# Memers 5th Meeting

SUSE Cloud Native Scholarship - Udacity

# Agenda

- Announcements
- Containers Demystified
- Q&A
- Fun Time

# Announcements

0%    L1 - Introduction to Cloud Nat

0%    L2 - Architecture consideratio

12%   L3 - Container Orchestration w

35%   L4 - Open Source PaaS

✓ 53%  **L5 - CI/CD with Cloud Native t**

# Announcements

**Isabella.Udacity**  3:00 PM
@channel

Hey Study Team Organizers time for our weekly Wednesday Pulse 🫀 check in!

**Please respond via the thread to the following prompts:**

1. **What did your Study Team work on or participate in last week?**
2. **What are your plans for this coming week?**
3. **Are you facing any challenges or blockers?**

A big kudos to our #st_memers team who hosted their second support session which looked like a huge success! 🎉

Also if your brain needs a break, check out the #st_hobbies_interests team for some lovely food & gardening photos! 😍

Catch you all around the workspace 🫶

# Announcements



**Vedita.Kamat** 🛡 7:51 PM
📜Reminder for Blogathon entries submission📜

If you love penning your thoughts down, if
you can explain a concept with an article, this is the opportunity for you to show your talent 😍
You can write a blog on the topics we suggest below. But you are free to write about anything
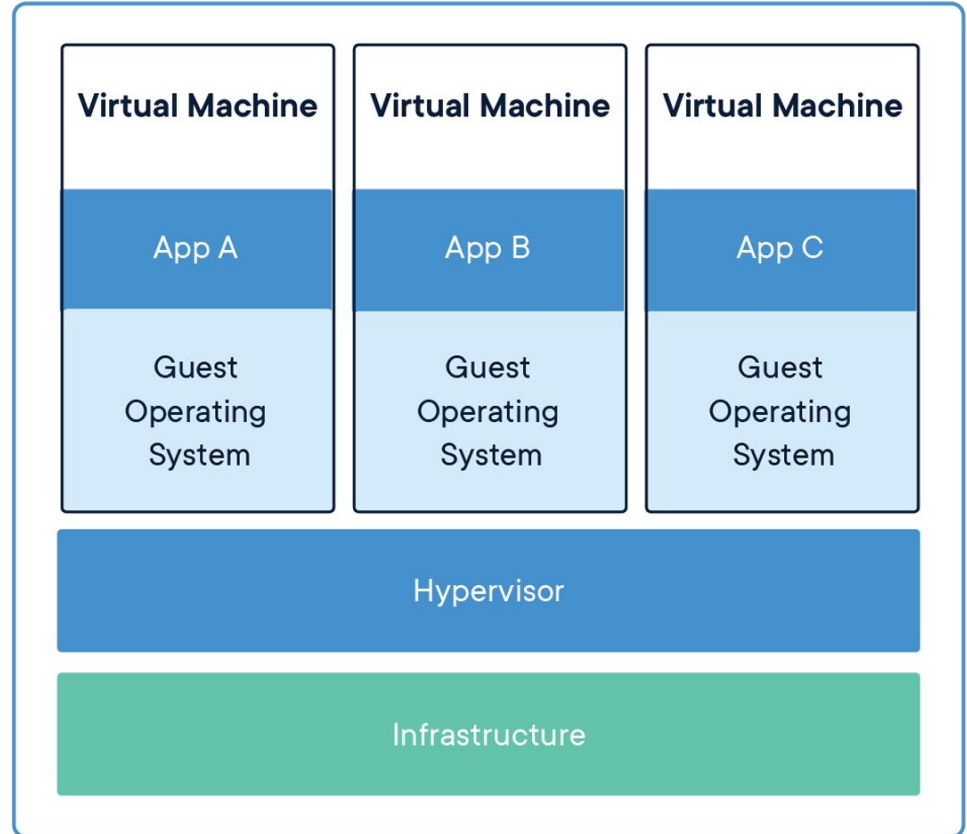else that interests you.✍️📝

Suggested Blog Topics
1. Basic concept explainers: Articles on pre-requisites like basic git commands, python,
flask,docker basics etc

2. Latest technologies in Cloud/AI: Write about the latest happenings in Cloud/AI that
astound you! Let everyone know about it🤩

