Lab 4

Thursday, October 10, 2024 8:12 AM

Inputs → Step 1(A)

1. Our project is a brownfield project
   - ↳ we're building off of "abandoned land" and we can pull from other architecture
   - ↳ well understood domain, not "novel"

2. Non functional Requirements
   - Reliability → system needs to be functional 100% of the time while providing constant surveillance
   - failure transparency → if system does fail, reports to user quickly + efficiently
   - Scailability → Allows systems to be efficiently added
   - Disaster Recovery → Attempt to recover by all means either by system reboot or by transfering responsibility to police

Constraints – to be considered (I want to discuss)

- One / little Admin user(s)
- System needs to be Mobile Phone Accessable
- security is top priority

Concerns →

- System needs to be cloud or outside database oriented to not put much pressure on Mobile phone
- Baseline cybersecurity to prevent attackers + collection of user data

Assumptions

1. User has preinstalled hardware from 3rd party
   - ei cameras, door locks, etc.
2. That system has connections to hardware either that our product is that hardware's main driver software or we have access to driver
3. Security of servers hosted on cloud

Use cases –

UC-3, 5, 7

Goal → establish overall system arch. + Connections to 3rd party

Step 2A

Step 3A

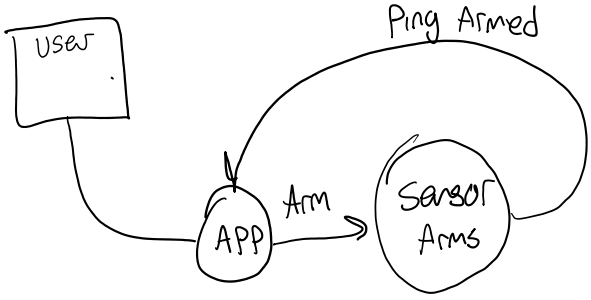
Step 3A

- Decompose → top down approach
- First iteration → designs top level arch.

Step 4A

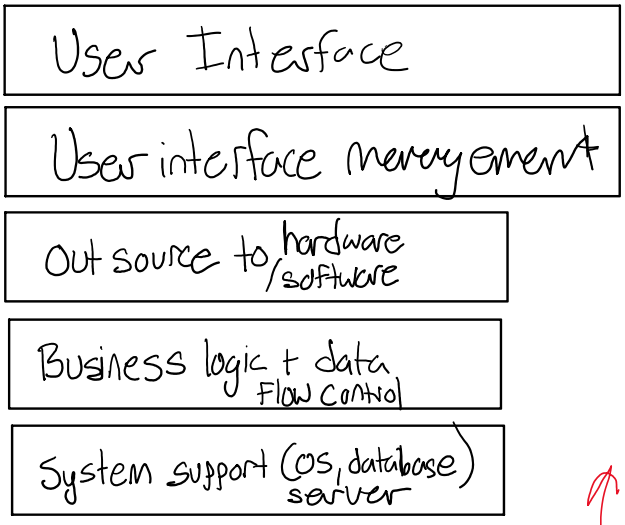
↳ layered system Arch.

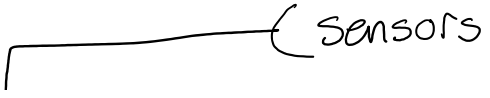
→ Arch. viewpoint → Physical view
- Communications
  - Dataflow for model based (physical object comm)
  - Event based interaction (user → app → object)

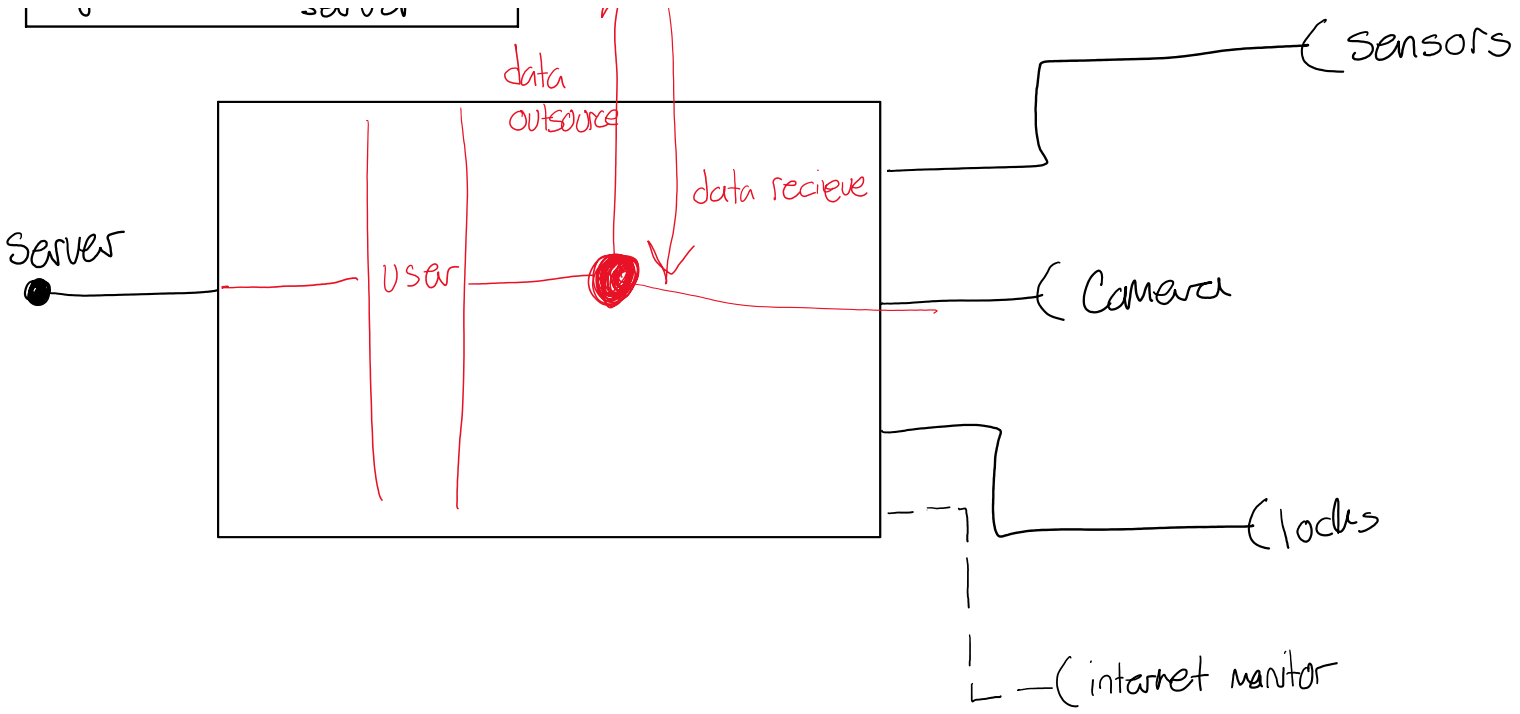


→ Component diagram

Step 5A







Step 7A

- Specify component / overall system
- Data flow specification