SW Engineering CSC648-848-05 Spring 2024

Application Name: **Swamp Study**

Seal Team One Members (Team 01)

Lennart Richter lrichter@sfsu.edu — Team Lead
Edmund Huang — Front-End Lead
Conrad Choi — Github Master
Julio Reyes — Docs-Editor
Rafael Fabiani — Backend-Lead

Version Table

Milestone 1	Feb 28, 2024
Milestone 1 V2	Apr 1, 2024
Milestone 2	Apr 4, 2024
Milestone 2 V2	Apr 24, 2024

Table of Contents

Data Definitions

User

A User is a student that has signed up with their email for the platform. The email has to have an “@sfsu.edu” ending.

Account

Each User has an account which correlates to their email and password. The password is stored hashed in the Database as a string

Profile

A Profile contains a User's description and profile picture. This data will be used to facilitate better matches

Profile Picture

An image used to identify users on the platform. Represented by a .jpg extension can have a maximum size of 5 MB.

Match

A Match is a set of 2 or more users that have both liked each other. This Match is then used to facilitate a meeting and communication between the users.

Profile

A profile is a public display of a user’s information, such as availability, subject and many more.

Availability

Availability is the times available a user can attend a study session. Represented by a Date and Time field, typically showing days and times in AM/PM that the user is available

Forum

The Forum is a part of the Application where Users can ask and answer questions related to specific classes. The Forum is organized into threads by class

Class

A Class is the representation of an SFSU course. Represented by a string Department and Course Name, as well as an integer representing the Class Number

Thread

A Thread is used to organize the Forum. Each thread contains one question and many answers. Each thread belongs to a specific class

Question

A Question is a text written by a User, the Author. Each Question automatically creates a thread

Answer

An Answer is a text written by a User in response to a question. Each answer belongs to a thread.

Application

The application holds all the components and necessary data for the user to interact with and engage with the platform.

Rating

Each use will have ratings which will get averaged to get their rating within the system as a study partner

Schedule

A Schedule is the mapping of which classes a User is taking. Each entry contains the user and the class

Functional Requirements

Priority 1: Must Have

1. **User**
   - 1.1. A User shall be able to create an account
   - 1.2. A User shall only have one account
   - 1.3. A User shall be able to view other users' accounts in the system
   - 1.4. A User shall be able to set their availability
   - 1.5. A User shall be able to establish their profile
   - 1.6. A User shall be able to ask many questions in the Forum
   - 1.7. A User shall be able to answer many questions in the Forum
   - 1.8. A User shall be able to like other Users
   - 1.9. A User shall be able to match with other Users
2. **Profile**
   - 2.1. A Profile shall be owned and edited by one and only one user
   - 2.2. A Profile shall be allowed one picture of the owner
   - 2.3. A Profile shall be allowed a short biography
   - 2.4. A Profile shall have many subject attributes
   - 2.5. A Profile shall be able to set a filter for their study partner preferences
   - 2.6. A Profile shall be marked Student or Educator
   - 2.7. A Profile marked Educator shall be able to access the Forum
   - 2.8. A Profile marked Educator shall be allowed to answer questions in the Forum
3. **Account**
   - 3.1. An Account shall have one email associated with it
4. **User Interface**
   - 4.1. The Interface shall allow a User to navigate through a potential Match’s profile
   - 4.2. The Interface shall allow a User to access/edit their Profile
   - 4.3. The Interface shall allow a User to access/edit their Account
5. **Match**
   - 5.1. A Match shall be provided a meeting link
   - 5.2. A Match shall be provided a meeting time
   - 5.3. A Match shall be made based on different criteria
6. **Forum**
   - 6.1. The Forum shall allow one main question per Thread
   - 6.2. The Forum shall allow many answers until marked done
   - 6.3. The Forum shall allow each class its section
   - 6.4. The Forum shall allow users to post in their class Forum

6.5. The Forum shall allow many questions

Priority 2: Desired

1. **Profile**
   1.1. A Profile shall be allowed to be invisible when not wanting to study
   1.2. A Profile marked Educator shall be allowed to remove questions from the Forum
2. **User**
   2.1. A User shall be able to flag another user for review
   2.2. A User shall have a match rating which determines visibility
   2.3. A User shall review a match after their first meeting
   2.4. A User shall be allowed to block another User
3. **User Interface**
   3.1. The Interface shall allow a user to swipe right or left on a potential study partner
4. **Matching System**
   4.1. The Matching System shall highlight common attributes users have with each other
   4.2. The Matching System shall notify users when they have a Match
   4.3. The Matching System shall send a notification to the user's device
   4.4. The Matching System shall show a user their ideal match
   4.5. The Matching System shall let users decide whether they want to meet in person or online
5. **Forum**
   5.1. The Forum shall limit access to students taking that class
   5.2. The Forum shall allow educators to access all the Threads

Priority 3: Opportunistic

1. **Account**
   1.1. An Account shall be allowed to log in from one device at a time
2. **User**
   2.1. A User shall be able to Video Call with their partner

Use Cases

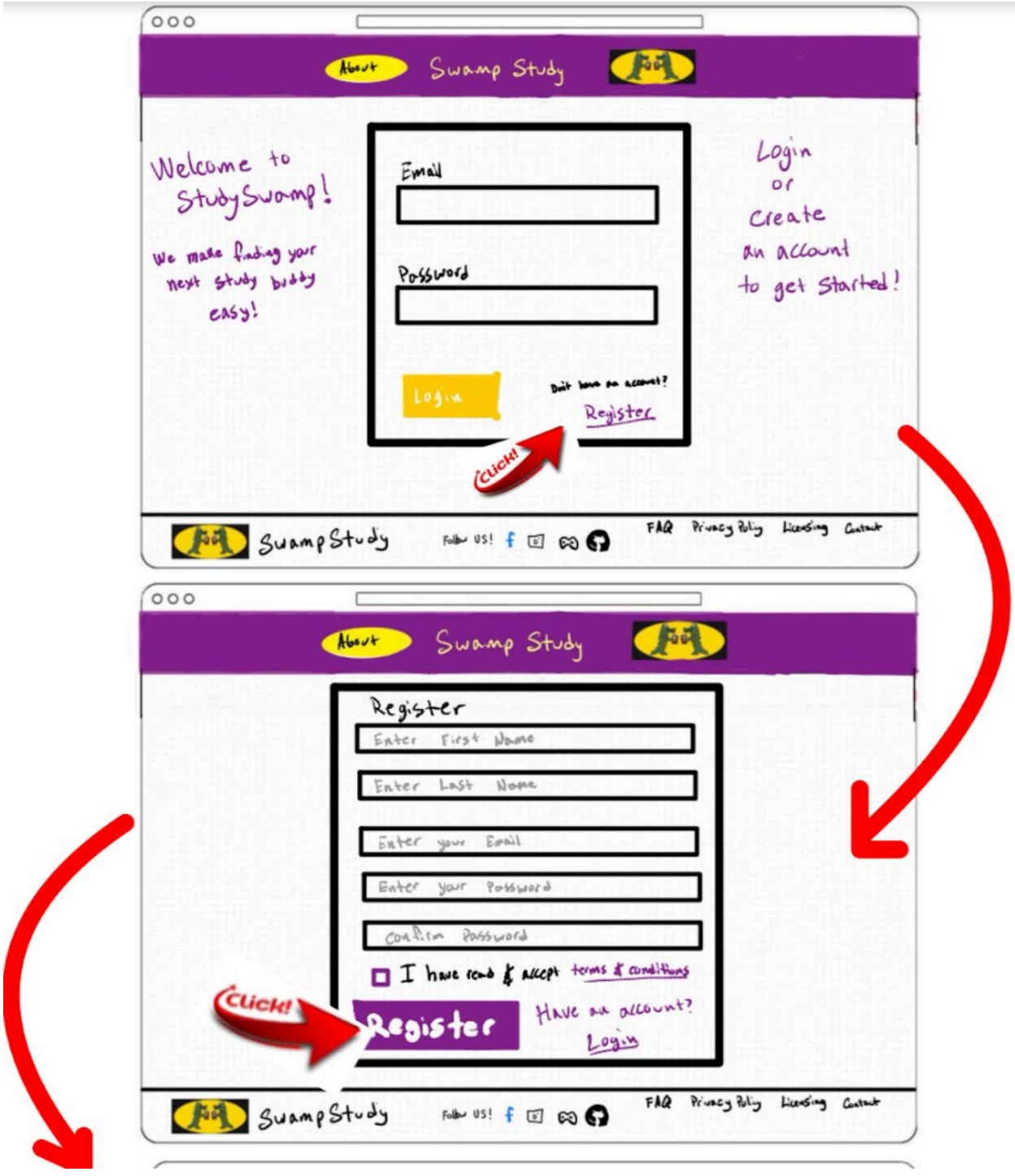
Priority 1: Must Have

Use case 1: Students using the site need a partner for a group project.

Use case 1 Storyboard:

Sebastian is worried about his grades and is stressed about midterms. He wants to find a study partner but has trouble.

Remembering hearing about SwampStudy, Sebastian signs up and starts to look for a study partner.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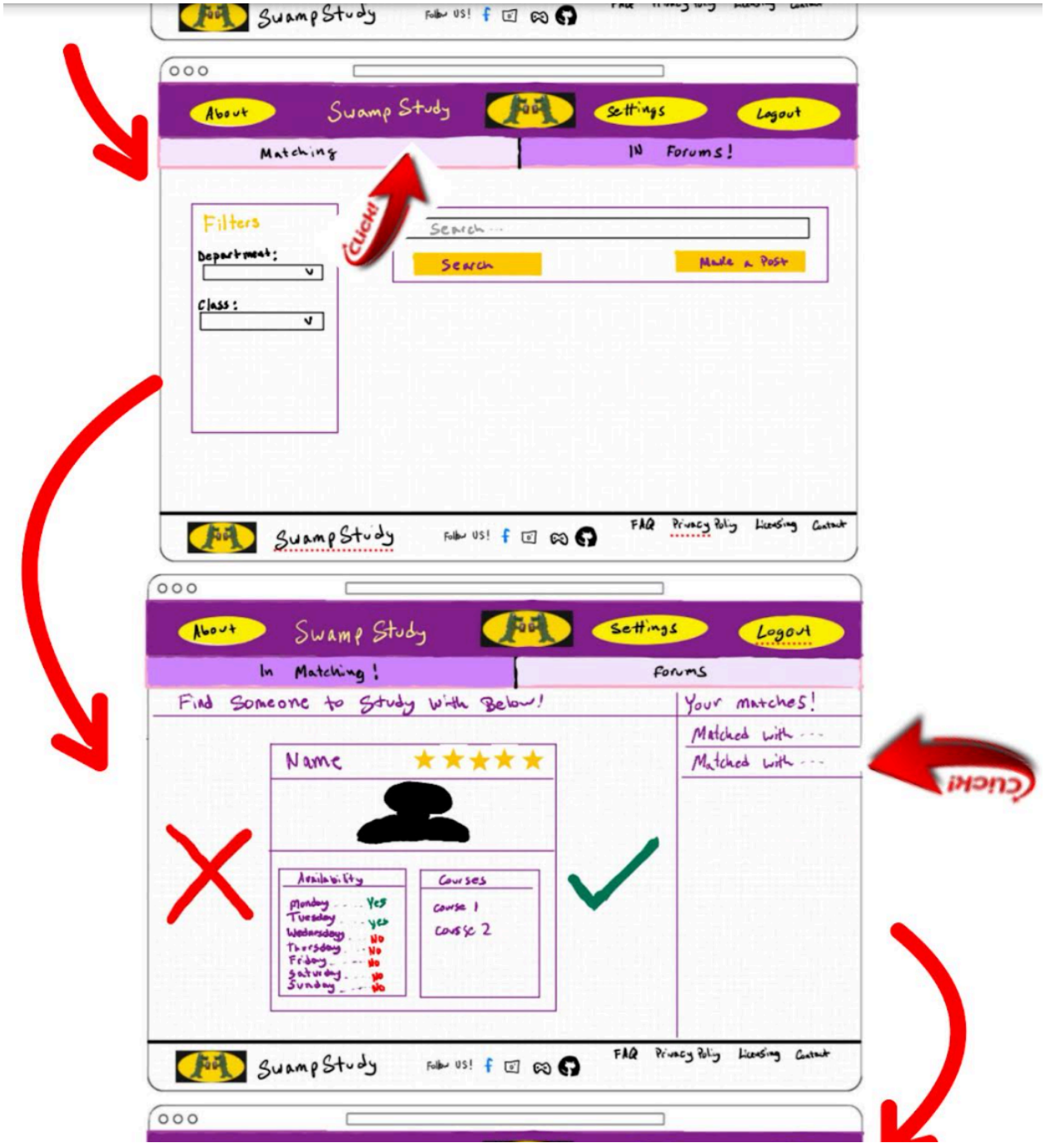
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Matching
In Forums!
Filters
Department:
Class:
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SwampStudy
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FAQ
Privacy Policy
Licensing
Content
About
Swamp Study
Settings
Logout
In Matching!
Forums
Find Someone to Study with Below!
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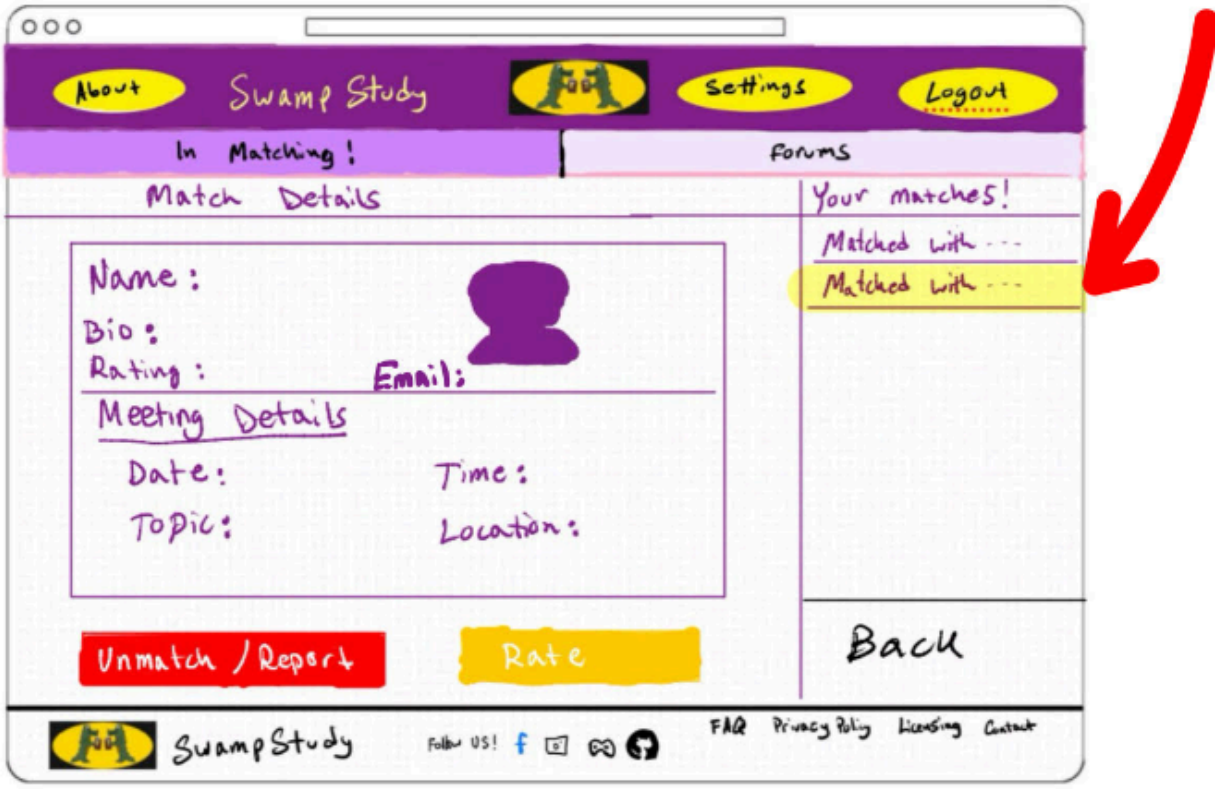