3. Productivity hacks: We all need to stay motivated and productivity hacks can be a
great help to keep everything organized.Write about your daily productivity tools like
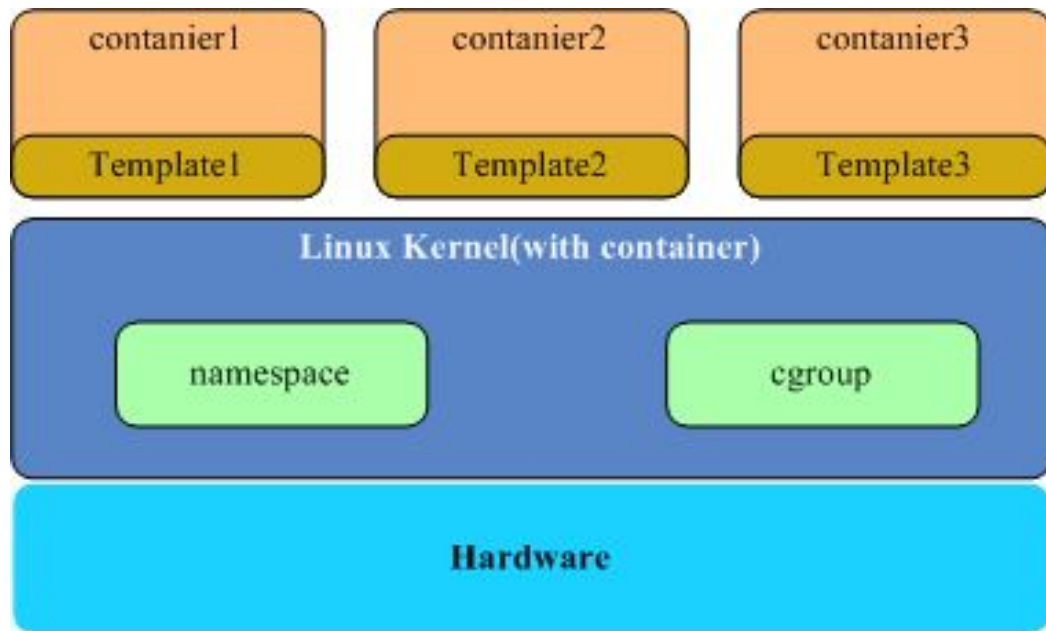Notion, Calendars, Todoist and more.

