

# STUDOCRACY

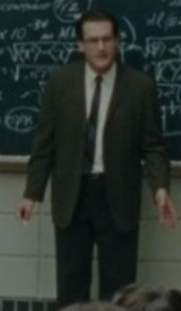
*Application Development 19/20*

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# PURPOSE

A large blackboard filled with handwritten physics and mathematics notes, including:

- Quantum mechanics equations:  $\Psi_0(r) = A e^{-\alpha r}$ ,  $\Delta^2 \Psi_0(r) = -\alpha^2 \Psi_0(r)$ ,  $E = -\frac{\hbar^2 \alpha^2}{2m}$ ,  $\Psi(r, \theta, \phi) = R_{nl}(r) Y_{lm}(\theta, \phi)$ ,  $\Delta^2 \Psi = -k^2 \Psi$ ,  $\Delta^2 \Psi = -\frac{2m(E - V(r))}{\hbar^2} \Psi$ .
- Electromagnetism:  $\mathbf{E} = -\nabla \phi - \dot{\mathbf{A}}$ ,  $\mathbf{B} = \nabla \times \mathbf{A}$ ,  $\nabla \cdot \mathbf{E} = \frac{\rho}{\epsilon_0}$ ,  $\nabla \times \mathbf{B} = \mu_0 \mathbf{j} + \mu_0 \epsilon_0 \dot{\mathbf{E}}$ .
- Special relativity:  $E^2 = p^2 c^2 + m_0^2 c^4$ ,  $E = \gamma m_0 c^2$ ,  $\mathbf{p} = \gamma m_0 \mathbf{v}$ .
- Statistics:  $\Psi(x) = A e^{-\alpha x}$ ,  $\int_{-\infty}^{\infty} |\Psi(x)|^2 dx = 1$ .
- Diagrams: A Bohr model of an atom, a graph of a wave function, and a diagram of a particle in a box.