After matching with a study partner and getting automatically scheduled a time and place for the study session, Sebastian feels much less worried.

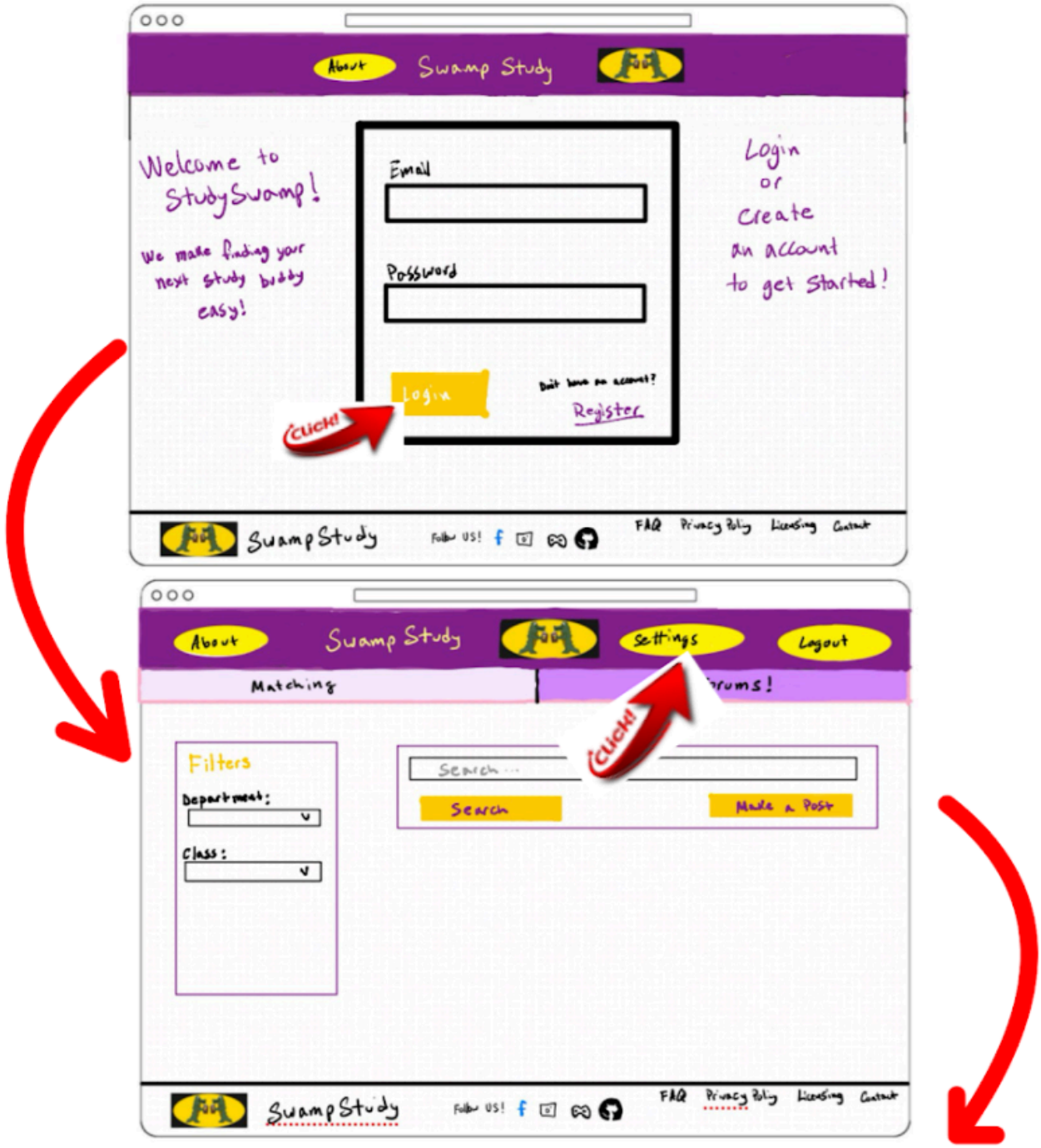
Use case 3: Non-Traditional Student looking for study partner/ Availability

Use case 3 Storyboard:

Richard has a lot on his plate, he has a family, goes to school full time and has a full time job.

Due to not being able to find someone to study with that also has his rigid schedule, his home life, school work and his job are suffering

One day he discovered Swamp Study and is able to find a study partner that matched his free time slot.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Content
About
Swamp Study
Settings
Logout
Matching
Forums!
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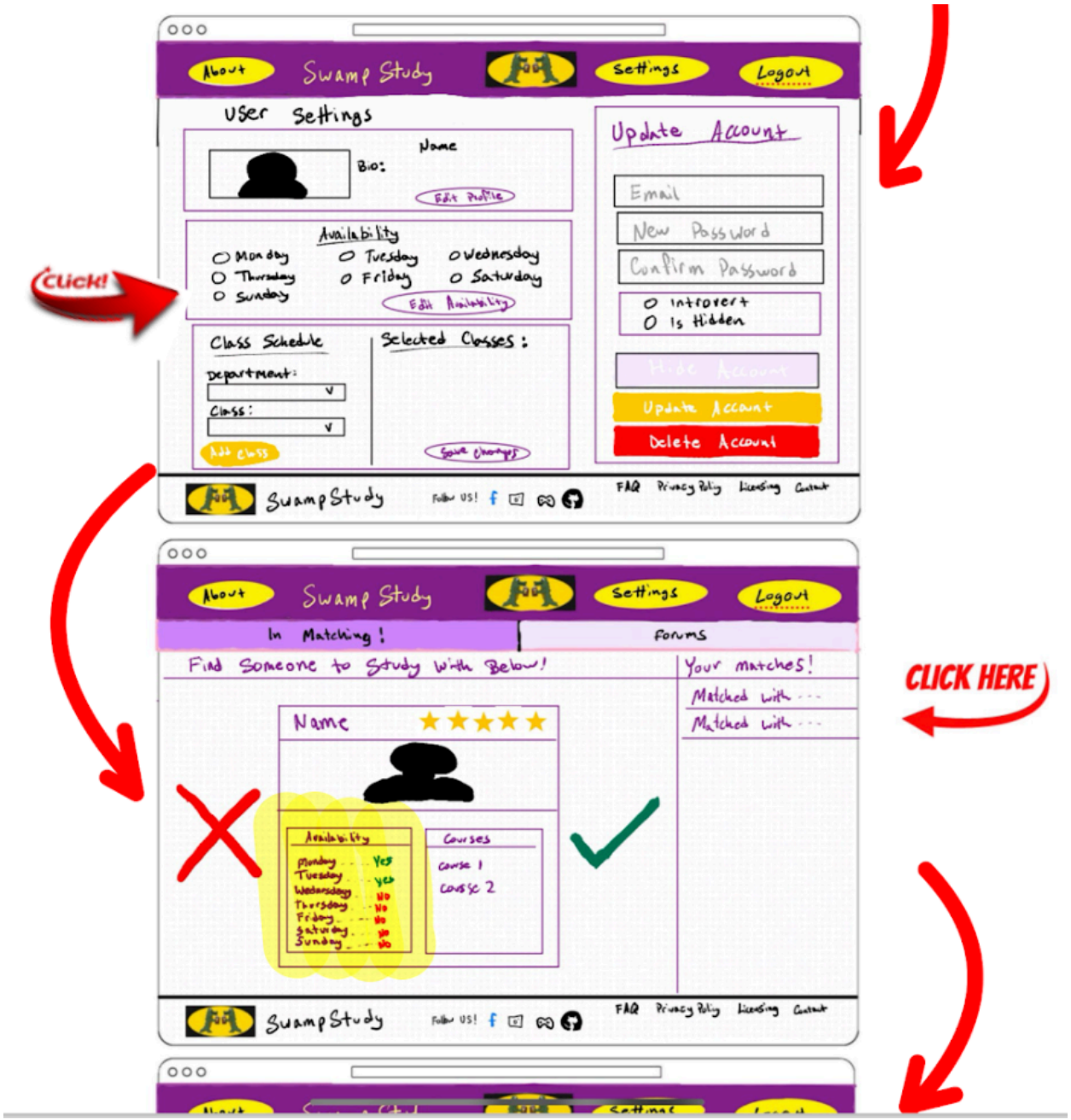
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Settings
Logout
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Class Schedule
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Add class
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Content
About
Swamp Study
Settings
Logout
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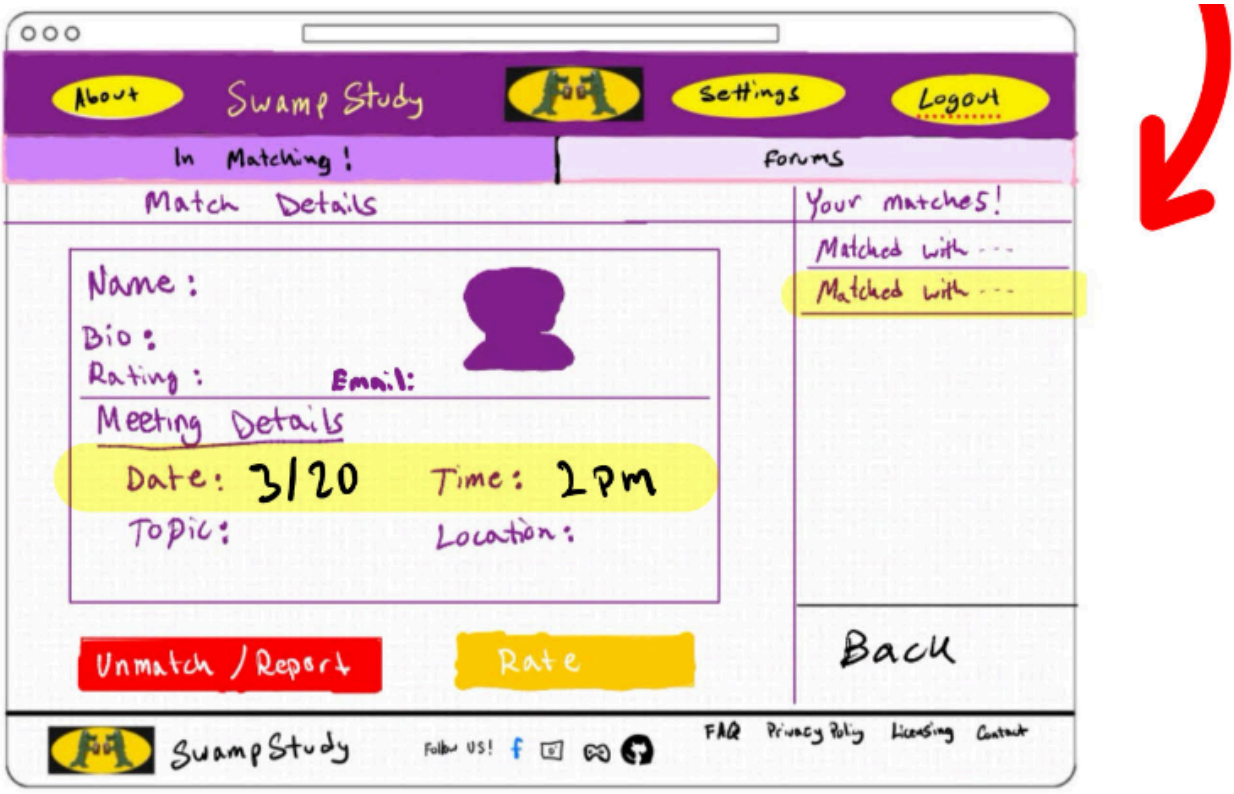
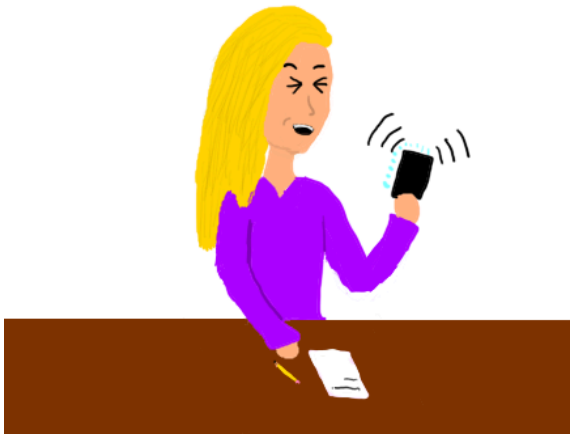