# Stay tuned!

- Support session
- Technical AMA session

# Containers Demystified

# From where it all started ?



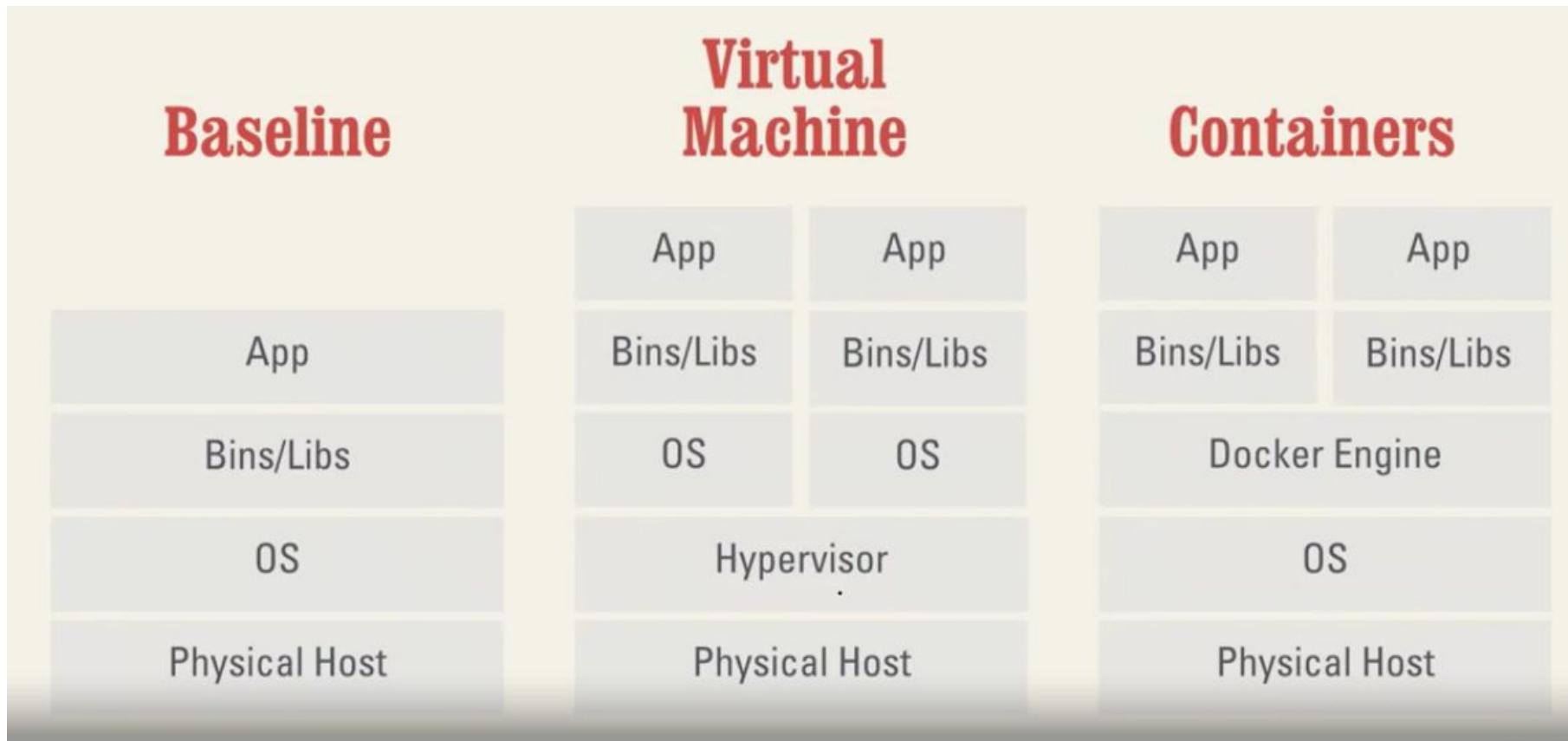| Virtual Machine | Virtual Machine | Virtual Machine |
|---|---|---|
| App A | App B | App C |
| Guest Operating System | Guest Operating System | Guest Operating System |

Hypervisor

Infrastructure

# Containers existed before Docker!



LXC (LinuX Containers) was the first, most complete implementation of Linux container manager. It was implemented in 2008 using **cgroups** and Linux **namespaces**.

# Containers vs. VMs

|  | Baseline | | Virtual Machine | | Containers | |
|---|---|---|---|---|---|---|
|  |  |  | App | App | App | App |
|  | App | | Bins/Libs | Bins/Libs | Bins/Libs | Bins/Libs |
|  | Bins/Libs | | OS | OS | Docker Engine | |
|  | OS | | Hypervisor | | OS | |
|  | Physical Host | | Physical Host | | Physical Host | |

