

Making the Mentoring Center Great Again

(Updates on the Backend for the MMCGA Project)

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Problem

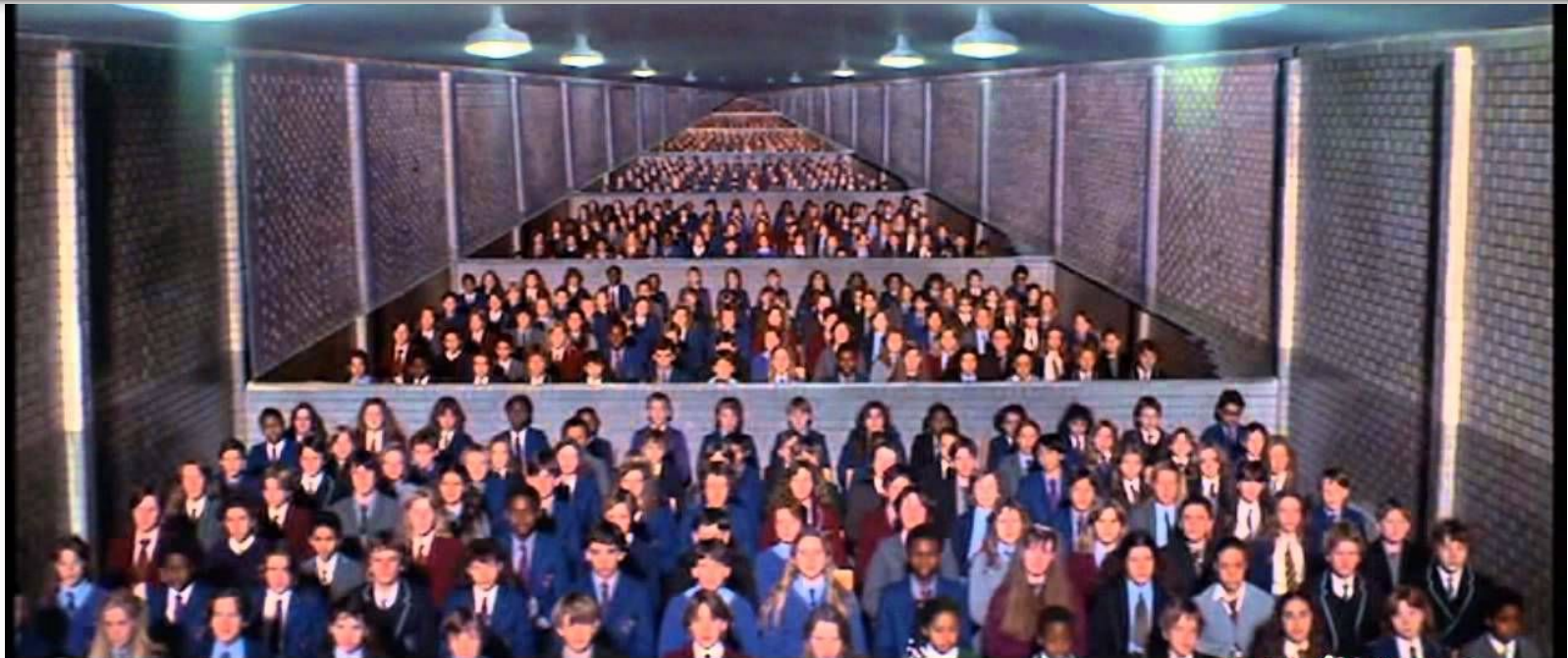


Image: Pink Floyd's *The Wall*

Solution

- Make an app!
 - Make a *Pervasive System*
- One common backend to run everything
 - Dedicated service run on the CS network
- One common frontend for users
 - Webview available for on multiple platforms