Now he can stop worrying so much about school and focus on his job and family. Everyone is happier.

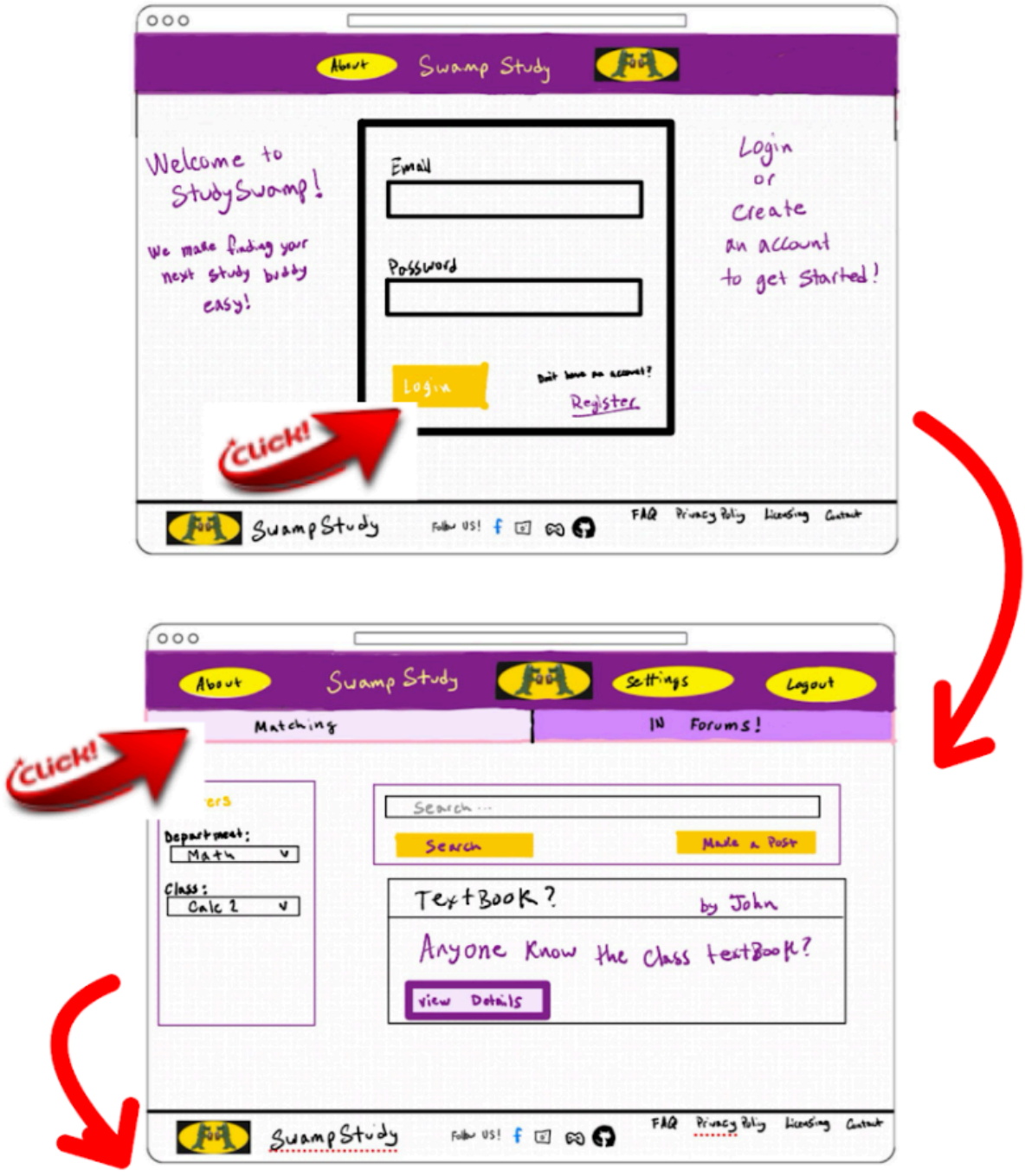
Use case 4: User looking to find a safe person to study with

Use case 4 Storyboard: Draft in progress

This is Melanie. She gets distracted from studying easily and her grades suffering.



Melanie gets on her SwampStudy account and matches with a potential study partner. Melanie appreciates the pre-confirmation contact methods available before meeting in real life.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Licensing
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About
Swamp Study
Settings
Logout
Matching
Forums!
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Department:
Math
Class:
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Make a Post
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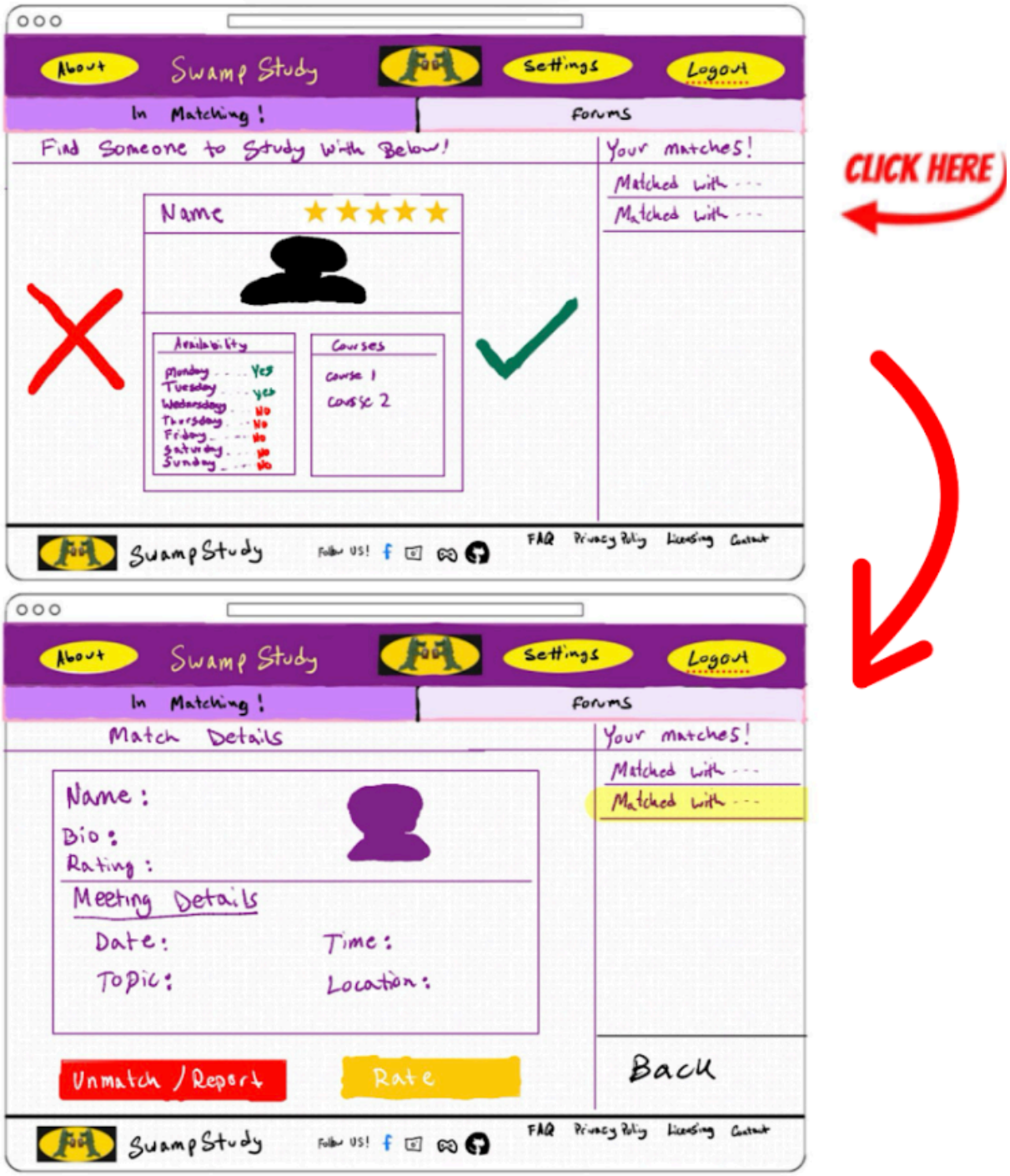
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Settings
Logout
In Matching!
Forums
Find Someone to Study With Below!
Your matches!
Matched with ...
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Name
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Monday ... Yes
Tuesday ... yes
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Thursday ... No
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Sunday ... No
Courses
course 1
course 2
SwampStudy
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Licensing
Content
CLICK HERE
About
Swamp Study
Settings
Logout
In Matching!
Forums
Match Details
Your matches!
Matched with ...
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Name:
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SwampStudy
Follow US!
FAQ
Privacy Policy
Licensing
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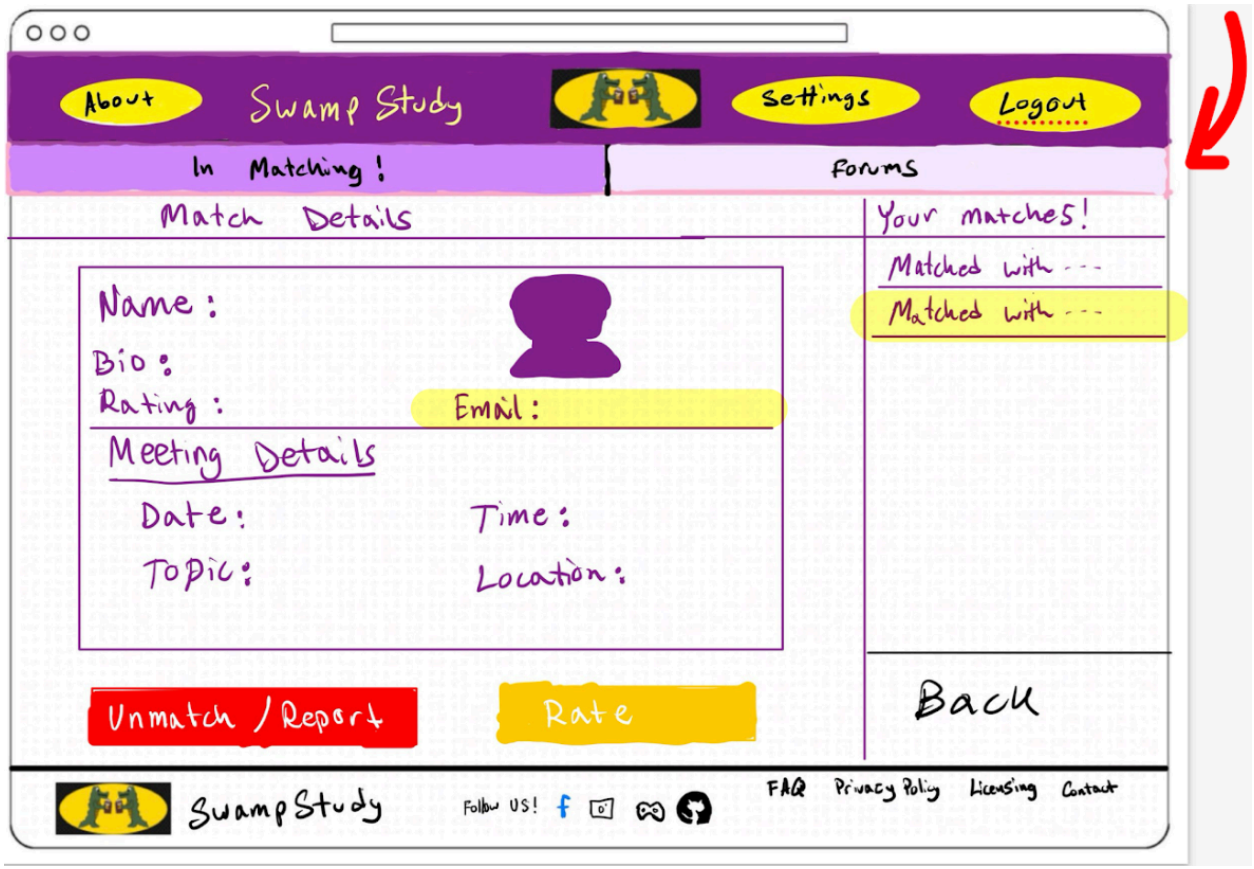
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Swamp Study
Settings
Logout
In Matching!
Forums
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Rate
Back
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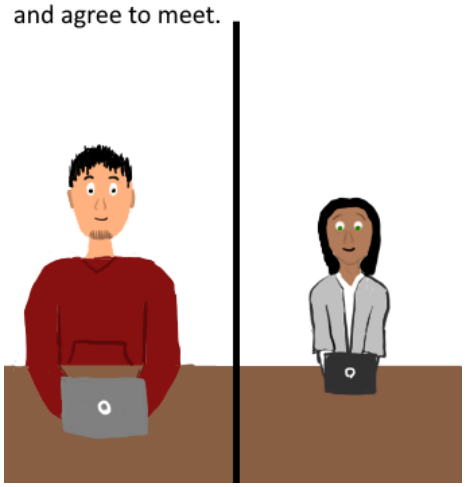
Contact

