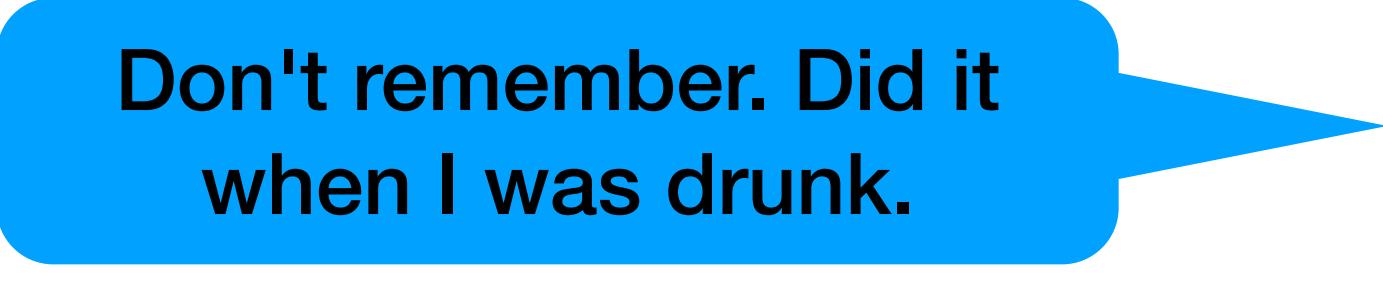


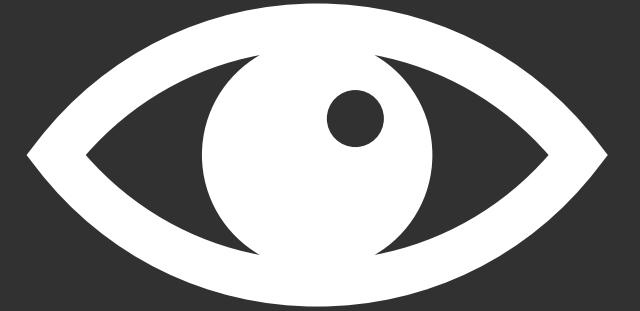
docker



Where are deps?



Don't remember. Did it
when I was drunk.

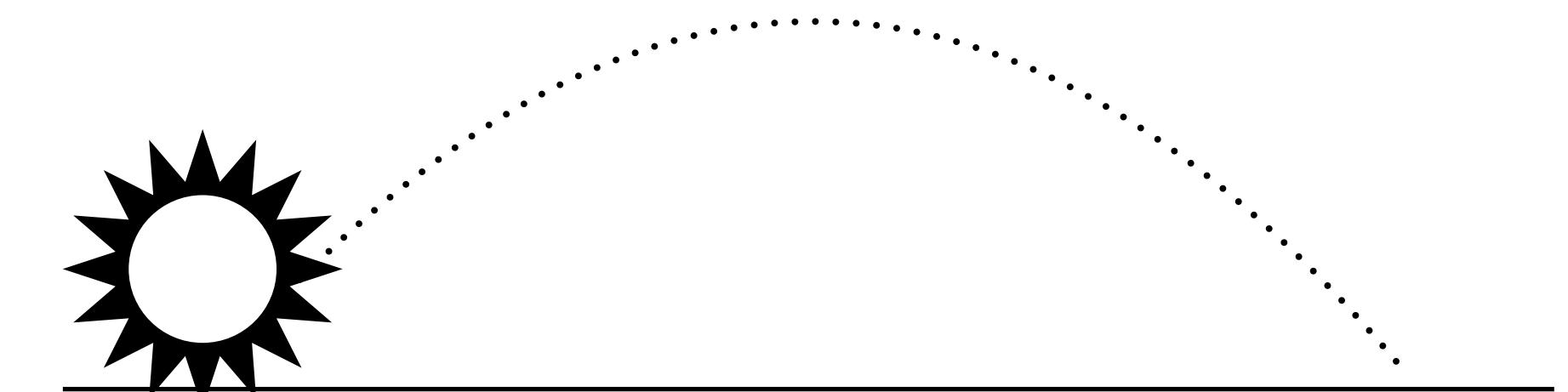
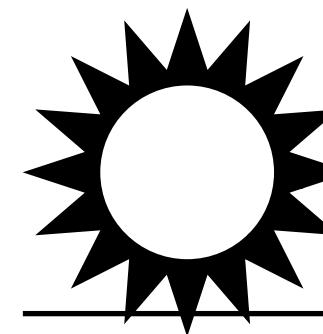
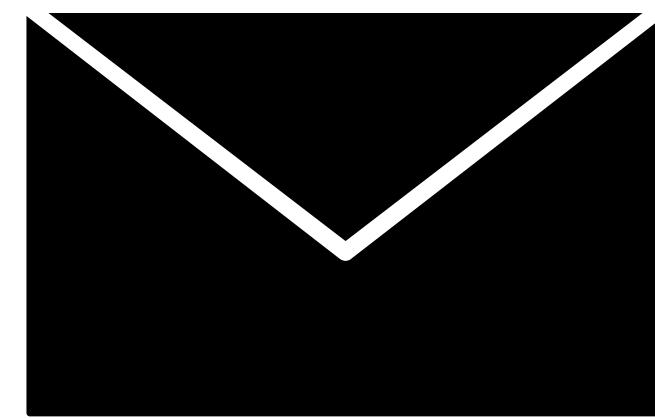


7 views



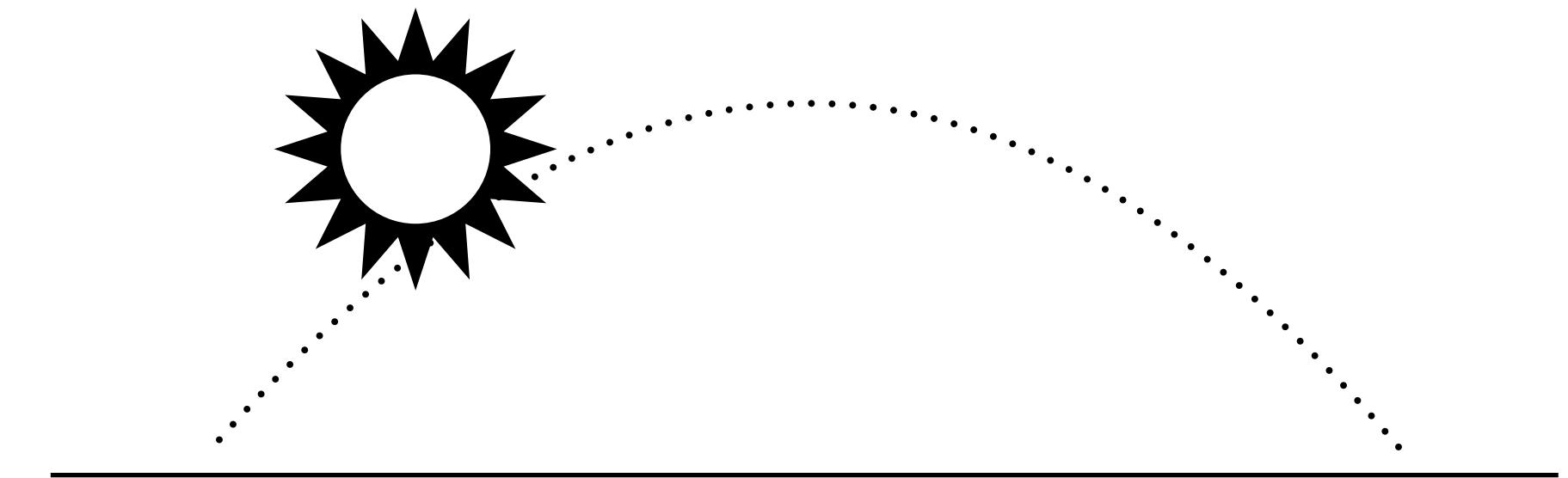
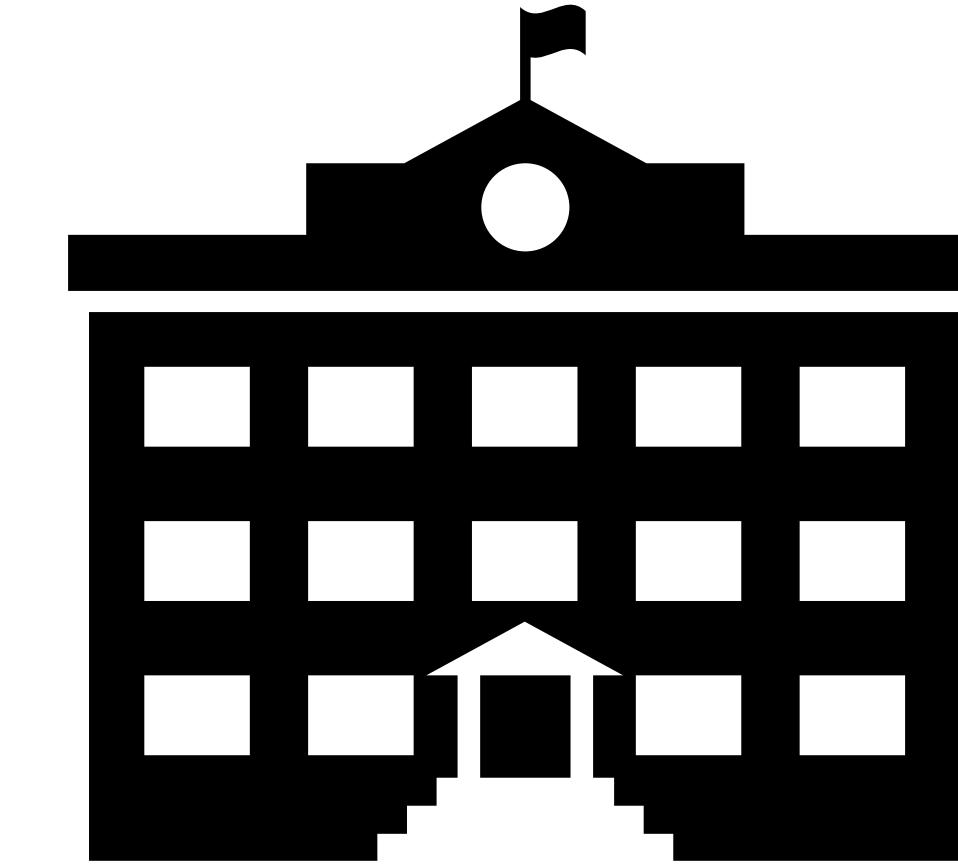
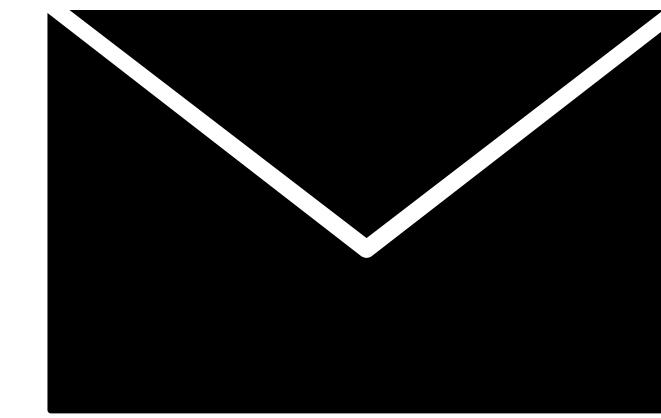
Hello Neil,

could you please provide
the code from your great
article?



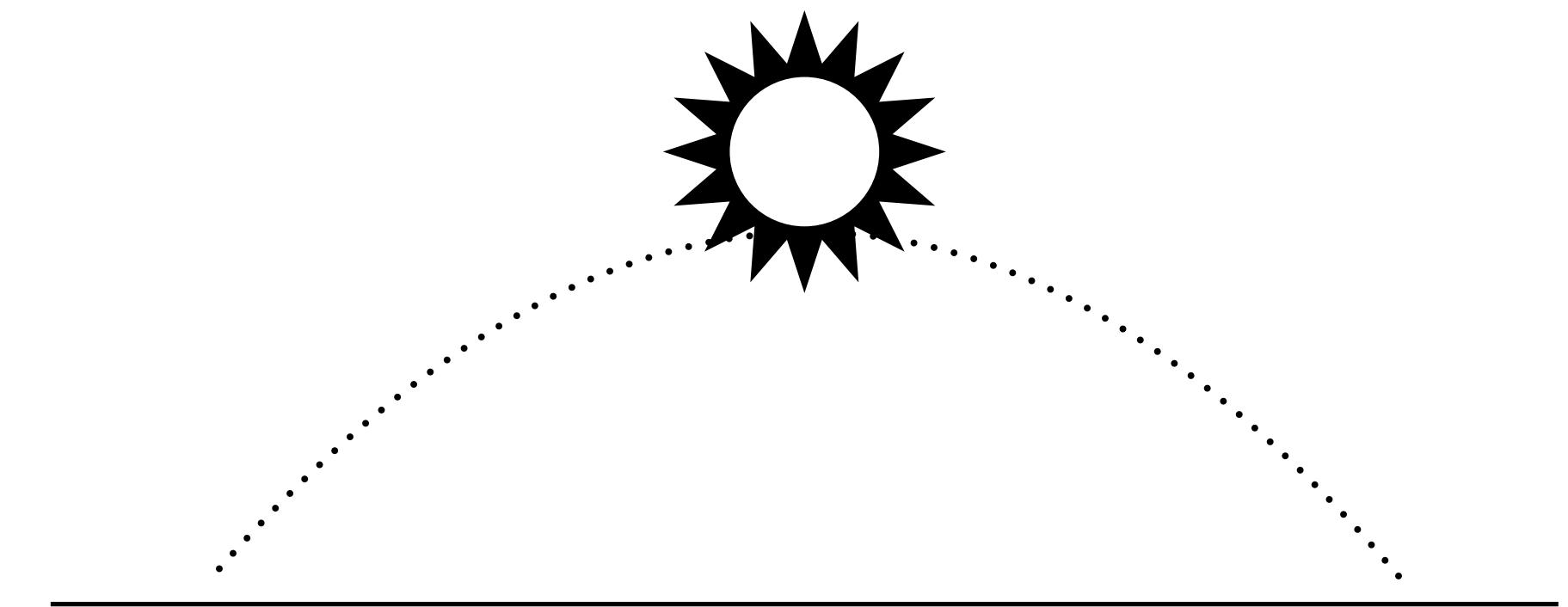
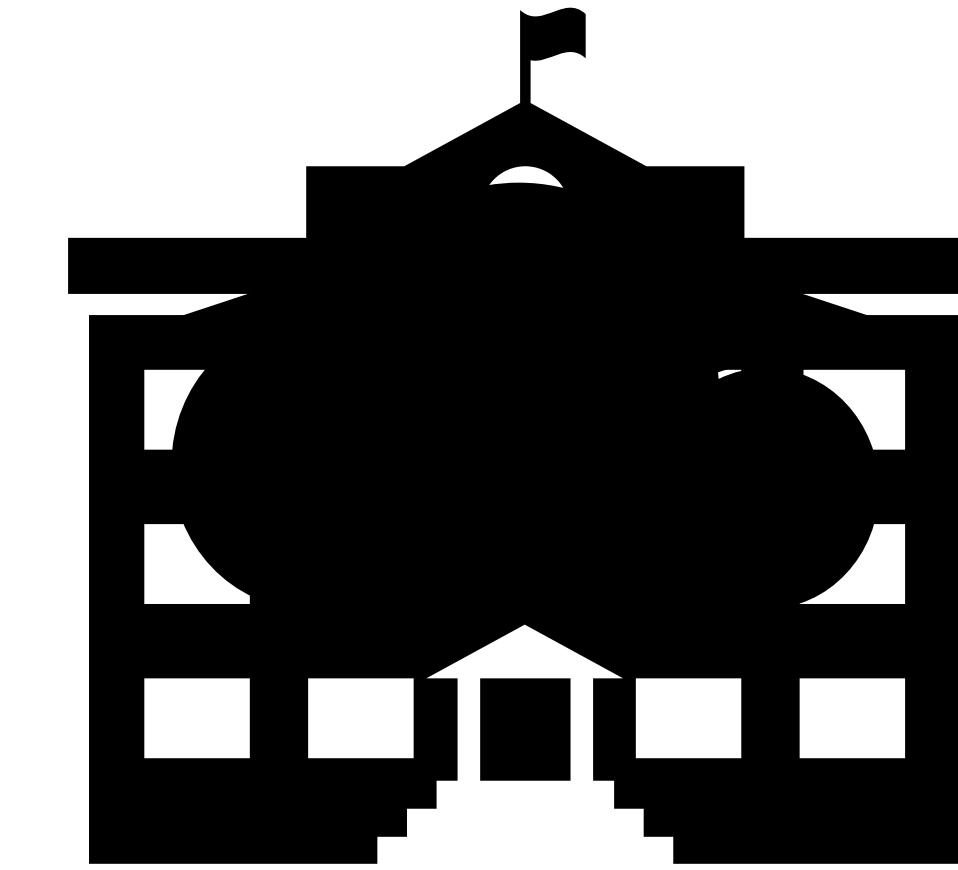
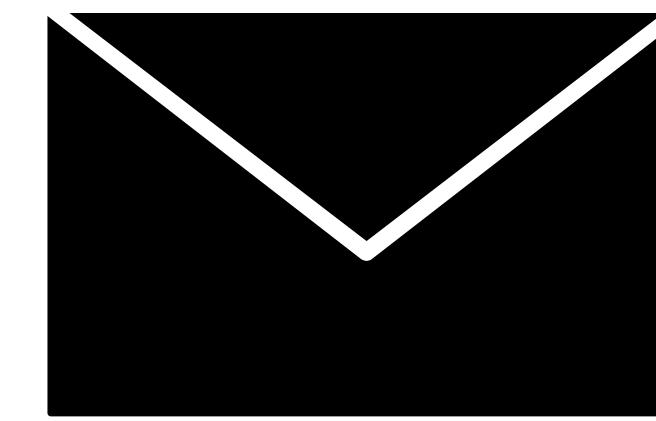
Sure,

We have written the code
long time ago, but you still
able download it from the
site of our University.



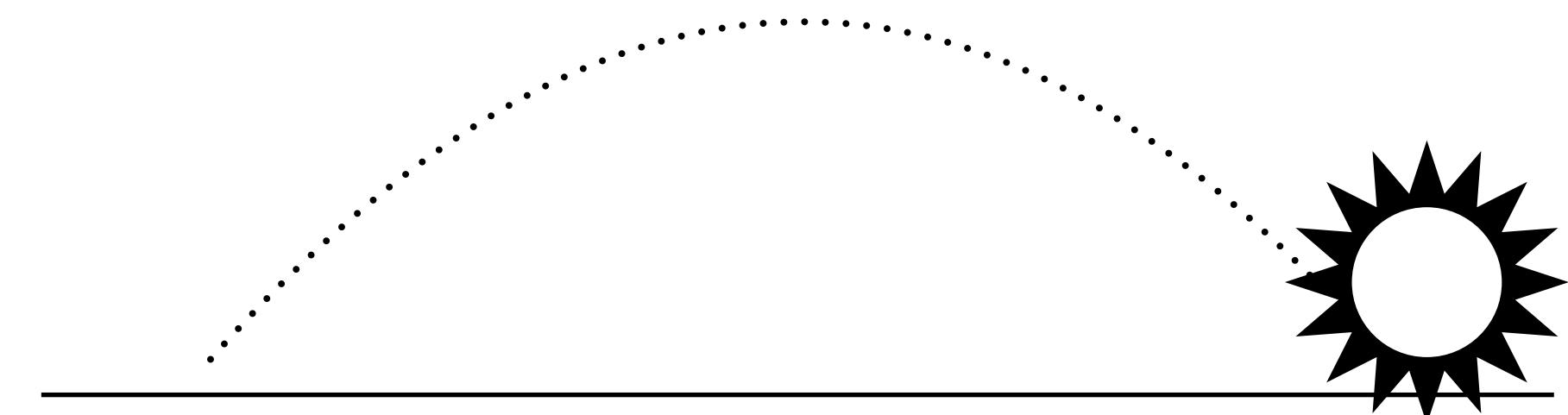
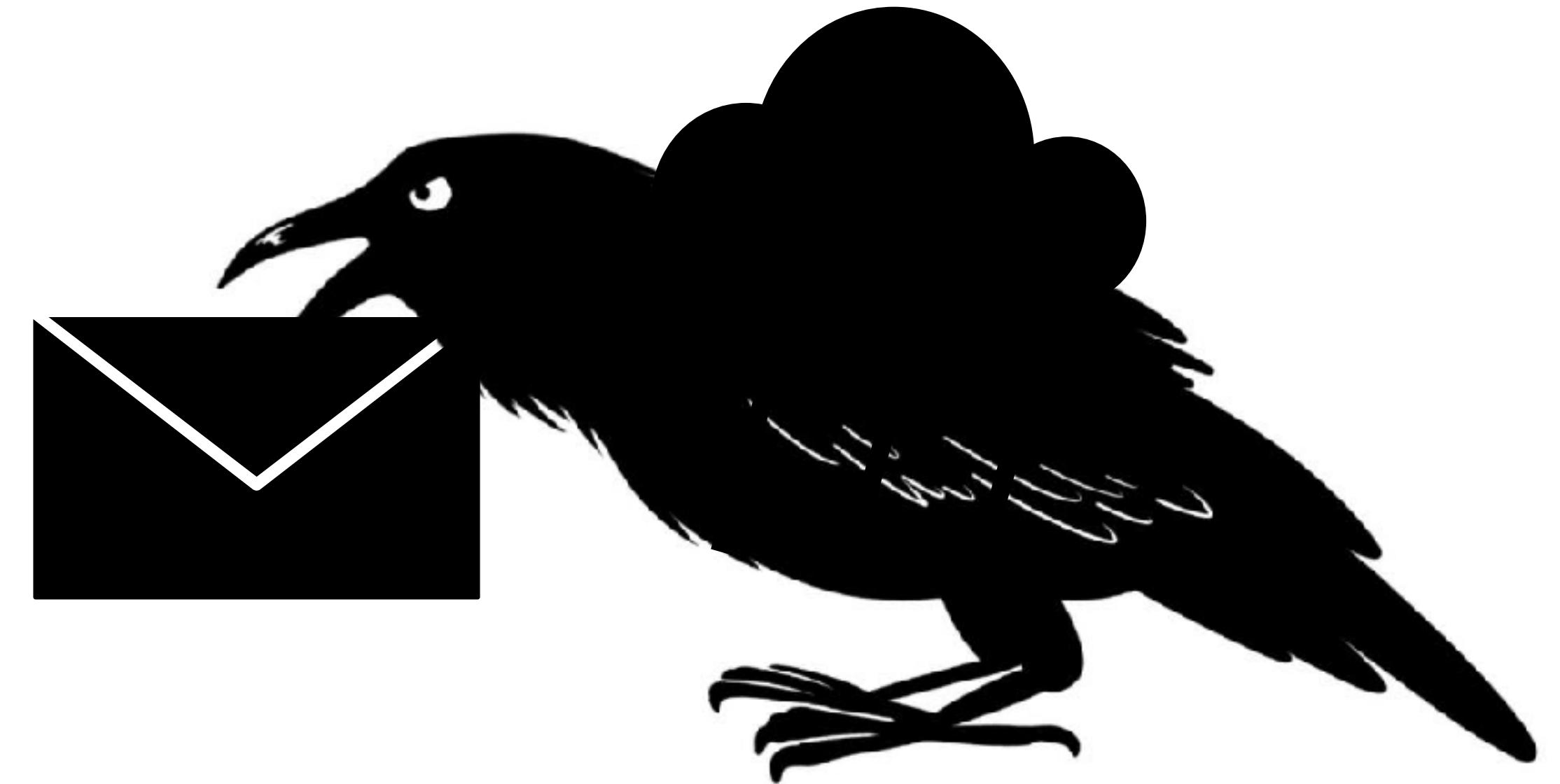
Oh, sorry,
my University has blocked my web
page since I graduated 3 years ago.

So, please follow the link to cloud
drive from my personal blog.



I forgot,
the space on my drive has been out a year
ago and I've deleted some old stuff to free up
my cloud.

Unfortunately, **you will nevermore see the**
code from my article.