# Why Containers?



WORKED FINE IN DEV

OPS PROBLEM NOW

memegenerator.net

IT WORKS ON MY MACHINE

THEN WE'LL SHIP YOUR MACHINE

AND THAT IS HOW DOCKER WAS BORN
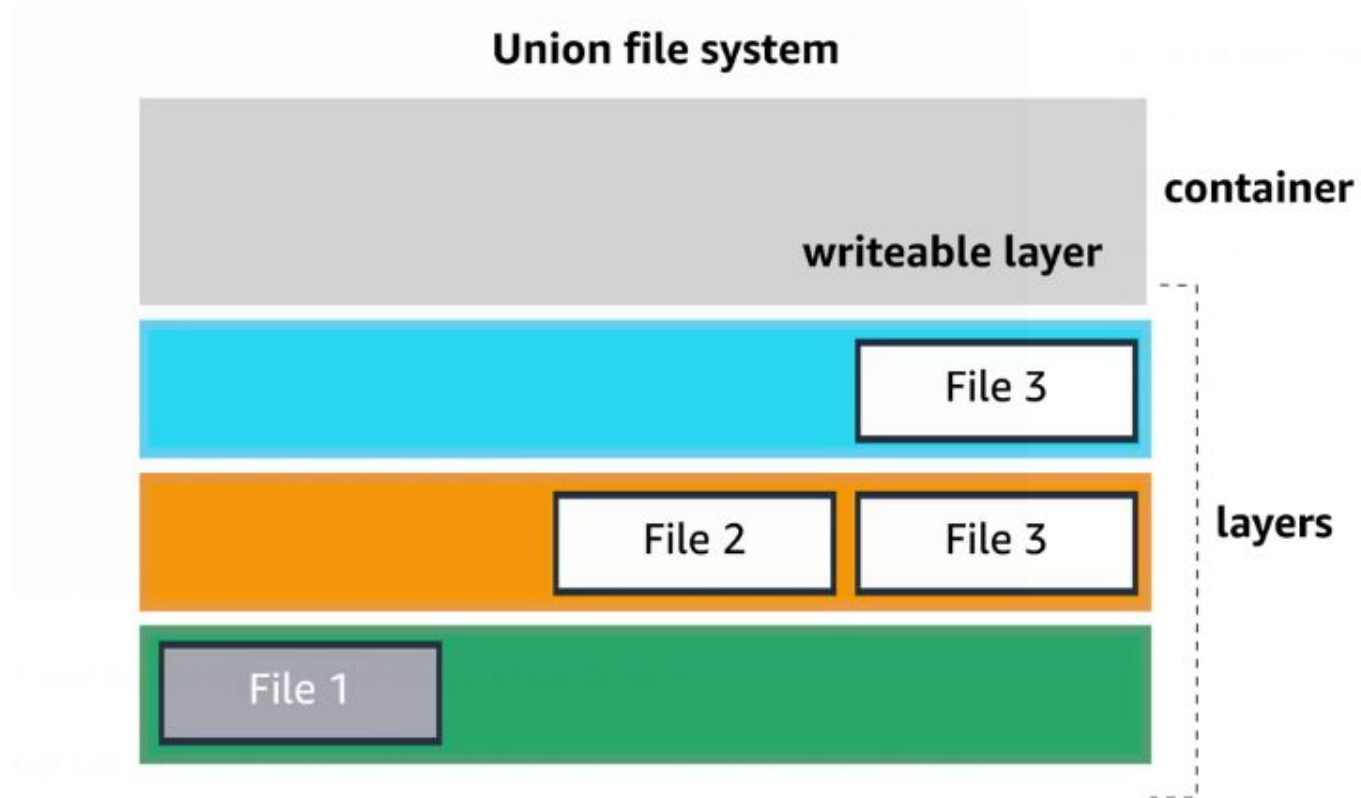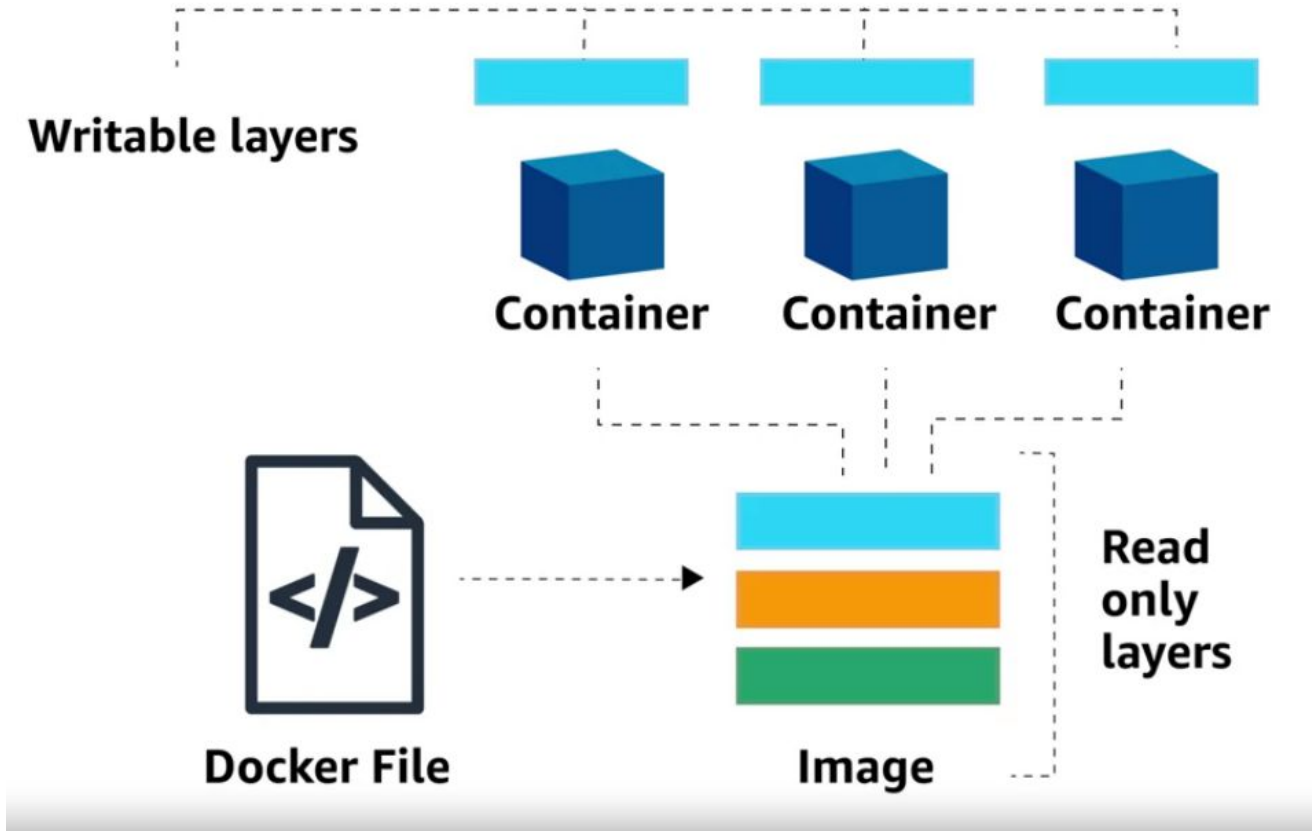
imgflip.com

