

Devops - Assignment - 05

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Class: MSc. C.S. B-21

Try 30 docker commands with different combination and paste the output in the file.

1. `docker pull ubuntu:latest`

```
latest: Pulling from library/ubuntu
2ab09b027e7f: Pull complete
Digest: sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21
Status: Downloaded newer image for ubuntu:latest
docker.io/library/ubuntu:latest
```

2. `docker image ls`

REPOSITORY	TAG	IMAGE ID	CREATED
SIZE			
web	latest	ce4ed44de852	34 hours ago
96MB			
sorcelock/web	latest	ce4ed44de852	34 hours ago
96MB			
test	latest	fb0a690b2e76	3 days ago
96MB			
alpine	latest	9ed4aefc74f6	2 weeks ago
7.04MB			
ubuntu	latest	08d22c0ceb15	6 weeks ago
77.8MB			

3. `docker images`

REPOSITORY	TAG	IMAGE ID	CREATED
SIZE			
web	latest	ce4ed44de852	34 hours ago
96MB			
sorcelock/web	latest	ce4ed44de852	34 hours ago
96MB			
test	latest	fb0a690b2e76	3 days ago
96MB			
alpine	latest	9ed4aefc74f6	2 weeks ago
7.04MB			
ubuntu	latest	08d22c0ceb15	6 weeks ago
77.8MB			

4. `docker container run -it ubuntu:latest`

```
root@6842831713df:/#
```

5. `docker run -itd ubuntu:latest`

```
699c04025233df19fa56352f987dce63d9022f5ab9899f047c7267f6df86411
```

6. `docker ps`

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
PORTS	NAMES			
2a916b13b824	ubuntu:latest	"/bin/bash"	3 seconds ago	Up 2 seconds
	priceless_robinson			
699c04025233	ubuntu:latest	"/bin/bash"	2 minutes ago	Up 2 minutes
	wizardly_snyder			

7. `docker container stop wizardly_snyder`

```
wizardly_snyder
```

8. `docker ps -a`

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
PORTS	NAMES			
2a916b13b824	ubuntu:latest	"/bin/bash"	About a minute ago	Up About
	priceless_robinson			a minute
699c04025233	ubuntu:latest	"/bin/bash"	4 minutes ago	Exited
(137) 48 seconds ago	wizardly_snyder			

9. `docker container ls`

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
PORTS	NAMES			
2a916b13b824	ubuntu:latest	"/bin/bash"	3 seconds ago	Up 2 seconds
	priceless_robinson			
699c04025233	ubuntu:latest	"/bin/bash"	2 minutes ago	Up 2 minutes

10. `docker container exec priceless_robinson ps aux`

USER	PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME	COMMAND
root	1	0.0	0.0	4624	3712	pts/0	Ss+	04:41	0:00	/bin/bash
root	9	3.0	0.0	7060	2944	?	Rs	04:45	0:00	ps aux

11. `docker exec priceless_robinson ps aux`

USER	PID	%CPU	%MEM	VSZ	RSS	TTY	STAT	START	TIME	COMMAND
root	1	0.0	0.0	4624	3712	pts/0	Ss+	04:41	0:00	/bin/bash
root	9	3.0	0.0	7060	2944	?	Rs	04:45	0:00	ps aux

12. `docker container attach priceless_robinson`

```
root@2a916b13b824:/#
```

13. `docker attach priceless_robinson`

```
root@2a916b13b824:/#
```

14. `docker image inspect ubuntu:latest`

```
[
  {
    "Id":
"sha256:08d22c0ceb150ddeb2237c5fa3129c0183f3cc6f5eeb2e7aa4016da3ad02140a",
    "RepoTags": [
      "ubuntu:latest"
    ],
    "RepoDigests": [
      "ubuntu@sha256:67211c14fa74f070d27cc59d69a7fa9aeff8e28ea118ef3babc295a0428a6d21
"
    ],
    "Parent": "",
    "Comment": "",
    "Created": "2023-03-08T04:44:27.714921351Z",
    "Container":
"d861c2e30ff0e91068a1939cec375a726f32d03219ea94907ef2b2d7257f2053",
    "ContainerConfig": {
      "Hostname": "d861c2e30ff0",
      "Domainname": "",
      "User": "",
      "AttachStdin": false,
      "AttachStdout": false,
      "AttachStderr": false,
      "Tty": false,
      "OpenStdin": false,
      "StdinOnce": false,
      "Env": [
        "PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"
      ],
      "Cmd": [
        "/bin/sh",
        "-c",
        "#(nop) ",

