

EE 193: Advanced Embedded Systems

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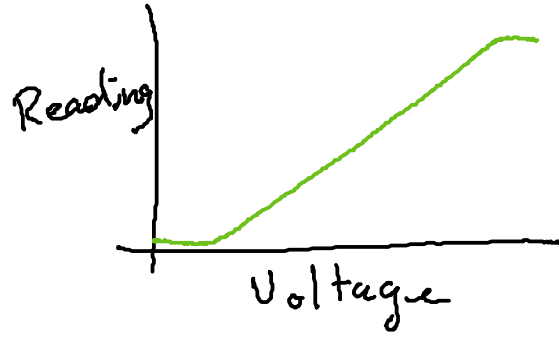
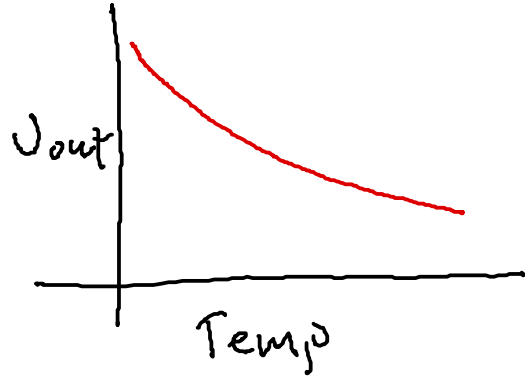
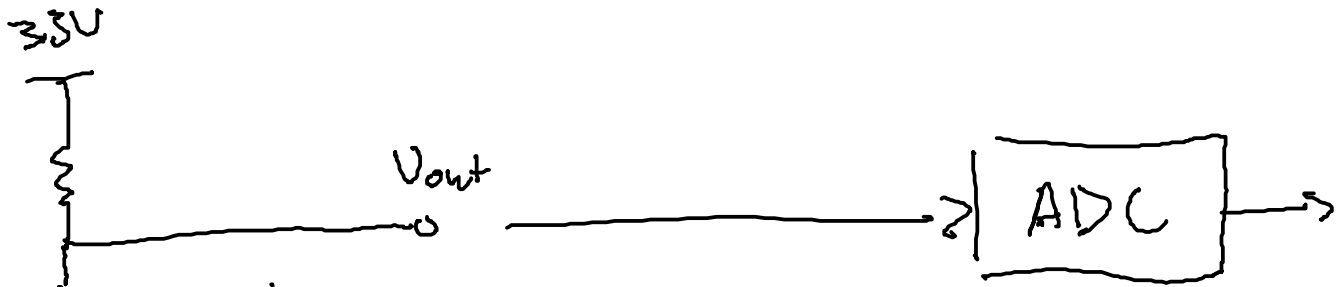


Logistics

Things are updated on the website

Blink/GPIO/ADC assignment due at end of this week

Power measurement and temperature measurement
due next week (before you leave for break)



Flashback: network layer model

Application layer

HTTP, etc

Transport layer

"ports" TCP UDP

Internet layer

IP addresses IPv4 IPv6

Data-link layer

MAC

Physical layer

WiFi Ethernet

HTTPS

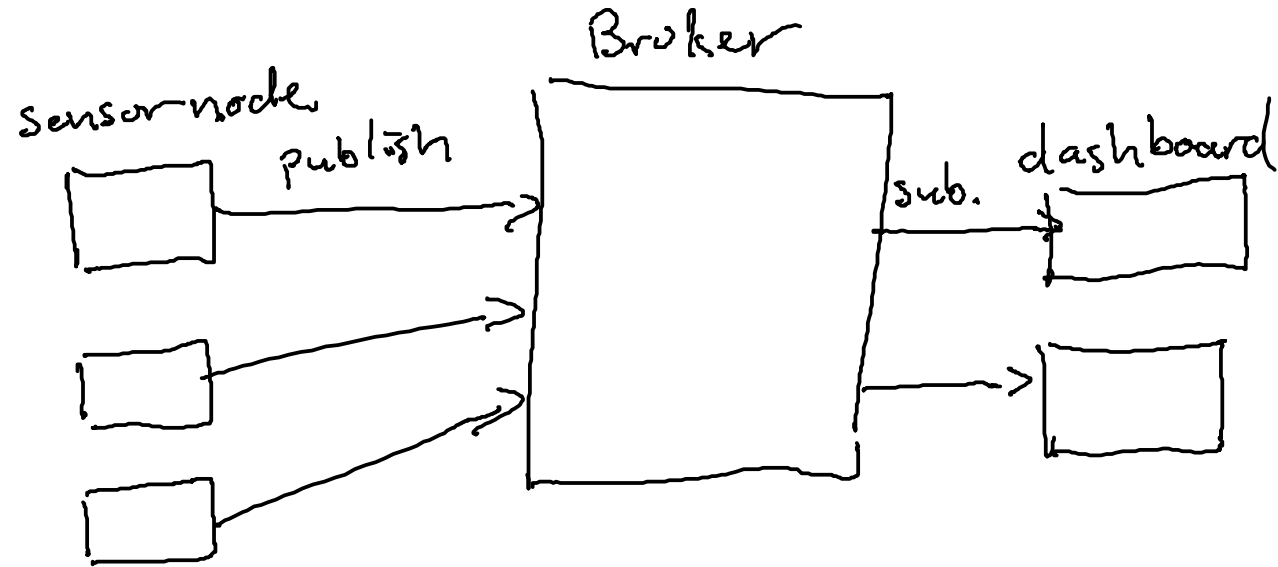
The Hyper-Text Transport Protocol

GET

POST

- Security (necessary, but painful)
- + Massive support
- Long messages
- Focus on HTML/web
- + Debugging

MQTT



Message

Topic

sensor1/temp

Payload

72.3

Examining MQTT packets

QoS 0: "fire and forget" At most 1

QoS 1: At least 1

QoS 2: Exactly 1

LoRa

Is just the physical layer

LoRaWAN

Implements the internet layer on top of LoRA