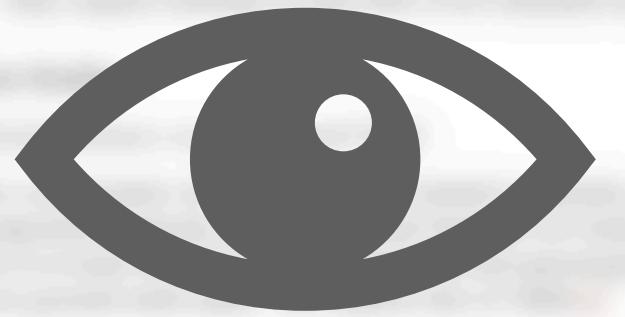




**Why don't
you use
Docker?**

**Really,
why?**



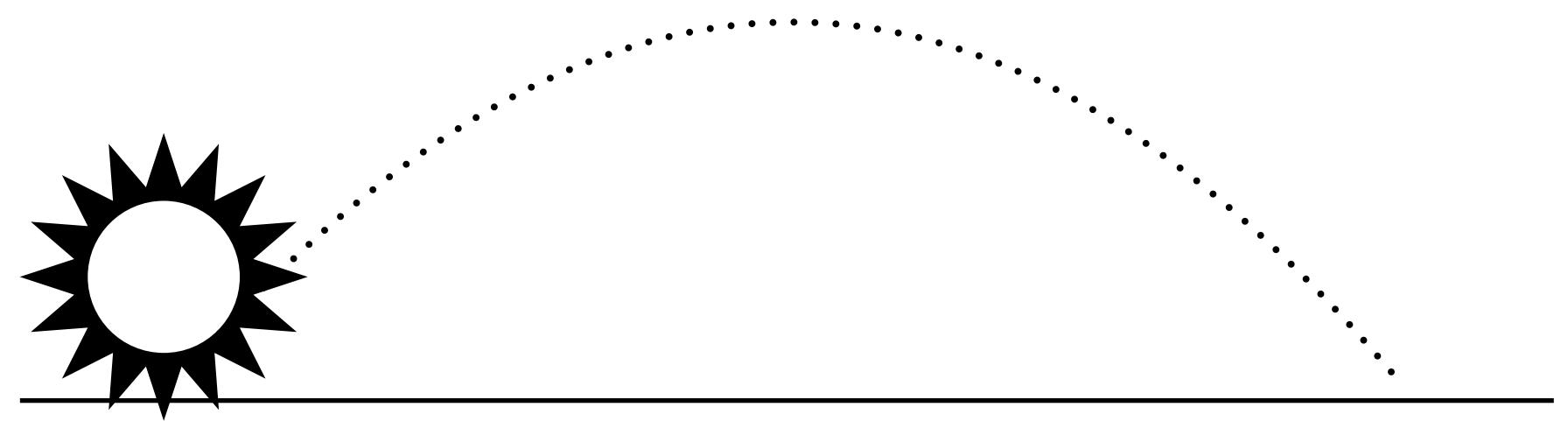
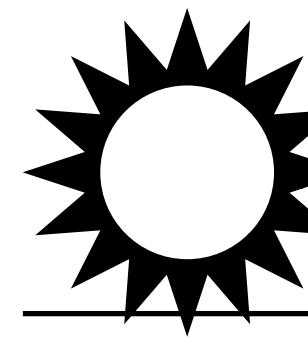
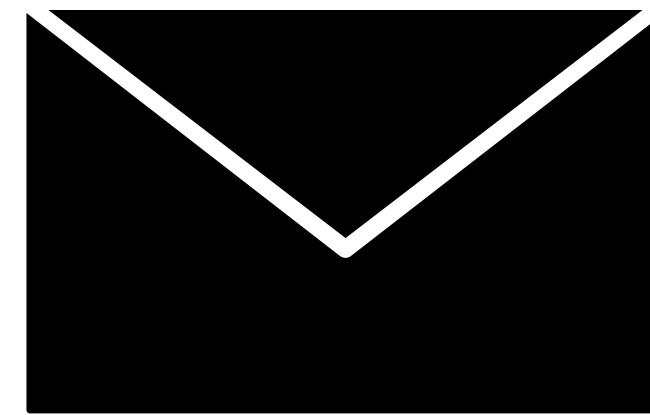


42 views



Hello Max,

could you please provide
the code from your great
article?

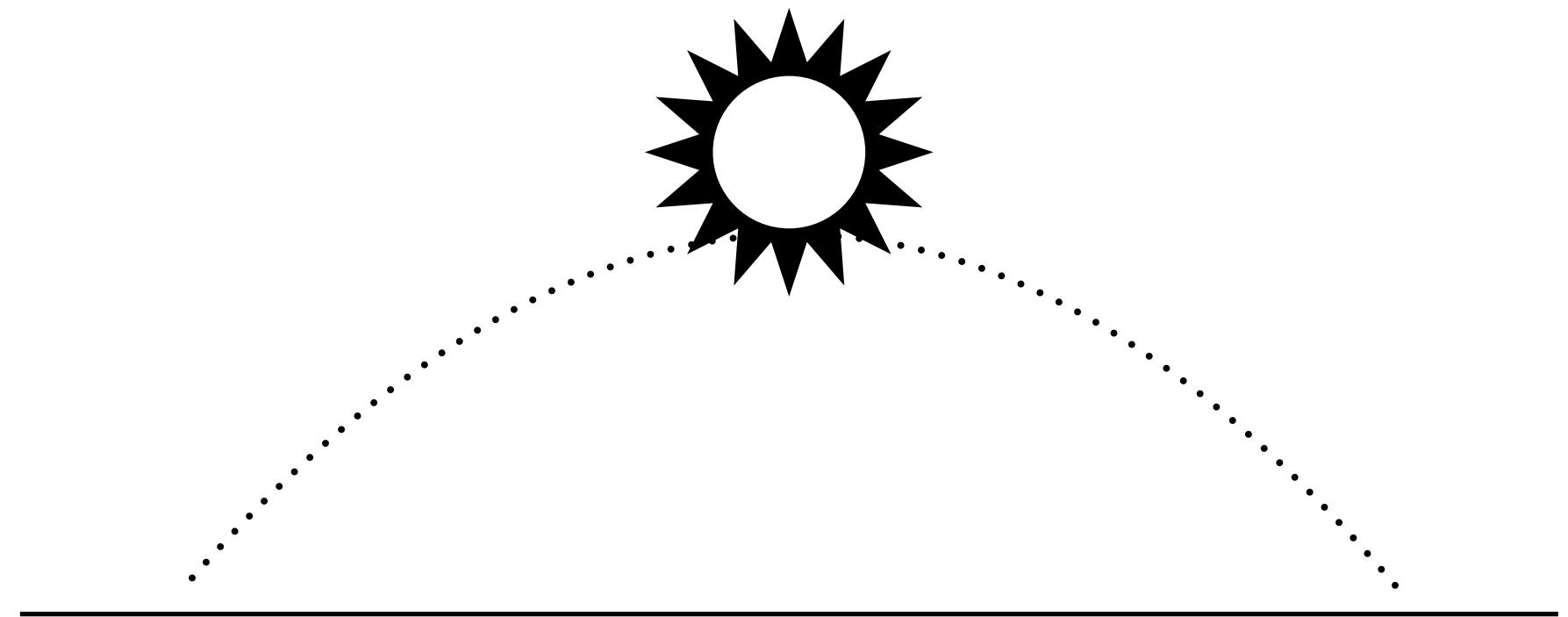
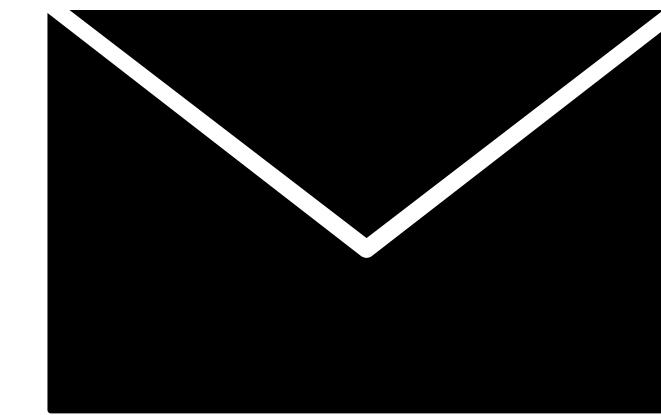


•

Sure,

I've uploaded my code on
Github 5 years ago.

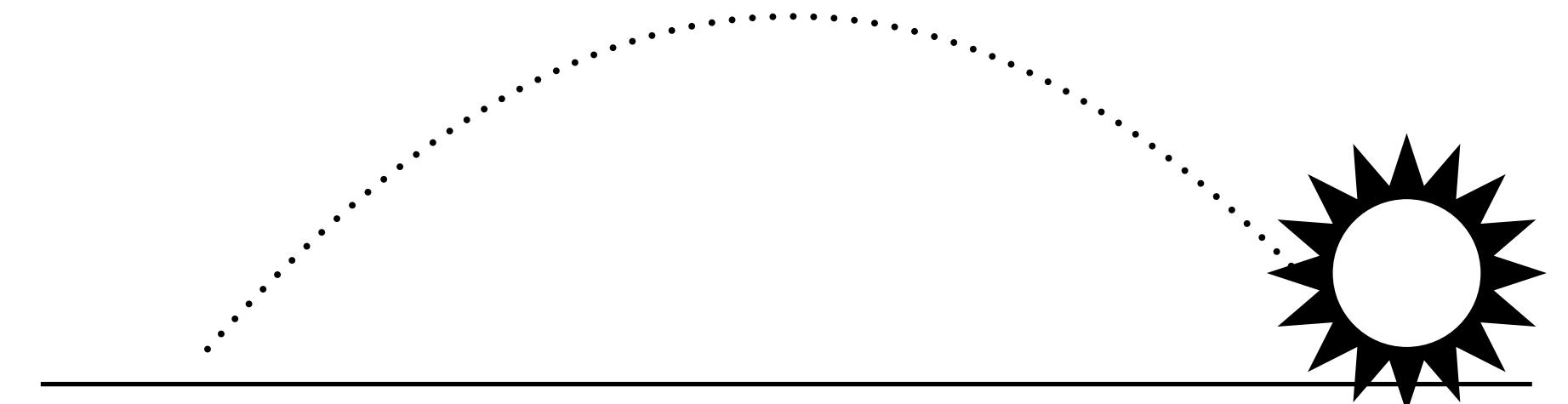
Just run `cmake` and you
will get binaries.



Forgot to say,

You will need Ubuntu 14.04,
but its support ended
April 2020.

Oh, and CUDA 7.5...





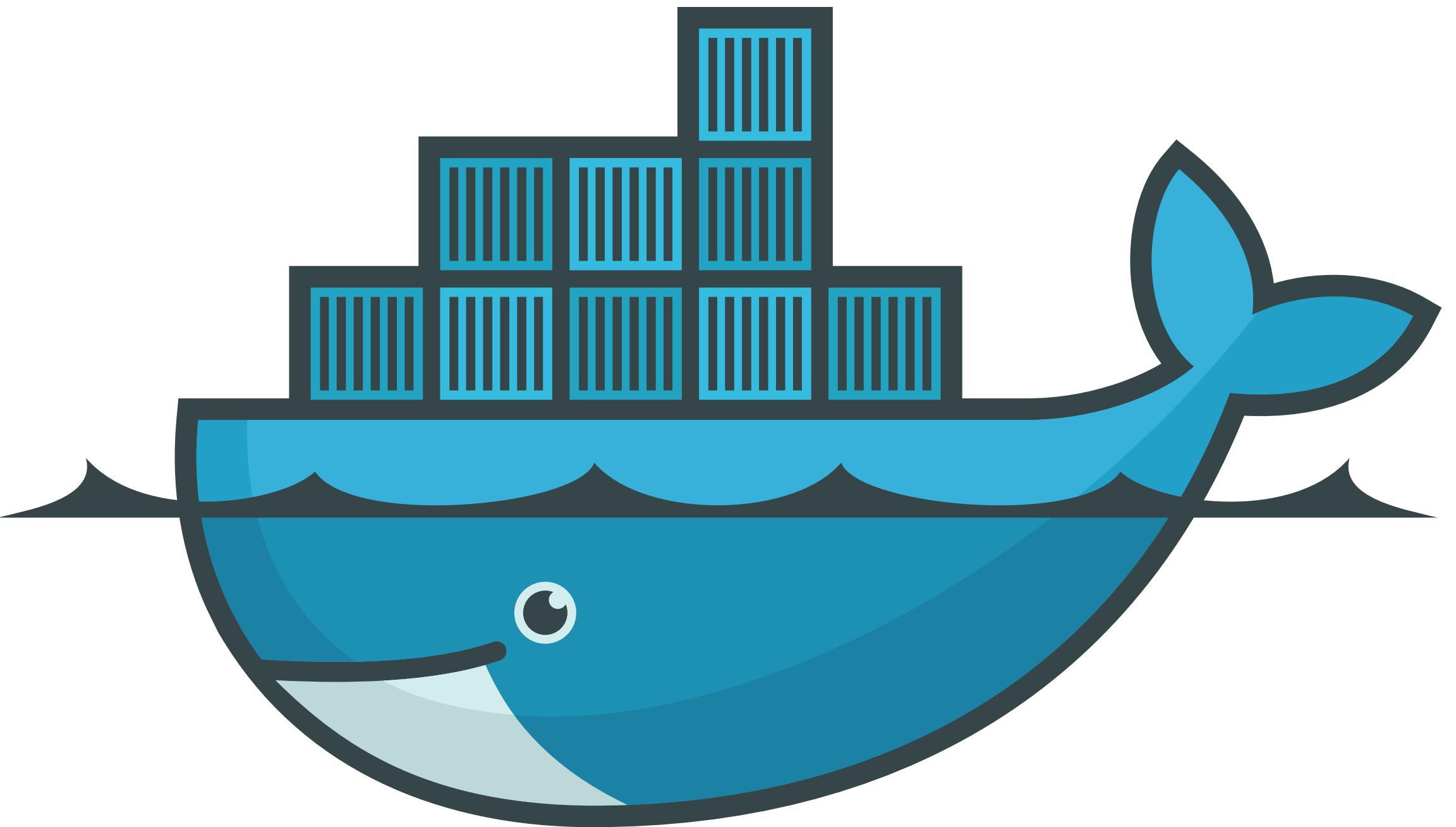
**Why don't
you use
Docker?**

**Good
thinking**



Like FedEx
for shipping your code

to ANY
infrastructure



docker

What Infrastructure Could Be?

Simple

- Embedded
- Laptop with Linux
- Desktop
- Baremetal server (node)
- Virtual Machine (Baremetal – Type 1)

Complex

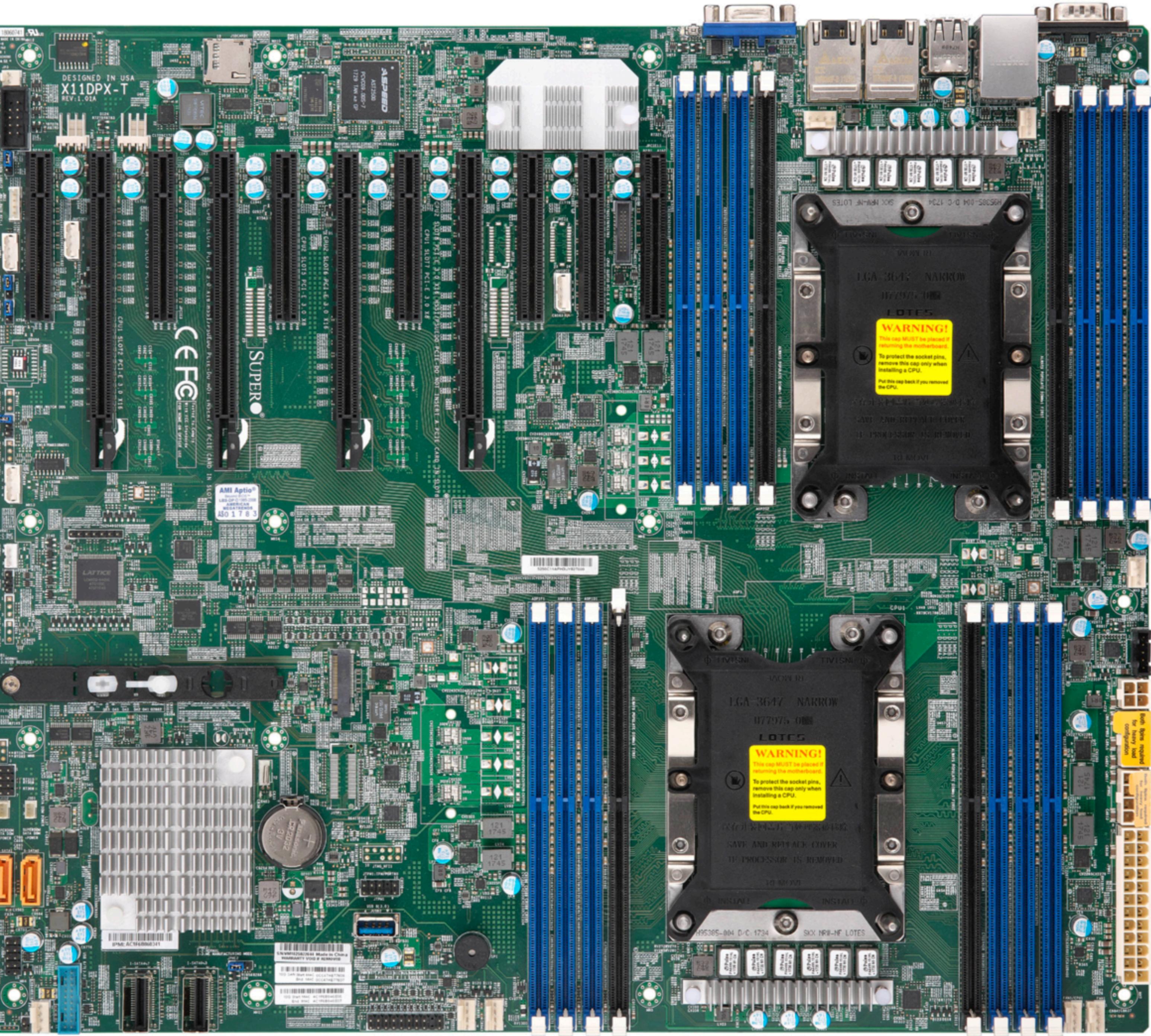
- Mobile
- Laptop with Windows
- Remote desktop
- Networked nodes
- Virtual Machine (Hosted)
- Cluster (heterogeneous nodes)
- HPC Cluster (homogeneous nodes)
- Data Center (HTC Cluster)
- Cloud (Geo-distributed Cluster)

- Laptop with Linux
- Desktop
- Baremetal server (node)
- Virtual Machine (Baremetal – Type 1)
- Laptop with Windows
- Remote desktop
- Networked nodes
- Virtual Machine (Hosted)