```

```
    "CMD [\"/bin/bash\"]"
  ],
  "Image":
    "sha256:7a0565b2a969e490c9d262ea6145cf91ce909c0b06c3586a57b6267f90585911",
    "Volumes": null,
    "WorkingDir": "",
    "Entrypoint": null,
    "OnBuild": null,
    "Labels": {
      "org.opencontainers.image.ref.name": "ubuntu",
      "org.opencontainers.image.version": "22.04"
    }
  },
  "DockerVersion": "20.10.12",
  "Author": "",
  "Config": {
    "Hostname": "",
    "Domainname": "",
    "User": "",
    "AttachStdin": false,
    "AttachStdout": false,
    "AttachStderr": false,
    "Tty": false,
    "OpenStdin": false,
    "StdinOnce": false,
    "Env": [

"PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin"
    ],
    "Cmd": [
      "/bin/bash"
    ],
    "Image":
      "sha256:7a0565b2a969e490c9d262ea6145cf91ce909c0b06c3586a57b6267f90585911",
      "Volumes": null,
      "WorkingDir": "",
      "Entrypoint": null,
      "OnBuild": null,
      "Labels": {
        "org.opencontainers.image.ref.name": "ubuntu",
        "org.opencontainers.image.version": "22.04"
      }
    },
    "Architecture": "amd64",
    "Os": "linux",
    "Size": 77806931,
    "VirtualSize": 77806931,
    "GraphDriver": {
      "Data": {
        "MergedDir":
"/var/lib/docker/overlay2/6febb1ac87ae31bd22c5d0ab663de4cad0416df711ae8b0b6b78d
d6162a782ee/merged",
        "UpperDir":
```

```

"/var/lib/docker/overlay2/6febb1ac87ae31bd22c5d0ab663de4cad0416df711ae8b0b6b78d
d6162a782ee/diff",
    "WorkDir":
"/var/lib/docker/overlay2/6febb1ac87ae31bd22c5d0ab663de4cad0416df711ae8b0b6b78d
d6162a782ee/work"
  },
  "Name": "overlay2"
},
"RootFS": {
  "Type": "layers",
  "Layers": [

"sha256:b93c1bd012ab8fda60f5b4f5906bf244586e0e3292d84571d3abb56472248466"
  ]
},
"Metadata": {
  "LastTagTime": "0001-01-01T00:00:00Z"
}
}
]

```

15. `docker image history ubuntu:latest`

IMAGE SIZE	CREATED COMMENT	CREATED BY	
08d22c0ceb15	6 weeks ago	/bin/sh -c #(nop) CMD ["/bin/bash"]	0B
<missing>	6 weeks ago	/bin/sh -c #(nop) ADD file:c8ef6447752cab254...	
77.8MB			
<missing>	6 weeks ago	/bin/sh -c #(nop) LABEL org.opencontainers...	0B
<missing>	6 weeks ago	/bin/sh -c #(nop) LABEL org.opencontainers...	0B
<missing>	6 weeks ago	/bin/sh -c #(nop) ARG LAUNCHPAD_BUILD_ARCH	0B
<missing>	6 weeks ago	/bin/sh -c #(nop) ARG RELEASE	0B

16. `docker image ls --filter reference='*:latest'`

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
web	latest	ce4ed44de852	37 hours ago	96MB
test	latest	fb0a690b2e76	3 days ago	96MB
alpine	latest	9ed4aefc74f6	2 weeks ago	7.04MB
ubuntu	latest	08d22c0ceb15	6 weeks ago	77.8MB