# Docker under the hood!
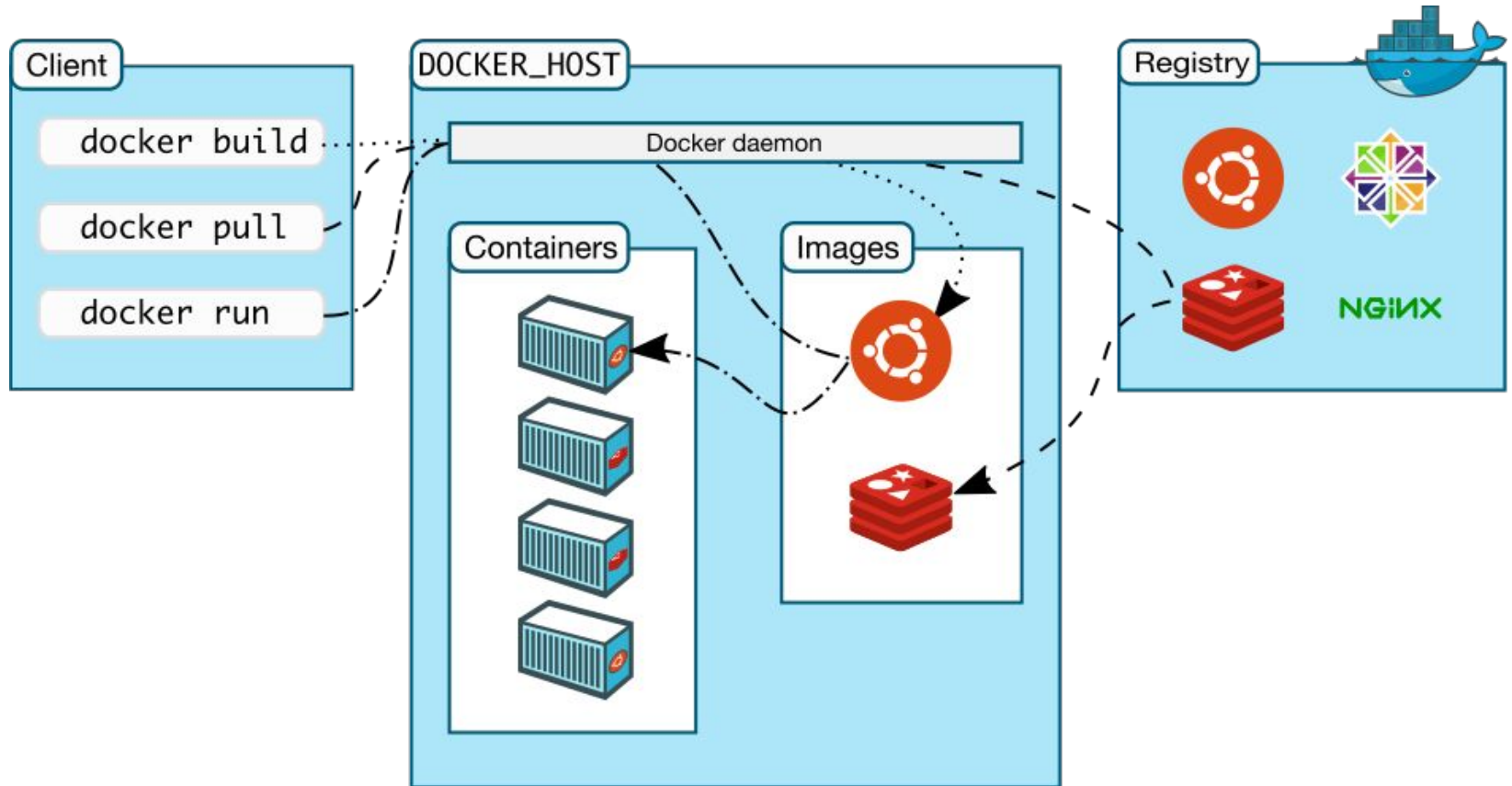