Infrastructure Level

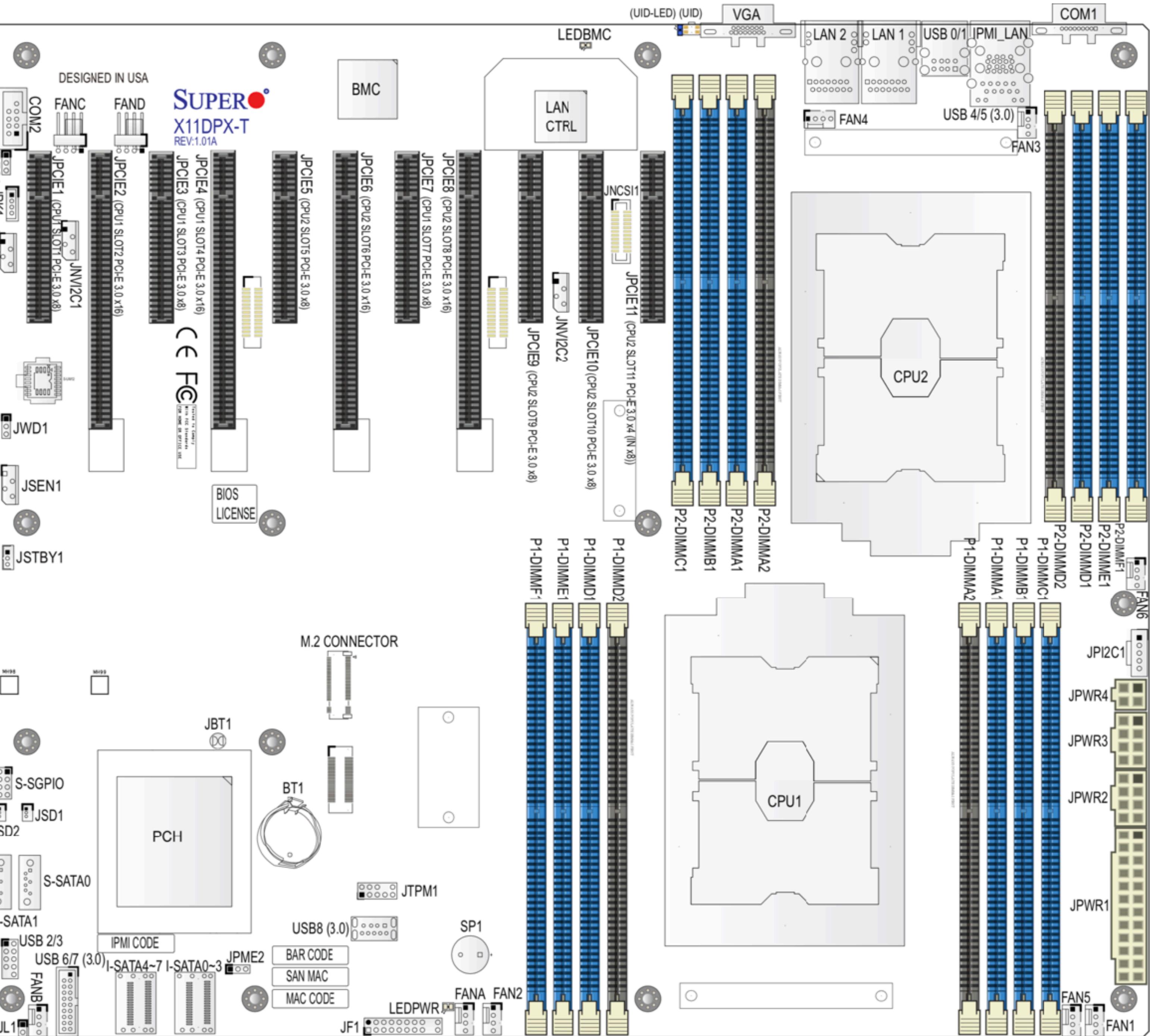
Motherboard

Supermicro X11DPG-QT



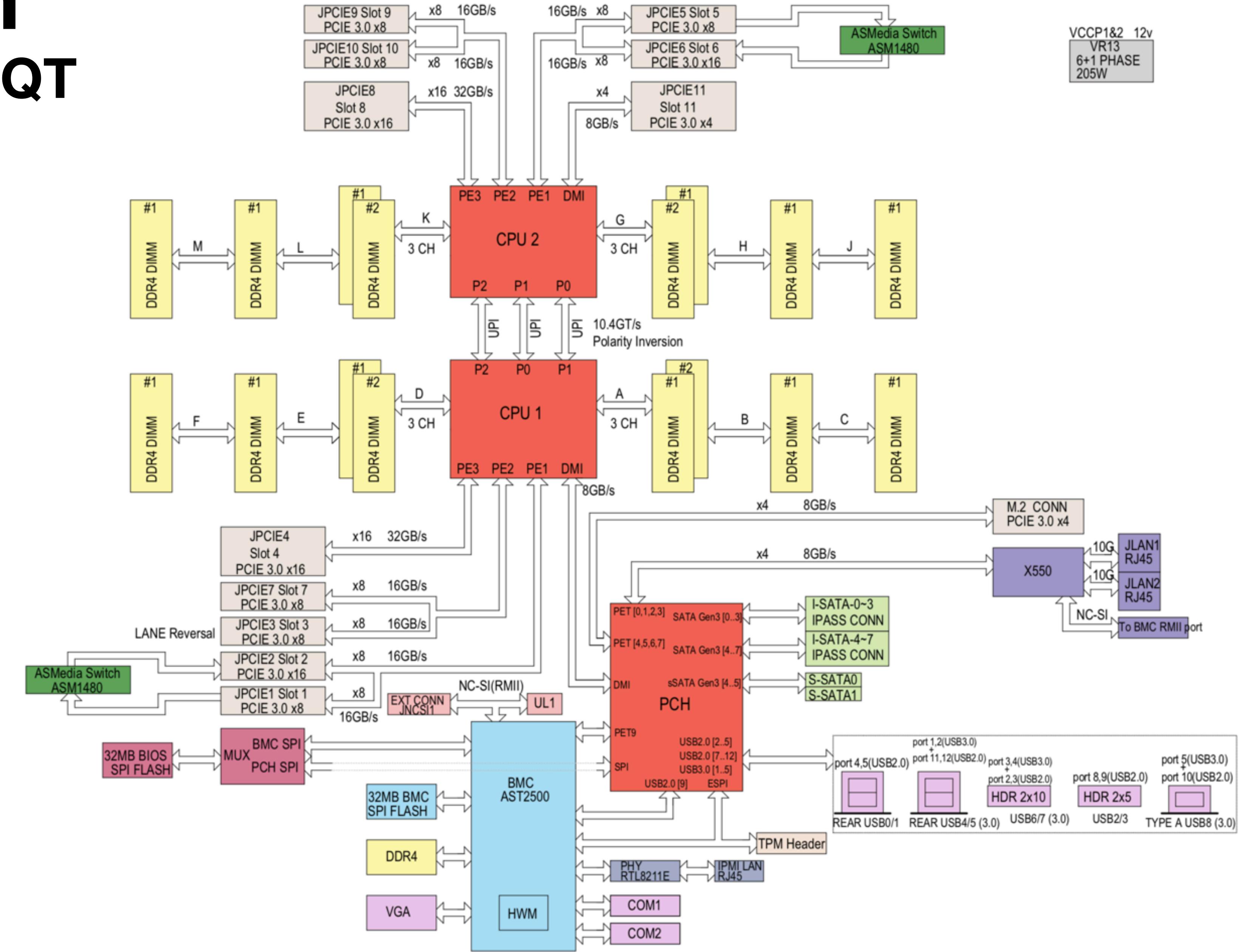
Layout

Supermicro X11DPG-QT



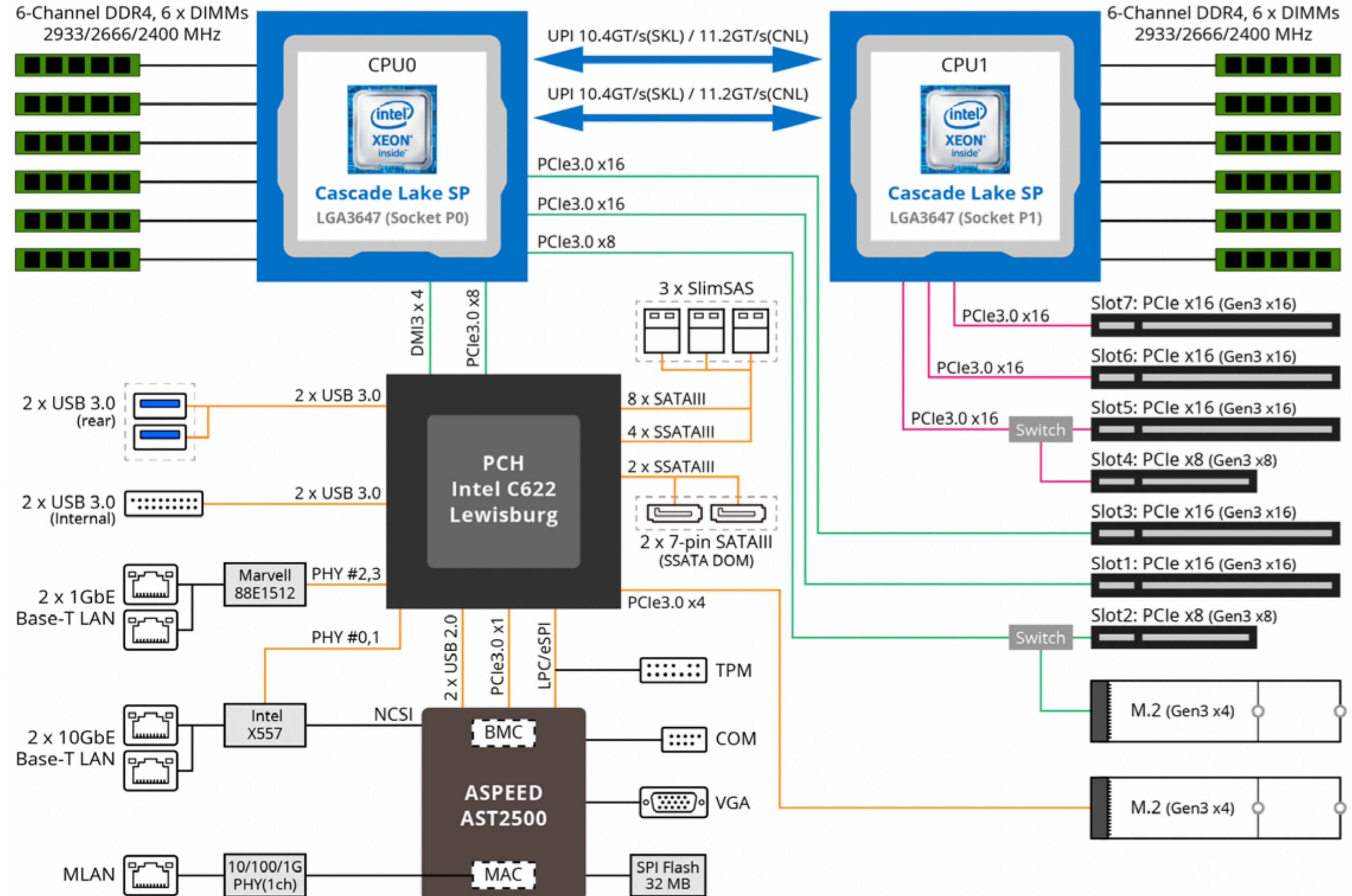
Block Diagram

Supermicro X11DPG-QT



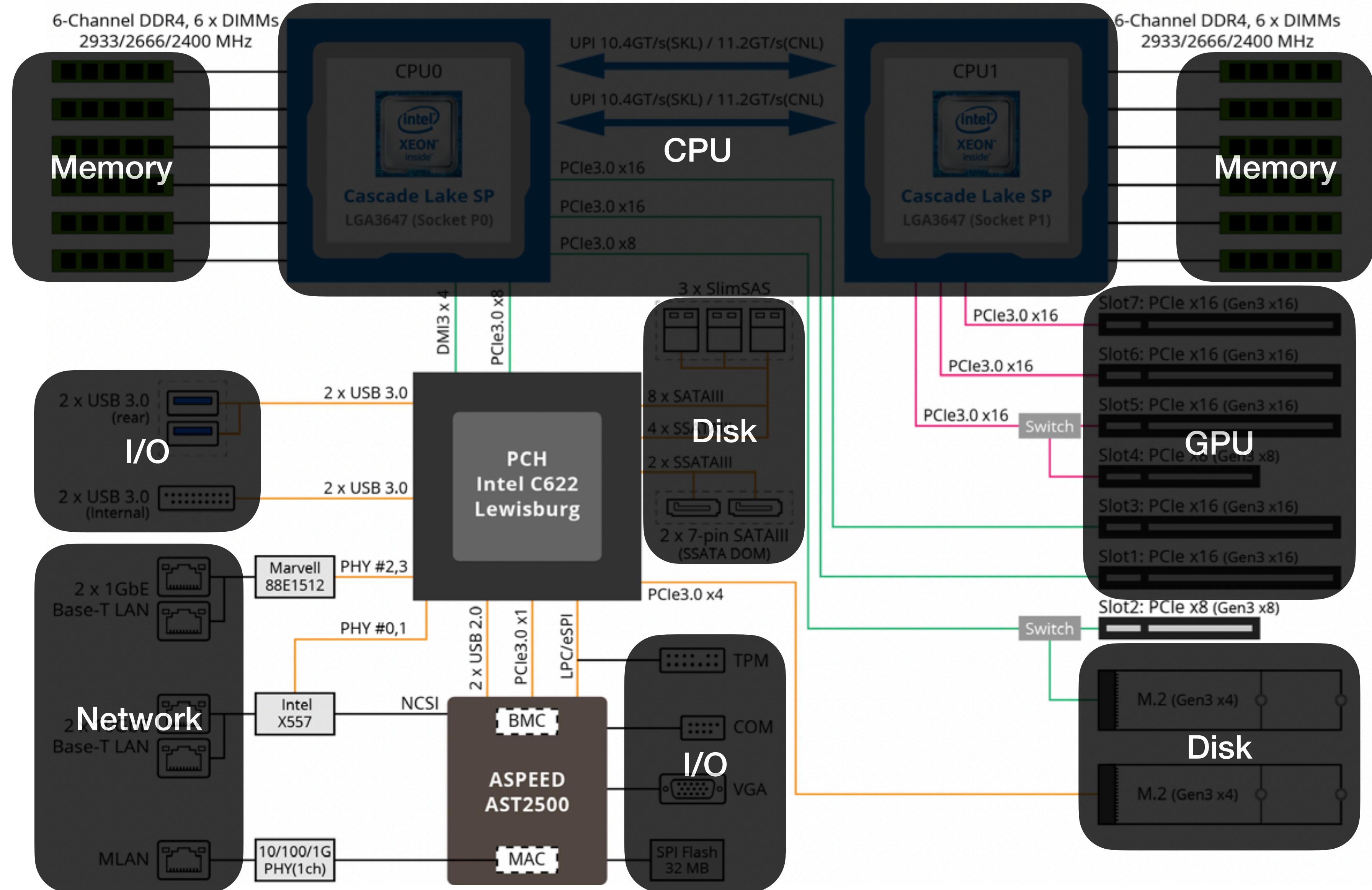
Block Diagram

GIGABYTE Motherboard MD71-HB1



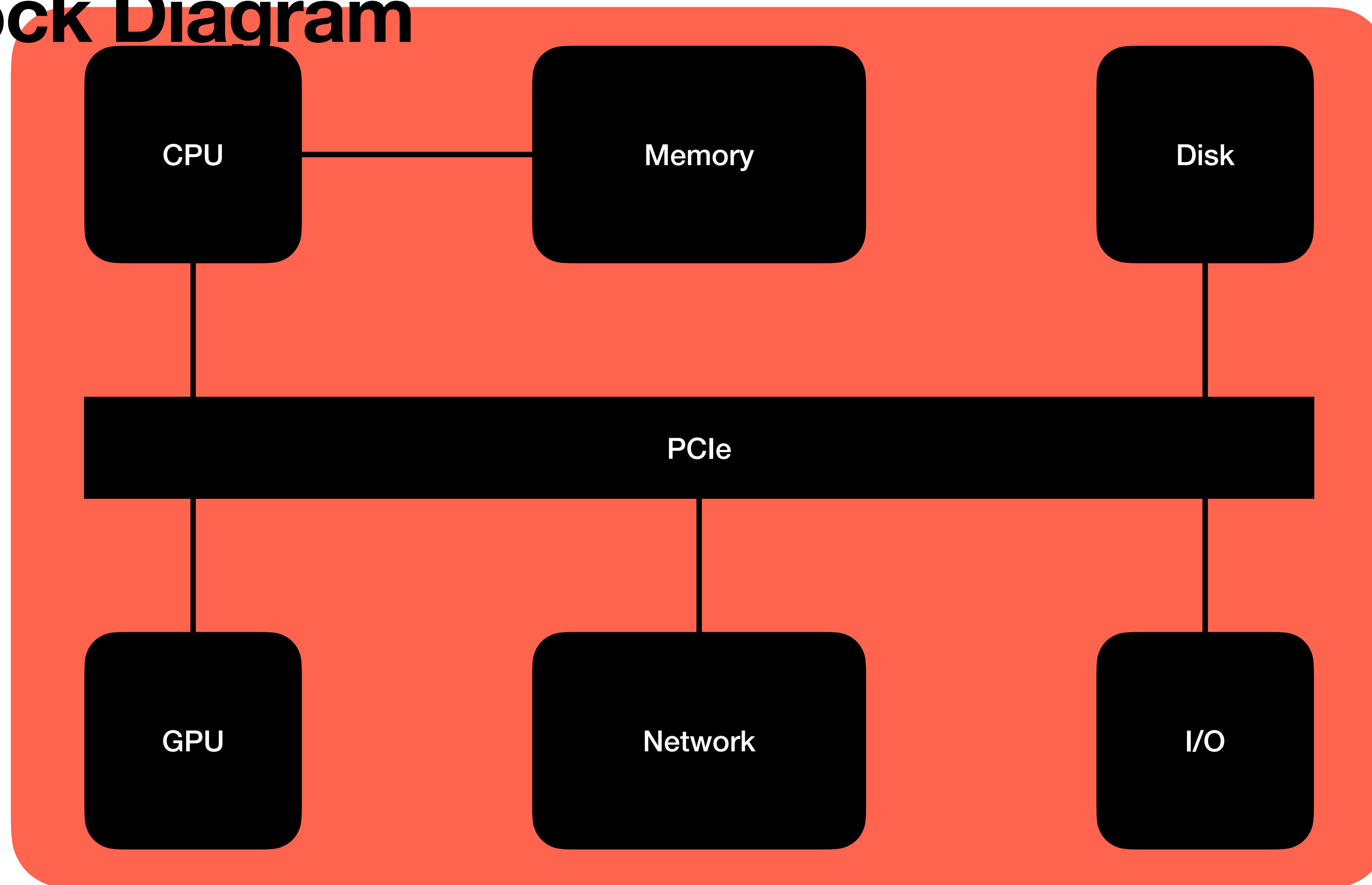
Block Diagram

GIGABYTE Motherboard MD71-HB1