Use case 5: Finding a long term study partner

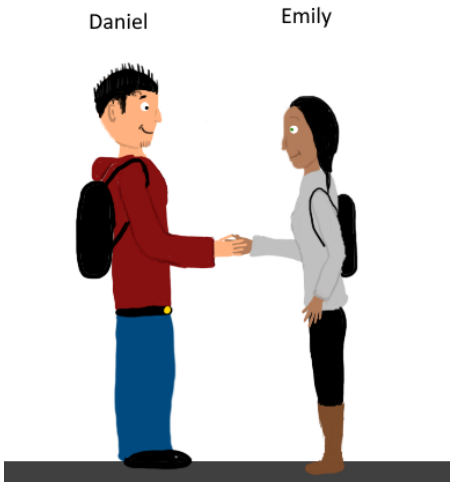
Use case 5 Storyboard (FROM DANIEL'S PERSPECTIVE):

Daniel is struggling with CSC510 and wants to find a study partner so he logs into SwampStudy.

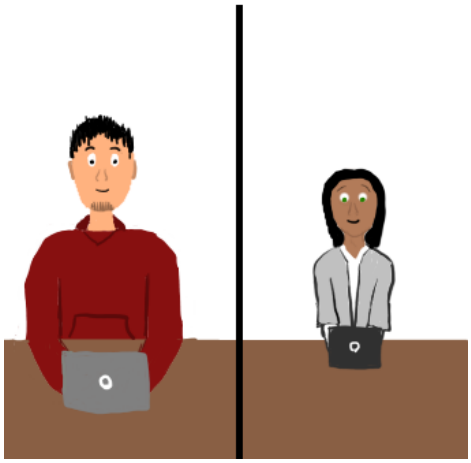
Daniel matches with Emily and they discuss their study habits and etc. They find out they have a lot in common and agree to meet.

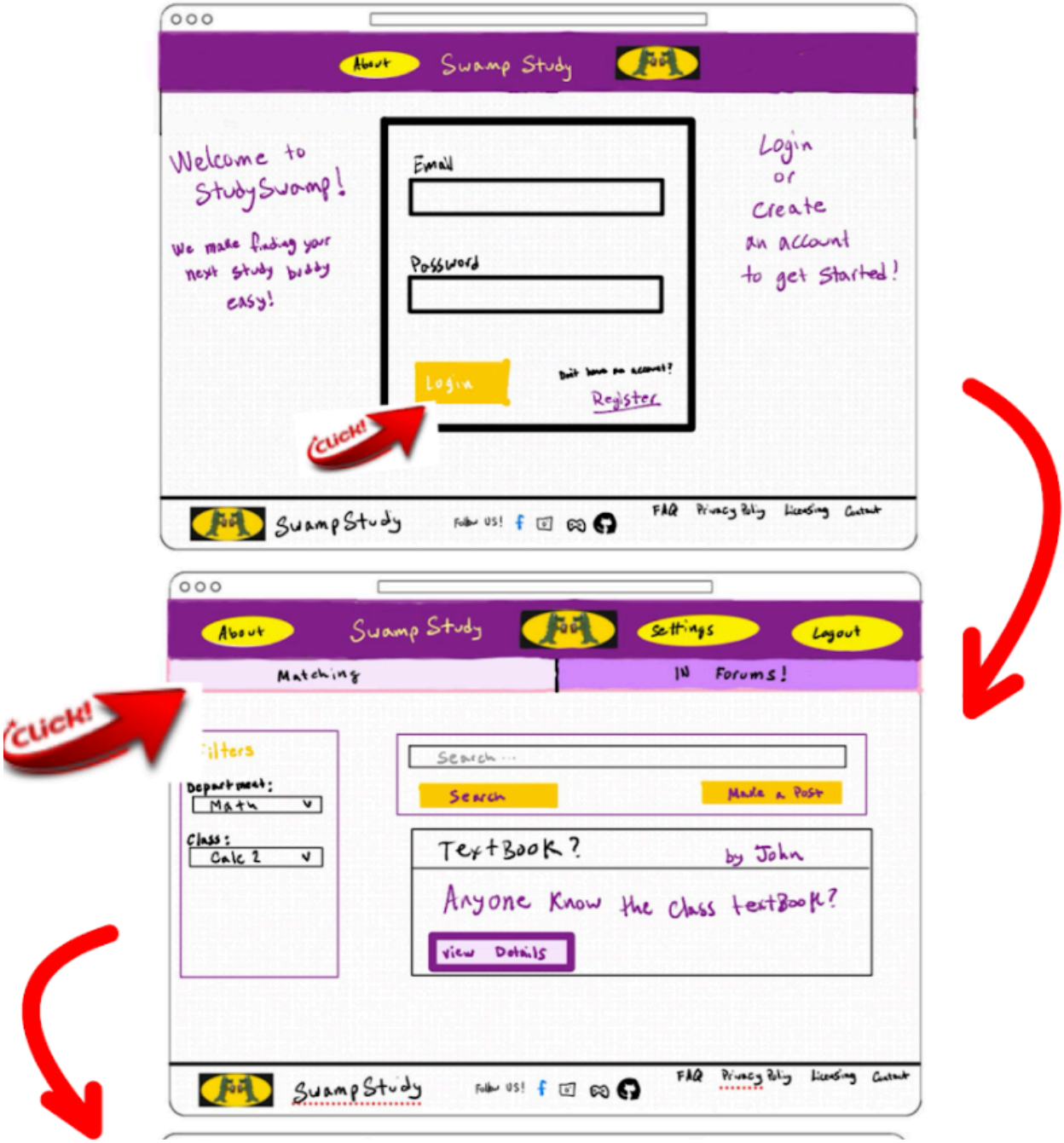


Daniel and Emily meet at the campus library for their study session.



After studying together, while giving the study buddy ratings, they both chose to rematch with each other.