17. `docker images --format '{{.Repository}} {{.Tag}} {{.Size}}'`

```

web latest 96MB
sorcelock/web latest 96MB
test latest 96MB
alpine latest 7.04MB
ubuntu latest 77.8MB

```

18. docker search ubuntu

NAME	STARS	OFFICIAL	AUTOMATED	DESCRIPTION
ubuntu	15857	[OK]		Ubuntu is a Debian-based Linux operating sys...
websphere-liberty	293	[OK]		WebSphere Liberty multi-architecture images ...
open-liberty	59	[OK]		Open Liberty multi-architecture images based...
neurodebian	99	[OK]		NeuroDebian provides neuroscience research s...
ubuntu-debootstrap	50	[OK]		DEPRECATED; use "ubuntu" instead
ubuntu-upstart	112	[OK]		DEPRECATED, as is Upstart (find other proces...
ubuntu/nginx	84			Nginx, a high-performance reverse proxy & we...
ubuntu/cortex	3			Cortex provides storage for Prometheus. Long...
ubuntu/squid	54			Squid is a caching proxy for the Web. Long-t...
ubuntu/apache2	57			Apache, a secure & extensible open-source HT...
ubuntu/mysql	45			MySQL open source fast, stable, multi-thread...
ubuntu/kafka	29			Apache Kafka, a distributed event streaming ...
ubuntu/bind9	51			BIND 9 is a very flexible, full-featured DNS...
ubuntu/redis	17			Redis, an open source key-value store. Long...
ubuntu/prometheus	40			Prometheus is a systems and service monitori...
ubuntu/postgres	27			PostgreSQL is an open source object-relation...
ubuntu/zookeeper	5			ZooKeeper maintains configuration informatio...
ubuntu/grafana	9			Grafana, a feature rich metrics dashboard & ...
ubuntu/memcached	5			Memcached, in-memory keyvalue store for smal...
ubuntu/prometheus-alertmanager	8			Alertmanager handles client alerts from Prom...
ubuntu/dotnet-deps	7			Chiselled Ubuntu for self-contained .NET & A...
ubuntu/dotnet-runtime	5			Chiselled Ubuntu runtime image for .NET apps...
ubuntu/cassandra	2			Cassandra, an open source NoSQL distributed ...
ubuntu/dotnet-aspnet	4			Chiselled Ubuntu runtime image for ASP.NET a...

19. `docker search ubuntu --filter "is-official=true"`

NAME	DESCRIPTION	STARS
OFFICIAL AUTOMATED		
ubuntu [OK]	Ubuntu is a Debian-based Linux operating sys...	15857
websphere-liberty [OK]	WebSphere Liberty multi-architecture images ...	293
open-liberty [OK]	Open Liberty multi-architecture images based...	59
neurodebian [OK]	NeuroDebian provides neuroscience research s...	99
ubuntu-debootstrap [OK]	DEPRECATED; use "ubuntu" instead	50
ubuntu-upstart [OK]	DEPRECATED, as is Upstart (find other proces...	112

20. `docker container rm priceless_robinson`

```
priceless_robinson
```

21. `docker container start wizardly_snyder`

```
wizardly_snyder
```

22. `docker image rm ce4ed44de852 -f`

```
Untagged: web:latest
Untagged: sorcelock/web:latest
Deleted:
sha256:ce4ed44de8527db34dfb63821a6b9e911c556420e3dd20a3a9863d7f3168c495
Deleted:
sha256:39d0d2ff4d14cd0773567747fa62d4962cf3bf6bbbc9c66543124c66cf3f1108
Deleted:
sha256:3ad4634f2b8fd620c1a4816ebcc940b5f2ddcd359ef5222b94a9e94628d9aaa5
Deleted:
sha256:5dbb9549a84d31b0505488598c485fd339c54531c94497c6fb1728aa26137bf9
Deleted:
sha256:d16260d1dcbf9ce9baa5a92ad59d46129ae573b8dd27d7d7f6d9f2a59d08fcbe5
```

23. `docker build -t web:latest .`

DEPRECATED: The legacy builder is deprecated and will be removed in a future release.