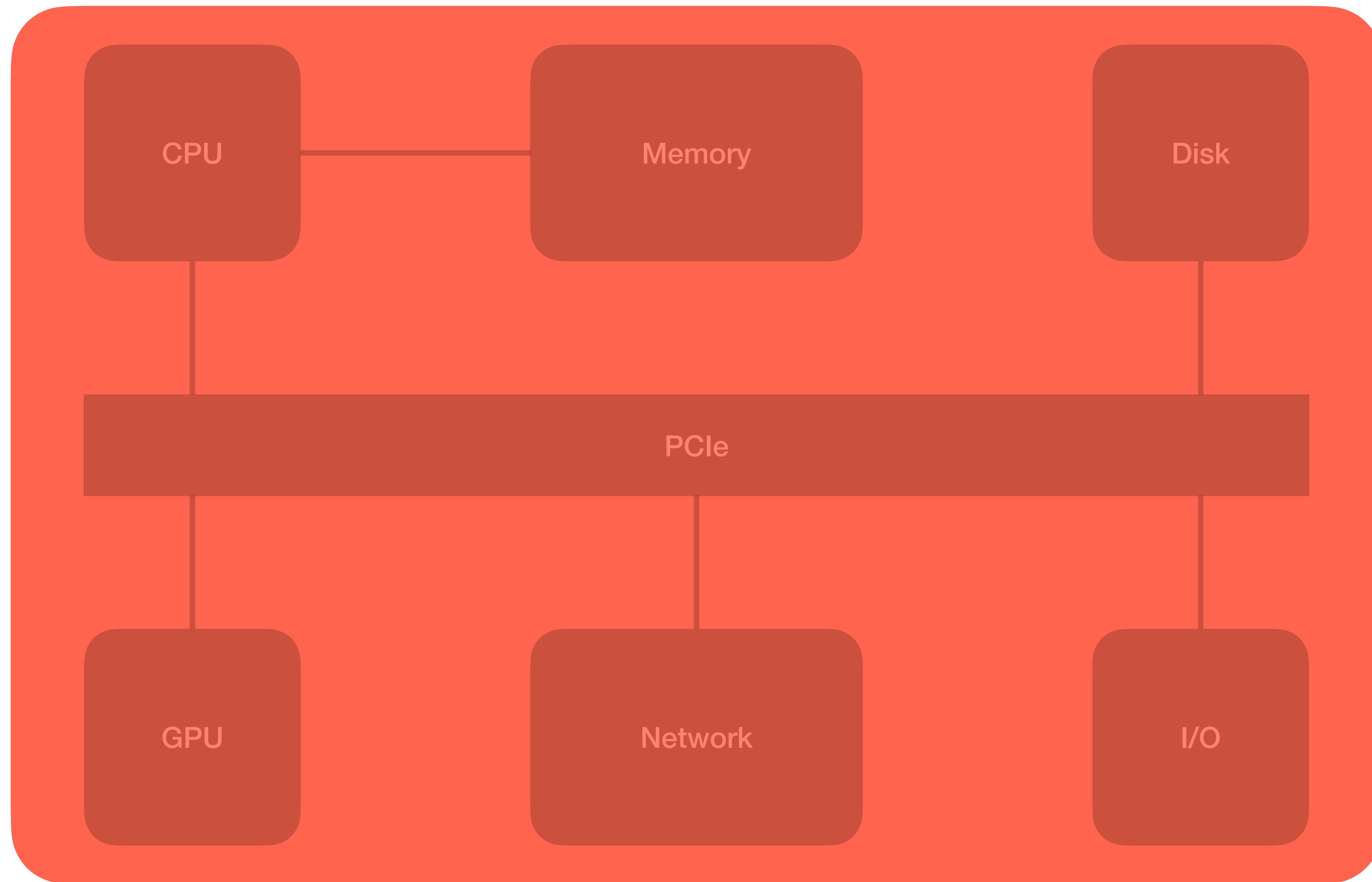


Block Diagram

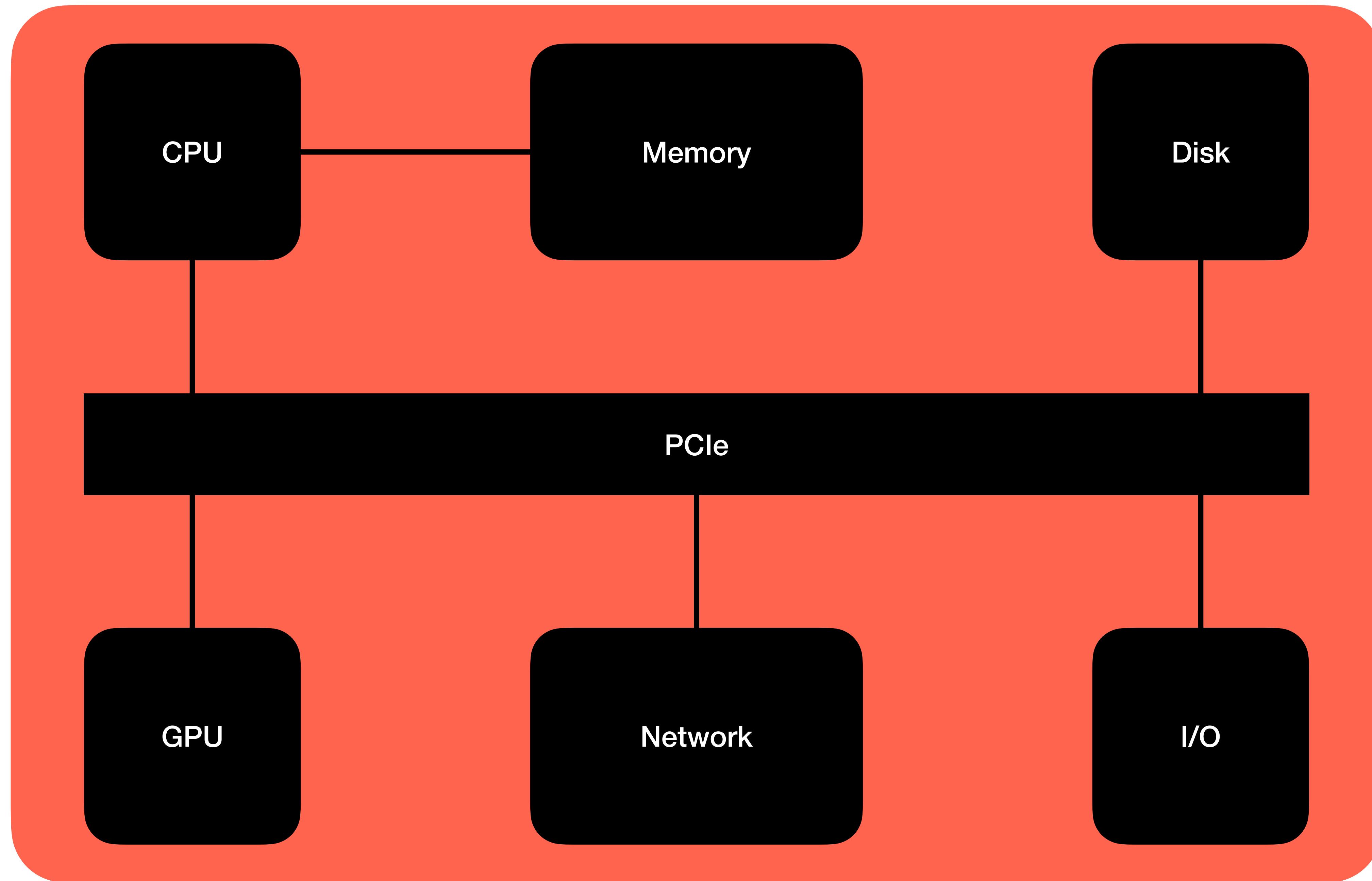
Machine

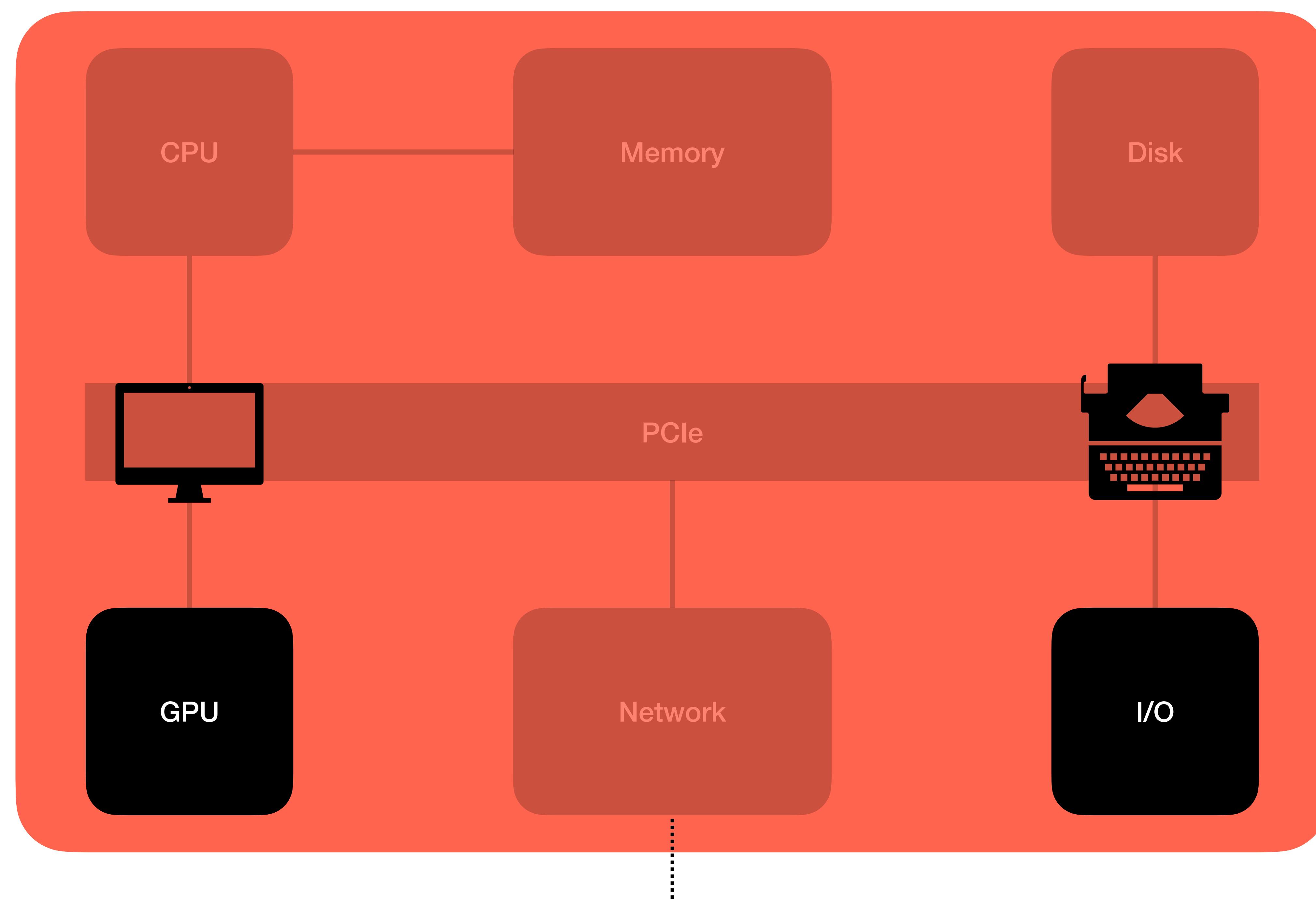


Storage

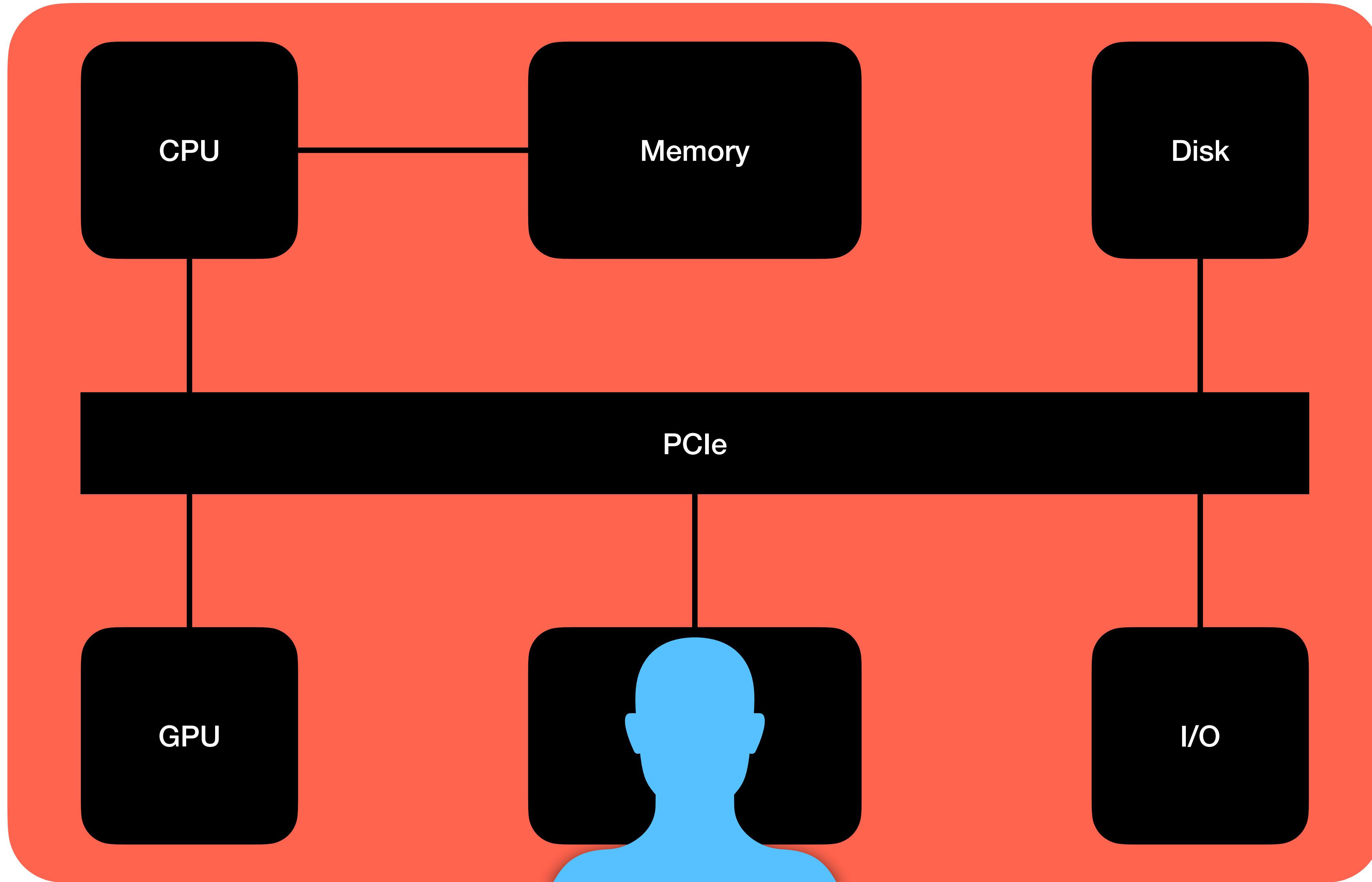


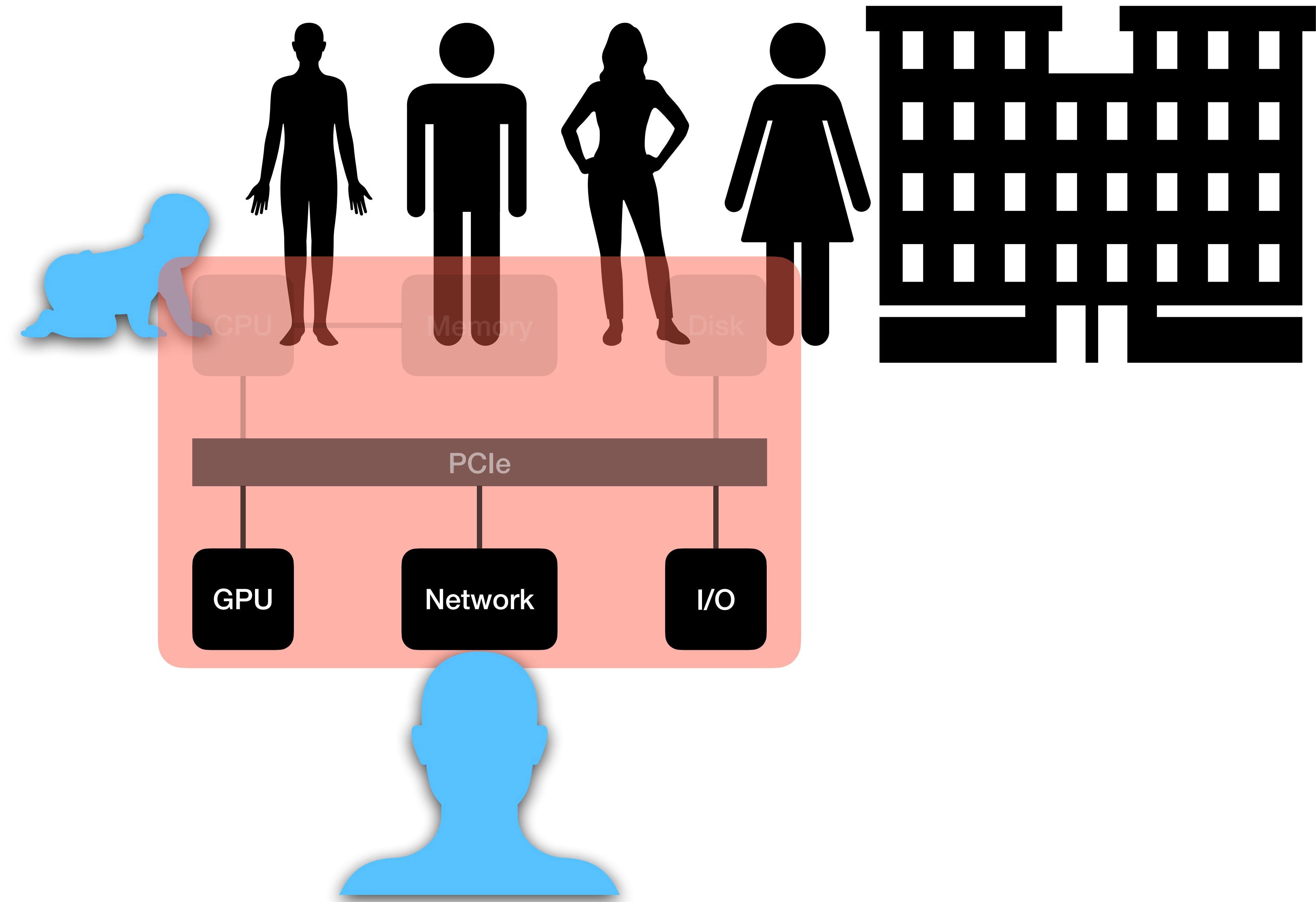
Terminal

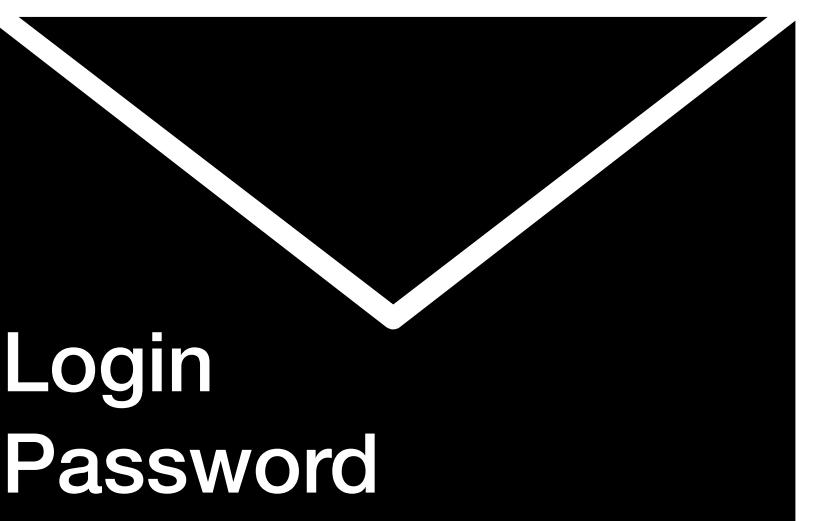
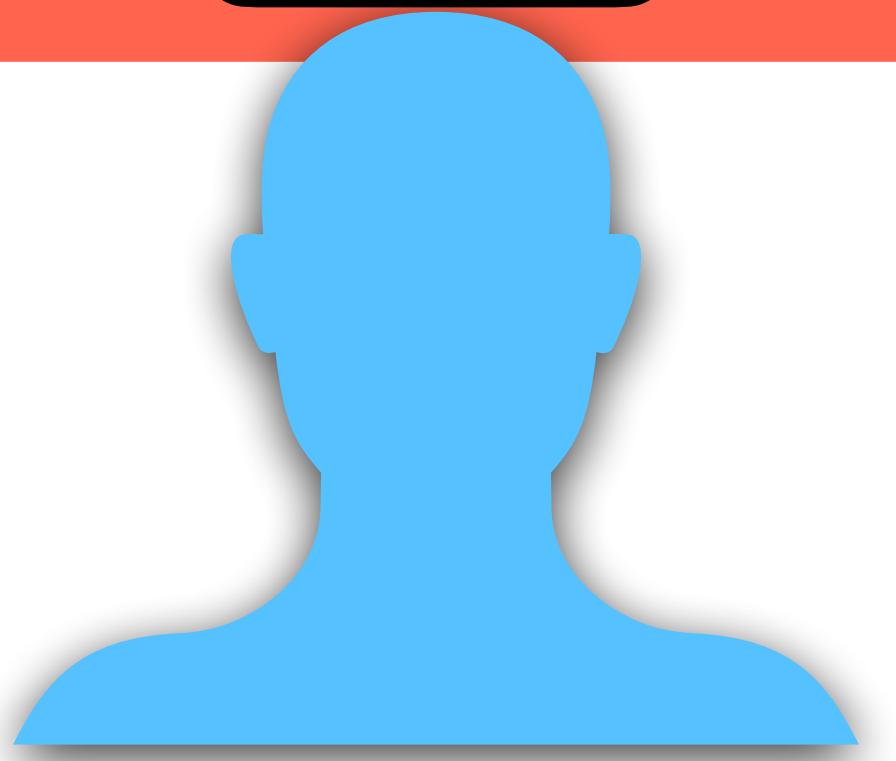
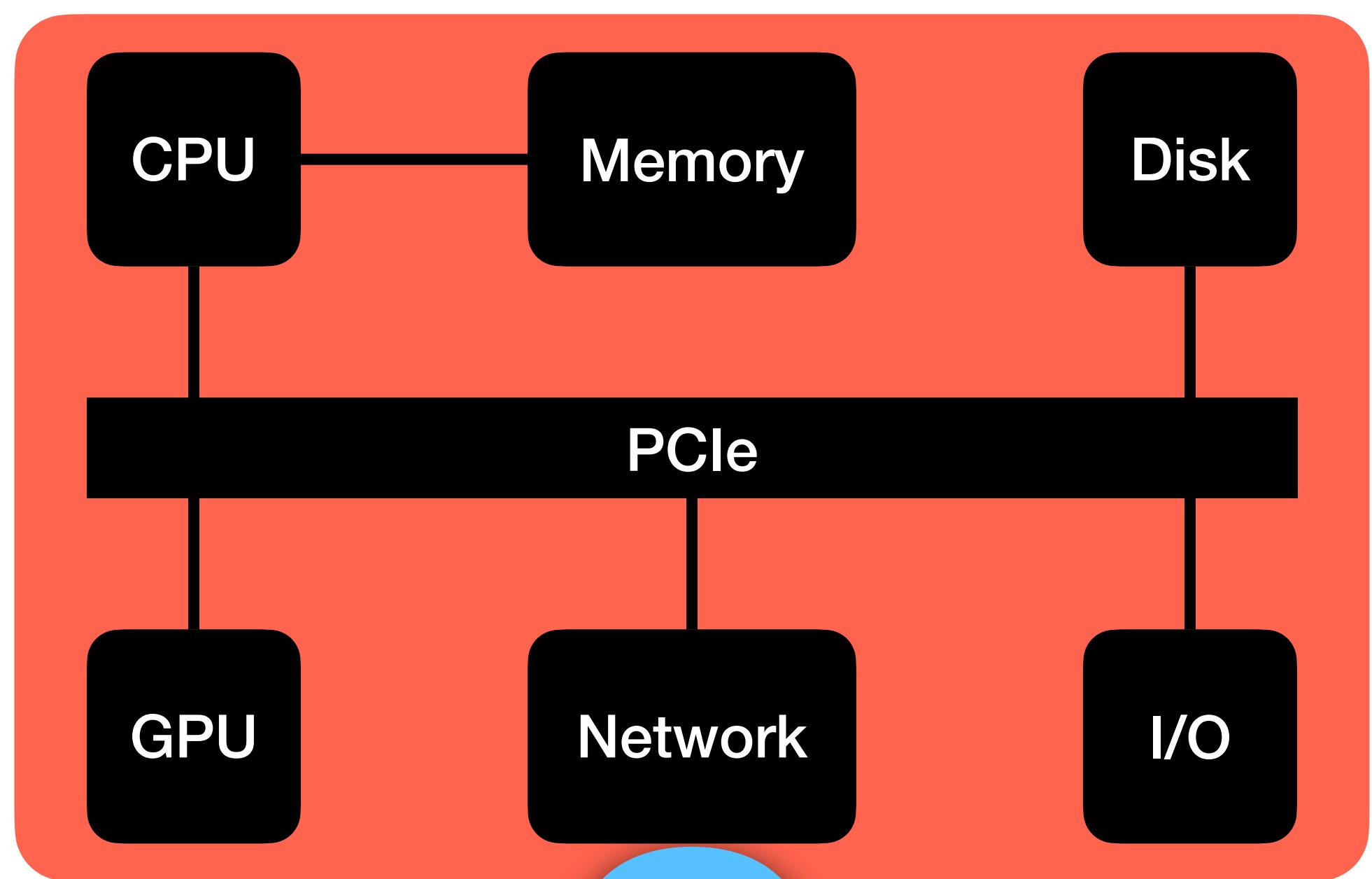
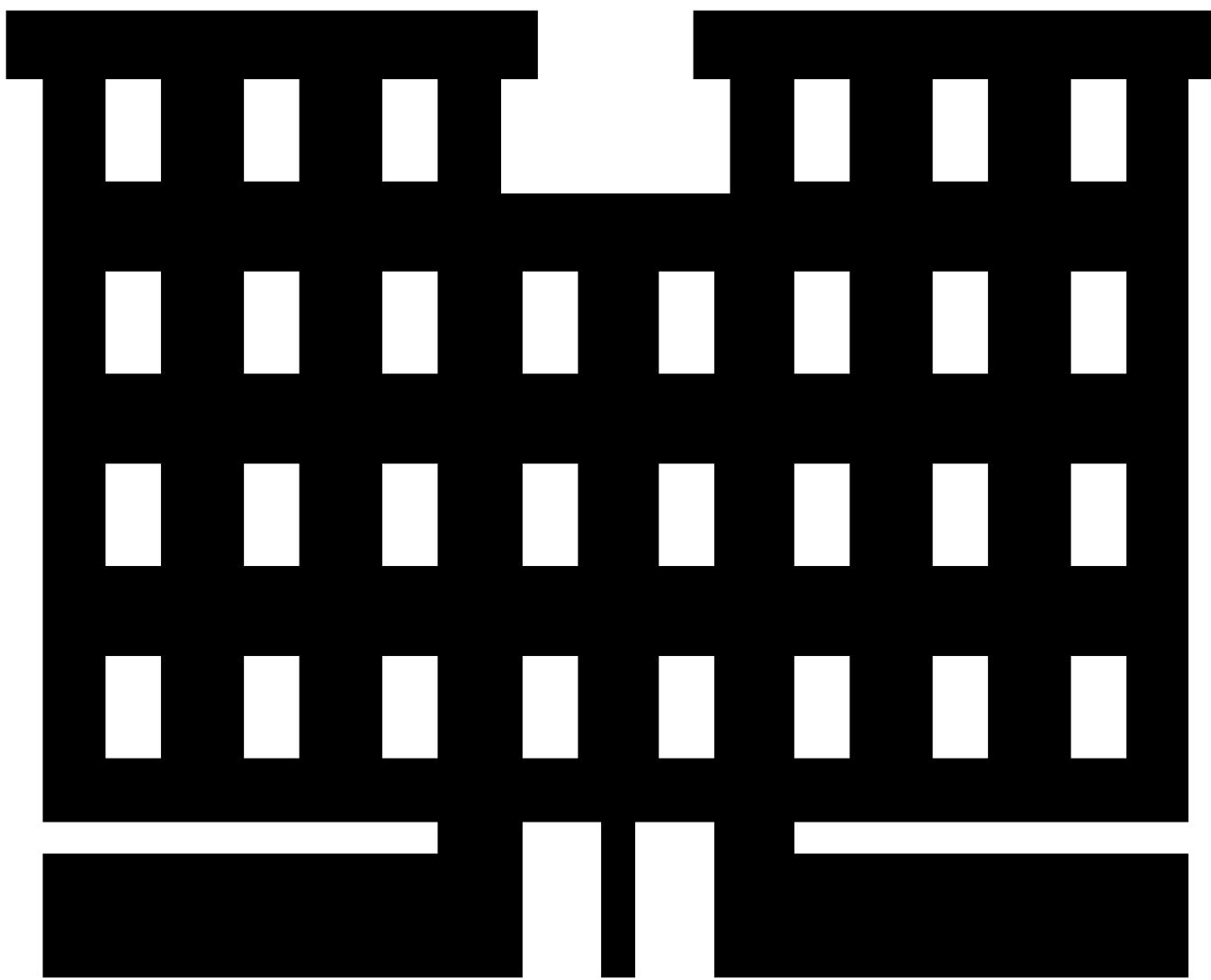


