

# EXPERIMENT - 6 (Docker Link)

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Open the terminal and run a postgres container by the command 'docker run -it -d --name db training/postgres'.

```
Terminal +
root@intactrive:~/bash Terminal
A good starting point is executing 'docker'
$
$ docker run -it -d --name db training/postgres
Unable to find image 'training/postgres:latest' locally
latest: Pulling from training/postgres
a3ed95caeb02: Pull complete
6e71c809542e: Pull complete
2978d9af87ba: Pull complete
e1bca35b062f: Pull complete
500b6decf741: Pull complete
74b14ef2151f: Pull complete
7afd5ed3826e: Pull complete
3c69bb244f5e: Pull complete
d86f9ec5a5df: Pull complete
010fabf20157: Pull complete
Digest: sha256:a945dc6dcfbc8d009c3d972931608344b76c2870ce796da00a827bd50791907e
Status: Downloaded newer image for training/postgres:latest
f715a29eb8738dea0416cb2c951706860c0d5292da6ab55478e571c63834da8c
```

Once the command execution is complete and the pulling of the image gets over, run another container of image webapp linking it with the db container we just created by the command 'docker run -it -d --name web --link db:mydb training/webapp'.

```
$ docker run -it -d --name web --link db:mydb training/webapp
Unable to find image 'training/webapp:latest' locally
latest: Pulling from training/webapp
e190868d63f8: Pull complete
909cd34c6fd7: Pull complete
0b9bfabab7c1: Pull complete
a3ed95caeb02: Pull complete
10bbbc0fc0ff: Pull complete
fca59b508e9f: Pull complete
e7ae2541b15b: Pull complete
9dd97ef58ce9: Pull complete
a4c1b0cb7af7: Pull complete
Digest: sha256:06e9c1983bd6d5db5fba376ccd63bfa529e8d02f23d5079b8f74a616308fb11d
Status: Downloaded newer image for training/webapp:latest
aaa49f53d300cc7583b61ce577b510563c36191e96f56f841e07f9f8a0e1b8e5
```

When the other image is pulled completely and the container is running then switch to the terminal of the container by using 'docker exec -it web bash'. After logging, ping the container with which we linked the current container

```
$ docker exec -it web bash
root@aaa49f53d300:/opt/webapp# ping db
PING mydb (172.18.0.2) 56(84) bytes of data:
64 bytes from mydb (172.18.0.2): icmp_seq=1 ttl=64 time=0.112 ms
64 bytes from mydb (172.18.0.2): icmp_seq=2 ttl=64 time=0.078 ms
64 bytes from mydb (172.18.0.2): icmp_seq=3 ttl=64 time=0.066 ms
64 bytes from mydb (172.18.0.2): icmp_seq=4 ttl=64 time=0.082 ms
64 bytes from mydb (172.18.0.2): icmp_seq=5 ttl=64 time=0.066 ms
64 bytes from mydb (172.18.0.2): icmp_seq=6 ttl=64 time=0.095 ms
64 bytes from mydb (172.18.0.2): icmp_seq=7 ttl=64 time=0.062 ms
64 bytes from mydb (172.18.0.2): icmp_seq=8 ttl=64 time=0.062 ms
```

Now run another container without linking it to any of the previous containers and check all the containers with the command 'docker ps'.

Login to the container again with which we ran the ping command once and try pinging the newly created container, the ping command will fail because the container isn't linked with the other container.

```
$ docker run -it --name web2 training/webapp
7f7821969c52b732e6f2c6d56cf6095f6d4c540a3293f0f80a51a353a44
$ docker ps
CONTAINER ID        IMAGE               COMMAND             CREATED             STATUS              PORTS              NAMES
7f7821969c52        training/webapp     "python app.py"     14 seconds ago     Up 12 seconds      5000/tcp           web2
aaa49f53d300        training/webapp     "python app.py"     3 minutes ago      Up 3 minutes       5000/tcp           web
f715a290b873        training/postgres   "su postgres -c 'ps" 4 minutes ago      Up 4 minutes       5432/tcp           db
$ docker exec -it web2 bash
root@7f7821969c52:/opt/webapp# ping db
ping: unknown host db
root@7f7821969c52:/opt/webapp#
```