6. TROUBLESHOOTING CONTAINERS.
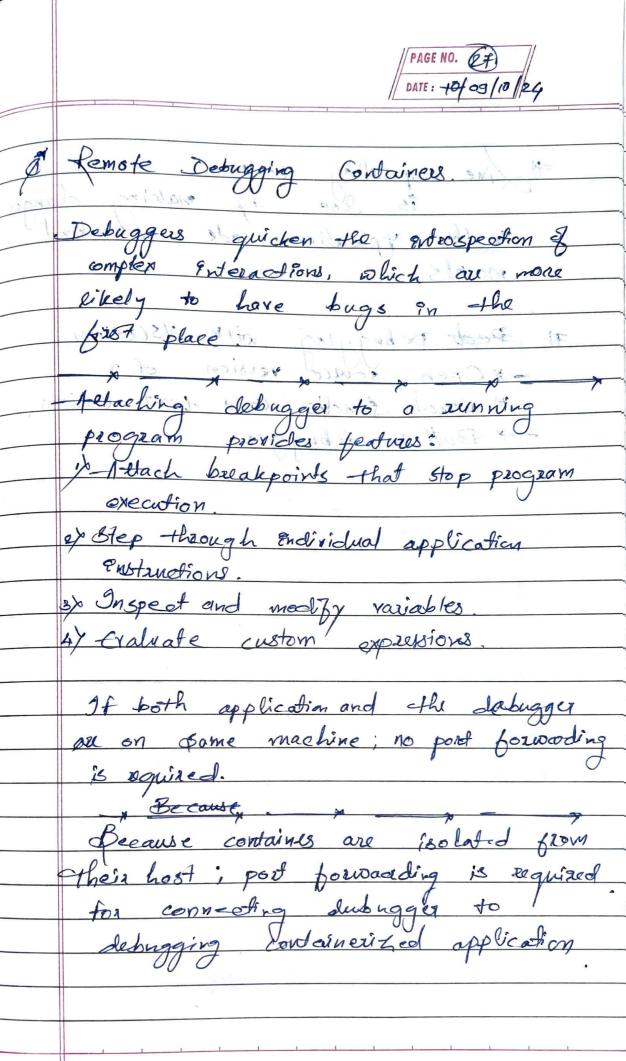
\# Podman logs container.
→ • To access information (error) of that that application encounters during startup.

To see logs in real time.
\# podman -f logs container

§ Container troubleshooting

.) Incorrect port mapping
If the port that is assigned to the container in port mapping configuration does not match the application port, then the containerized

\# podman port container_name
→ • Current container port mapping

8000/tcp ——→ 0.0.0.0 : 8080
Host. port ⤴   Accessible IP ⤴   ⤵ cont. port
              Host

\# (ss) socket statistics command list open ports.

A socket is the combination of a port and an IP address.

-p : Process using the socket.

-a : listening and established connections.

-n : numeric ports instead of mapped service names.

-t : TCP sockets

\# podman exec -it container_name
ss -pant

You can run the host system commands within the container network namespace by using the 'nsenter' command.

Container namespace can be targeted by '.n -t' command with cont. PID

\#co \# podman inspect container-name
--format '{{.state.Pid}}'
⟶ To get container PID

\# sudo nsenter -n -t cont_PID ss -pant

P Use elevated priviledges.

Q Container Network Connectivity Issues.

podman inspect container --format=
'{{. Network Settings. Networks }}'
→ To inspect container to check using a specific network.

When containers communicate by using Podman networks, there is no port mapping involved.

Q Name resolution Issue.

Podman provides container-to-container network traffic by using IP. But as IP changes, it could be done via hostname.

To do via hostname. DNS must be resolved. & DNS must be enabled.

podman network inspect Network name
→ To ensure DNS is enabled for a podman network.

It should be "dns_enabled": true,

Remote Debugging Containers.

Debuggers quicken the introspection of complex interactions, which are more likely to have bugs in the first place.

Attaching debugger to a running program provides features:

1) Attach breakpoints that stop program execution.

2) Step through individual application instructions.

3) Inspect and modify variables.

4) Evaluate custom expressions.

If both application and the debugger are on same machine; no port forwarding is required.

Because

Because containers are isolated from their host; port forwarding is required for connecting debugger to debugging containerized application.

#4 Live updating Code
is done by making changes
in the application code in bind
mauls.

Deet Debugging with VSCodium.
→ Open source version of
to visual Studio Code text editor.
→ Built in debugger.