



# Study Buddy

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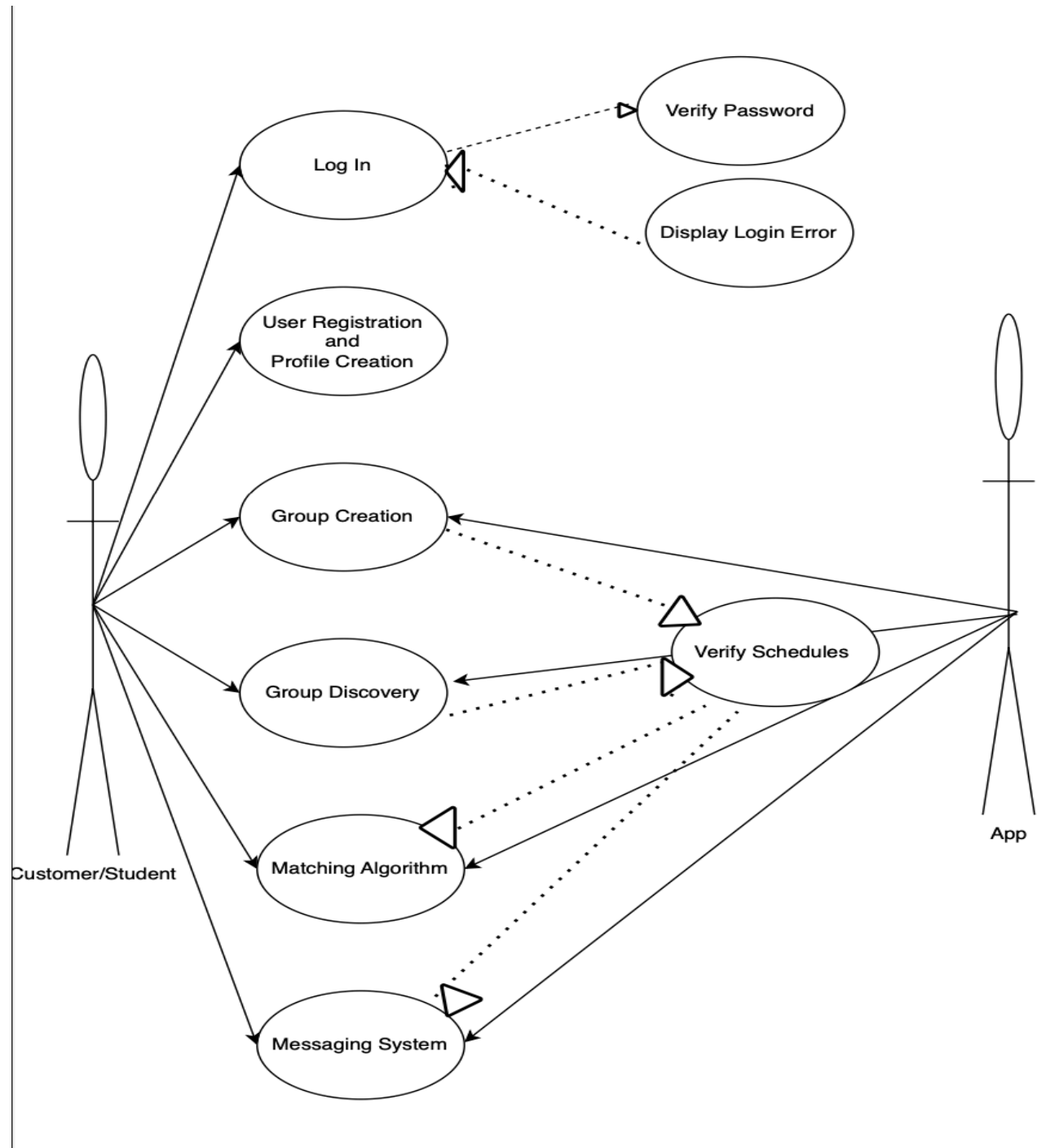
## Collection Relationship Diagram



