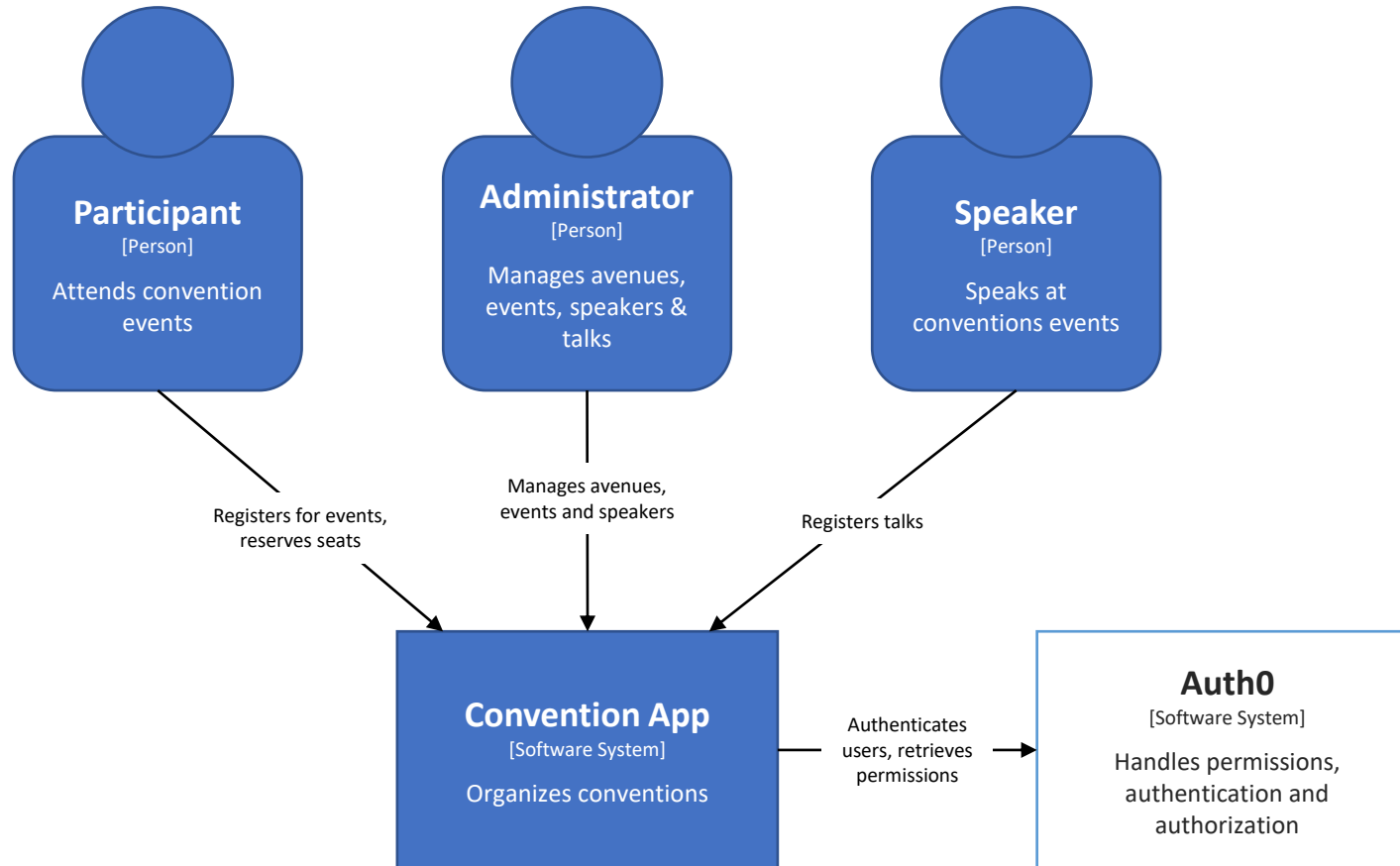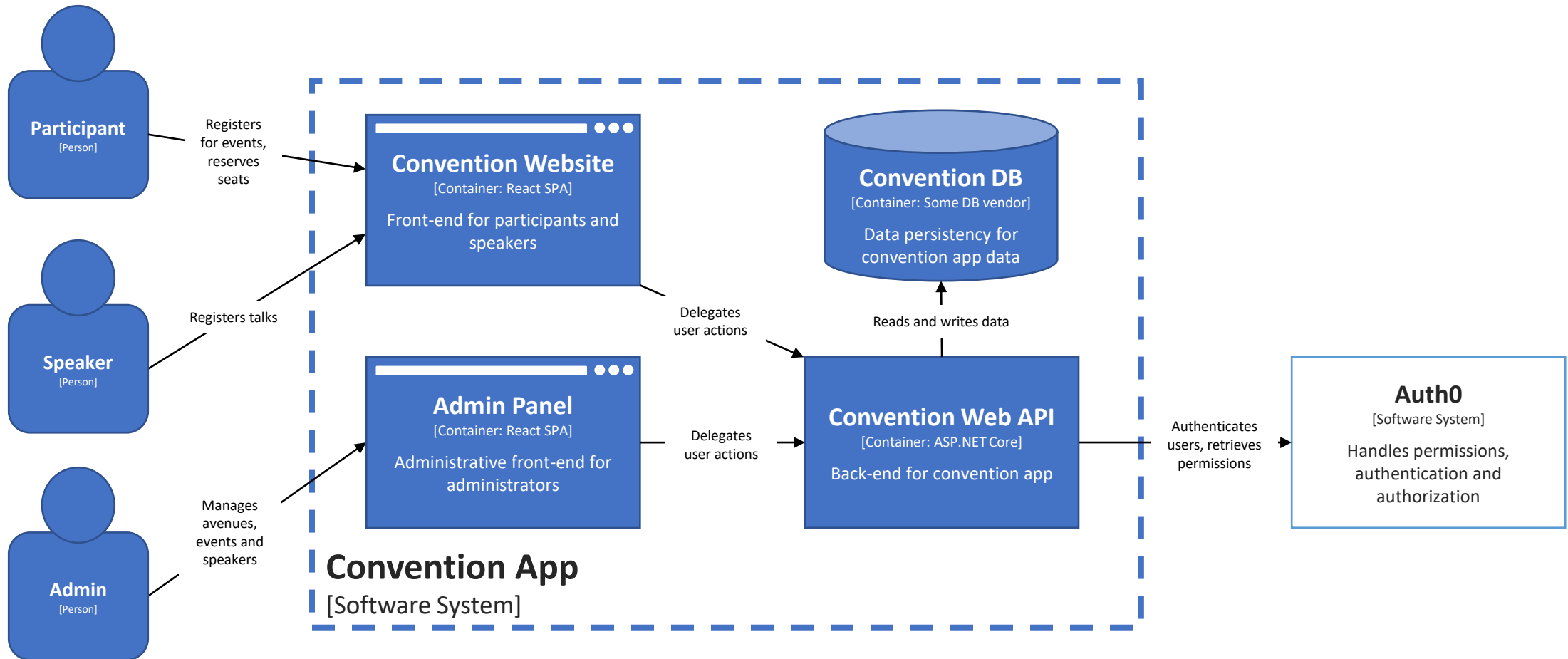# Convention APp

