COPY requirements.txt /usr/src/app/
----> Using cache
----> 44296491adbd
Step 4/8 : RUN pip install --no-cache-dir -r /usr/src/app/requirements.txt
----> Using cache
----> bb595686ed4e
Step 5/8 : COPY app.py /usr/src/app/
----> 81ce97e205da
Step 6/8 : COPY templates/index.html /usr/src/app/templates/
----> 732d2c06d1dd
Step 7/8 : EXPOSE 5000
----> Running in 5ebf4f6245b0
Removing intermediate container 5ebf4f6245b0
----> 304d5cb99ad7
Step 8/8 : CMD ["python", "/usr/src/app/app.py"]
----> Running in b54a62cd9c11
Removing intermediate container b54a62cd9c11
----> 4c51af523542
Successfully built 4c51af523542
Successfully tagged ntout/myfirstapp356:latest
SECURITY WARNING: You are building a Docker image from windows against a non-windows Docker host. All files and directories added to
build context will have '-rwxr-xr-x' permissions. It is recommended to double check and reset permissions for sensitive files and d
irectories.
```

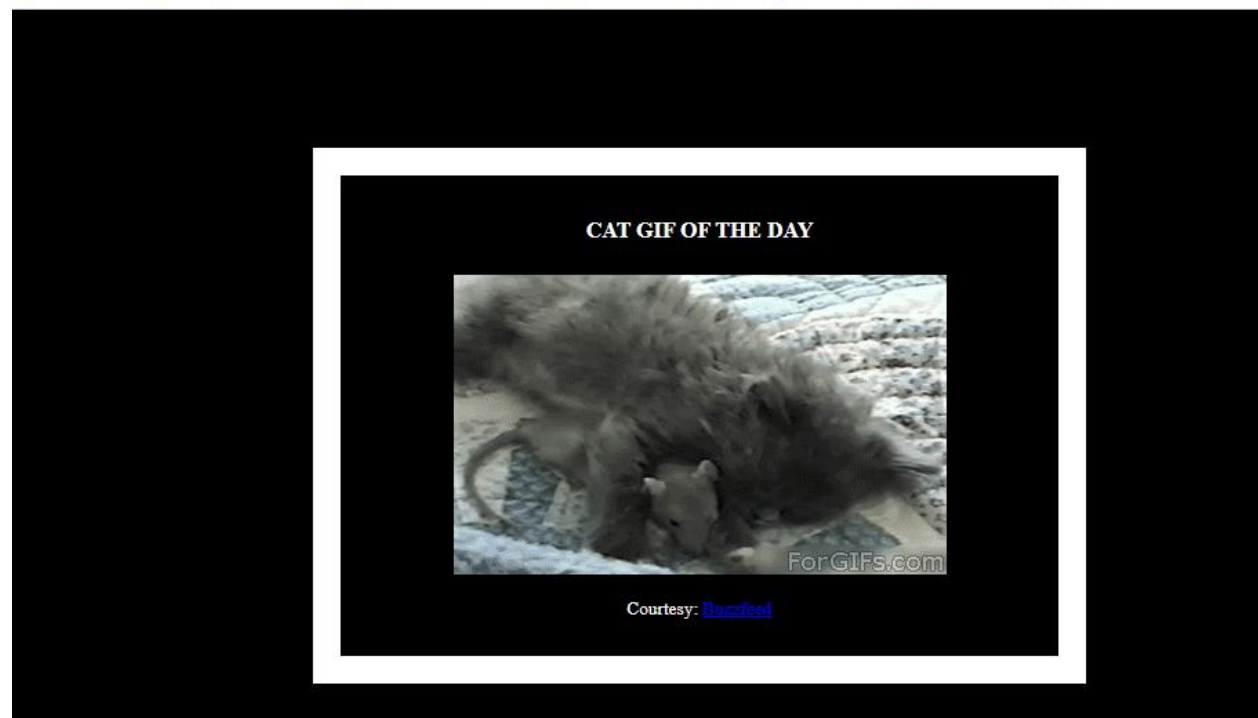
10

```
$ docker run -p 8888:5000 --name myfirstapp356 ntout/myfirstapp356
* Running on http://0.0.0.0:5000/ (Press CTRL+C to quit)
```

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chrome | 192.168.99.101:8888

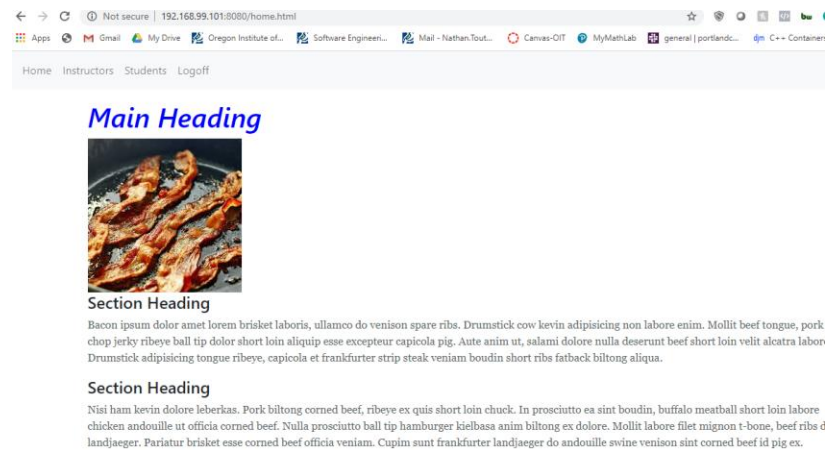
My Drive Oregon Institute of... Software Engineeri... Mail - Nathan.Tout... Canvas-OIT MyMathLab general | portlandc...



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```
$ docker push ntout/myfirstapp356
The push refers to repository [docker.io/ntout/myfirstapp356]
08940d711a16: Pushed
2aaa6697f0a2: Pushed
62ea26a71e2c: Mounted from ntout/myfirstapp
ebc013804dc8: Mounted from ntout/myfirstapp
5c5d89167461: Mounted from ntout/myfirstapp
f566c57e6f2d: Mounted from ntout/myfirstapp
latest: digest: sha256:3b9bc396f086ce418bd9e6ef3d8a4ddb1476e3c056b2b7cd53eeb24c638d4448 size: 1572
```

Exercise 4 - Your Web Application in a Container



<https://hub.docker.com/repository/docker/ntout/mysite2>