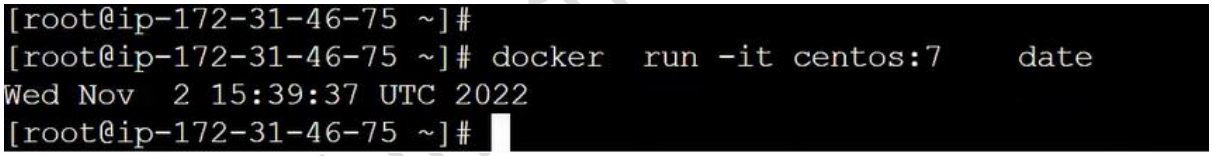
## Summary

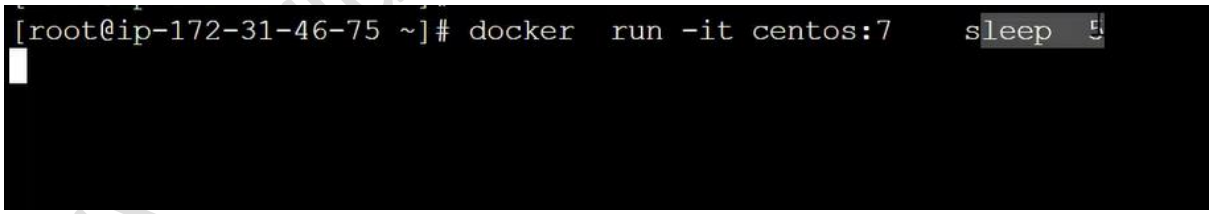
## Session No – 10

- To enable docker services permanently i.e. whenever we start the operating system automatically start the docker services

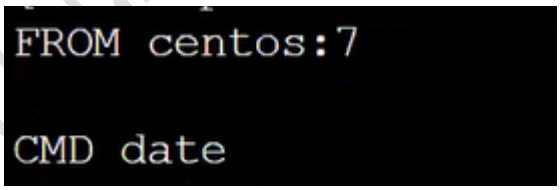

- If our requirement is we want to launch the container then run the command & stop the container then we can pass the command or script at the time of running the container




- When we pass the command with the help of the docker run command then the life of the container will be the life of the command




- CMD is used to run the command at run time docker file for date command




- Building the image

- Now as soon as we launch the container from the image automatically date command will run

```
[root@ip-172-31-46-75 dcode]# docker run  -it myd:v1
Wed Nov  2 15:48:55 UTC 2022
[root@ip-172-31-46-75 dcode]#
```

- **Docker history (image name )** command is used to see the history of the image

```
[root@ip-172-31-46-75 dcode]# docker history myd:v1
IMAGE          CREATED         CREATED BY                                      SIZE      COMMENT
ce16443daf79   2 minutes ago   /bin/sh -c #(nop)  CMD ["/bin/sh" "-c" "date…   0B
eeb6ee3f44bd   13 months ago   /bin/sh -c #(nop)  CMD ["/bin/bash"]            0B
<missing>      13 months ago   /bin/sh -c #(nop)  LABEL org.label-schema.sc…   0B
<missing>      13 months ago   /bin/sh -c #(nop) ADD file:b3ebbe8bd304723d4…   204MB
[root@ip-172-31-46-75 dcode]#
```

- We can override the date command with the cal command while launching the container

```
[root@ip-172-31-46-75 hcode]# docker run -it myh:v1   cal
    November 2022
Su Mo Tu We Th Fr Sa
       1  2  3  4  5
 6  7  8  9 10 11 12
13 14 15 16 17 18 19
20 21 22 23 24 25 26
27 28 29 30
```

- The terminal inside the container is because of the bash shell

```
[root@ip-172-31-46-75 hcode]# docker run -it myh:v1   bash
[root@98dbf83c5cd2 /]#
[root@98dbf83c5cd2 /]#
[root@98dbf83c5cd2 /]#
```

- -DFOREGROUND is a keyword to run HTTPd webserver infinitely

```
[root@ip-172-31-46-75 hcode]# systemctl status  httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; disabled; vendor preset: disabled)
   Active: active (running) since Wed 2022-11-02 16:20:44 UTC; 11s ago
     Docs: man:httpd.service(8)
 Main PID: 7020 (httpd)
   Status: "Total requests: 0; Idle/Busy workers 100/0;Requests/sec: 0; Bytes served/sec:   0 B/sec"
    Tasks: 47
   Memory: 13.5M
   CGroup: /system.slice/httpd.service
           ├─7020 /usr/sbin/httpd -DFOREGROUND
           ├─7021 /usr/sbin/httpd -DFOREGROUND
           ├─7022 /usr/sbin/httpd -DFOREGROUND
           ├─7023 /usr/sbin/httpd -DFOREGROUND
           ├─7024 /usr/sbin/httpd -DFOREGROUND
           └─7025 /usr/sbin/httpd -DFOREGROUND

Nov 02 16:20:44 ip-172-31-46-75.ap-south-1.compute.internal systemd[1]: Starting The Apache HTTP Server...
Nov 02 16:20:44 ip-172-31-46-75.ap-south-1.compute.internal systemd[1]: Started The Apache HTTP Server.
```

- Creating an Apache webserver image
  - Docker file

```
FROM centos:7

RUN yum install httpd -y
RUN yum install net-tools  -y
RUN echo welcome > /var/www/html/index.html

CMD  httpd  -DFOREGROUND
```

  - Building the image

```
[root@ip-172-31-46-75 hcode]# docker build -t myh:v1
Sending build context to Docker daemon  2.048kB
Step 1/5 : FROM centos:7
 ---> eeb6ee3f44bd
Step 2/5 : RUN yum install httpd -y
 ---> Using cache
 ---> dc0633ab3943
Step 3/5 : RUN yum install net-tools  -y
 ---> Using cache
 ---> a165516cc2bf
Step 4/5 : RUN echo welcome > /var/www/html/index.html
 ---> Using cache
 ---> d30e7f1e6c1c
Step 5/5 : CMD  httpd  -DFOREGROUND
 ---> Running in 2ac24c4d577c
Removing intermediate container 2ac24c4d577c
 ---> ff786f1f0398
Successfully built ff786f1f0398
```

  - Launching the container from the image

```
[root@ip-172-31-46-75 hcode]# docker run -it myh:v1
AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using 172.17.0.2. Set the 'Serv
erName' directive globally to suppress this message
```

  - Accessing the webpage with the curl command

```
[root@ip-172-31-46-75 ~]# curl http://172.17.0.2/index.html
welcome
[root@ip-172-31-46-75 ~]# curl http://172.17.0.2/index.html
welcome
```

- **Docker save** command is used to save the image
  - Command:- **docker save ( image name: tag)  -o (Name with extention.tar )**

```
[root@ip-172-31-46-75 hcode]# docker save myh:v1   -o  myweb.tar
[root@ip-172-31-46-75 hcode]# ls
Dockerfile  myweb.tar
[root@ip-172-31-46-75 hcode]#
```

- **Docker load** command is used to load the image from a tar file
    - Command:- **docker load -i (file name )**
        - **-i** to read from a tar file

```
[root@ip-172-31-46-75 hcode]# docker load -i myweb.tar
Loaded image: myh:v1
[root@ip-172-31-46-75 hcode]# docker images
REPOSITORY   TAG       IMAGE ID       CREATED          SIZE
myh          v1        ff786f1f0398   11 minutes ago   603MB
```