CS220 - Operating Systems

Spring 2020

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FAST National University of Computer and

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https://recluze.net

Plan

About the Course

About the Instructor

Course Outline

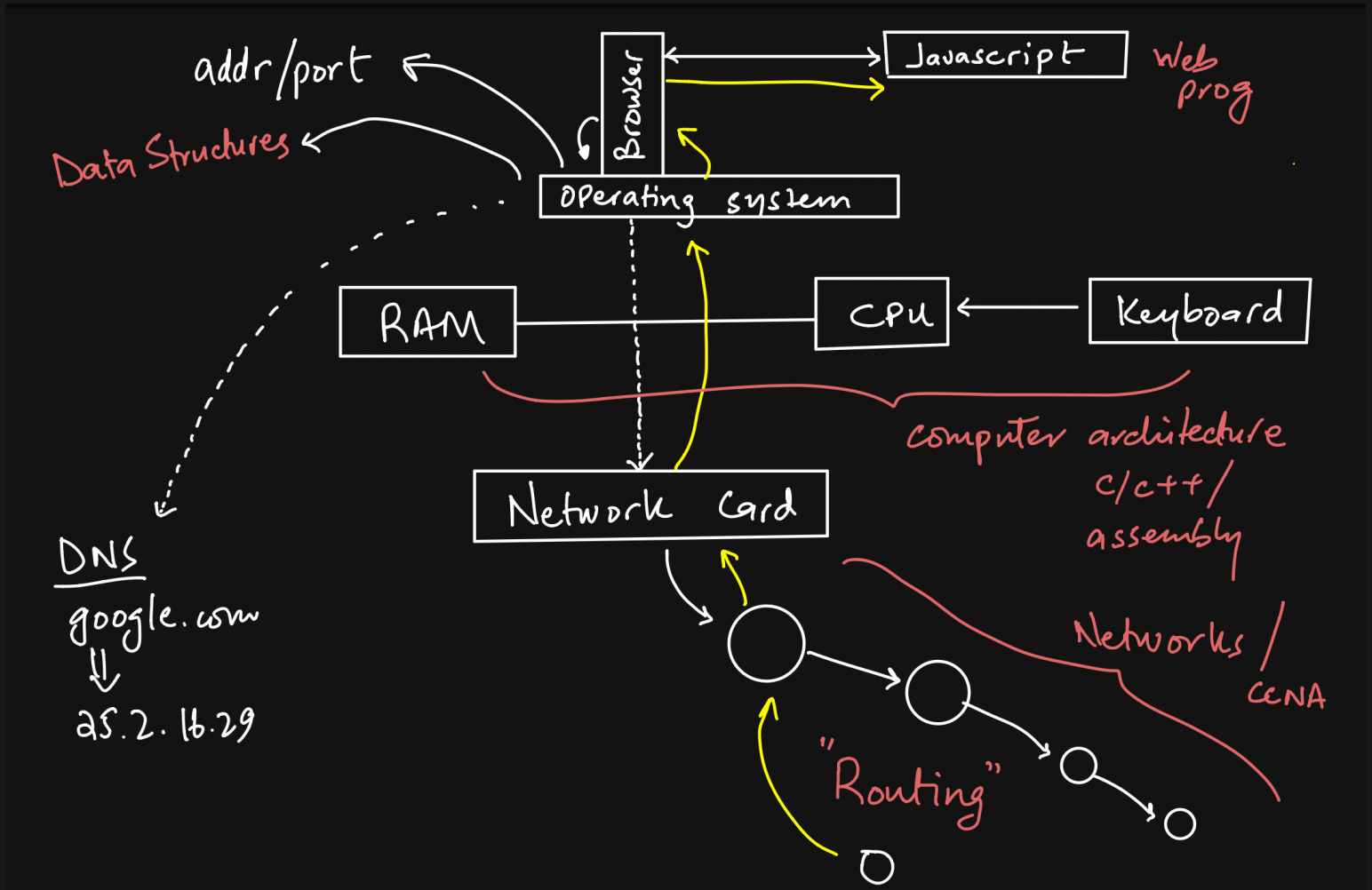
Teaching Method

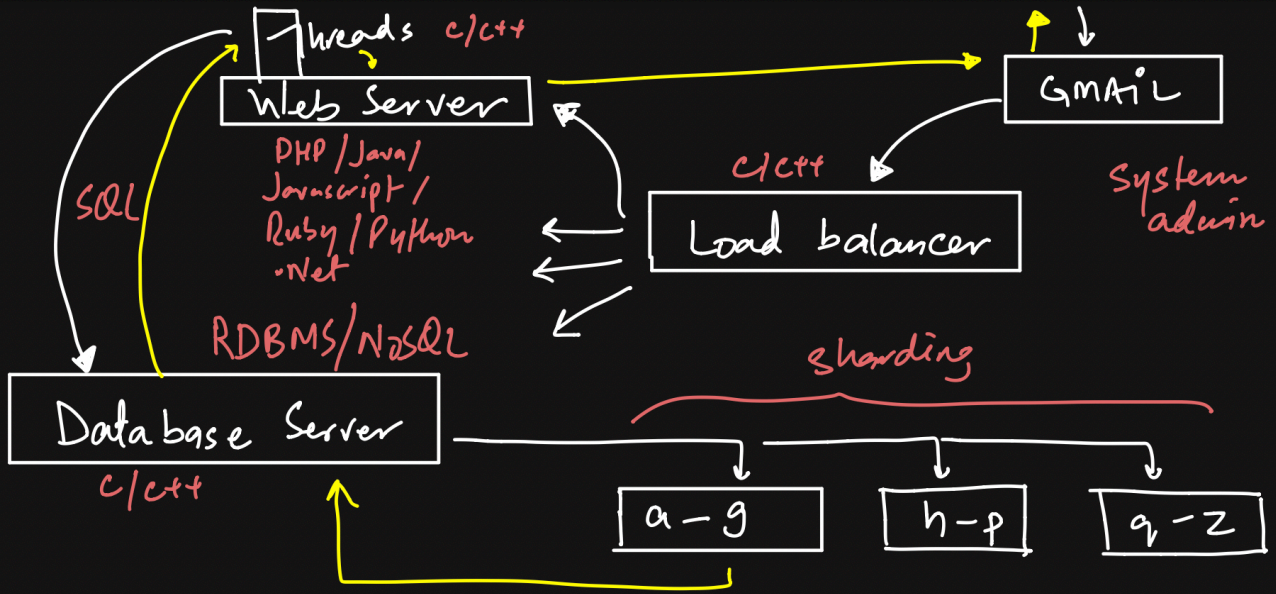
Research Focus

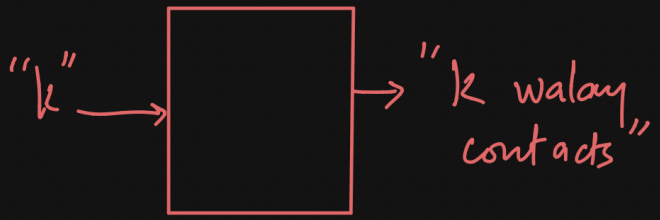
First things First

Where does this course fit in?

.. and what about the rest of the courses of this semester?


addr/port
Browser
Javascript
Web prog
Data Structures
Operating system
RAM
CPU
Keyboard
computer architecture
c/c++/
assembly
Network Card
DNS
google.com
25.2.16.29
Networks /
CCNA
"Routing"





"ABSTRACTION"

Machine Learning
Python
Matlab
Java
C/C++
Lua

Importance of Operating Systems

Operating systems course is typically a dry course

Very important in terms of job interviews

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Has two sides:

- Theory: “achi wali”
- Practice: OS is the backbone, the brain and the heart of all things computing!

OS Concepts in Practice

You need to have a good understanding of OS concepts for:

Programming large scale systems

- Managing industry grade databases/MISs

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- Example: Apache worker pools
- System administration
- IT and networks
- Research and development
- UI/UX
- Anything else that a computer touches!

Plan for this Semester

Topics to be covered (traditional):

- Intro to OS
- Processes

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- Protection and security

Other Topics

From an Industry Perspective

- Containers and virtualization

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- Cloud computing
- Provisioning

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- Cloud computing
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- Mobile operating systems
- Security models
- Industry grade security management systems*

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I'll skip everything that is not "important"

All the remaining theory is actually very practical

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I do not assume lab concepts but they should be very useful