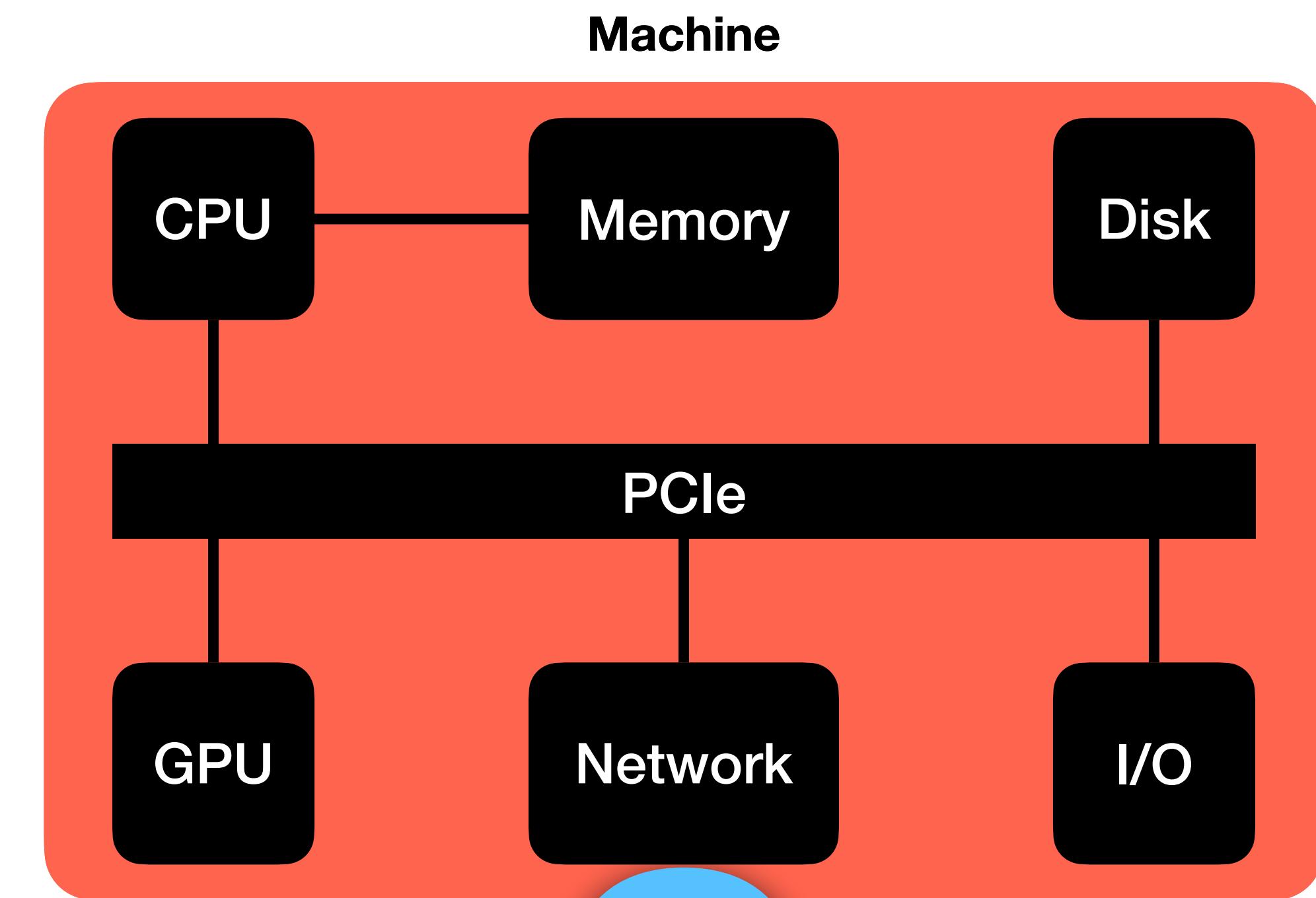


Machine









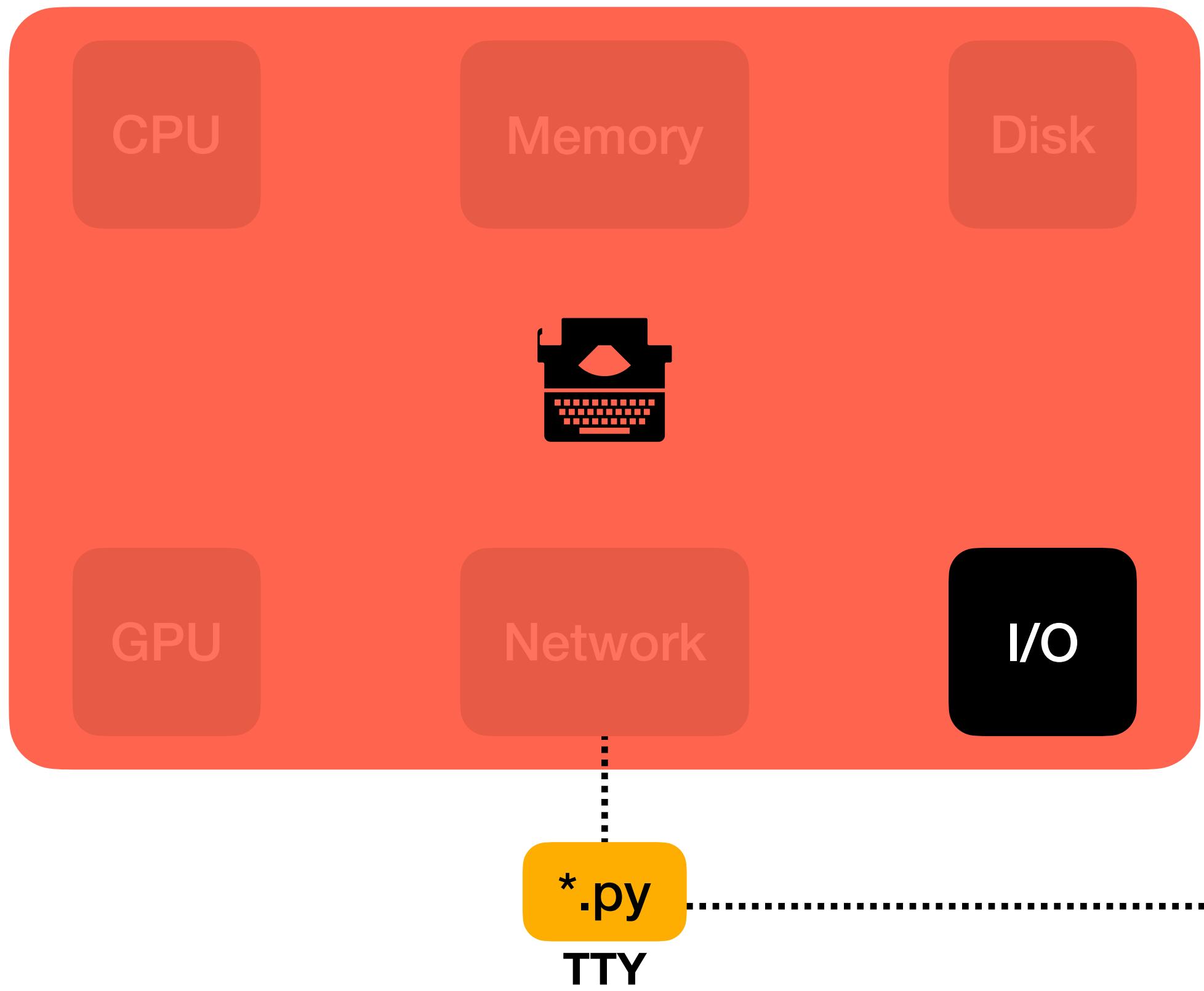
Terminal

I/O

Remote Host

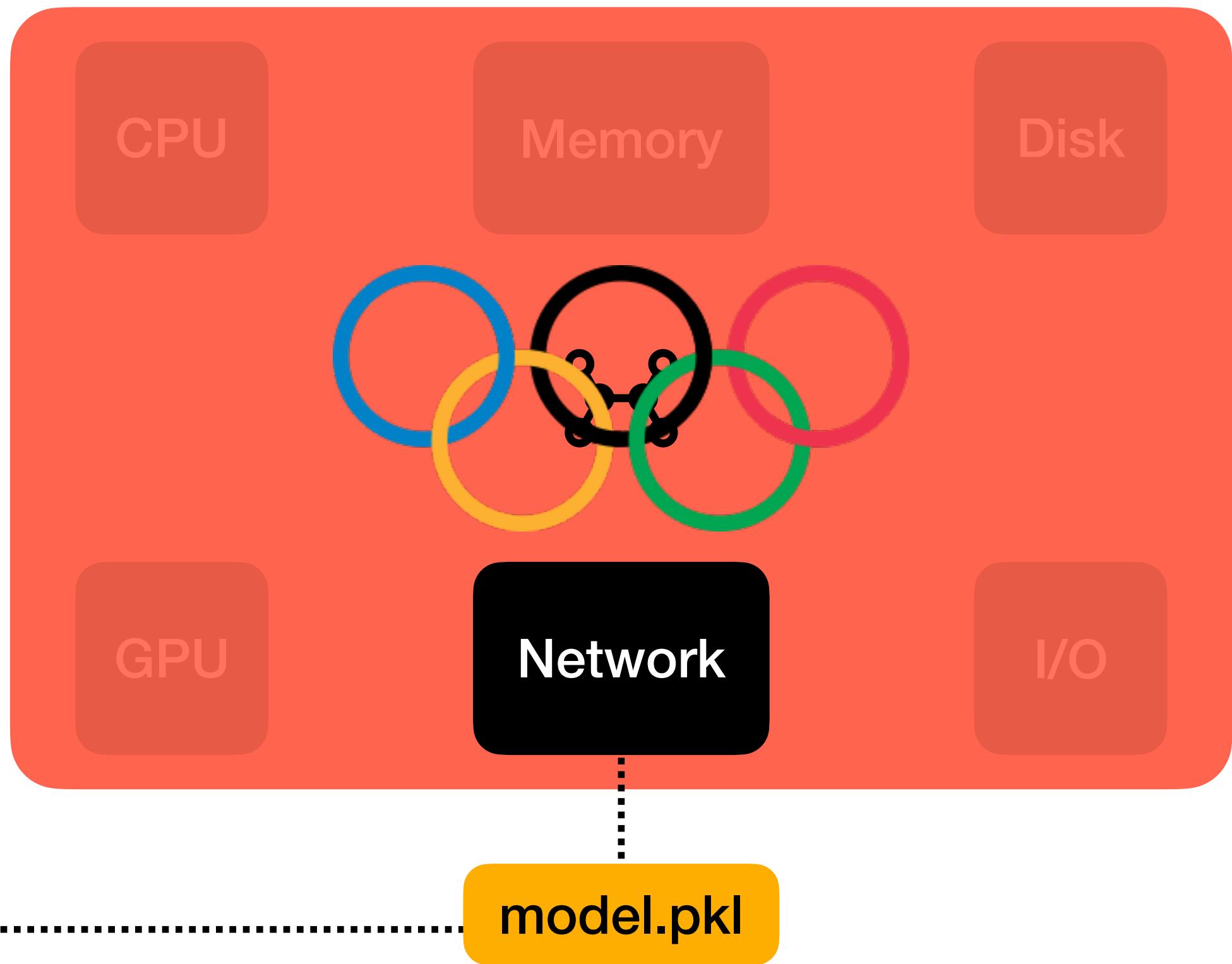
Network

Terminal



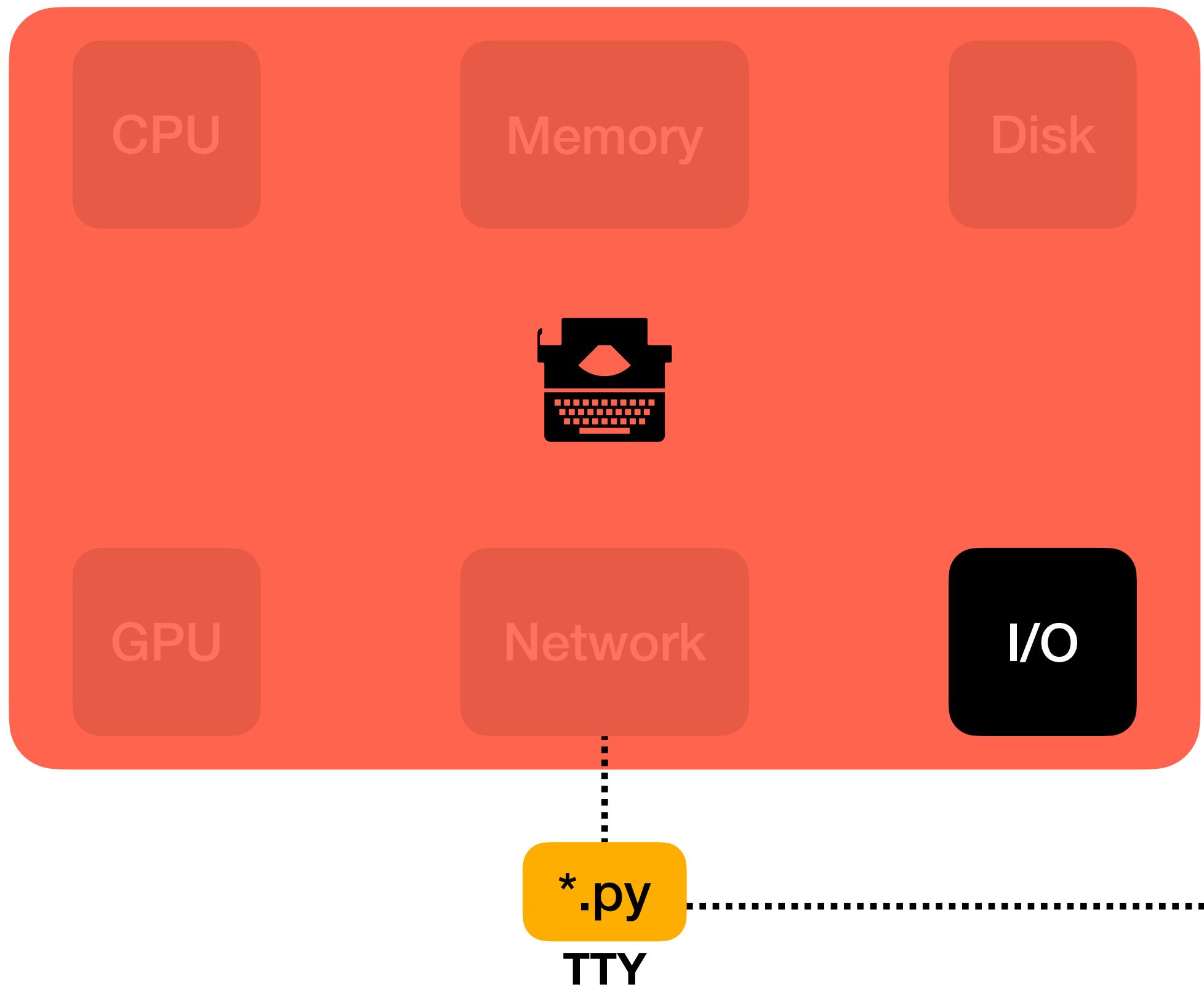
```
scp *.py Host:~/  
ssh login@Host  
scp Host:~/model.pkl .
```

Host



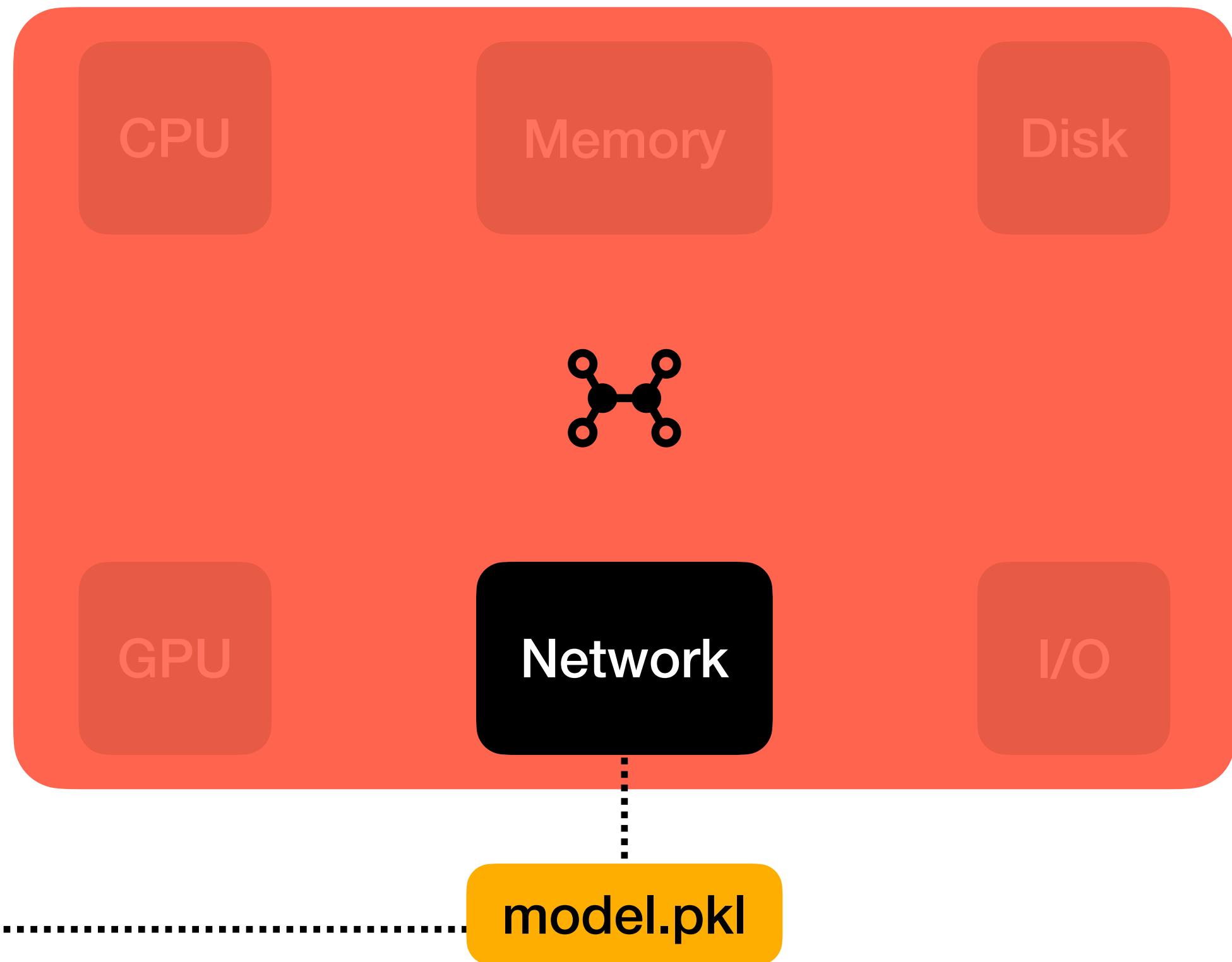
```
python train.py  
python test.py  
exit
```

Terminal

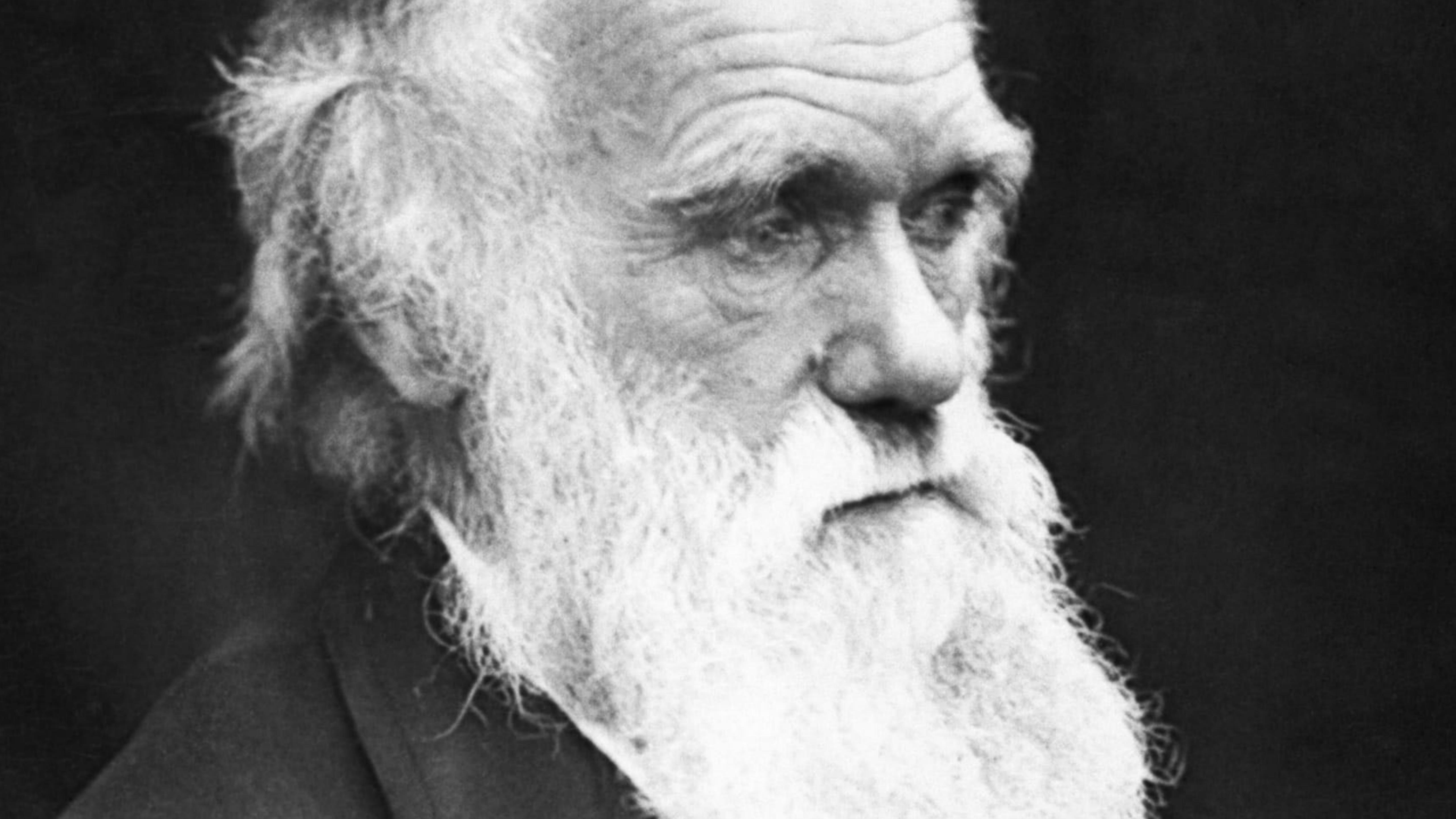


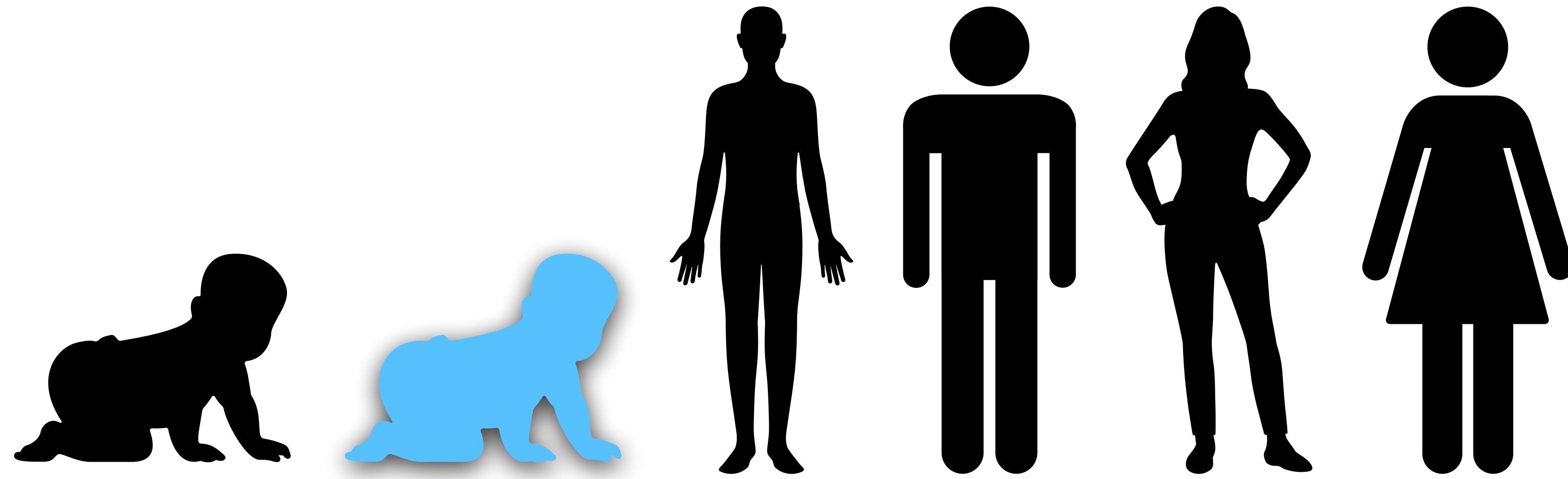
```
scp *.py Host:~/  
ssh login@Host  
scp Host:~/model.pkl .
```

Host

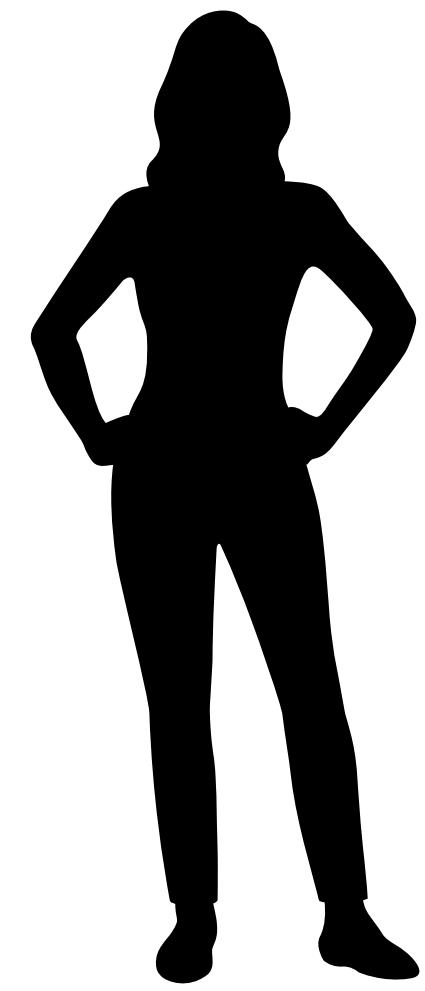
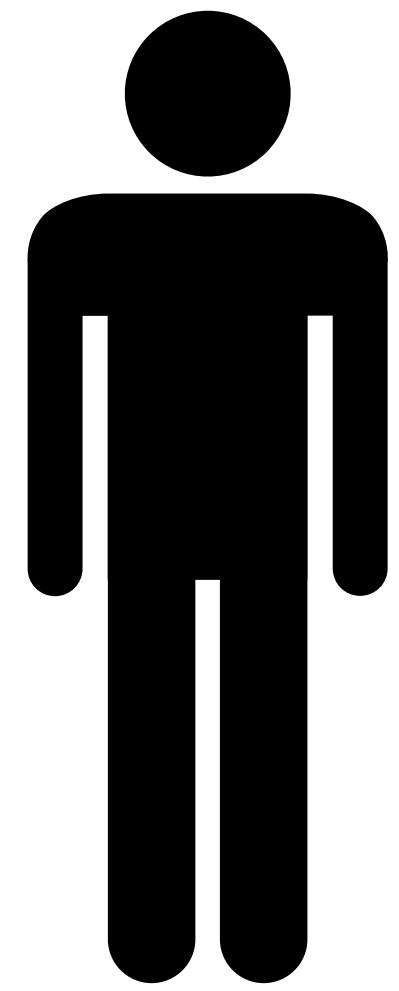
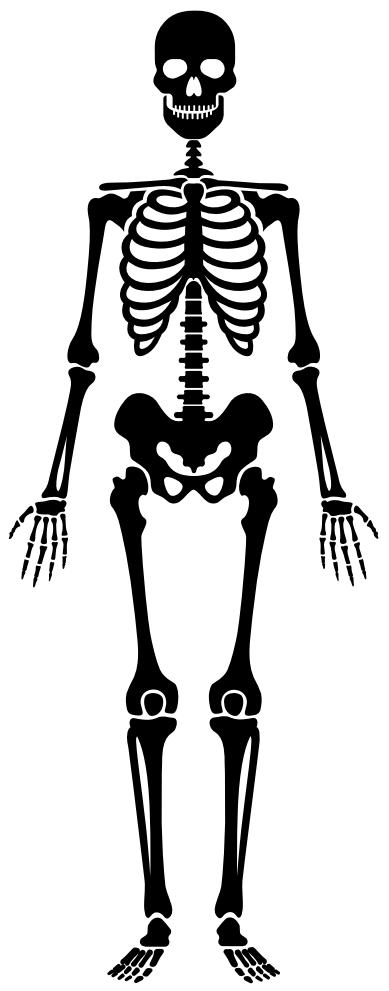
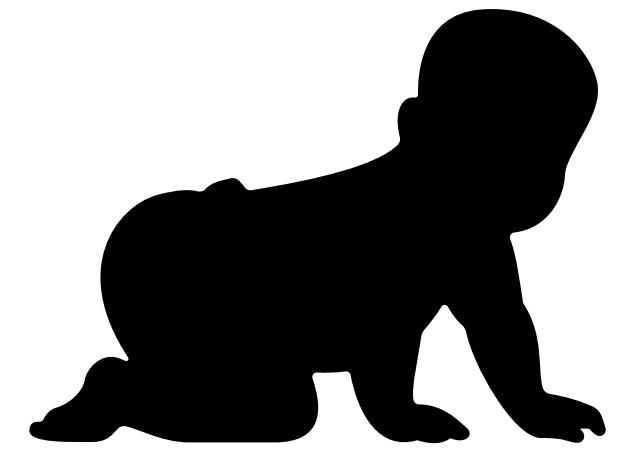


```
python train.py  
python test.py  
exit
```