# Image vs. Container
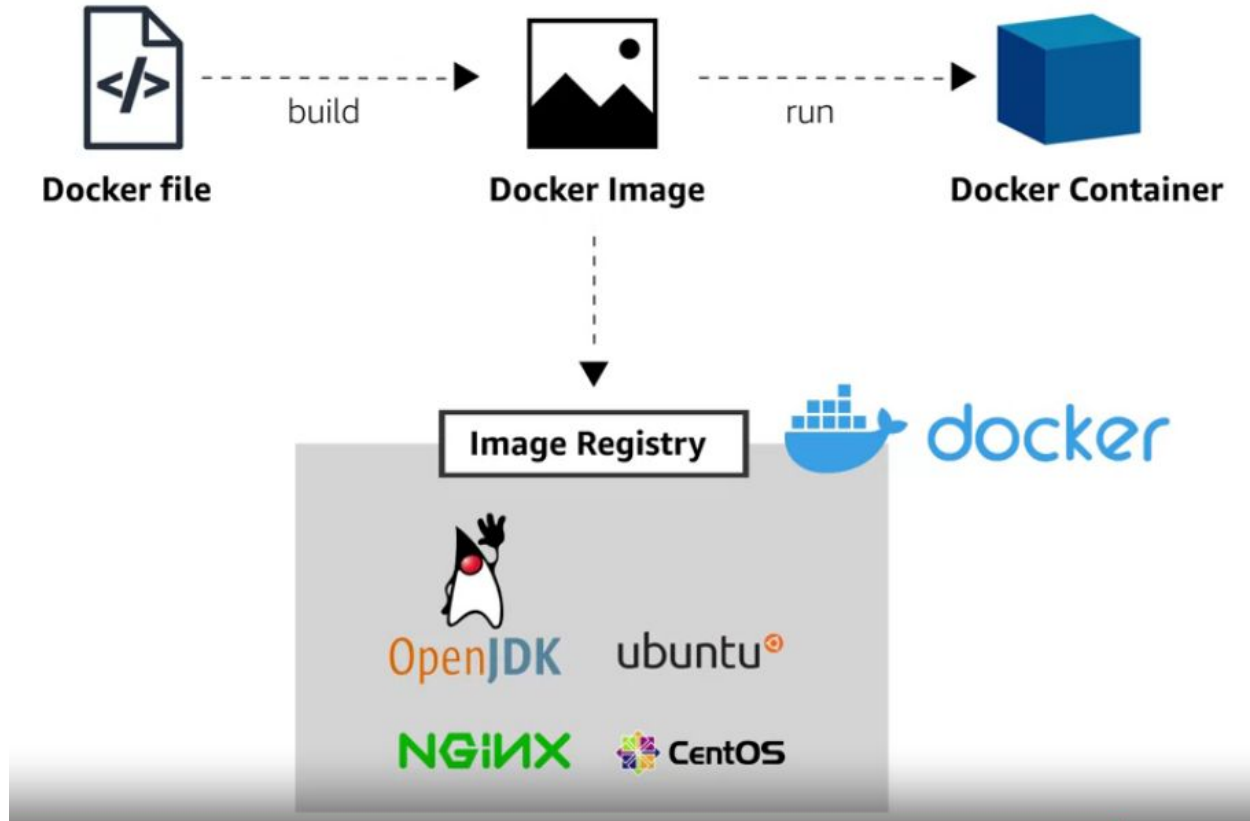
# It all layers!

