Problem 1


```
Activities    Terminal                                    Dec 14  2:40 AM ●
                           mmansour@localhost:/home/mmansour
File  Edit  View  Search  Terminal  Tabs  Help
              mmansour@localhost:/home/mmansour            ×           mmansour@localhost:/home/mmansou

[root@localhost mmansour]# docker network create --driver bridge --subnet 128.23.16.0/24 --gateway 128.23.16.1 MYNETWORK
95dc5584fac5e5fc6459ae636298e1542932fce45a6462aa59a22862ba55e6f7
[root@localhost mmansour]#
```

```
[root@localhost mmansour]# docker run --network=MYNETWORK --name=docker1 -d nginx
f810b8fc1f5b1b1a1b69923e51efbf8edd5dc9d23ec3cd877e065fa40d89a898
[root@localhost mmansour]# docker run --network=MYNETWORK --name=docker2 -d nginx
22795764c516e5d3f53d17b106937b6a9ab4bd987b17b3211c040c205fa763ad
[root@localhost mmansour]#
```

```
root@22795764c516:/# ping 128.23.16.2
PING 128.23.16.2 (128.23.16.2) 56(84) bytes of data.
64 bytes from 128.23.16.2: icmp_seq=1 ttl=64 time=0.419 ms
64 bytes from 128.23.16.2: icmp_seq=2 ttl=64 time=0.373 ms
64 bytes from 128.23.16.2: icmp_seq=3 ttl=64 time=0.340 ms
```

Problem 2

```
FROM httpd:2.4

COPY myfile.html /usr/local/apache2/htdocs/

COPY my-httpd.conf /usr/local/apache2/conf/httpd.conf

EXPOSE 9999



ENV CONTAINER=docker

CMD echo ${CONTAINER}
```

```
[root@localhost problem2]# docker build -t run-html .
Sending build context to Docker daemon   22.02kB
Step 1/6 : FROM httpd:2.4
2.4: Pulling from library/httpd
025c56f98b67: Already exists
94efcc2978ca: Pull complete
f06194b937dc: Pull complete
e8f73658d652: Pull complete
```

```
[root@localhost problem2]# docker run run-html
docker
```

Problem3

```yaml
version: "3"
services:
  img_flask:
    build: ./flask
    container_name: cont_flask

    depends_on:
       - img_nginx
       - img_mysql

  img_nginx:
    image: nginx:stable-alpine
    container_name: cont_nginx

  img_mysql:
    image: mysql
    container_name: cont_mysql
    command: sleep 50
    volumes:
        - type: volume
          source: vol_sql_1
          target: /code

volumes:
  vol_sql_1:
~
```

Problem 4

```dockerfile
# extend base image of node
FROM node:10-alpine

# make dir app working dir
RUN mkdir -p /node/weather-app
WORKDIR /node/weather-app

COPY . ./

RUN apk update

RUN apk add npm

ENV APP_VERSION=latest

ENV NODE_ENV=production

RUN cp -r /node/weather-app  /var/weather-app

WORKDIR /var/weather-app

EXPOSE 3000

ENTRYPOINT [ "./bin/www" ]

CMD "npm start"
~
~
```