Ideal Features

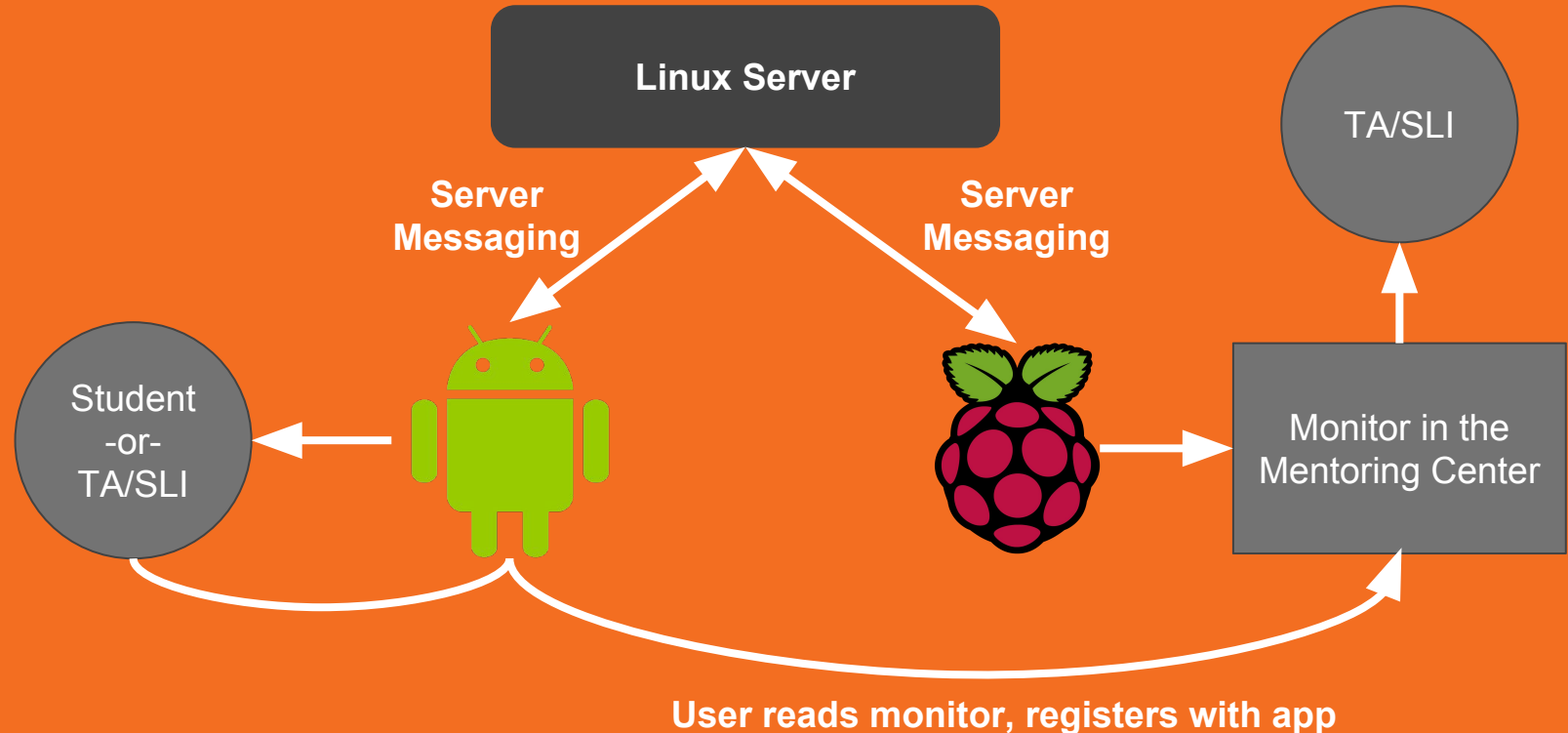
- Tutors should do minimal management of the system
 - Tutors should “log in” to show that they are on duty
 - When they confirm they have helped a student, they should be told who is next in line
- The CS Department gets usage statistics
 - To prove the usefulness of the Mentoring Center and improve upon it

RabbitMQ

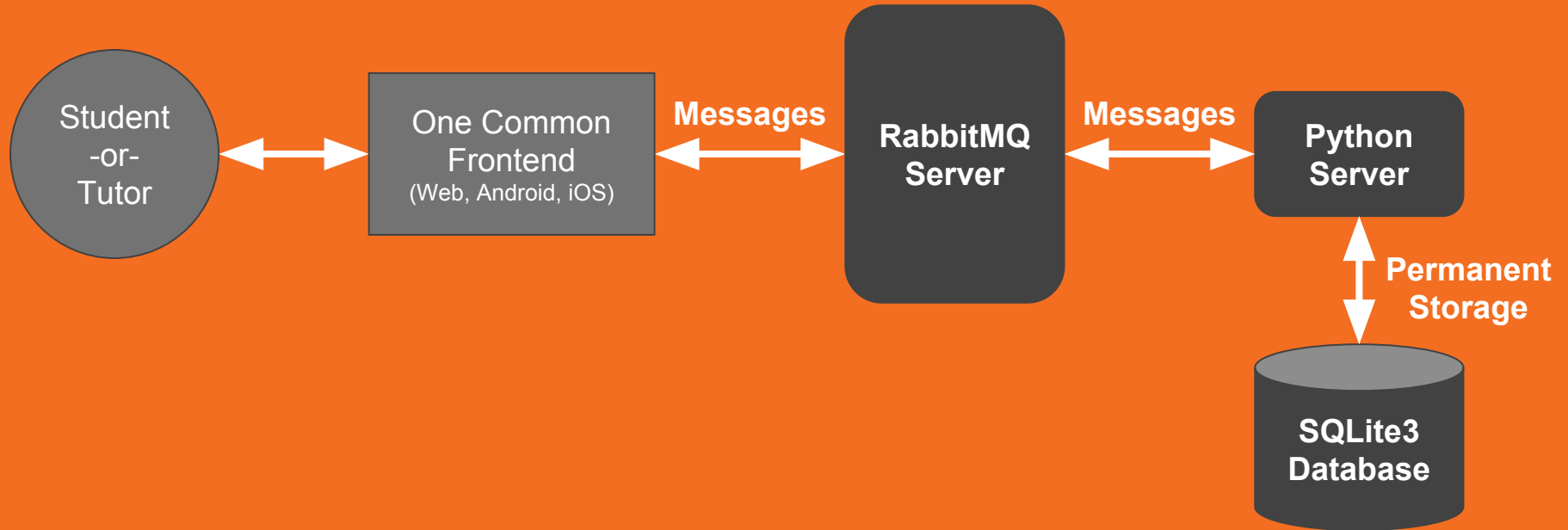
- Open Source messaging server
- Provides advanced features for scalable message queuing
- Made our lives **much** easier
 - Queued messages; prevented race conditions
 - Handled networking aspects