# USE CASES

- Lectures
- Talks
- Meetings
- Presentations
- Lessons
- Pitches

→ Audience gets to influence the style of the talk

→ Speaker can adjust his talk to keep the audience interested and involved

# CHALLENGES

## Connectivity Challenge

search for lectures in the current WLAN

## Offline Challenge

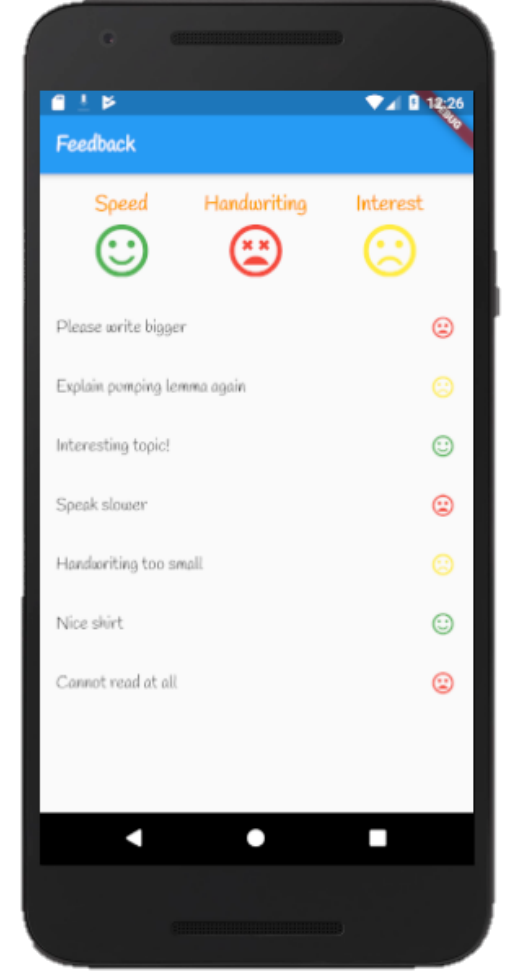
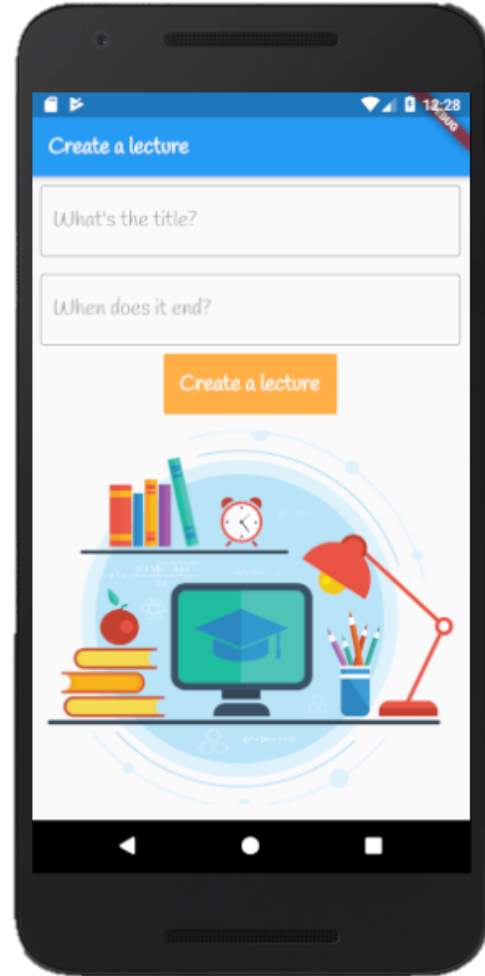
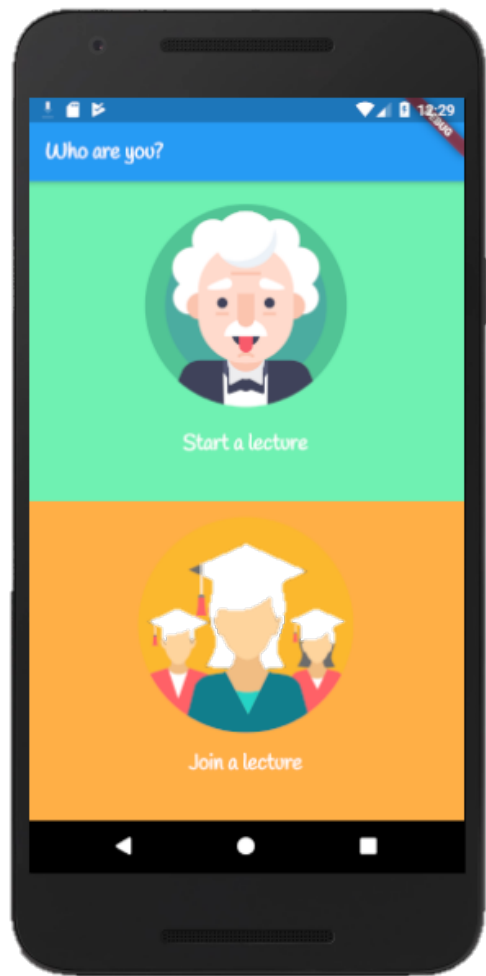
save data locally and transmit when online