Install the buildx component to build images with BuildKit:

<https://docs.docker.com/go/buildx/>

Sending build context to Docker daemon 86.53kB

Step 1/8 : FROM alpine

---> 9ed4aefc74f6

Step 2/7 : RUN apk add --update nodejs npm curl

---> Using cache

---> 5e5ee0617391

Step 3/7 : COPY . /src

---> 4ae4de18563a

Step 4/7 : WORKDIR /src

---> Running in 627f8716cca5

Removing intermediate container 627f8716cca5

---> 0fb88209ba95

Step 5/7 : RUN npm install

---> Running in 110f26e4c86b

npm WARN deprecated formidable@1.2.6: Please upgrade to latest, formidable@v2 or formidable@v3! Check these notes: <https://bit.ly/2ZEqIau>

npm WARN deprecated superagent@6.1.0: Please upgrade to v7.0.2+ of superagent. We have fixed numerous issues with streams, form-data, attach(), filesystem errors not bubbling up (ENOENT on attach()), and all tests are now passing. See the releases tab for more information at

<<https://github.com/visionmedia/superagent/releases>>.

added 207 packages, and audited 208 packages in 1m

31 packages are looking for funding

run `npm fund` for details

6 vulnerabilities (1 moderate, 5 high)

To address issues that do not require attention, run:

npm audit fix

To address all issues, run:

npm audit fix --force

Run `npm audit` for details.

Removing intermediate container 110f26e4c86b

---> b97615946c67

Step 6/7 : EXPOSE 8080

---> Running in e2d52ae1b5ec

Removing intermediate container e2d52ae1b5ec

---> 8a8dbcd1d7c9

Step 7/7 : ENTRYPOINT ["node", "./app.js"]

---> Running in 5e2d25a3c224

Removing intermediate container 5e2d25a3c224

---> b4ccfa69c974


```
Successfully built b4ccfa69c974
Successfully tagged web:latest
```

24. `docker image tag web:latest sorcelock/web:latest`

REPOSITORY	TAG	IMAGE ID	CREATED
SIZE			
web	latest	b4ccfa69c974	16 minutes ago
96MB			
sorcelock/web	latest	b4ccfa69c974	16 minutes ago
96MB			

25. `docker network ls`

NETWORK ID	NAME	DRIVER	SCOPE
3a2f5de26697	bridge	bridge	local
2e3480bc39f4	host	host	local
9aac591d2186	none	null	local

26. `docker network inspect bridge`

```
[
  {
    "Name": "bridge",
    "Id": "3a2f5de266973c785b852c3229851b7e998ba3297bc368497b52fdaacbb35c85",
    "Created": "2023-04-18T14:23:59.153817121+05:30",
    "Scope": "local",
    "Driver": "bridge",
    "EnableIPv6": false,
    "IPAM": {
      "Driver": "default",
      "Options": null,
      "Config": [
        {
          "Subnet": "172.17.0.0/16",
          "Gateway": "172.17.0.1"
        }
      ]
    },
    "Internal": false,
    "Attachable": false,
    "Ingress": false,
    "ConfigFrom": {
      "Network": ""
    },
    "ConfigOnly": false,
    "Containers": {
      "699c040252333df19fa56352f987dce63d9022f5ab9899f047c7267f6df86411":
```

```
{
    "Name": "wizardly_snyder",
    "EndpointID":
"eac75e227ff280a2712353459760dfafb675b1e9fb4e5afe7927dfd0b2a83076",
    "MacAddress": "02:42:ac:11:00:02",
    "IPv4Address": "172.17.0.2/16",
    "IPv6Address": ""
  }
},
"Options": {
  "com.docker.network.bridge.default_bridge": "true",
  "com.docker.network.bridge.enable_icc": "true",
  "com.docker.network.bridge.enable_ip_masquerade": "true",
  "com.docker.network.bridge.host_binding_ipv4": "0.0.0.0",
  "com.docker.network.bridge.name": "docker0",
  "com.docker.network.driver.mtu": "1500"
},
"Labels": {}
}
]
```