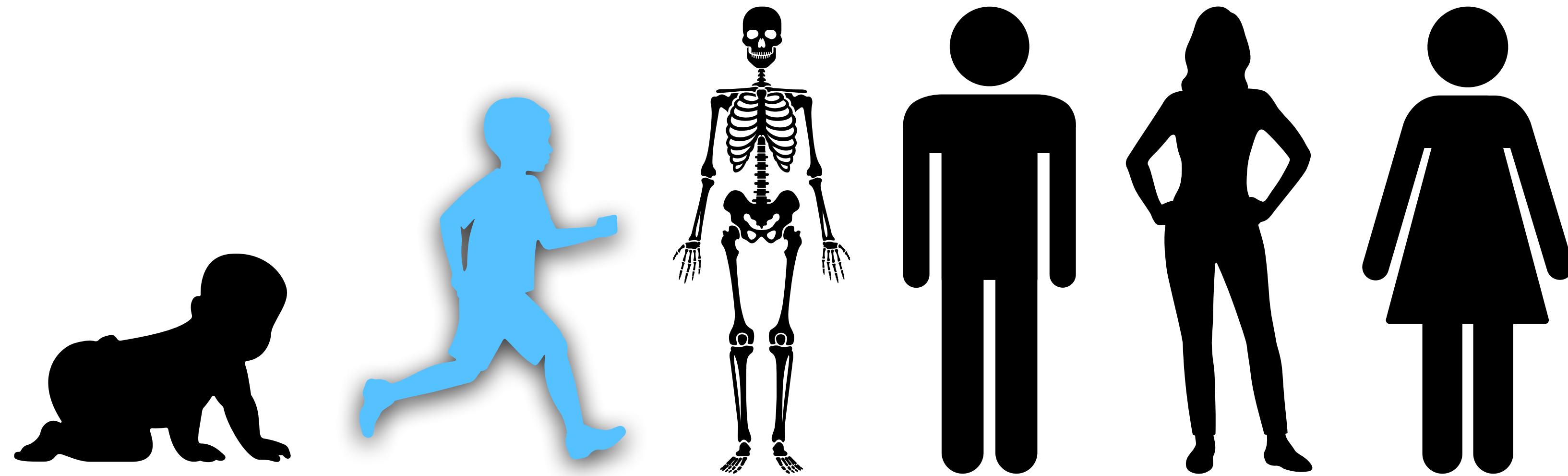





Team evolves

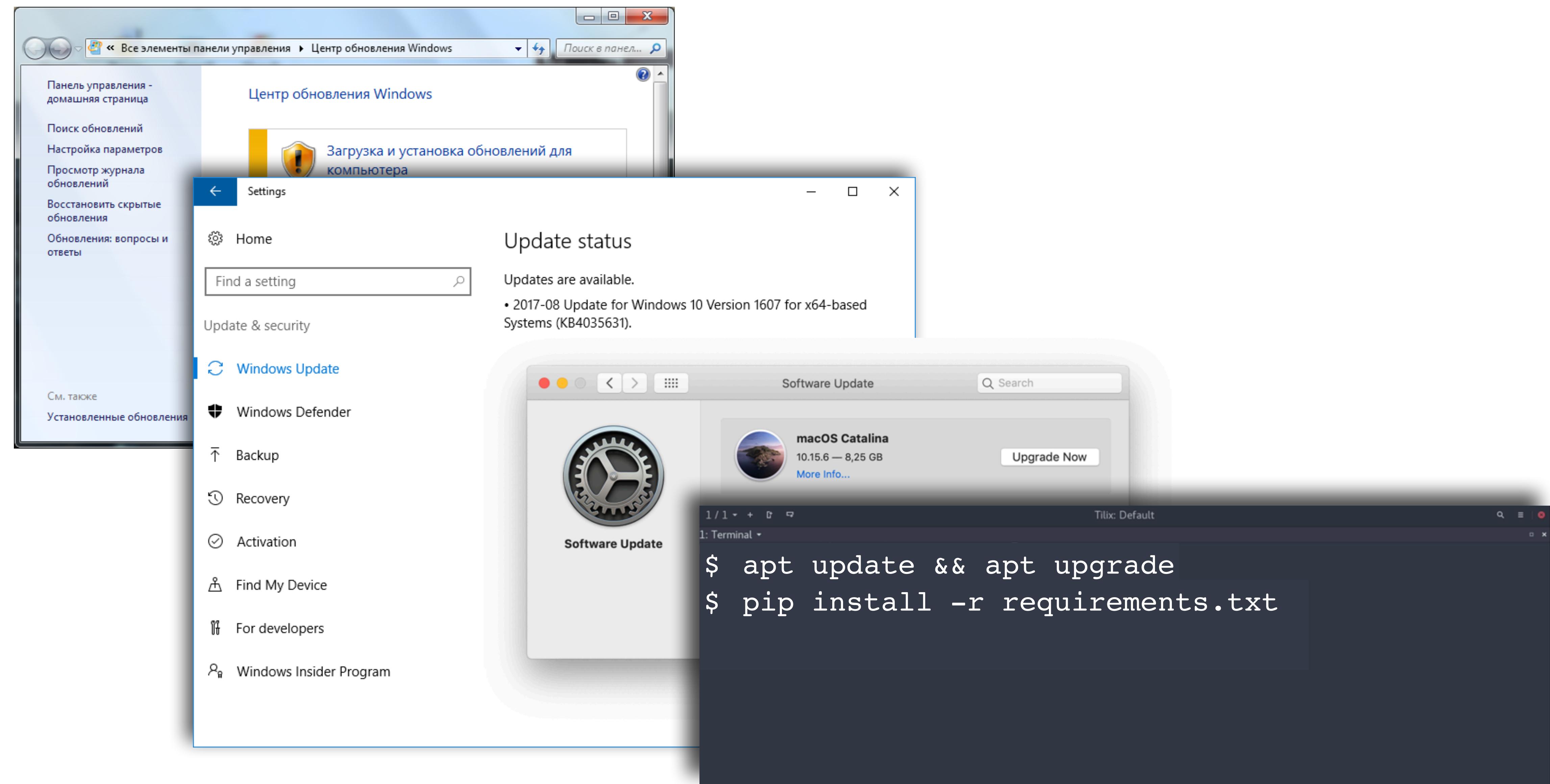


Skills evolve

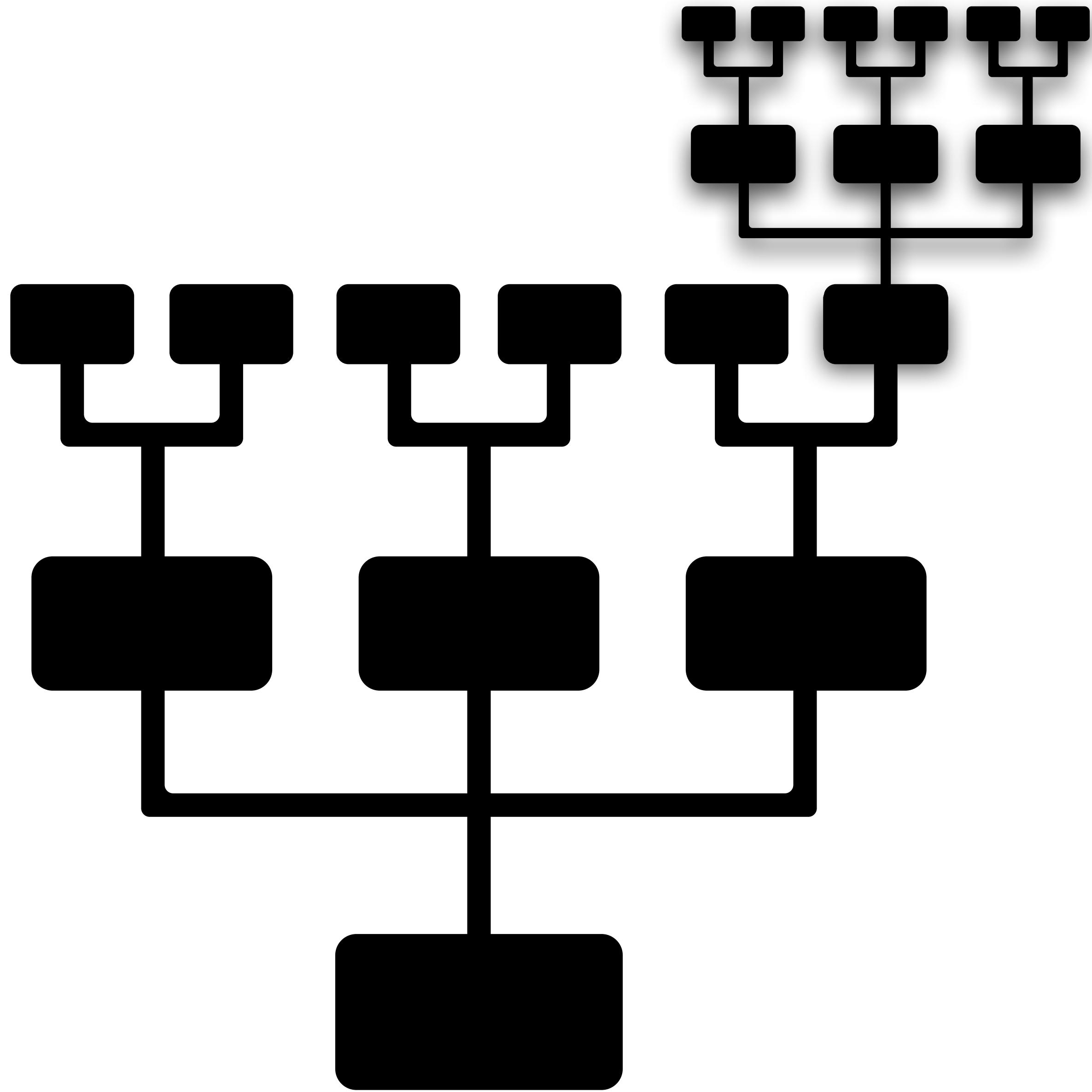


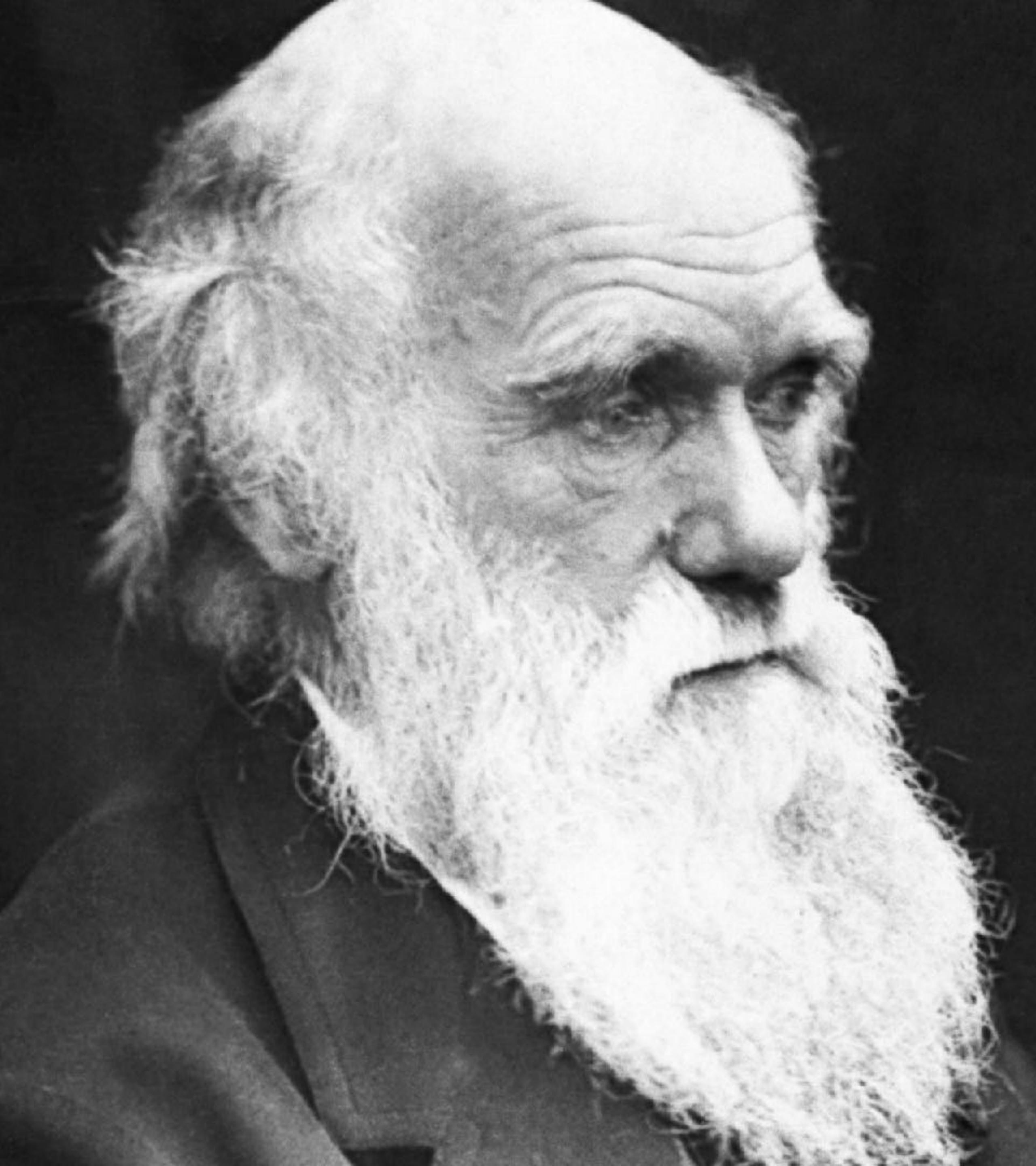
```
if __name__ == "__main__":
    print("Hello, world")
```

Code evolves



Environment evolves

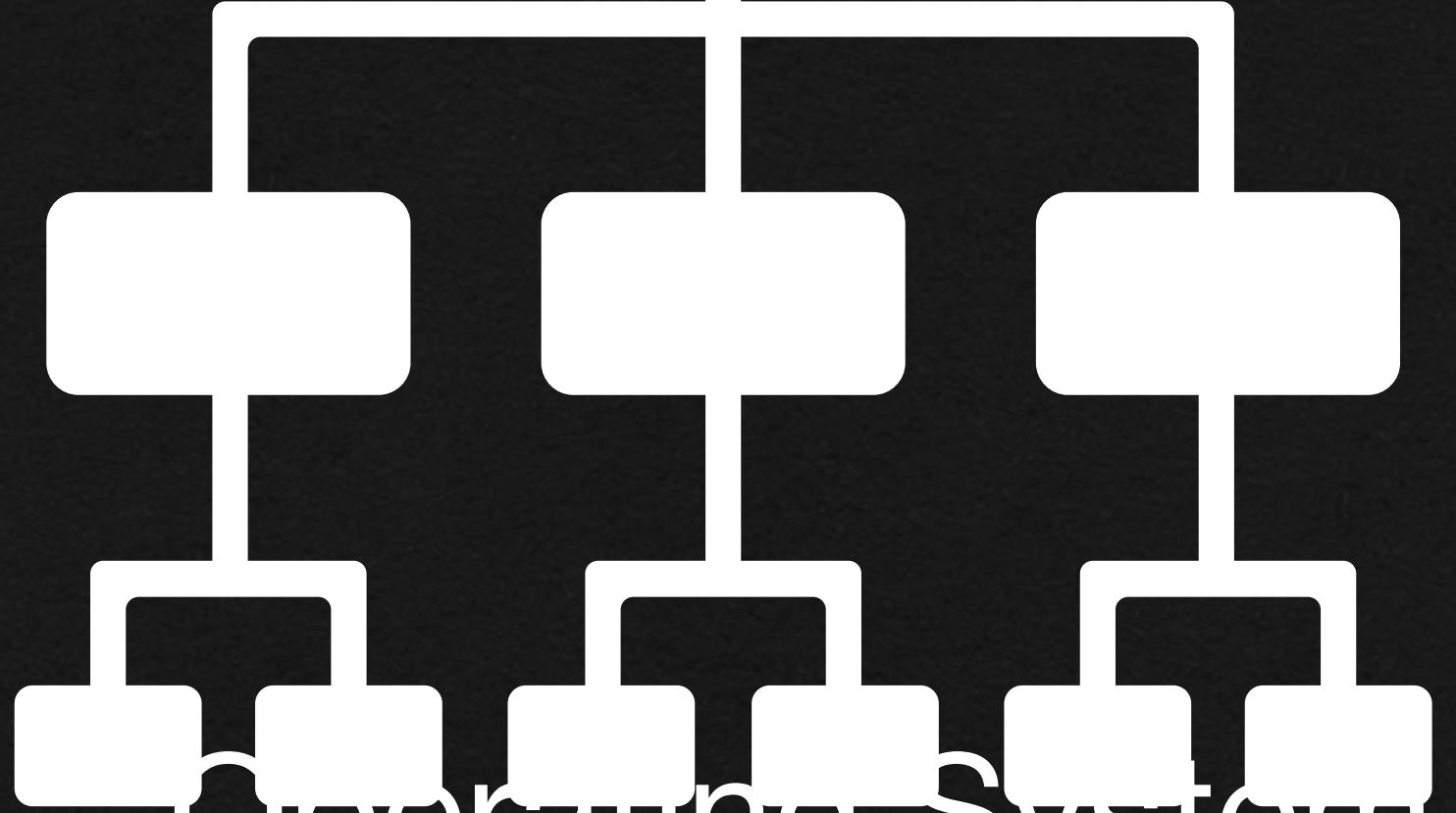




Team

Knowledge
Code

Skills



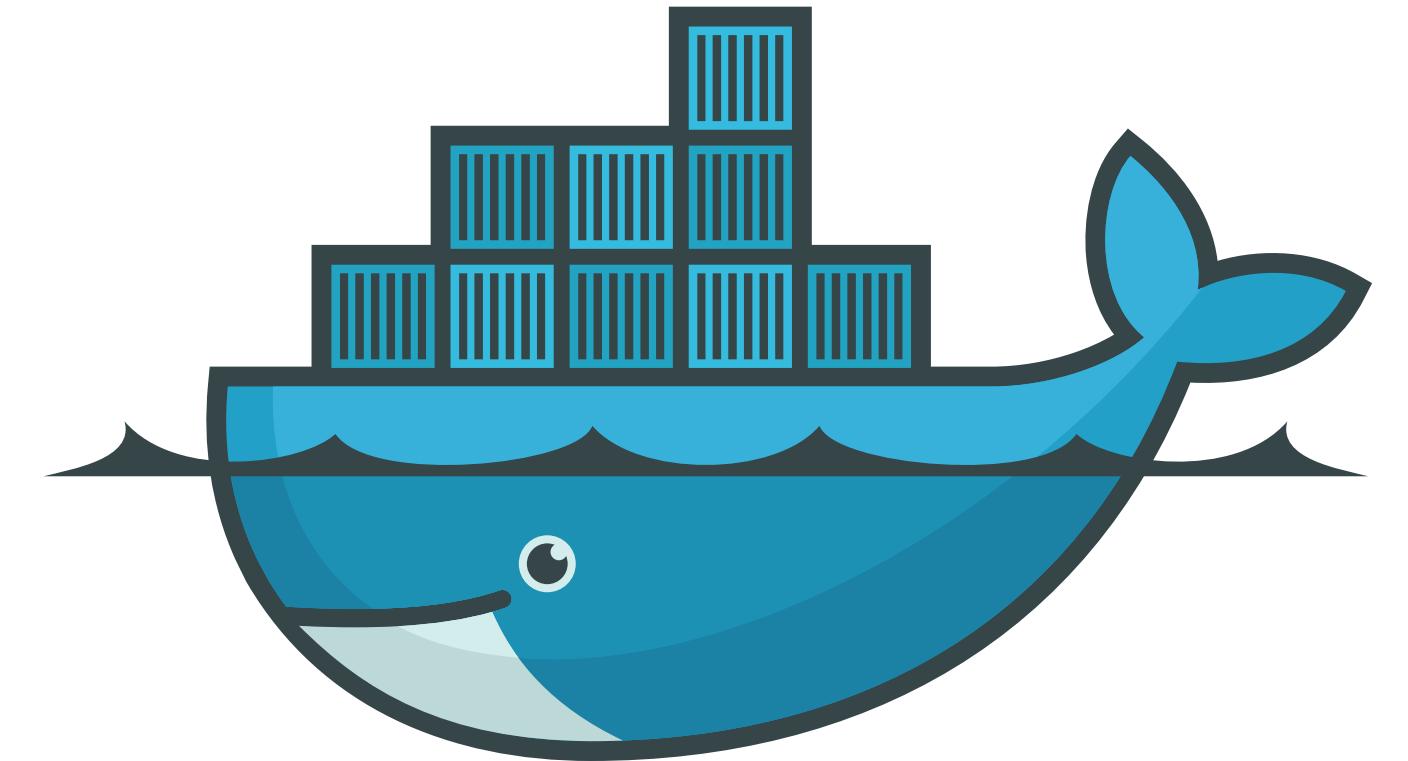
Operating System
Environment
Infrastructure