# It all layers!



Writable layers

Container    Container    Container

Docker File    Image    Read only layers
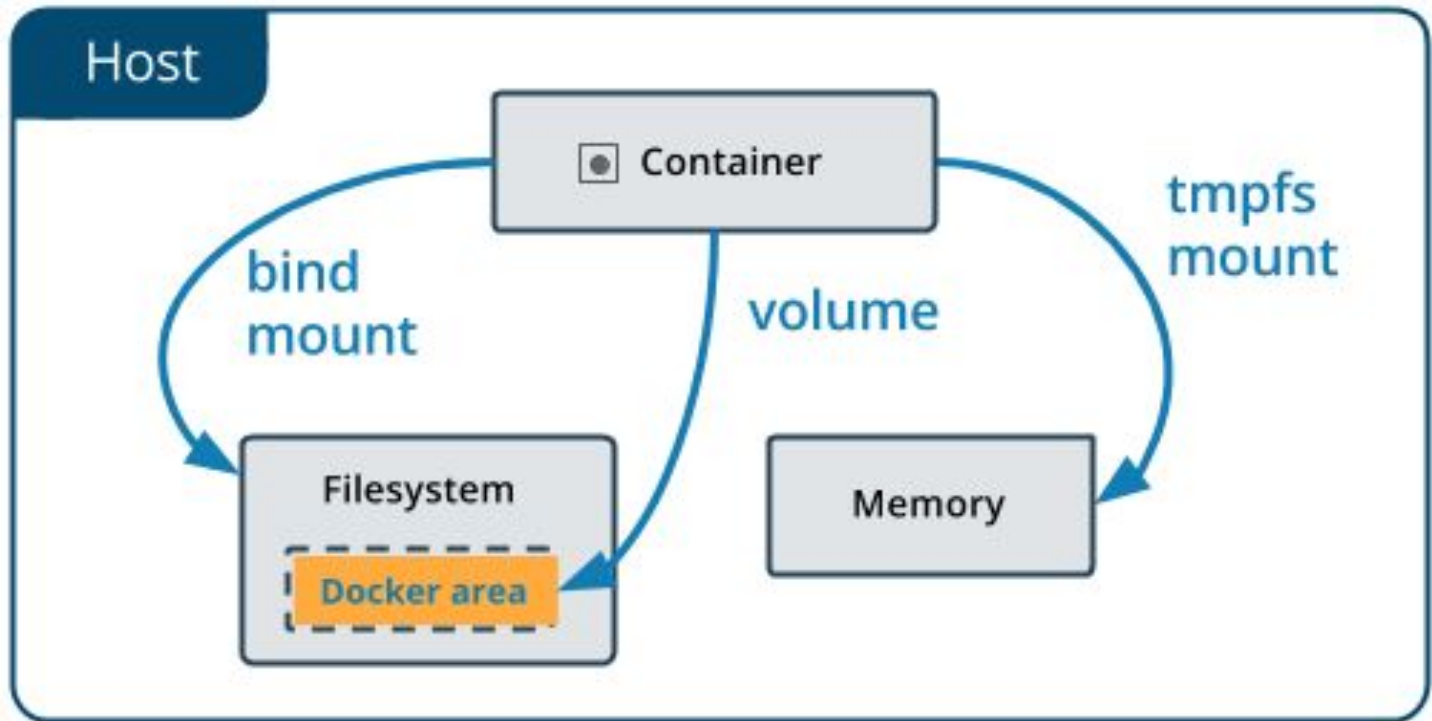
# Containers are stateless

# Build time vs. Image size

| | Average stage times: (Average _full_ run time: ~10min 33s) | 1s | 1s | 1min 37s | 8min 12s | 5min 44s |
|---|---|---|---|---|---|---|
| **#22** Jun 20 10:22 | 2 commits | 1s | 1s | 26s | 29s | 31s |
| **#21** Jun 16 09:05 | 1 commit | 1s | 1s | 2min 49s | | |
| **#20** Jun 15 10:00 | 1 commit | 1s | 1s | | 15min 55s | 10min 57s |

# Important info to note!

- Containers run on their own network
- Containers have their own filesystem
- Containers have their own processes
- Containers share the same **kernel** with the host

# Keep learning

- Why you need to learn Docker night now ➜ https://www.youtube.com/watch?v=eGz9DS-aIeY

- How Docker Works - Intro to Namespaces ➜ https://www.youtube.com/watch?v=-YnMr1lj4Z8

- Docker Labs ➜ https://dockerlabs.collabnix.com/

# Thanks for your attention!

# Any questions ?

# Fun Time

Did I just forgot to put "where" in delete statement today?