Case assignment

By Kasper Brohus Allerslev

System Context

Container View

System Architecture

- Back-end/front-end separation
- Private database
  - Only web api has access
  - Easy schema changes
- Docker
  - Containerize applications separately
    - Web API
    - Website
    - Admin Panel

Software Architecture

- Service-oriented
    - Low logic in controllers
    - Easier testing through decoupling
- Client-side interfaces
    - Components define their required interfaces
- Outside-in development
    - Implement from "top level"
    - Define and implement new interfaces as necessary
    - Test all "levels" of logic separately
        - Controllers
        - Services
        - Database

Testing

- Unit testing
    - Controllers
    - Services
- Integration testing
    - Database integrations
    - Foreign API
- System testing
    - Test at system boundary
    - Mock external API's
- End-to-end testing

Security

- Participants: Require signup

- Speakers and talks: Approval

- Non-discoverable admin functionality

- Permission-based access control

- Network zones
  - DMZ: Web API and front-ends
  - Secured: Database

Authentication and Authorization

- Authority: Auth0
- Machine-to-Machine (front-ends & Postman)
- Roles and permissions
  - Administrators
    - Manage avenues & events
    - Elevate user to speaker at event
  - Speakers
    - Register talks for event
  - Participants
    - Register for events
    - Reserve seats for talks at own registered events

Privacy & Legal Constraints

- GDPR
  - Personally identifying data
  - Logs
- 3rd party Cookies

Final remarks

- SQLite was used for demonstration purposes
- Split up WebApi assembly
  - Domain logic
  - Database
  - Services
  - Integrations
- Use solution for secrets management