Tracking the History

Track the content



Track the environment

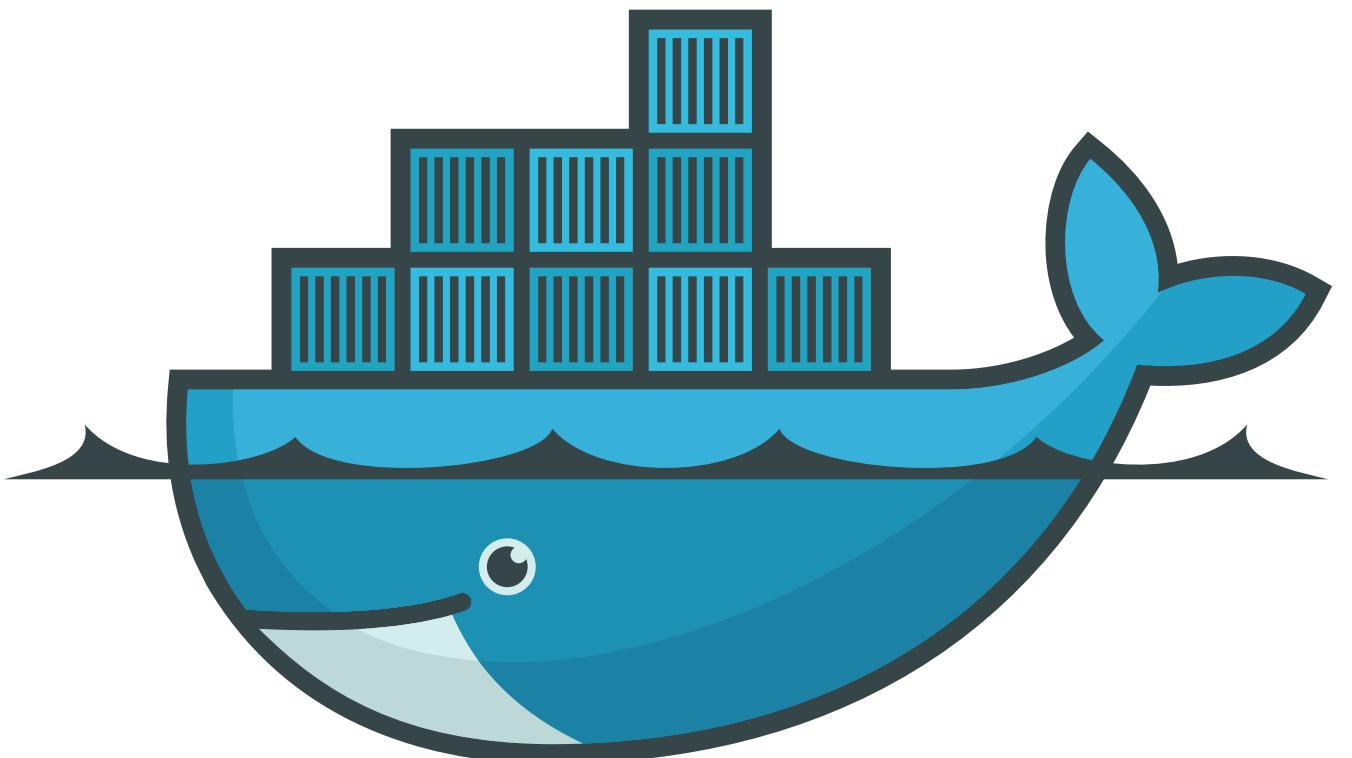


docker

Track the content



Track the environment



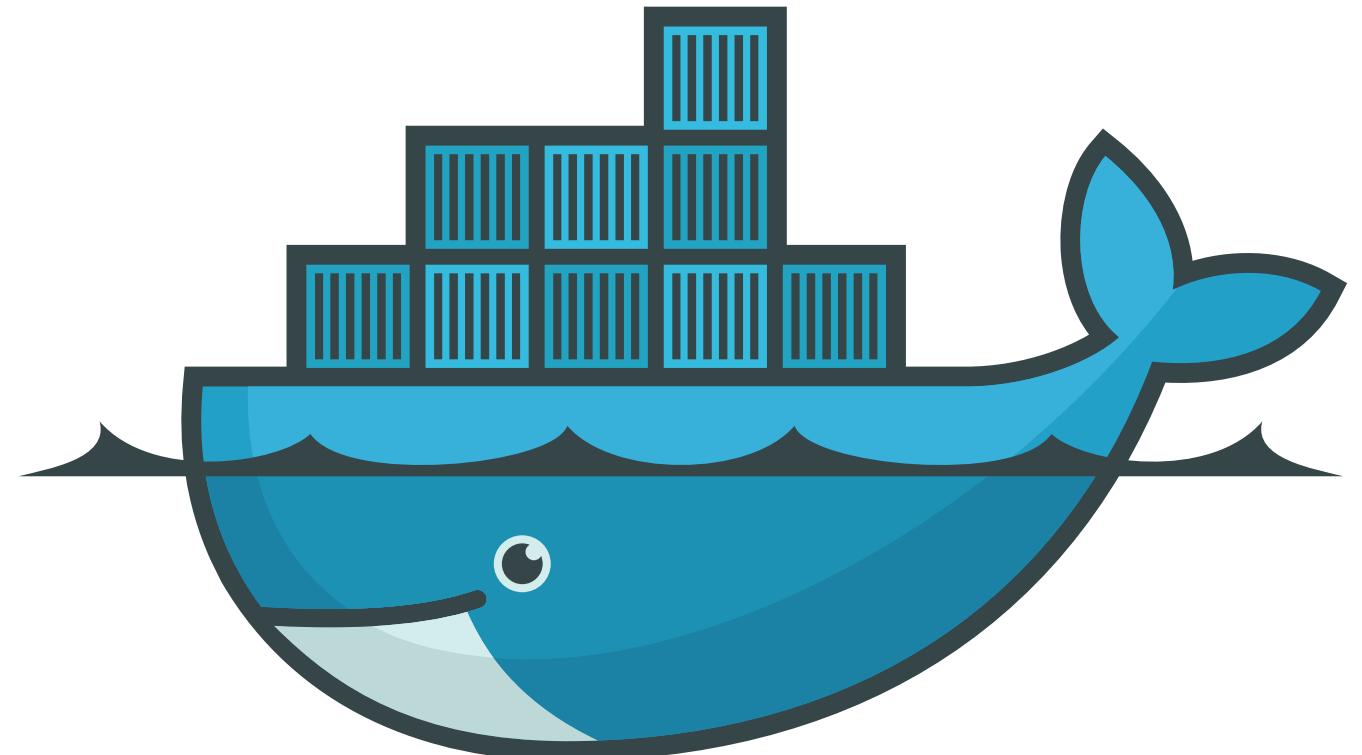
docker

TShick

the content



the environment



docker

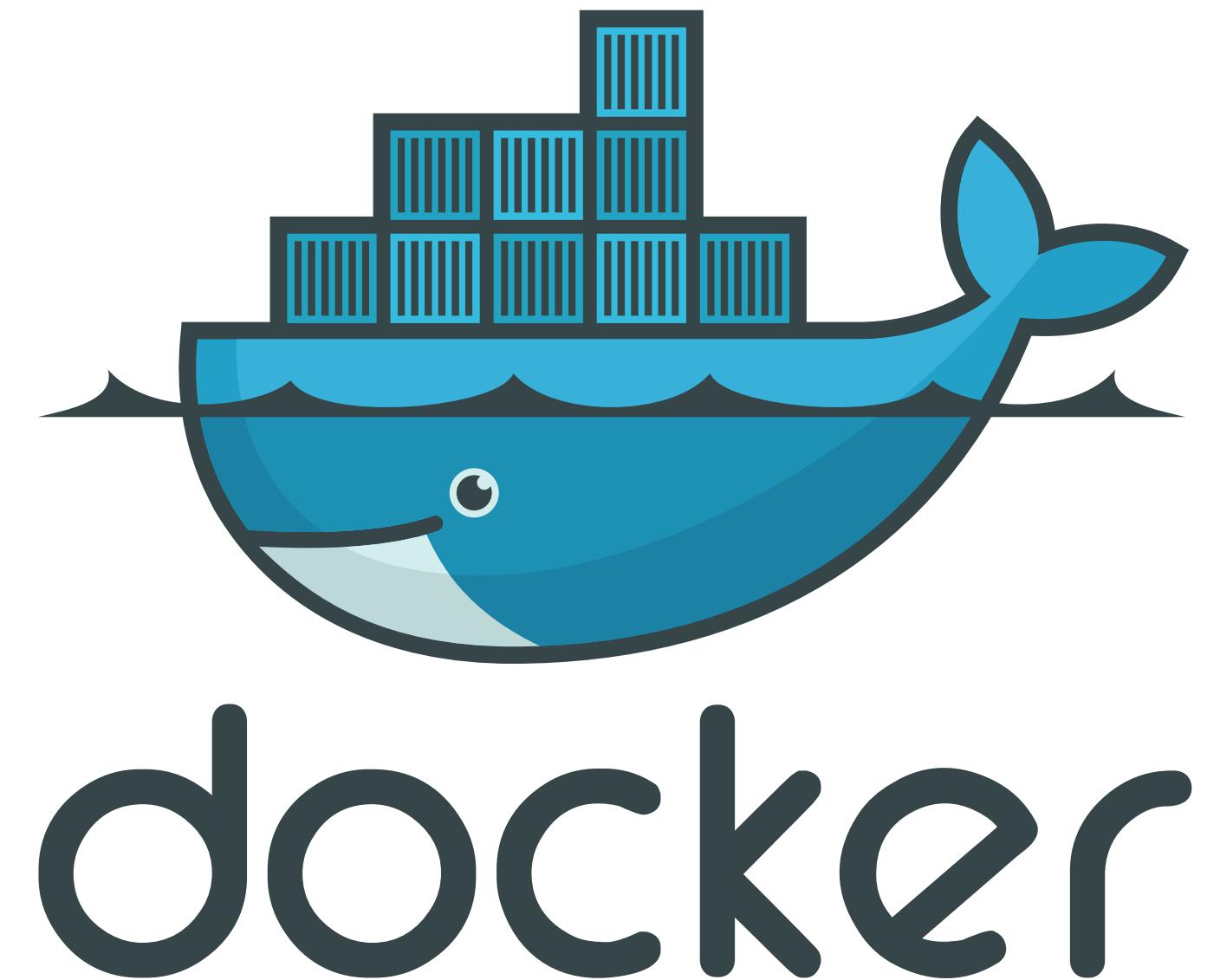
Control the Environment

Pack

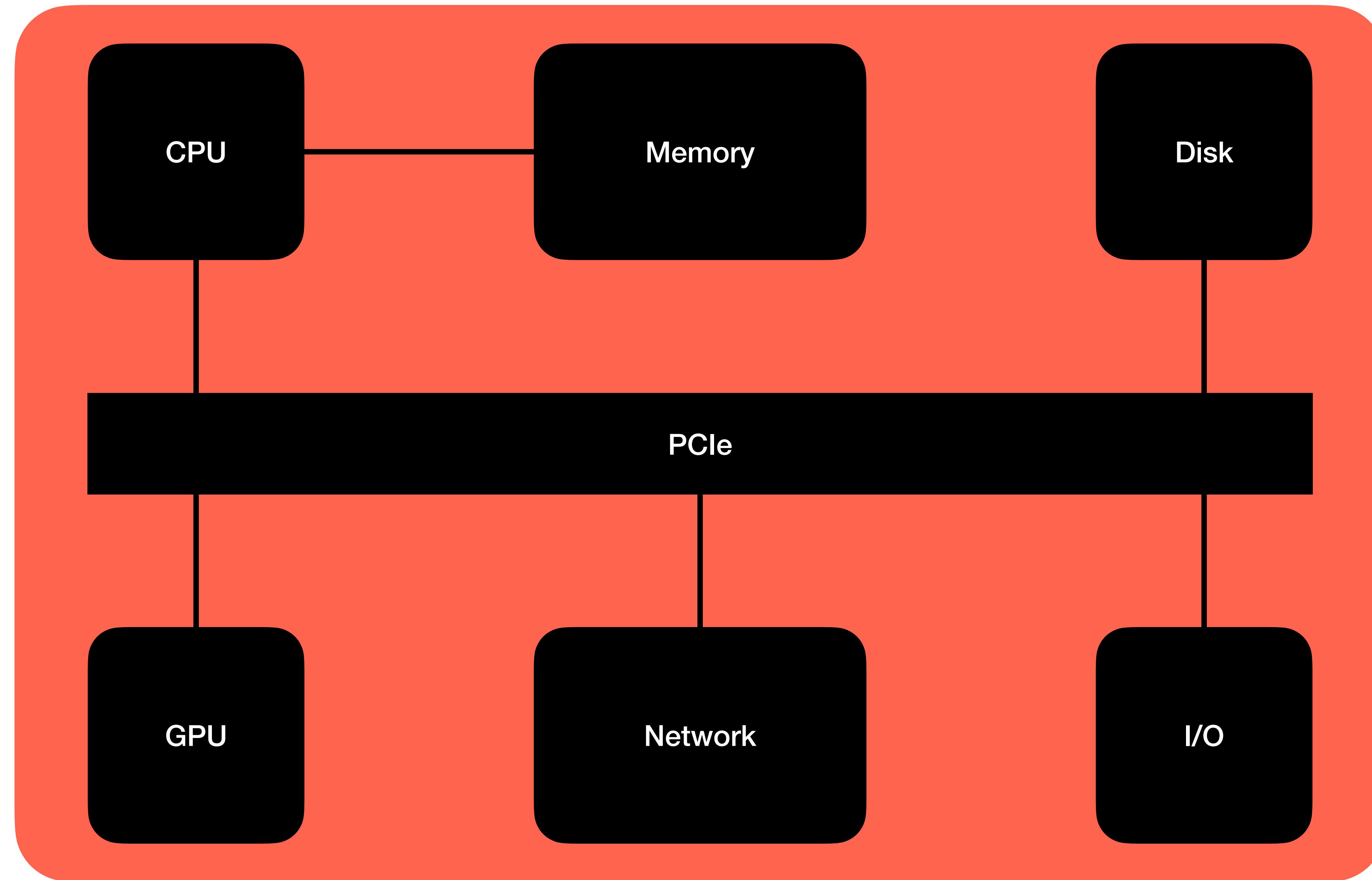
Tag

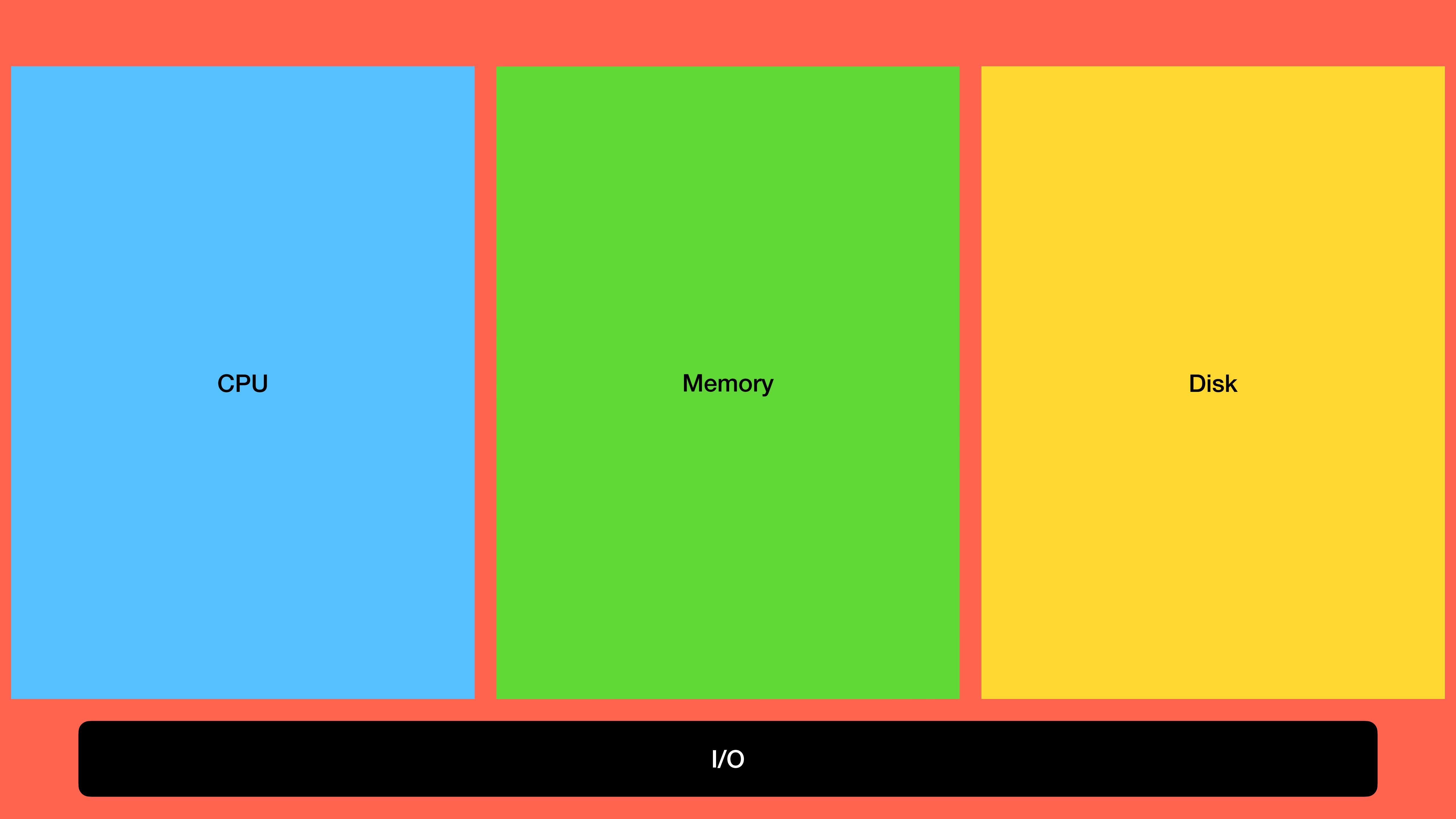
Publish

Inherit



Docker Images





CPU

Memory

Disk

I/O

Runtime

Address Space

Filesystem

command line interface

CPU

Memory

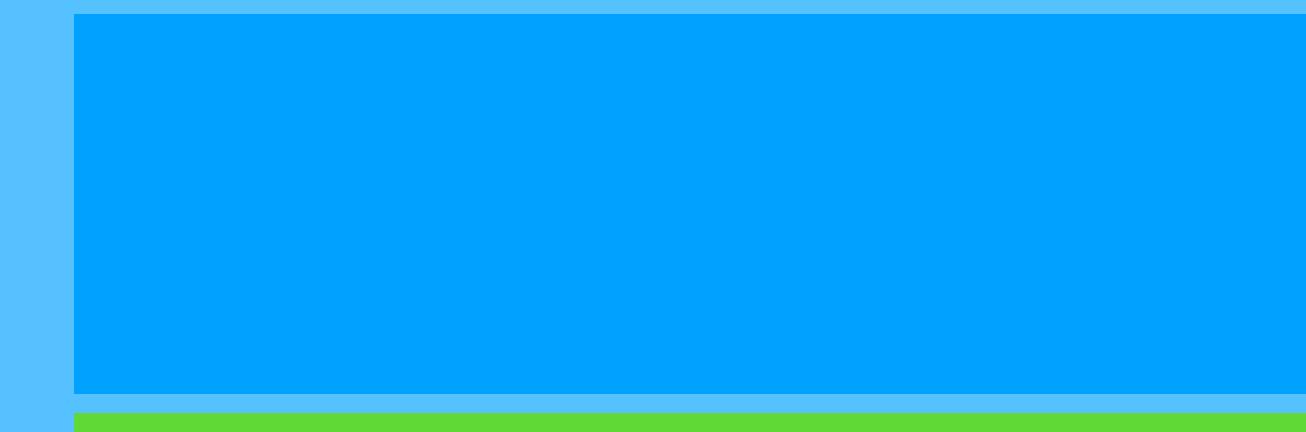
Filesystem

Core

Kernel Space

File

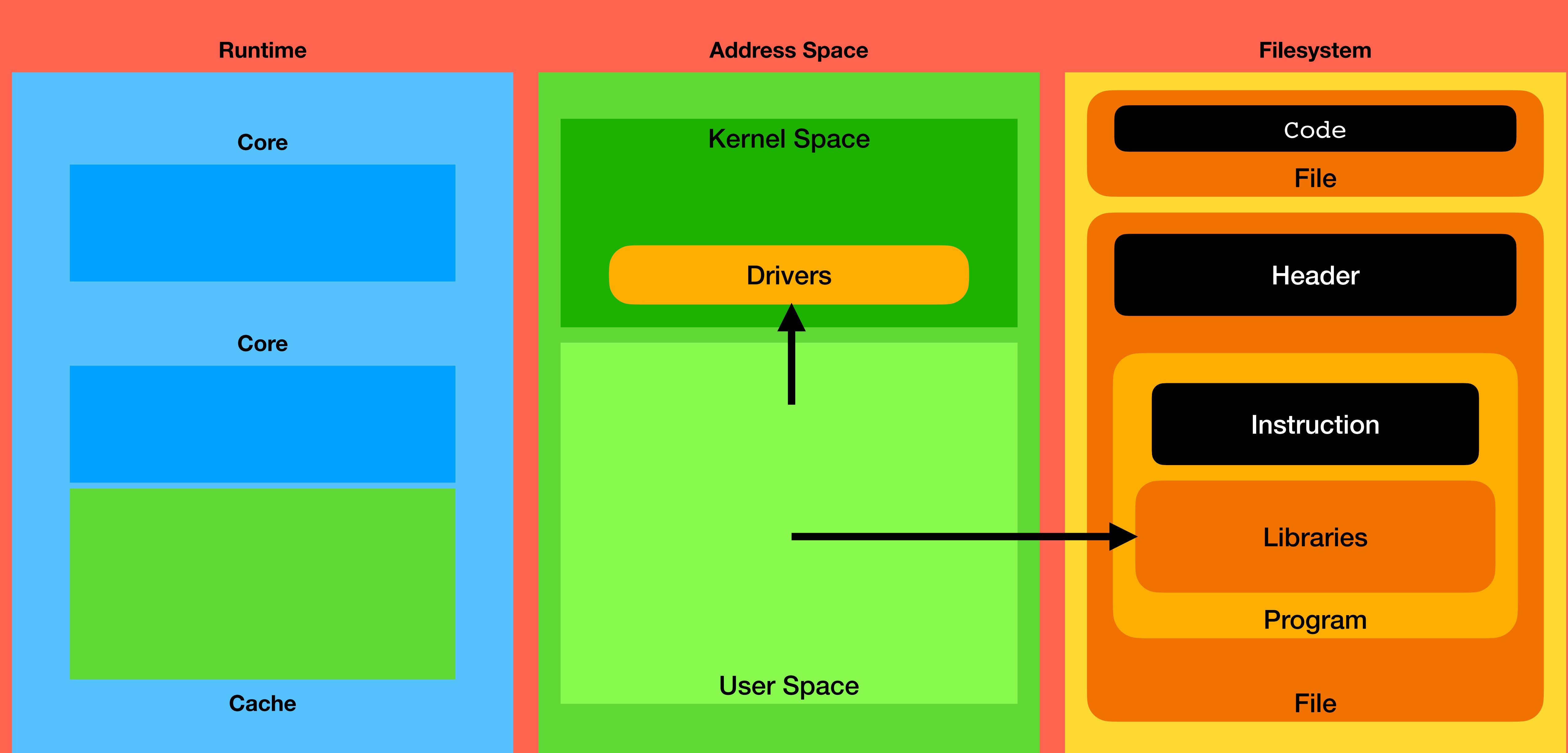
Core



Cache

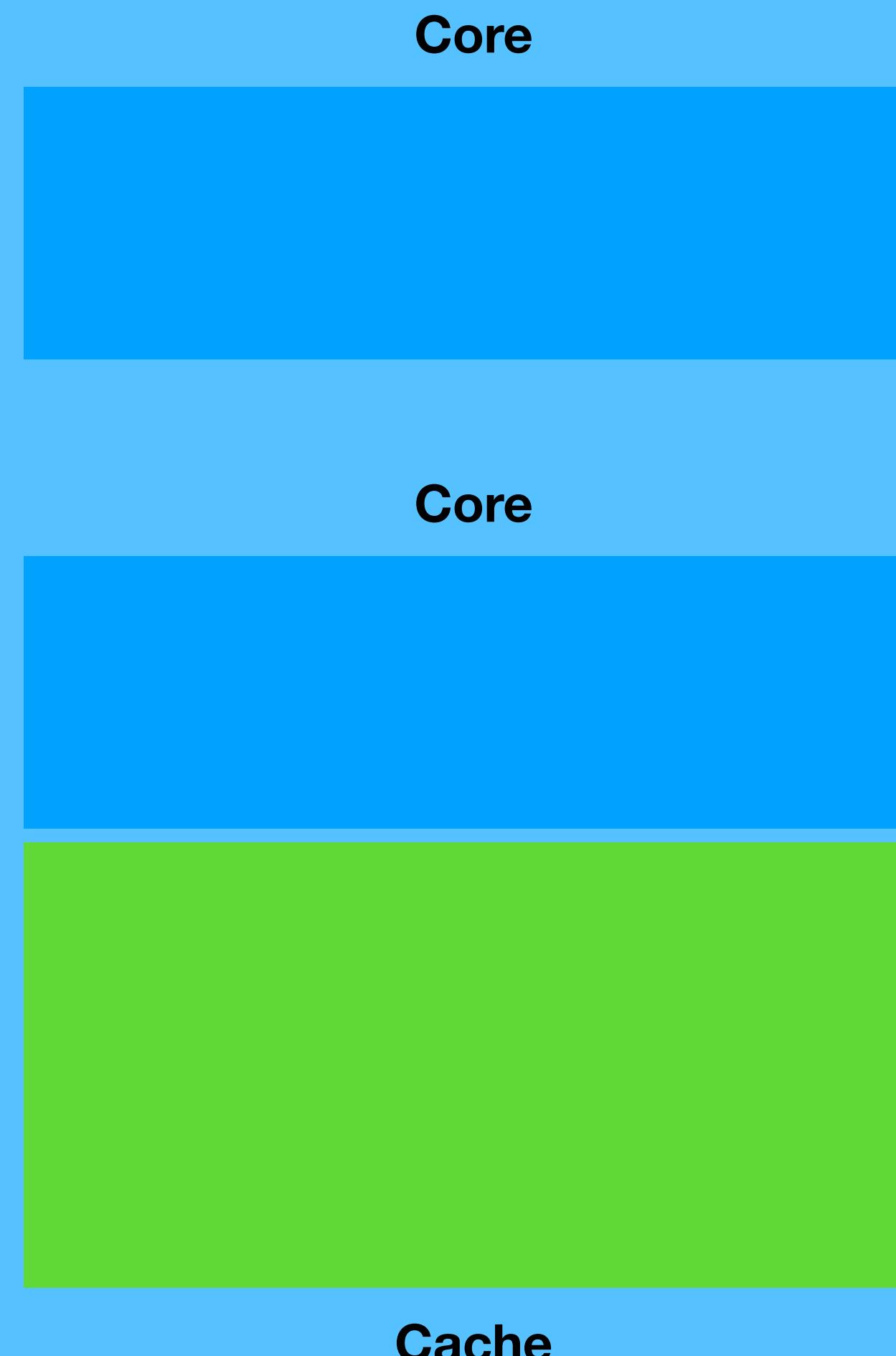
User Space

File

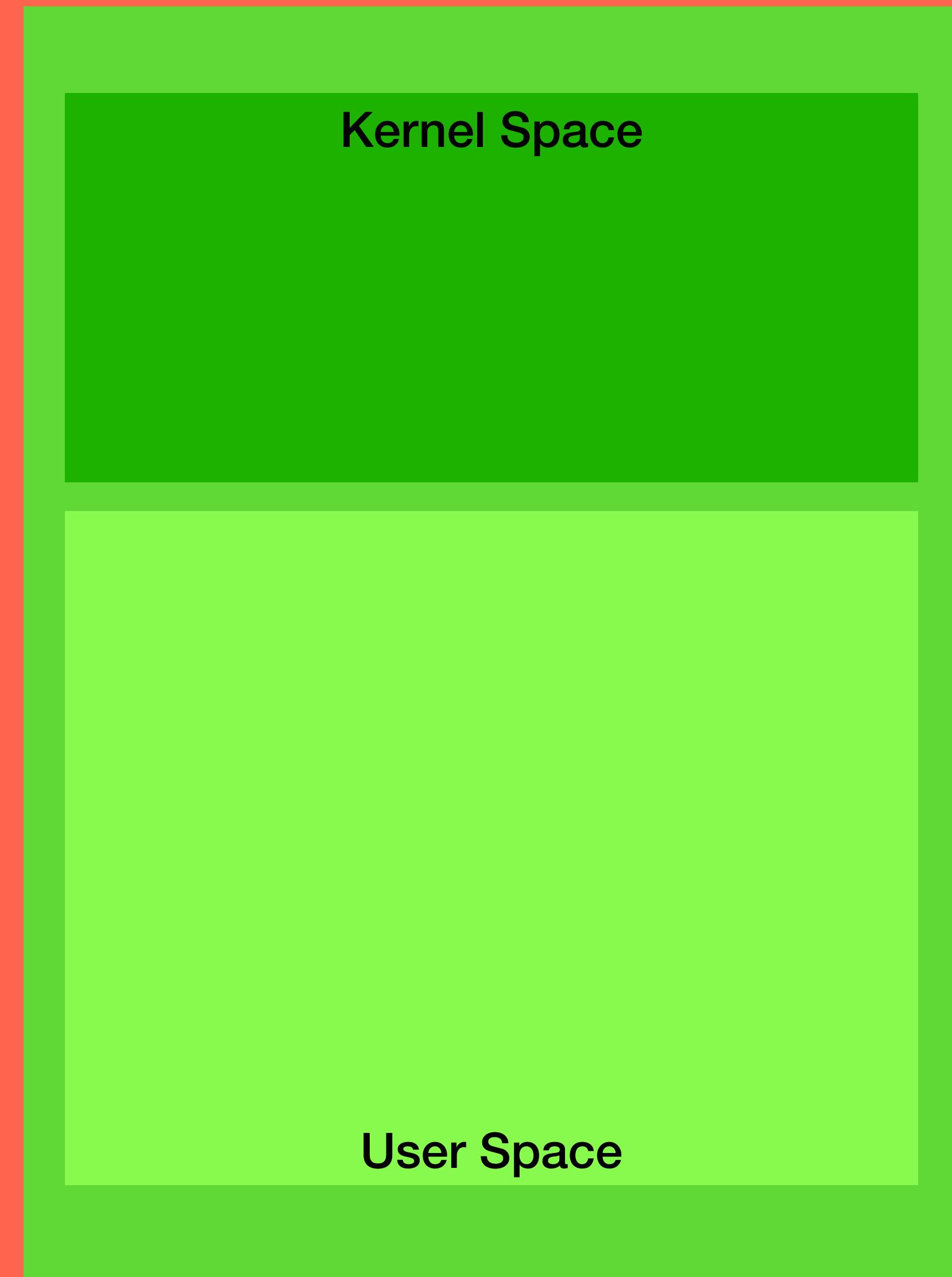


./app

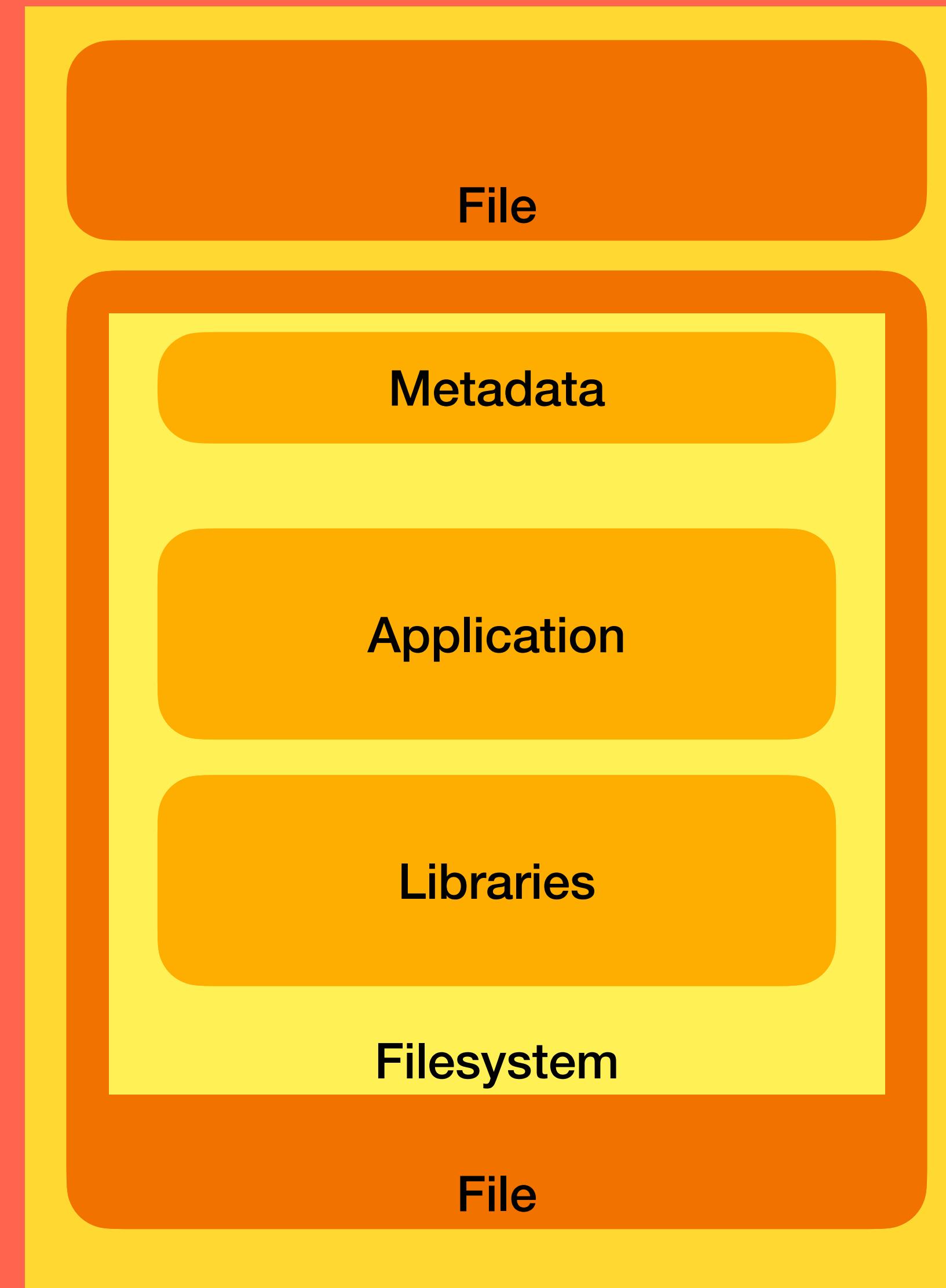
Runtime



Address Space



Filesystem



Image



Dockerfile



```
docker build --tag <repo>/<image>:<label> .
```

Docker Hub

https://hub.docker.com

dockerhub Search for great content (e.g., mysql)

Explore Pricing Sign In Sign Up

Explore > [cosmosarno/jupyter-lab](#)



cosmosarno/jupyter-lab ☆

By [cosmosarno](#) • Updated a year ago

Container

Overview Tags

IMAGE
[20190617180129_lc0w](#)
Last updated a year ago by [mhatreabhay](#)

DIGEST
[23087f3f8988](#)

OS/ARCH
linux/amd64

IMAGE
[20190613105400_lc0w](#)
Last updated a year ago by [mhatreabhay](#)