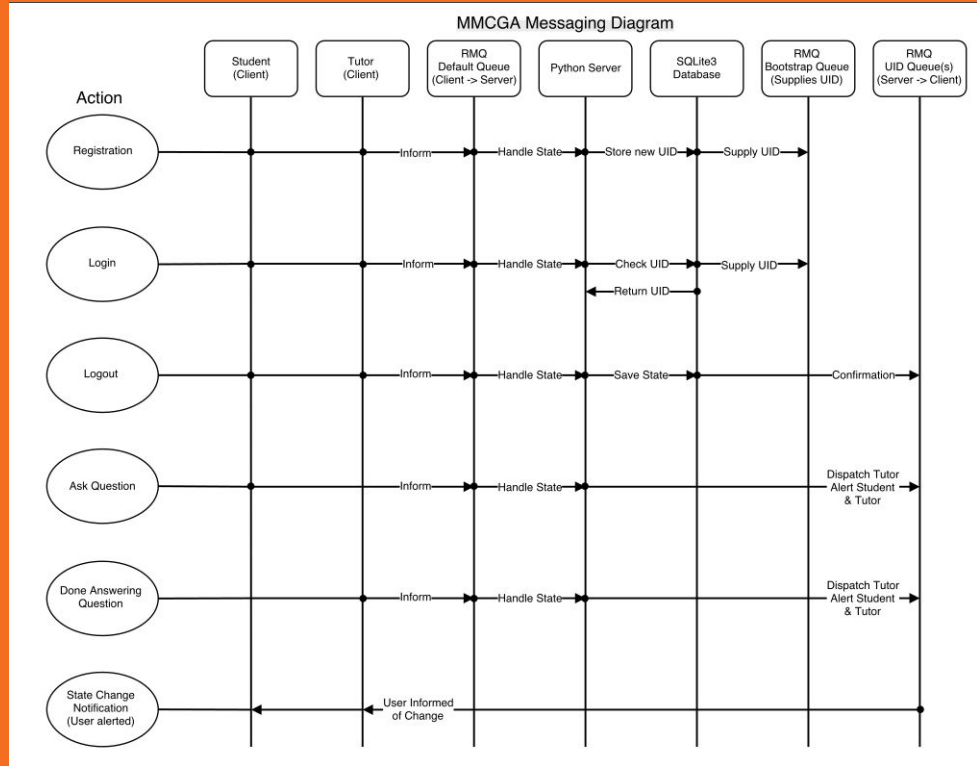
Original System Diagram



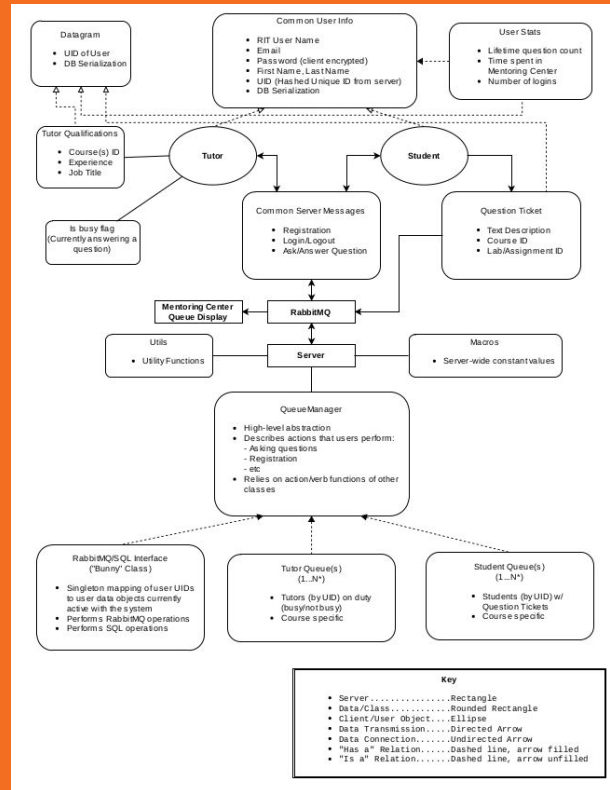
Current System Diagram



Messaging Diagram



System Architecture Diagram



Future Development

- Available on GitHub:
 - https://github.com/RIT-CS-Mentoring-Center-Queueing/mmcga_project
- Tutors have already shown interest in the project
 - Hopefully having a steady group of “moderators” will encourage maintenance of the project and growth of the project over time

Questions?