Full Stack Programmer

# Tombola

# Tombola

Get Housie app

Generate

**78**

| 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 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |

Created by **Yash**

# Tombola

Generate

**82**
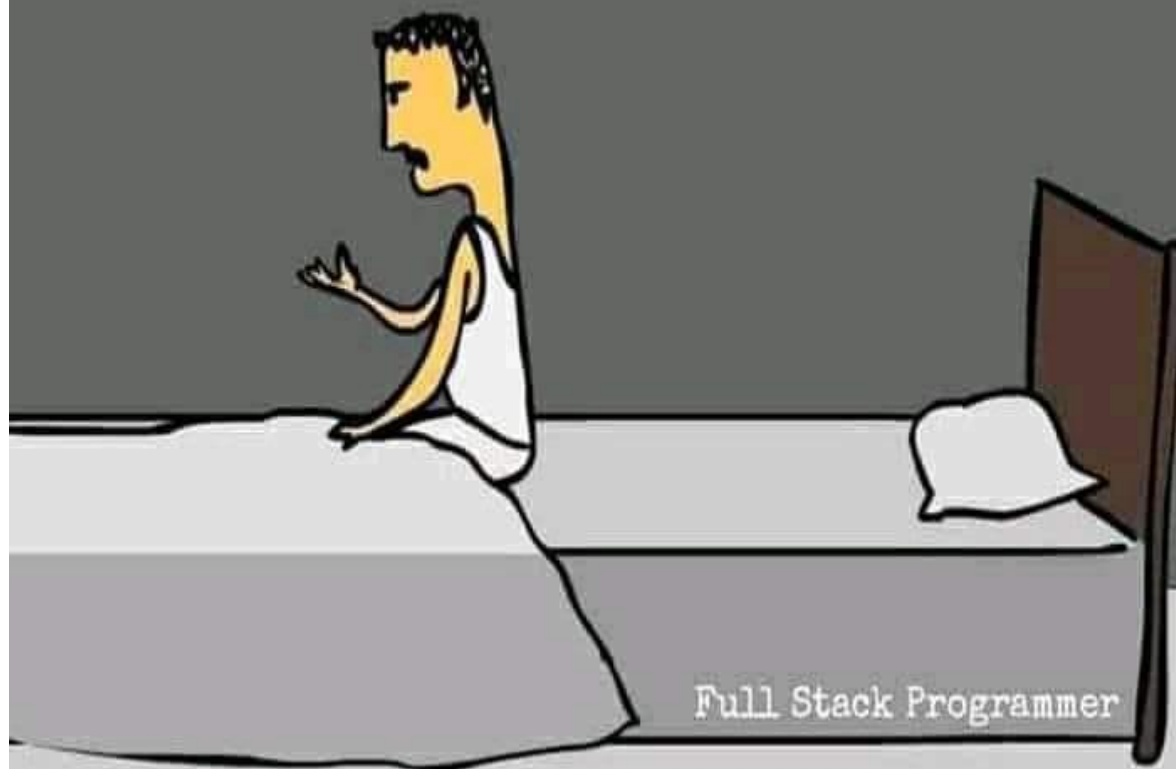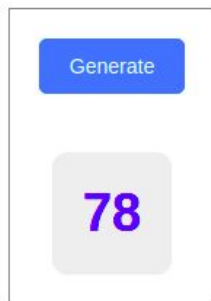
Get Housie app  

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 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 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |

# Tombola

Get Housie app

| Generate |
| --- |
| **30** |

| 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 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 |
| 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 |
| 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 |
| 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |

# Tombola Winners

1. **Ayush Yadav(**@**ayu**)
2. **ANEMICHE Samah(@Samah.Anemiche**)
3. **Rahul Aryan(@Rahul.Aryan**)