DIGEST
[fcb1cdcf5a9d](#)

OS/ARCH
linux/amd64

IMAGE
[20190613105400_lc0w_](#)
Last updated a year ago by [mhatreabhay](#)

DIGEST
[35e4fe61698a](#)

OS/ARCH
linux/amd64



pytorch [Edit profile](#)

Community Organization <http://pytorch.org> Joined April 5, 2017

Repositories

Displaying 20 of 20 repositories



pytorch/conda-cuda
By [pytorch](#) • Updated 4 days ago

Container

100K+ Downloads 3 Stars



pytorch/manylinux-rocm
By [pytorch](#) • Updated 19 days ago

Container

482 Downloads 0 Stars



pytorch/pytorch-binary-docker-image-ubuntu16.04
By [pytorch](#) • Updated 20 days ago

Container

100K+ Downloads 2 Stars

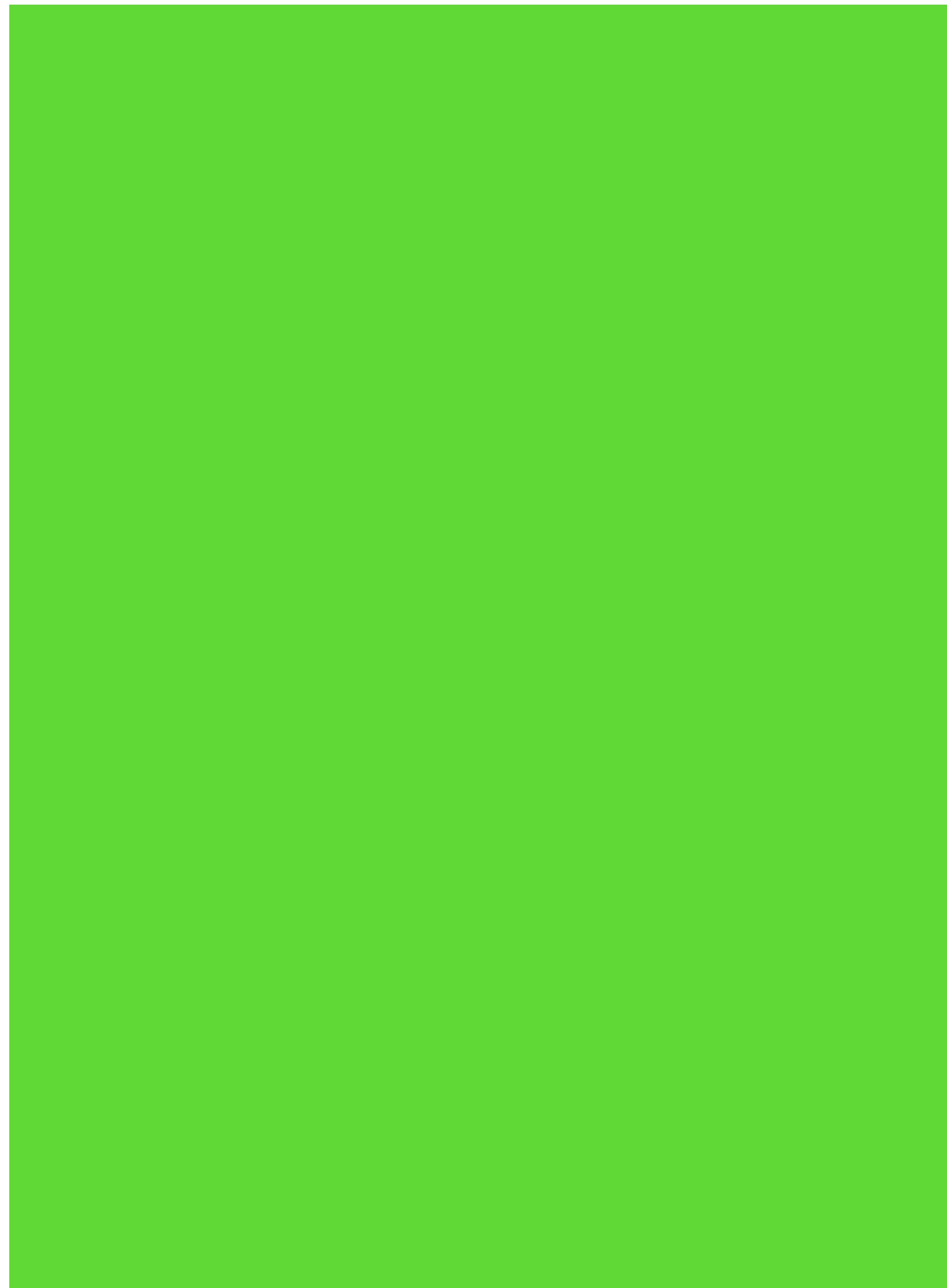


pytorch/manylinux-cuda110
By [pytorch](#) • Updated a month ago

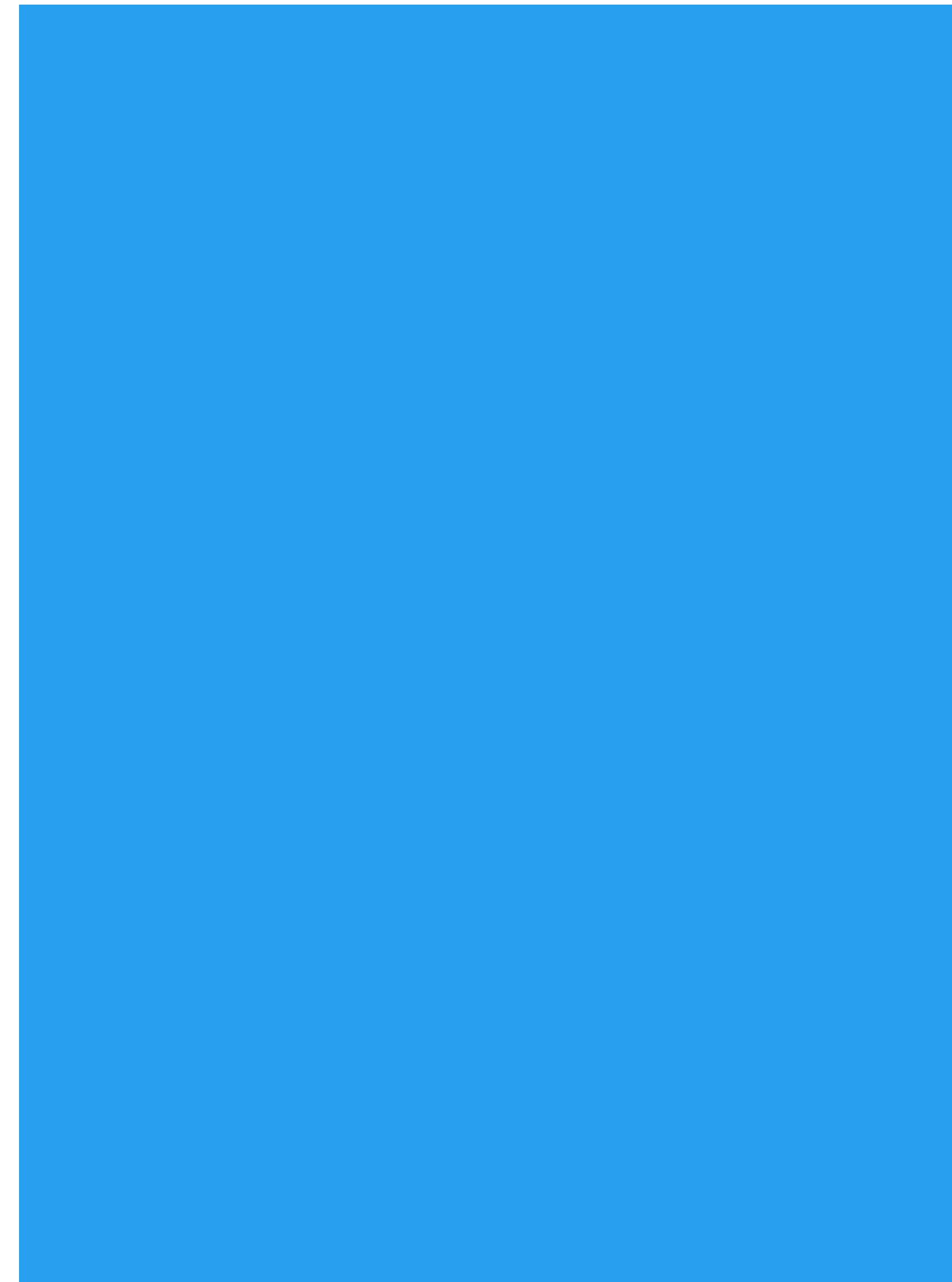
Container

2.3K Downloads 0 Stars

Image

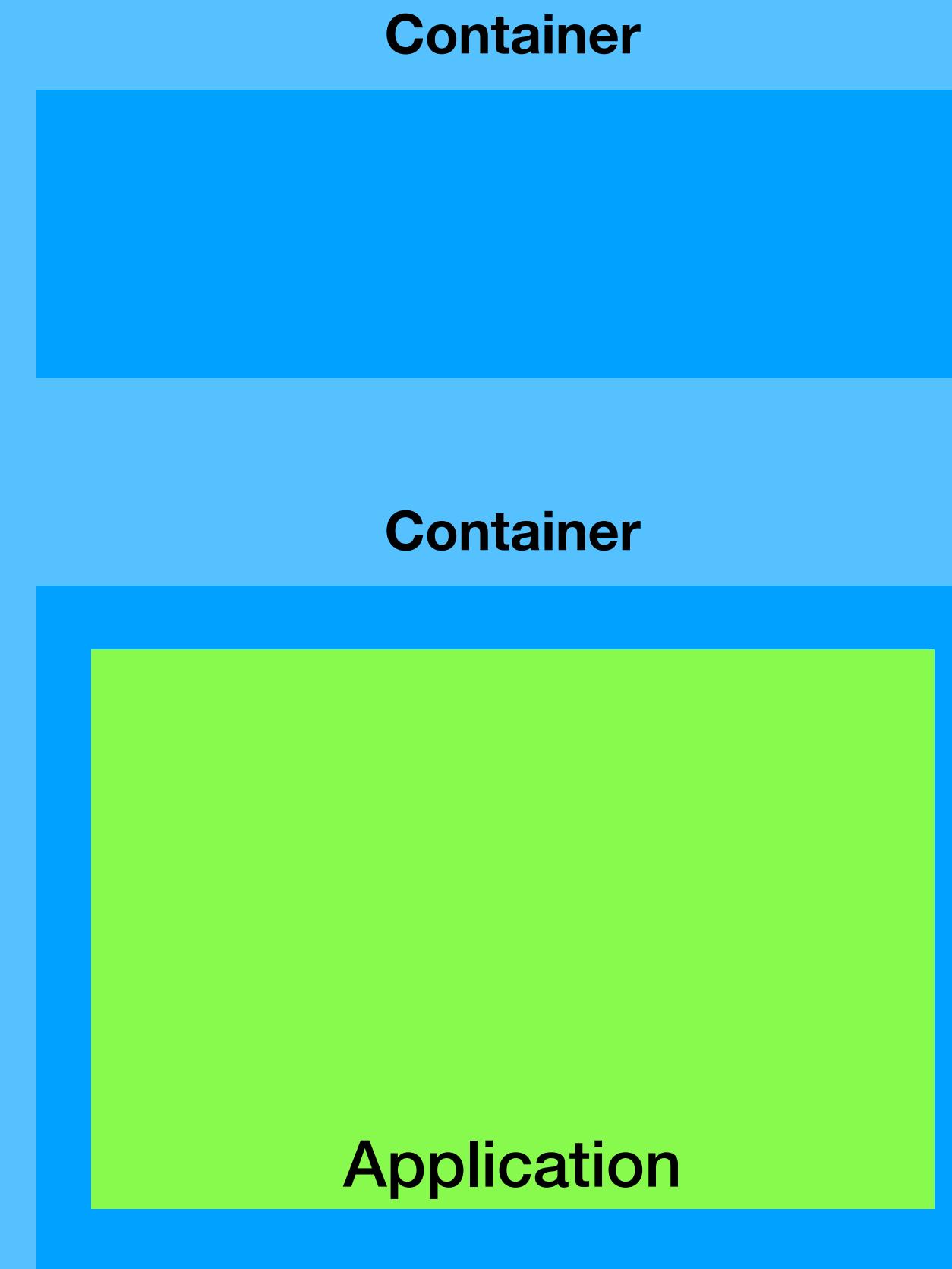


Docker Hub

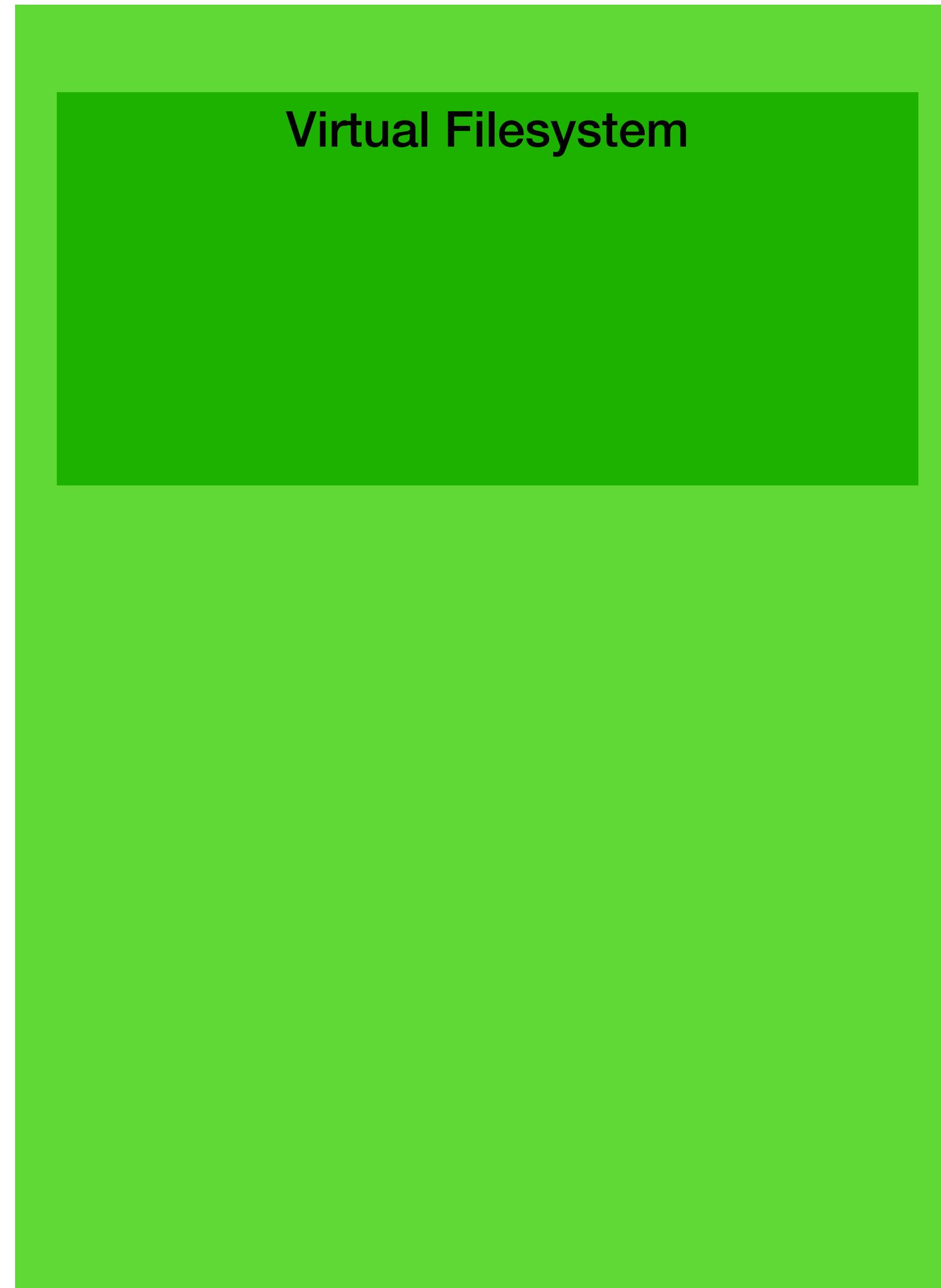


```
docker pull <repo>/<image>:<label>
```

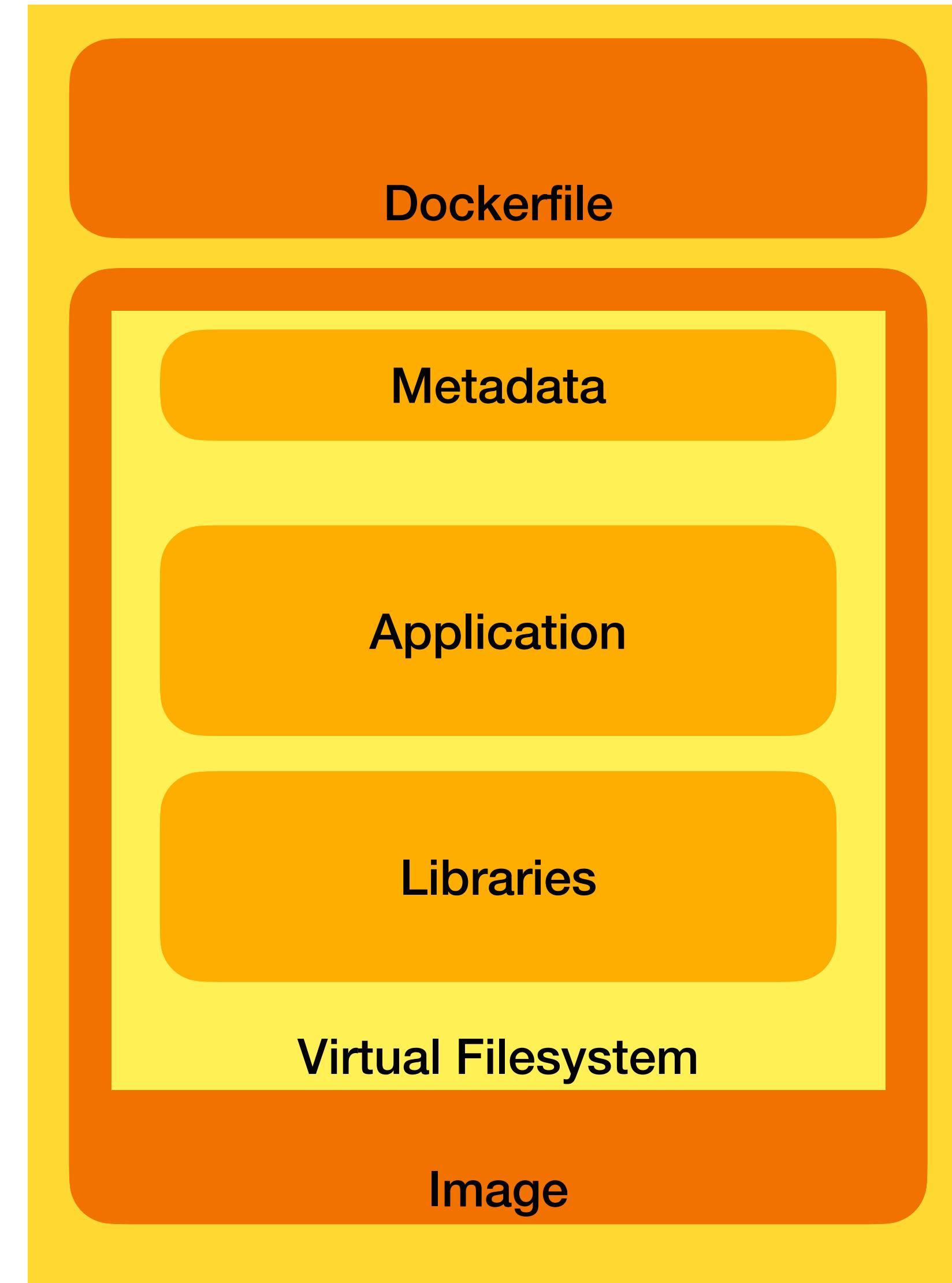
Runtime



Address Space



Filesystem



Lifetime

Container

Commands



Filesystem



Network



```
docker run --rm <image>
```

Runtime

Container

Container

Address Space

Virtual Filesystem

Application

Filesystem

Dockerfile

Metadata

Application

Libraries

Virtual Filesystem

Image

Lifetime

Container

Image

Dockerfile

Shorter lifetime

Longer lifetime