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Licensing
Content
About
Swamp Study
Settings
Logout
Matching
Forums!
CLICK!
Filters
Department:
Math
Class:
Calc 2
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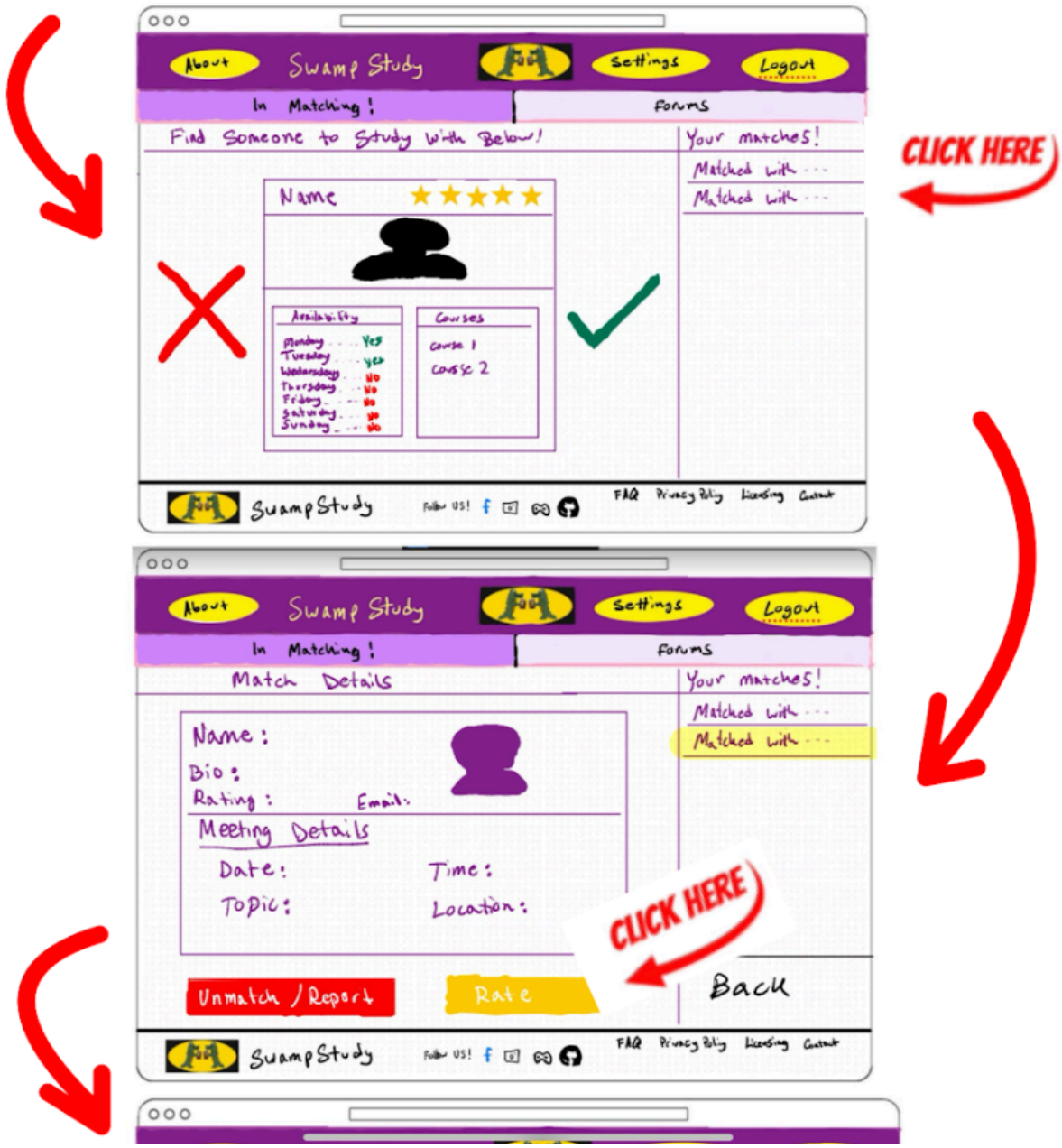
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Settings
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Forums
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Courses
course 1
course 2
SwampStudy
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Licensing
Contact
About
Swamp Study
Settings
Logout
In Matching!
Forums
Match Details
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Rating:
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Meeting Details
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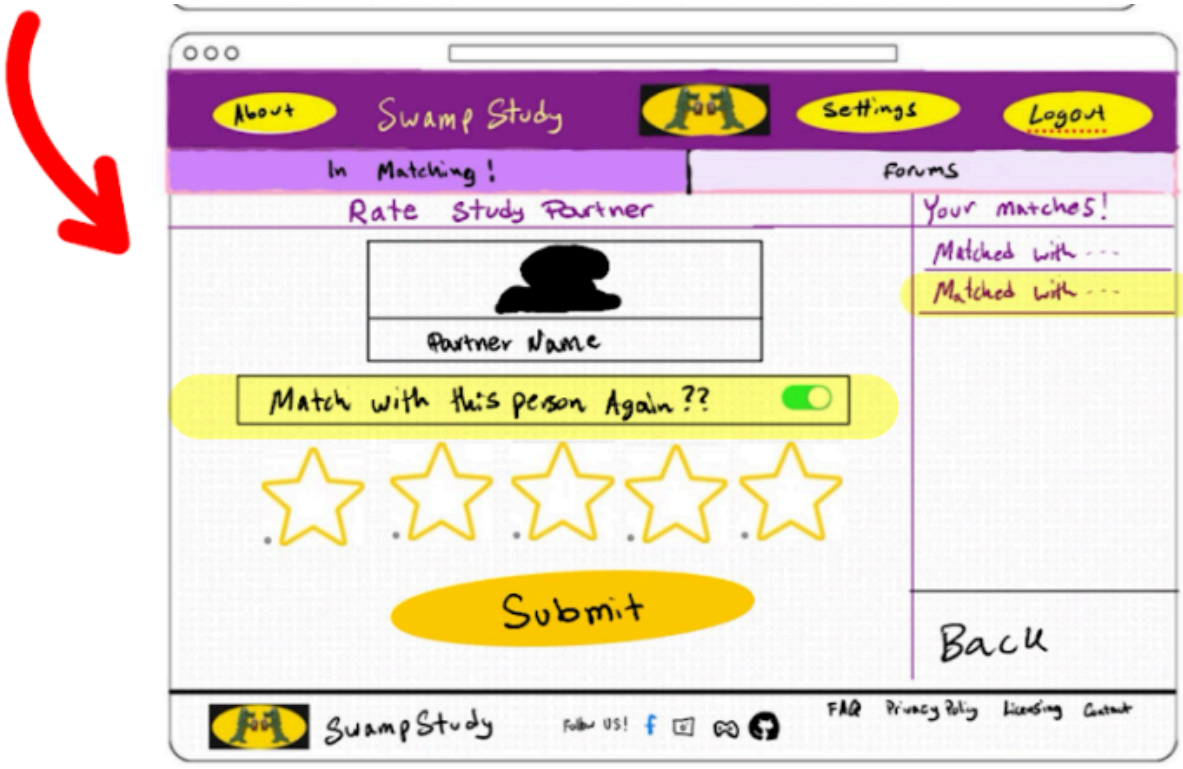
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Settings
Logout
In Matching!
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Matched with ...
Partner Name
Match with this person Again??
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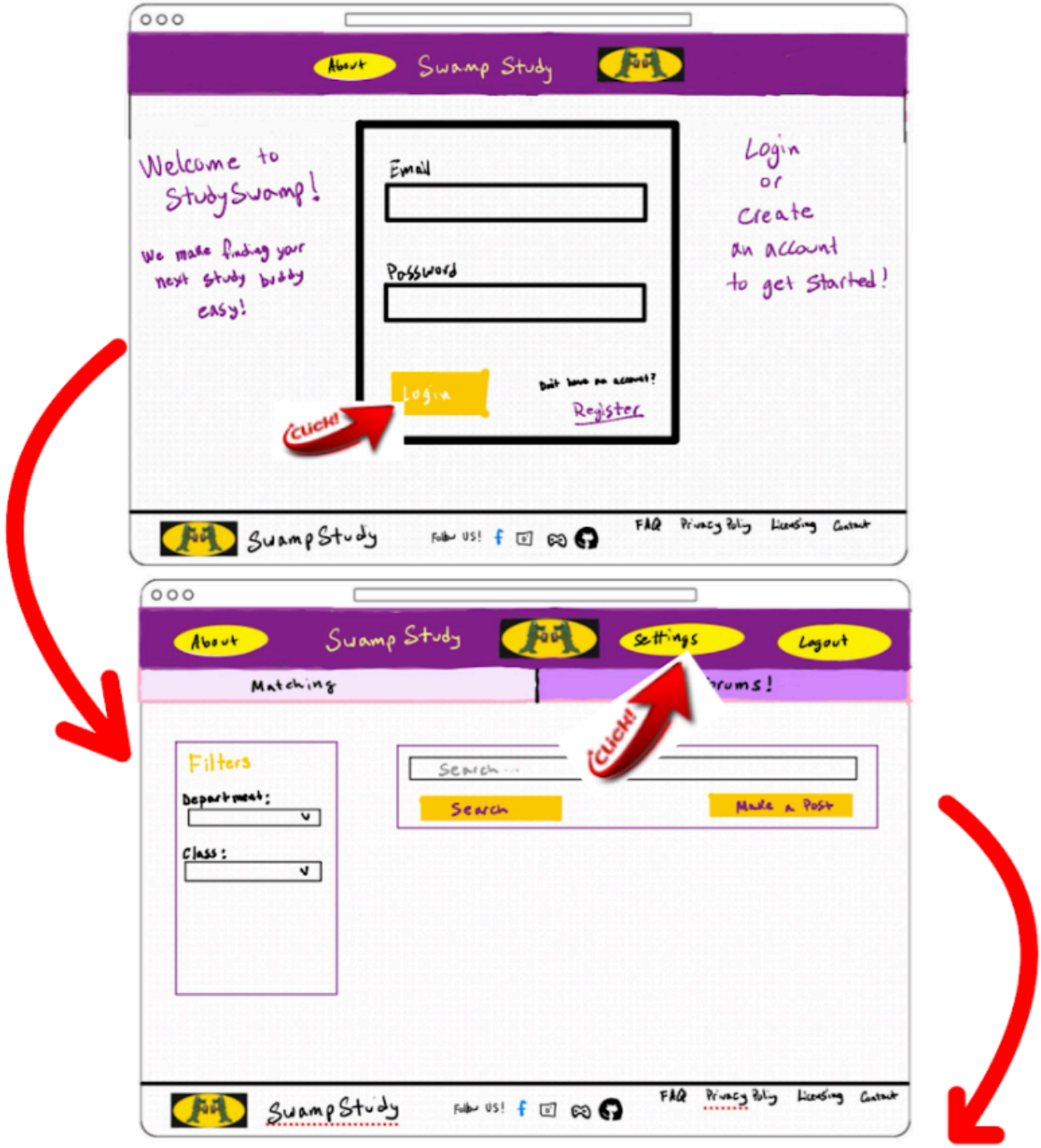
Use case 6: Hiding Profile

Use case 6 Storyboard

Kyle is a social butterfly, he craves company. He is also very studious, he is a regular SwampStudy user.
But sometimes he is overwhelmed.

He needs the app but he also needs a a break.

He is happy to see StudySwamp has a “Hide your Profile” feature.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Swamp Study
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Logout
Matching
Forums!
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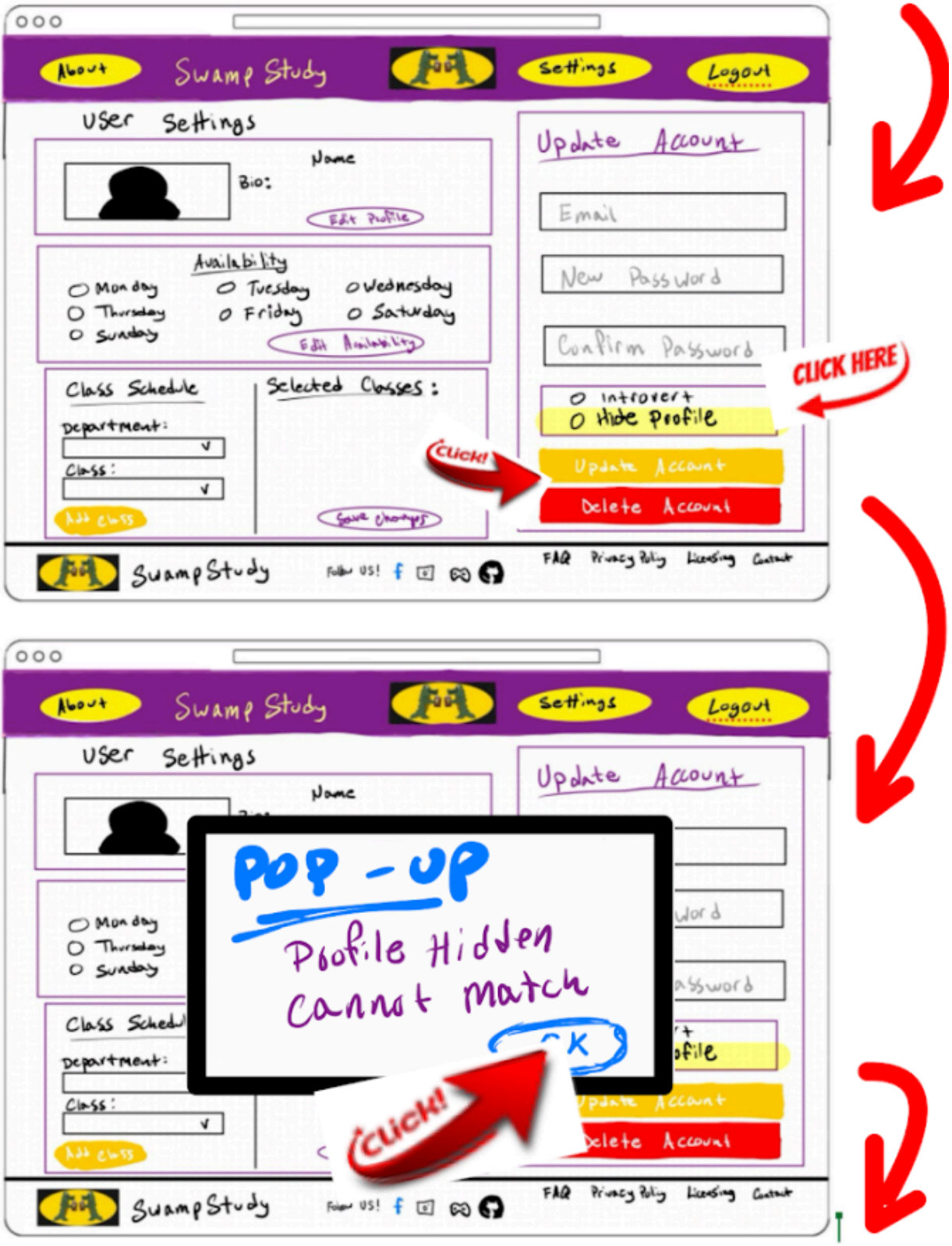
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Swamp Study
Settings
Logout
User Settings
Name
Bio:
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Availability
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Edit Availability
Class Schedule
Selected Classes:
Department:
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Add class
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Content
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Swamp Study
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User Settings
Bio:
Monday
Thursday
Sunday
Saturday
Availability
Class Schedule
Department:
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Update Account
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Privacy Policy
Licensing
Content
About
Swamp Study
Settings
Logout
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Forums!
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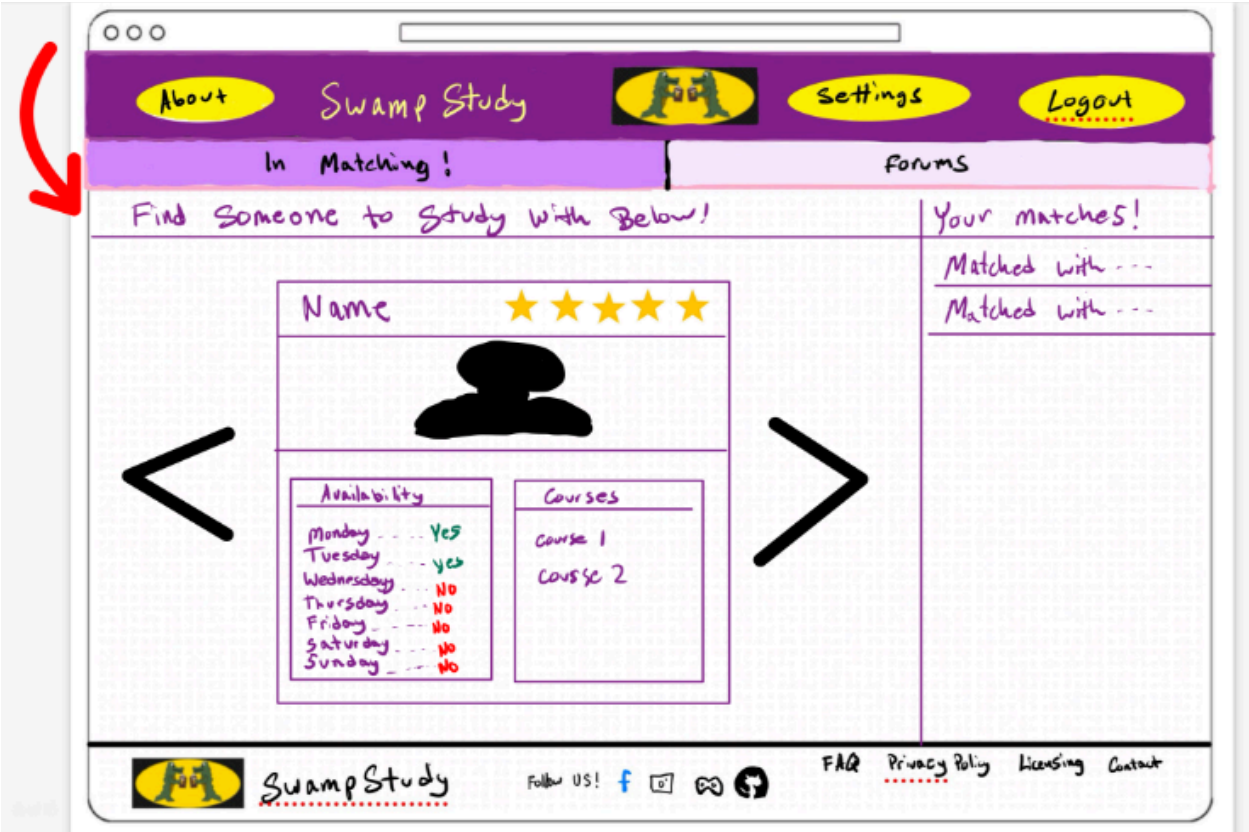


