**High Level Design**

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**Project 1: Group Matching App**

**COP 4331, Fall 2021**

**Contents of this Document**

High-Level Architecture

Design Issues

**High-level Architecture**

* <Provide a diagram of the major components of your system. Describe each of the major components given in the diagram. Consider the various architectural styles discussed in chapter 5.  Do any of them apply?  Can they be combined to form a unique architecture diagram for your system? Make sure to explain the reasoning of your choice of architectural style(s) within the context of the project. > Come up with one Friday
* <Provide a diagram of the system interfaces. Describe each of interfaces of your system in detail. How will the major components interact with each other?> Brendan will get more info from Samantha and then do this before submitting

**Design Issues**

<Discuss your team's evaluation of the major design issues: reliability, reusability, maintainability, testability, performance, portability, security, and safety. Which issues are relevant to your project? What prototypes (if any) will you need to do to evaluate alternate design strategies? What technical difficulties do you expect to encounter? How will you solve them? What design trade-offs did you make in your selection of the architecture? What was your rationale for selecting this architecture? What technical risks are involved in this solution?>

*Major Design Issues*

Reliability:

* Needed

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:

* Needed

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
  + Charles explain pls
* 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
* Add more?

*Technical Difficulties and Risks*

* Needed