aggregate feedback -> single user crashes don't matter

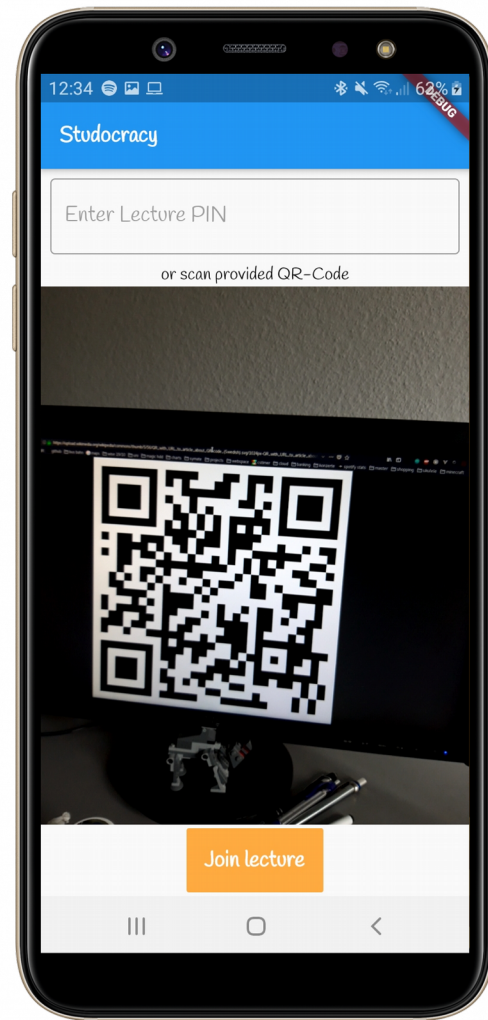
## Usability challenge

build a cross platform application

# MOCKUPS - PROFESSOR

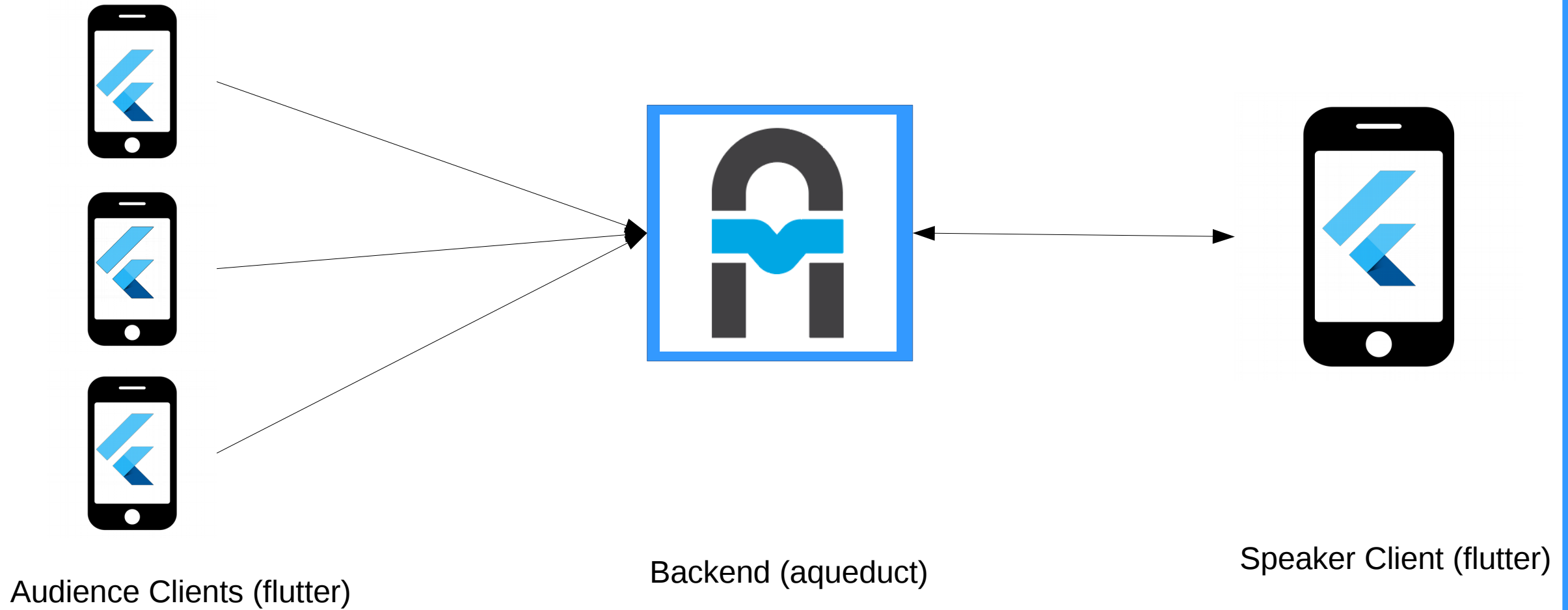


# MOCKUPS - STUDENT





# OUR STACK



# WORK PLAN

- 11.11. - 24.11. Conception, Backend, Basic-Functionality
- 24.11. - 5. 12. Core-Functionality, Conception deadline
- 6.12. - 21.12. Finish Functionality, Bug-Fixing
- 22.12. - 1.1. *Holidays*
- 1.1. - 20.1. Final-Bug-Fixing, Improvements, Extra Features
- 20.1. - 31.1. Publish & test app