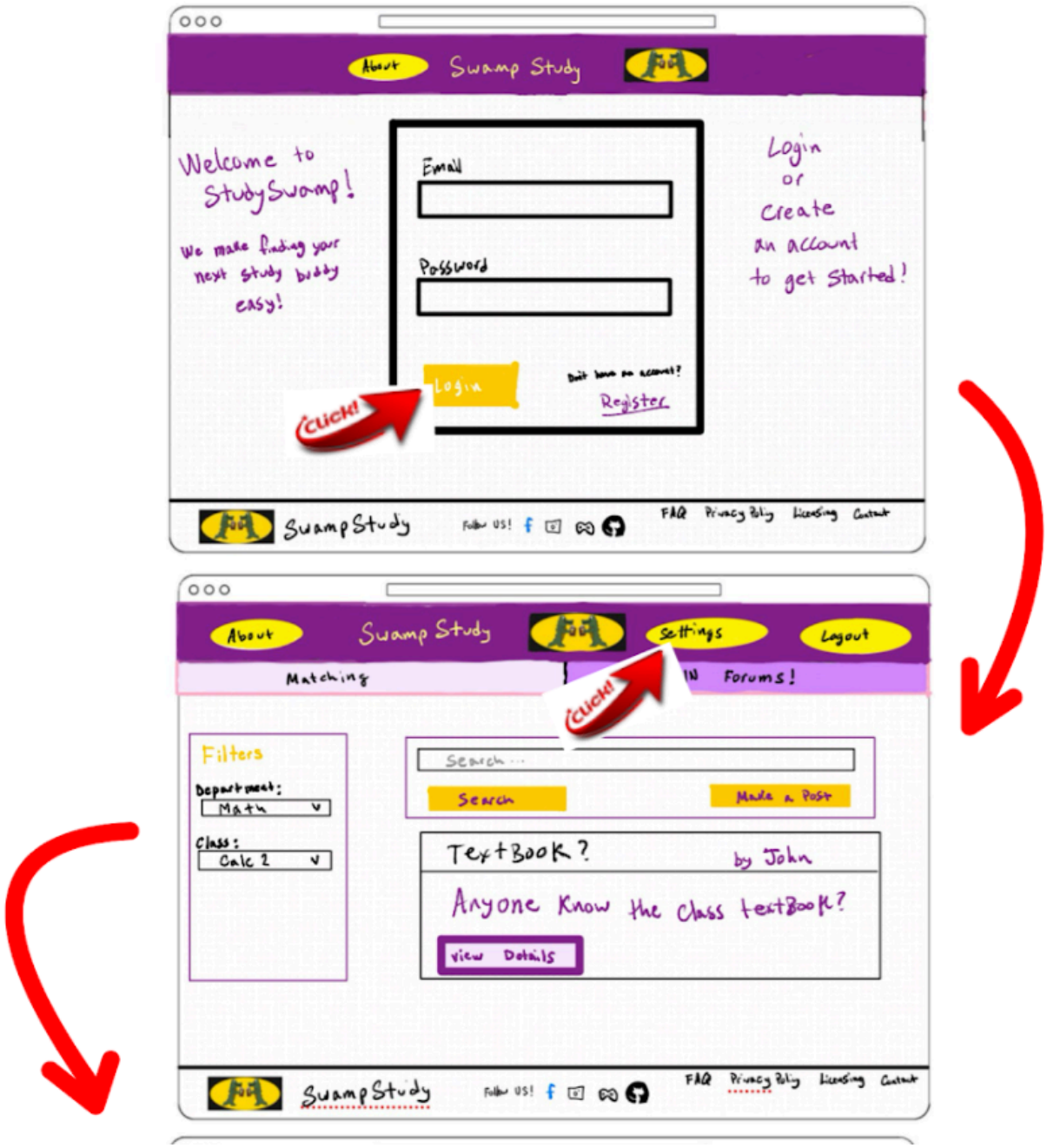
Hiding his profile allows him to focus on himself, not on studying or social pressure.

Use case 7: Introvert looking for someone with similar traits to study with

Use Case 7 Storyboard

Taylor is an introvert, she is shy around others and prefers to keep to herself.
But unfortunately she needs help in school and is anxious that the partner will talk about nonsense and end up distracting her.