## Data Dictionary

| Category                | Field Name              | Data Type        | Limitations                     | Description  |
|-------------------------|-------------------------|------------------|---------------------------------|--|
| Users Collection        | user_id (PK)            | ObjectId         | Limited to valid email formats. | Unique identifier for each user.                               |
|                         | email                   | String           |                                 | Email address of the user.                                     |
|                         | password                | String (Hashed)  |                                 | Password of the user, hashed for security.                     |
|                         | is_verified             | Boolean          |                                 | Indicates whether the user's email has been verified.          |
|                         | created_at              | Date             |                                 | Timestamp indicating when the user was created.                |
|                         | updated_at              | Date             |                                 | Timestamp indicating when the user was last updated.           |
| UserProfiles Collection | user_id (FK)            | ObjectId         |                                 | Foreign key referencing the user_id in the Users Collection.   |
|                         | name                    | String           |                                 | Name of the user.  |
|                         | academic_interests      | Array of Strings |                                 | Academic interests of the user.                                |
|                         | availability            | Array of Strings |                                 | Availability of the user for study sessions.                   |
|                         | preferred_topics        | Array of Strings |                                 | Preferred study topics of the user.                            |
|                         | ... (Additional fields) |                  |                                 | Additional profile information specific to the user.           |
| Groups Collection       | group_id (PK)           | ObjectId         |                                 | Unique identifier for each study group.                        |
|                         | name                    | String           |                                 | Name of the study group.                                       |
|                         | description             | String           |                                 | Description of the study group.                                |
|                         | creator_id (FK)         | ObjectId         |                                 | Foreign key referencing the user_id of the group creator.      |
|                         | privacy_setting         | String           |                                 | Privacy setting of the study group (public/private).           |
|                         | created_at              | Date             |                                 | Timestamp indicating when the study group was created.         |
|                         | updated_at              | Date             |                                 | Timestamp indicating when the study group was last updated.    |
| GroupMembers Collection | group_id (FK)           | ObjectId         |                                 | Foreign key referencing the group_id in the Groups Collection. |
|                         | user_id (FK)            | ObjectId         |                                 | Foreign key referencing the user_id in the Users Collection.   |
|                         | role                    | String           |                                 | Role of the user within the study group (e.g., member, admin). |
|                         | joined_at               | Date             |                                 | Timestamp indicating when the user joined the group.           |
| Feedback Collection     | feedback_id (PK)        | ObjectId         |                                 | Unique identifier for each feedback entry.                     |
|                         | user_id (FK)            | ObjectId         |                                 | Foreign key referencing the user_id in the Users Collection.   |
|                         | group_id (FK)           | ObjectId         |                                 | Foreign key referencing the group_id in the Groups Collection. |
|                         | rating                  | Integer          |                                 | Rating provided by the user for the study group.               |
|                         | comment                 | String           |                                 | Comment provided by the user regarding the study group.        |
|                         | created_at              | Date             |                                 | Timestamp indicating when the feedback was provided.           |
| Messages Collection     | message_id (PK)         | ObjectId         | (File path or reference)        | Unique identifier for each message.                            |
|                         | sender_id (FK)          | ObjectId         |                                 | Foreign key referencing the user_id of the sender.             |
|                         | receiver_id (FK)        | ObjectId         |                                 | Foreign key referencing the user_id of the receiver.           |
|                         | content                 | String           |                                 | Content of the message.  |
|                         | attachment              | String           |                                 | File attachment associated with the message.                   |
|                         | created_at              | Date             |                                 | Timestamp indicating when the message was sent.                |

## Updated DFDs



## Lessons Learned Report

Our goal as a team was to gain experience in programming with languages we are less familiar with in hopes of learning more to become well-rounded developers. We wanted to create an application, The Study Group Matching App, that would work as a mobile application designed to help college students easily find and form study groups based on their enrolled courses, schedules, and preferred meeting locations on campus. The app would essentially be used by students and it'd utilize advanced algorithms to match students with similar academic needs, fostering a collaborative learning environment, which we successfully did. We also wanted to develop our project management skills and improve our leadership skills to gain a deeper understanding of agile methods. In doing so to ensure our project had a strong foundation we took turns in the role. We learnt as a team that collaboration is good. We were able to bounce off all of our creative ideas as a whole and successfully thrive in our tasks.

Something challenging we encountered in the beginning was our diagrams. However, after many conversations both in class and on our own time we were able to understand the requirements given and complete them as needed. Overall, we learnt much about the process of our design knowing the ins and outs of how our idea can be further implemented into a project, an app. This process takes time and we were able to set timelines out to account for each desired task within the design. In the future, we hope to go further in hopefully trying to get this app developed and possibly earn money from our implementation.