High Level Design

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Project 1: Group Matching App

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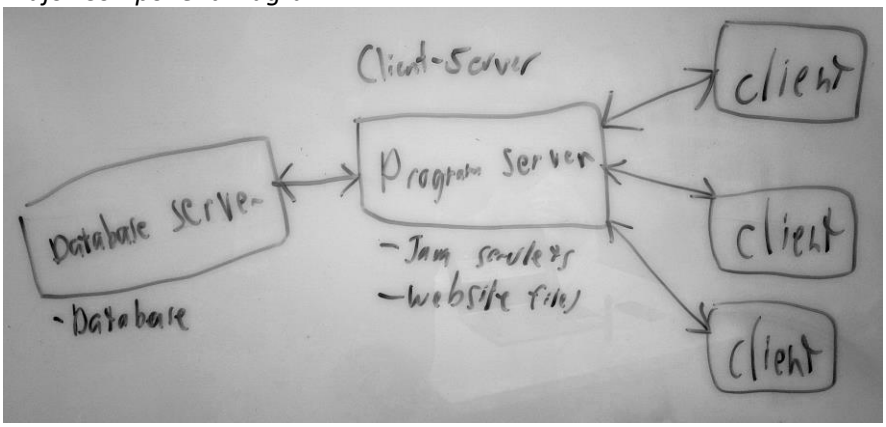
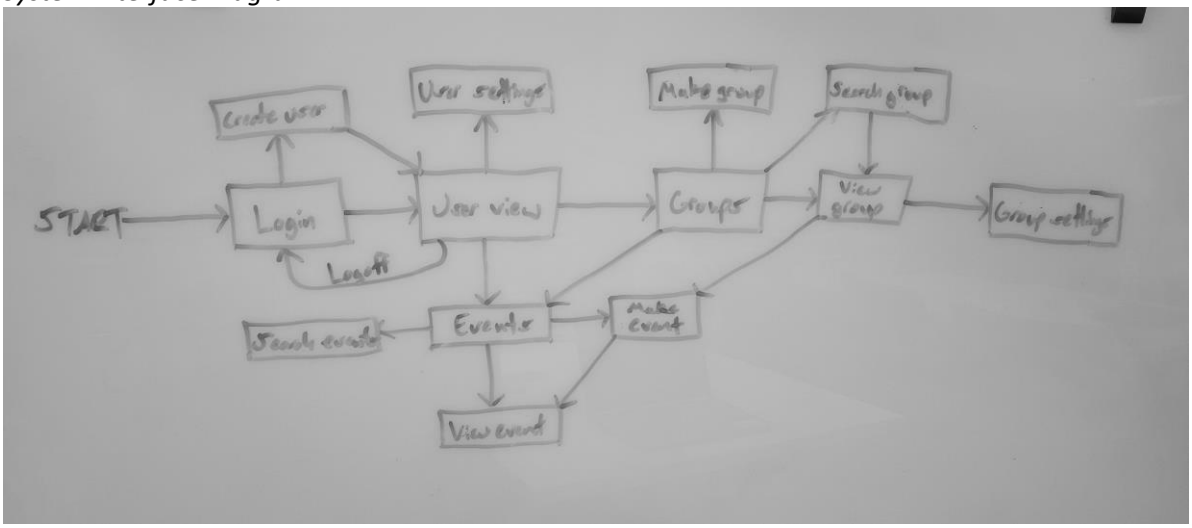
Major Component Diagram



System Interface Diagram



Design Issues

Major Design Issues

Reliability:

- Will be a concern due to time and testing constraints

Reusability:

- Continuous instance of myMeet unless reset or shut down by developers
- Service can easily be replicated and rebranded if source code present

Maintainability:

- Under constant watch by developers
- Bug reports should be

Testability:

- Developers will evaluate use cases and will perform tests based on those use cases
- Will ensure performance is consistent

Performance:

- Resource-light for users
- Speed not imperative for operations performed in the application
- Lightweight database query

Portability:

- Users
    - Extremely portable
    - Reliant only on an internet connection and browser
    - Resource-light
- Developers
    - Unportable
    - One instance of myMeet at a time
    - One database
    - Setup is involved (but not necessarily intensive)

Security:

- Database security
    - Database restrictions encoded in Java program
    - Duplication of primary keys disallowed
- Passwords and sensitive information hashed

    - Password reset functionality
- Focus on user privacy
- Eventually will become open source

Safety:

- Safeguards against malicious behavior
    - Kick users
    - Block users
    - Minimum age
- User privacy

Architecture Rationale

- Developer experience with Java, Python, and MySQL
- Developers wish to learn new skills and further their experience using industry practices
- Requirements and recommendations set by professor and teaching assistants led to the project evolving into a more complex organism
    - Originally programmed solely in Java
    - Latest evolution incorporates Java, JavaScript, MySQL, and Python
- Minimize complication
- Up-to-date languages

Technical Difficulties and Risks

- All developers are inexperienced in the following incorporated methods:
    - Database management
    - Web development
    - Full stack development
- Developers will be most likely only able to test for functionality and unable to perform thorough stress tests
    - There will be a stress point past where the developers have tested
- Project may not be completed to the developers' standards due to time and experience constraints