She is happy to find that SwampStudy has a “introvert” filter that fixes her issue.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Swamp Study
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Logout
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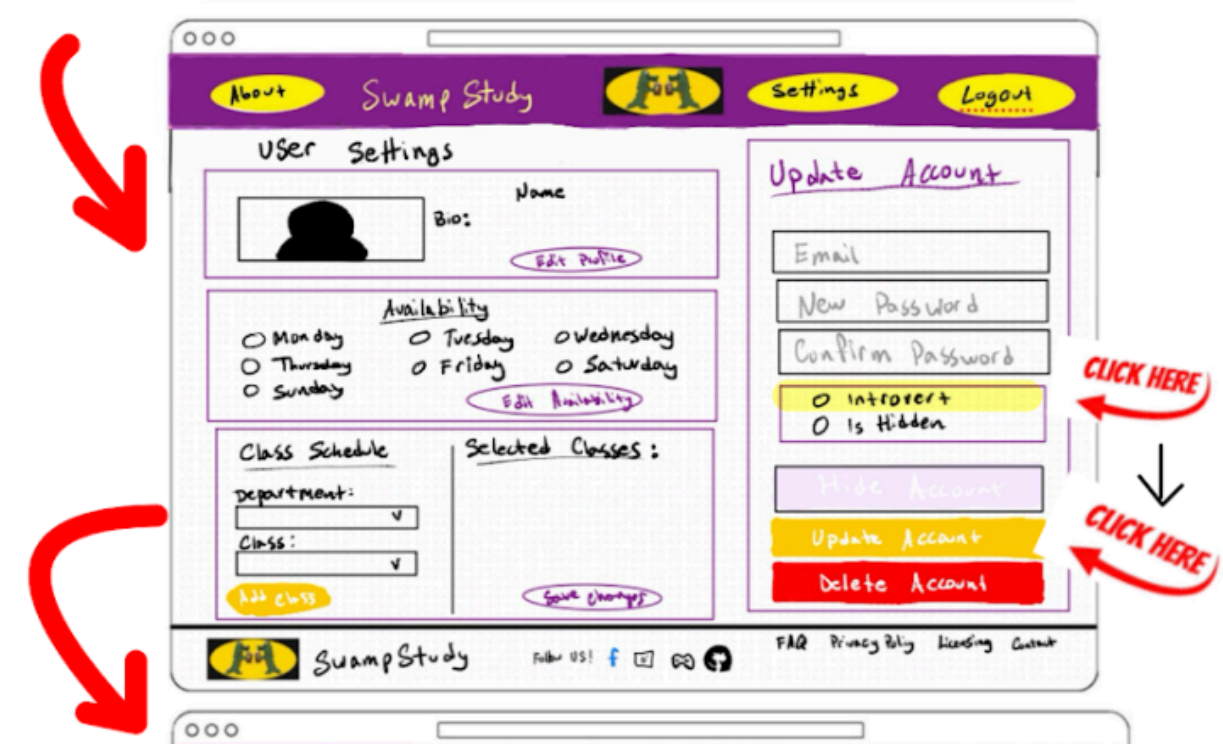
About
Swamp Study
Settings
Logout
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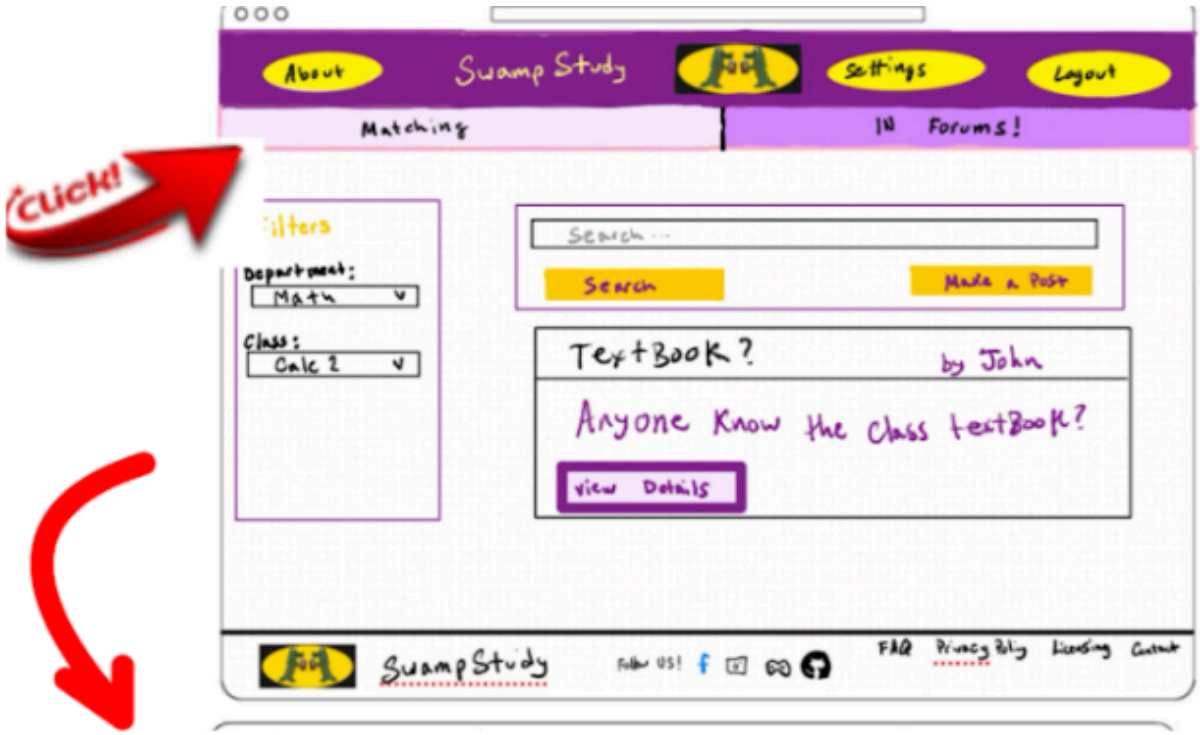
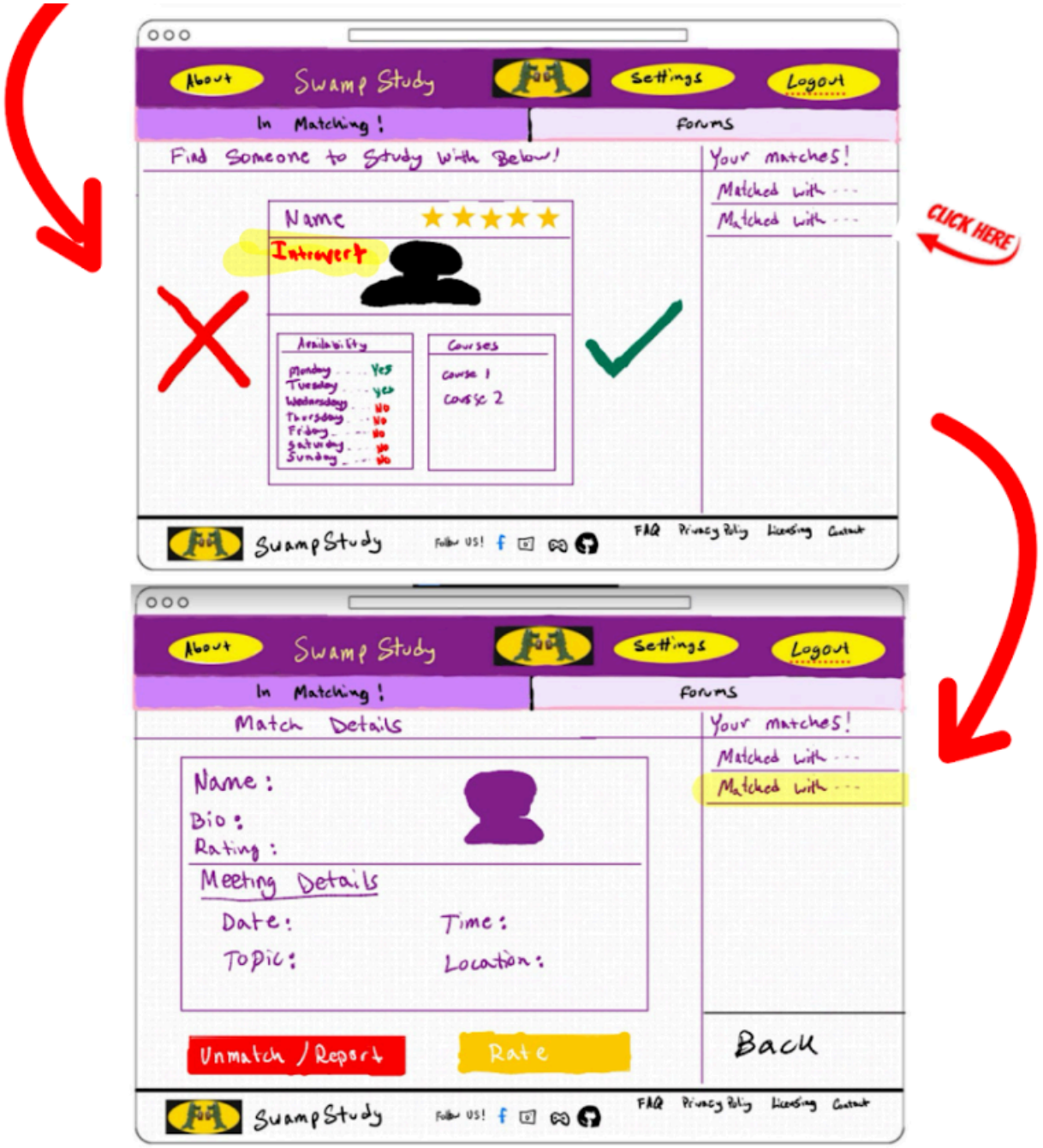
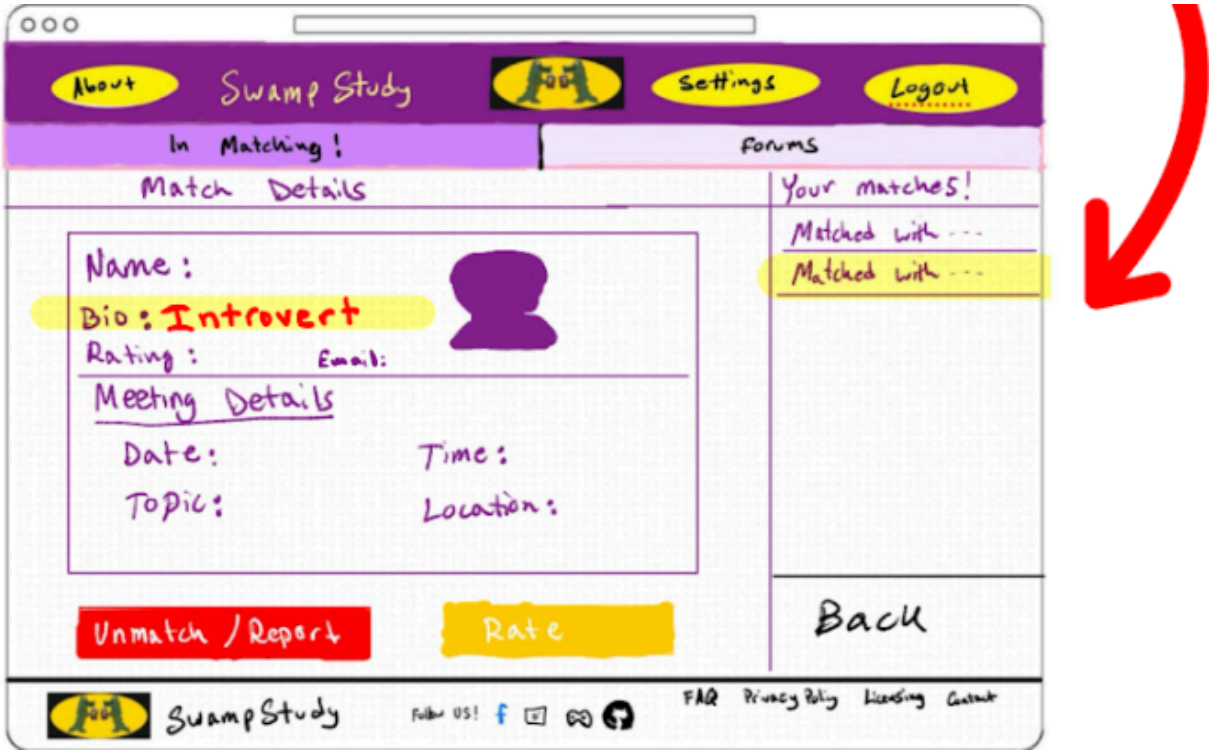
Class Schedule
Department:
Class:
Add class
Selected Classes:
Save changes
Update Account
Email
New Password
Confirm Password
Introvert
Is Hidden
Hide Account
Update Account
Delete Account
CLICK HERE
CLICK HERE
SwampStudy
Follow US!
FAQ
Privacy Policy
Licensing
Content


About
Swamp Study
Settings
Logout
Matching
IN Forums!
CLICK!
Filters
Department:
Math
Class:
Calc 2
Search...
Search
Make a Post
TextBook?
by John
Anyone Know the class textBook?
view Details
SwampStudy
Follow US!
FAQ
Privacy Policy
Licensing
Content


About
Swamp Study
Settings
Logout
In Matching !
Forums
Find Someone to Study With Below!
Your matches!
Matched with ...
Matched with ...
CLICK HERE
Name
Introvert
Availability
Monday ... Yes
Tuesday ... yes
Wednesday ... No
Thursday ... No
Friday ... No
Saturday ... No
Sunday ... No
Courses
course 1
course 2
SwampStudy
Follow US!
FAQ
Privacy Policy
Licensing
Content
About
Swamp Study
Settings
Logout
In Matching !
Forums
Match Details
Your matches!
Matched with ...
Matched with ...
Name :
Bio :
Rating :
Meeting Details
Date :
Time :
Topic :
Location :
Unmatch / Report
Rate
Back
SwampStudy
Follow US!
FAQ
Privacy Policy
Licensing
Content



She is now free to study with others just like her,and avoid the uncomfortable small talk extroverts tend to do.

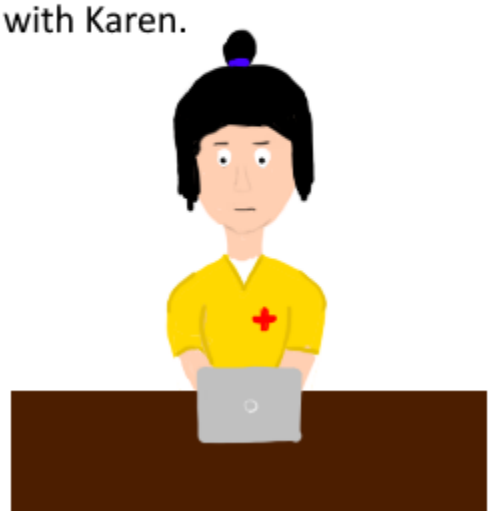
Use case 8: Users ensuring the quality of matches by rating

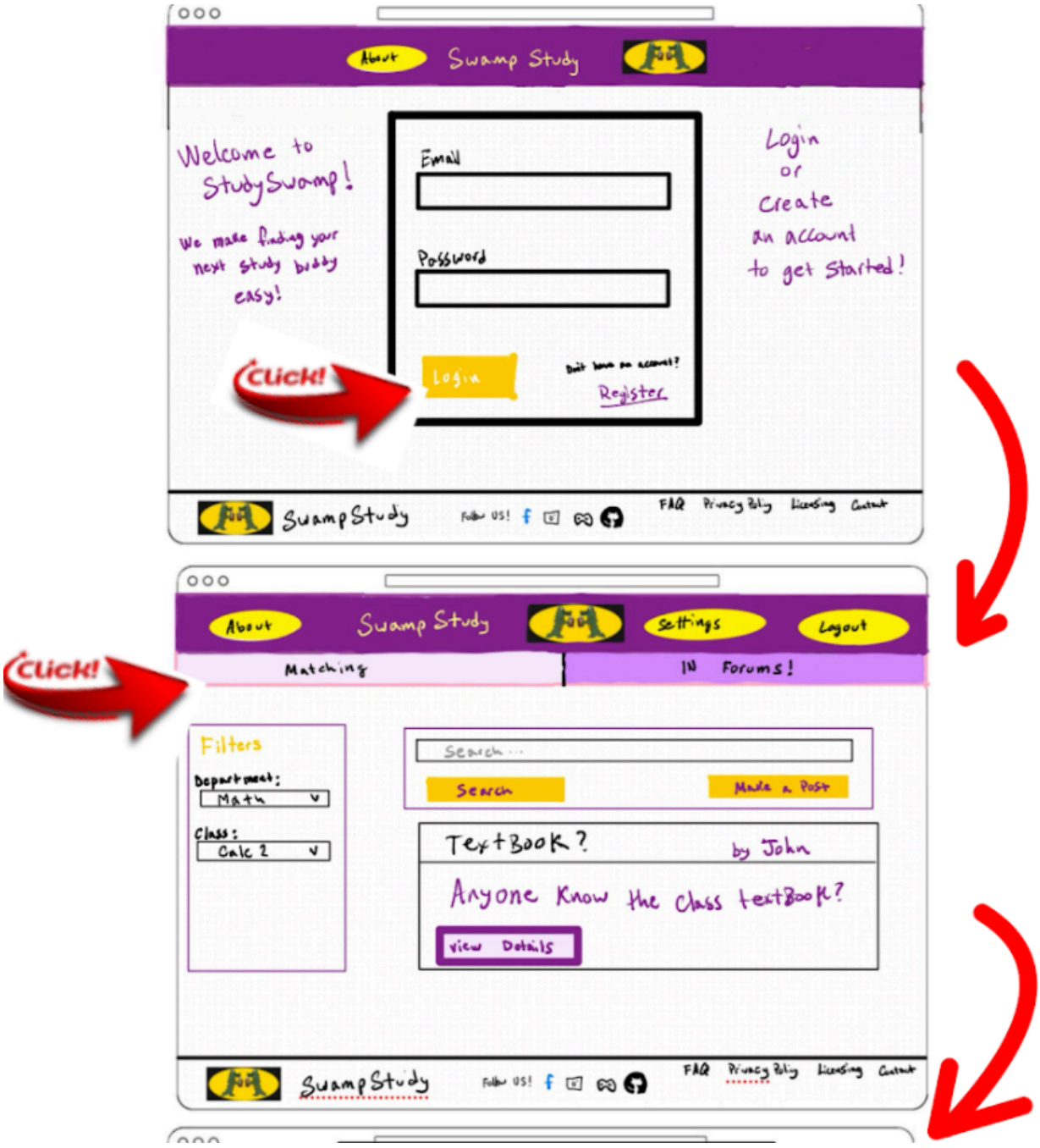
Use Case 8 Storyboard

This is Michelle, she matches with Karen and they schedule a session.