27. docker network inspect host

```
[
  {
    "Name": "host",
    "Id":
"2e3480bc39f4d5981eb78e6d2ca10682799dfb1151d406daa298fd7f27103aae",
    "Created": "2023-04-15T22:32:45.94090405+05:30",
    "Scope": "local",
    "Driver": "host",
    "EnableIPv6": false,
    "IPAM": {
      "Driver": "default",
      "Options": null,
      "Config": []
    },
    "Internal": false,
    "Attachable": false,
    "Ingress": false,
    "ConfigFrom": {
      "Network": ""
    },
    "ConfigOnly": false,
    "Containers": {},
    "Options": {},
    "Labels": {}
  }
]
```

28. `docker network create mynet`

```
bfcbf69843e0cbbaa63d73f74025839910b5fe137198dfa0fce2e558e04e9f29
```

29. `docker info`

```
Client:
 Context:      default
 Debug Mode:  false
 Plugins:
  compose: Docker Compose (Docker Inc.)
    Version:  2.17.2
    Path:     /usr/lib/docker/cli-plugins/docker-compose
  scan: Docker Scan (Docker Inc.)
    Version:  v0.1.0-278-g284fb08661
    Path:     /usr/lib/docker/cli-plugins/docker-scan

Server:
 Containers: 3
  Running: 1
  Paused: 0
  Stopped: 2
 Images: 15
 Server Version: 23.0.3
 Storage Driver: overlay2
  Backing Filesystem: extfs
  Supports d_type: true
  Using metacopy: true
  Native Overlay Diff: false
  userxattr: false
 Logging Driver: json-file
 Cgroup Driver: systemd
 Cgroup Version: 2
 Plugins:
  Volume: local
  Network: bridge host ipvlan macvlan null overlay
  Log: awslogs fluentd gcplogs gelf journald json-file local logentries splunk
syslog
 Swarm: inactive
 Runtimes: runc io.containerd.runc.v2
 Default Runtime: runc
 Init Binary: docker-init
 containerd version: 1fbd70374134b891f97ce19c70b6e50c7b9f4e0d.m
 runc version:
 init version: de40ad0
 Security Options:
  seccomp
   Profile: builtin
  cgroupns
 Kernel Version: 6.2.10-arch1-1
```

```
Operating System: EndeavourOS
OSType: linux
Architecture: x86_64
CPUs: 16
Total Memory: 7.137GiB
Name: medusa
ID: a37ce111-bf49-4ae4-b1c4-7983ea4b5b7c
Docker Root Dir: /var/lib/docker
Debug Mode: false
Registry: https://index.docker.io/v1/
Experimental: false
Insecure Registries:
  127.0.0.0/8
Live Restore Enabled: false
```

30. `docker version`

```
Client:
 Version:           23.0.3
 API version:       1.42
 Go version:        go1.20.2
 Git commit:        3e7cbfdee1
 Built:             Wed Apr  5 13:17:36 2023
 OS/Arch:           linux/amd64
 Context:           default

Server:
 Engine:
  Version:          23.0.3
  API version:      1.42 (minimum version 1.12)
  Go version:       go1.20.2
  Git commit:       59118bff50
  Built:            Wed Apr  5 13:17:36 2023
  OS/Arch:          linux/amd64
  Experimental:     false
 containerd:
  Version:          v1.7.0
  GitCommit:        1fbd70374134b891f97ce19c70b6e50c7b9f4e0d.m
 runc:
  Version:          1.1.6
  GitCommit:
 docker-init:
  Version:          0.19.0
  GitCommit:        de40ad0
```