Michelle is finding Karen to be intollerable and is losing patience.

Michelle is giving Karen a bad rating. She ends this session hoping no one else has to deal with Karen.




About
Swamp Study
Welcome to StudySwamp!
We make finding your next study buddy easy!
Email
Password
Login
Don't have an account?
Register
Login or Create an account to get started!
Click!
SwampStudy
Follow US!
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About
Swamp Study
Settings
Logout
Matching
Forums!
Click!
Filters
Department:
Math
Class:
Calc 2
Search...
Search
Make a Post
TextBook?
by John
Anyone Know the class textBook?
view Details
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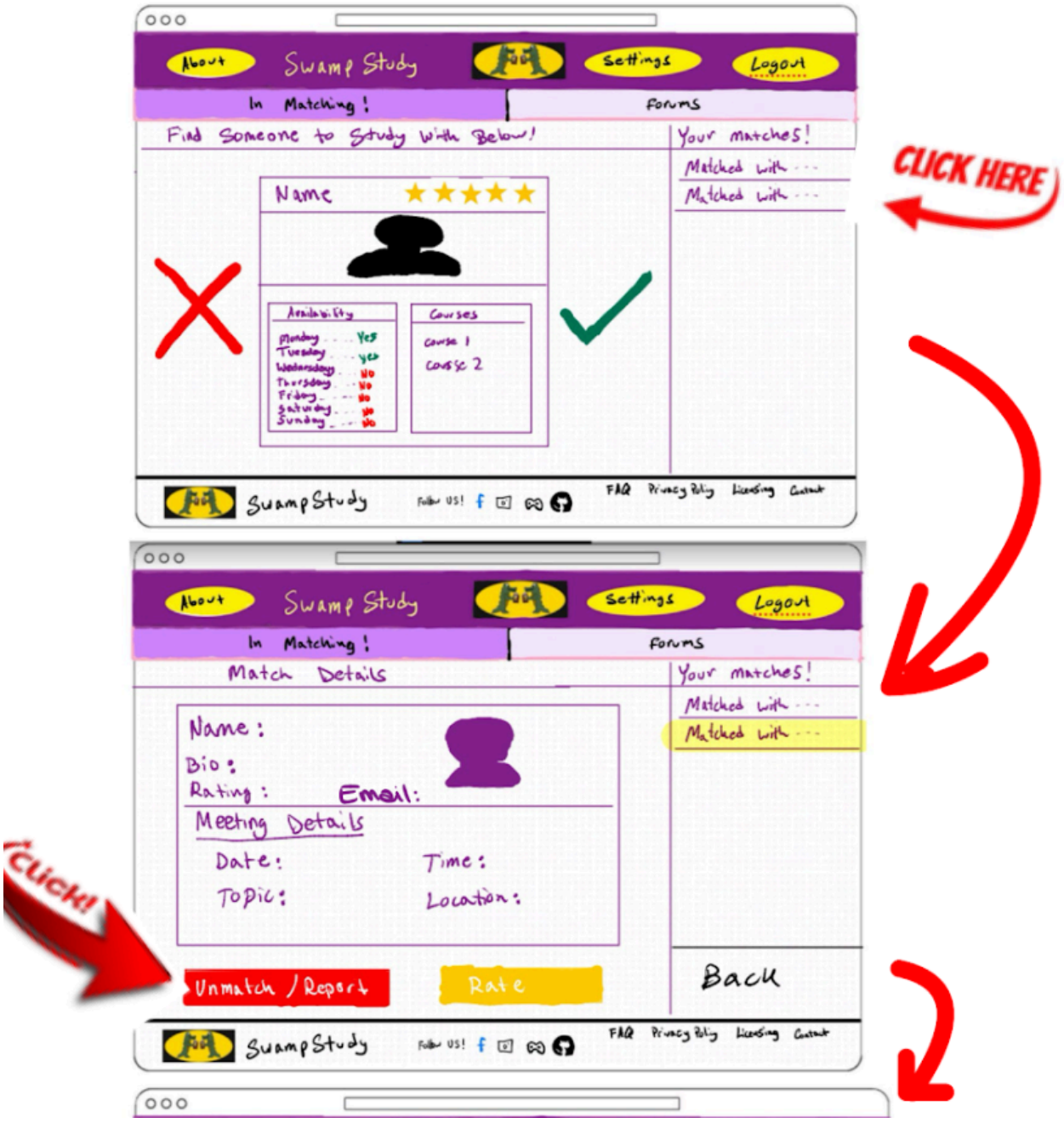
About
Swamp Study
Settings
Logout
In Matching!
Forums
Find Someone to Study With Below!
Your matches!
Matched with ...
Matched with ...
CLICK HERE
Name
Availability
Monday ... Yes
Tuesday ... yes
Wednesday ... No
Thursday ... No
Friday ... No
Saturday ... No
Sunday ... No
Courses
course 1
course 2
SwampStudy
Follow US!
FAQ
Privacy Policy
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Contact
About
Swamp Study
Settings
Logout
In Matching!
Forums
Match Details
Your matches!
Matched with ...
Matched with ...
Name:
Bio:
Rating:
Email:
Meeting Details
Date:
Time:
Topic:
Location:
Click!
Unmatch / Report
Rate
Back
SwampStudy
Follow US!
FAQ
Privacy Policy
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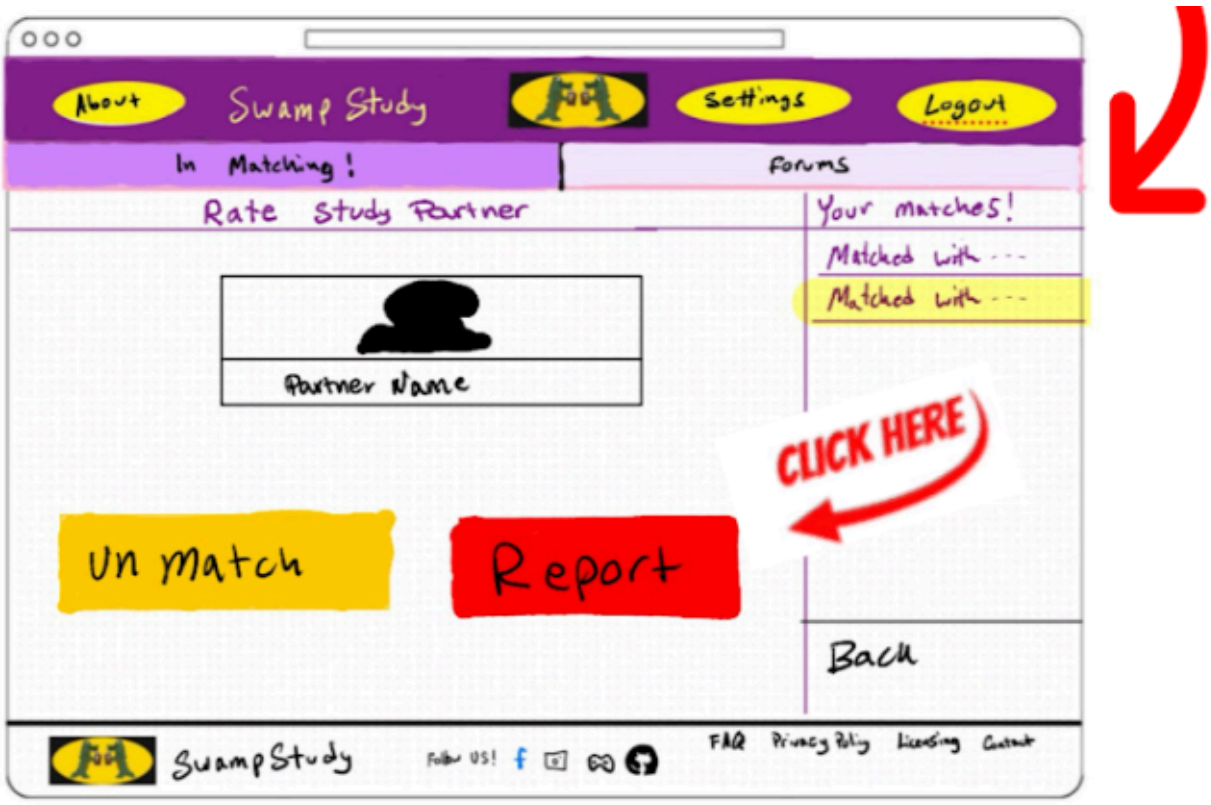
Contact


About
Swamp Study
Settings
Logout
In Matching !
Forums
Rate Study Partner
Your matches!
Matched with ---
Matched with ---
Partner Name
CLICK HERE
Un Match
Report
Back
SwampStudy
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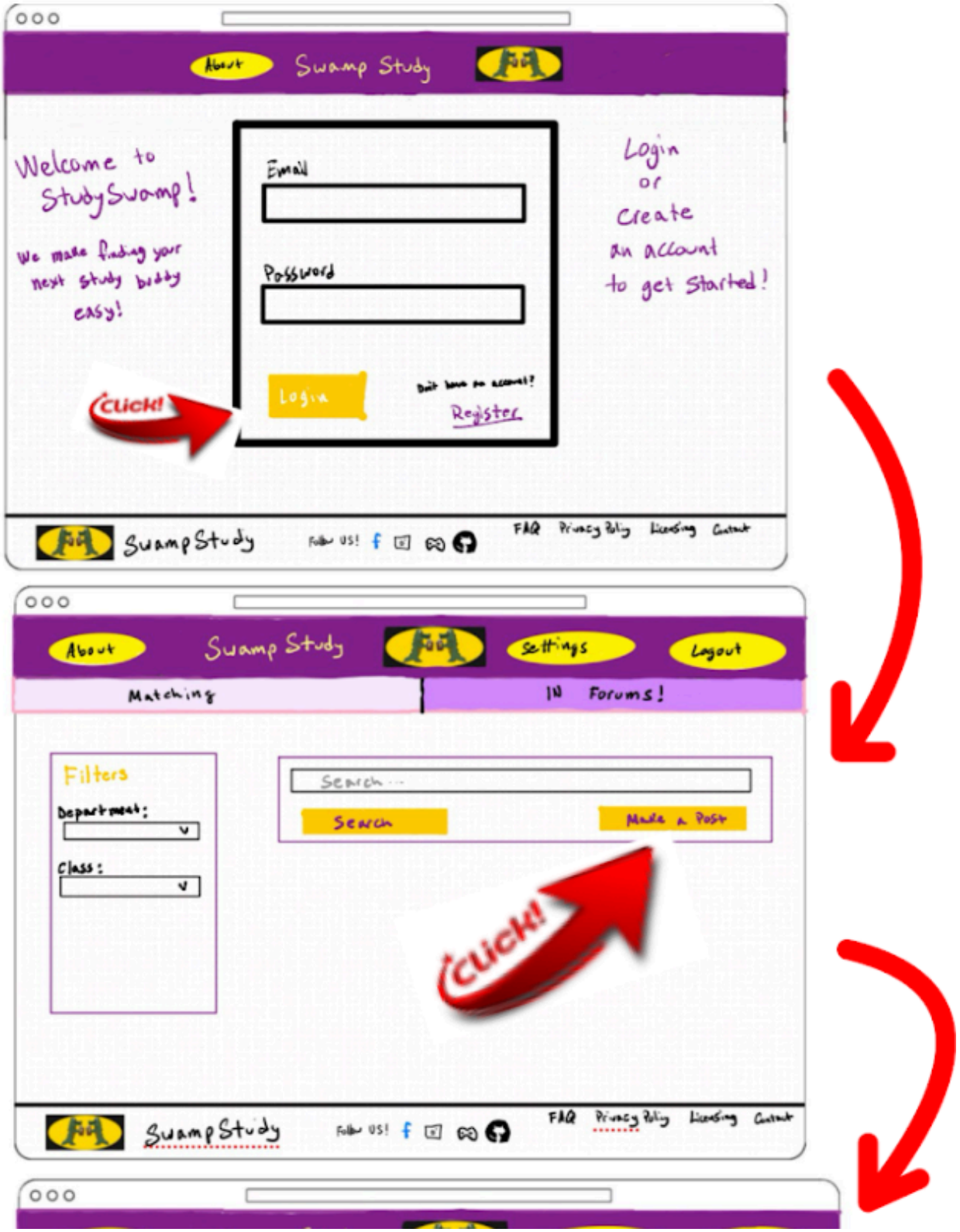
Use case 12: User getting his questions answered on the forum

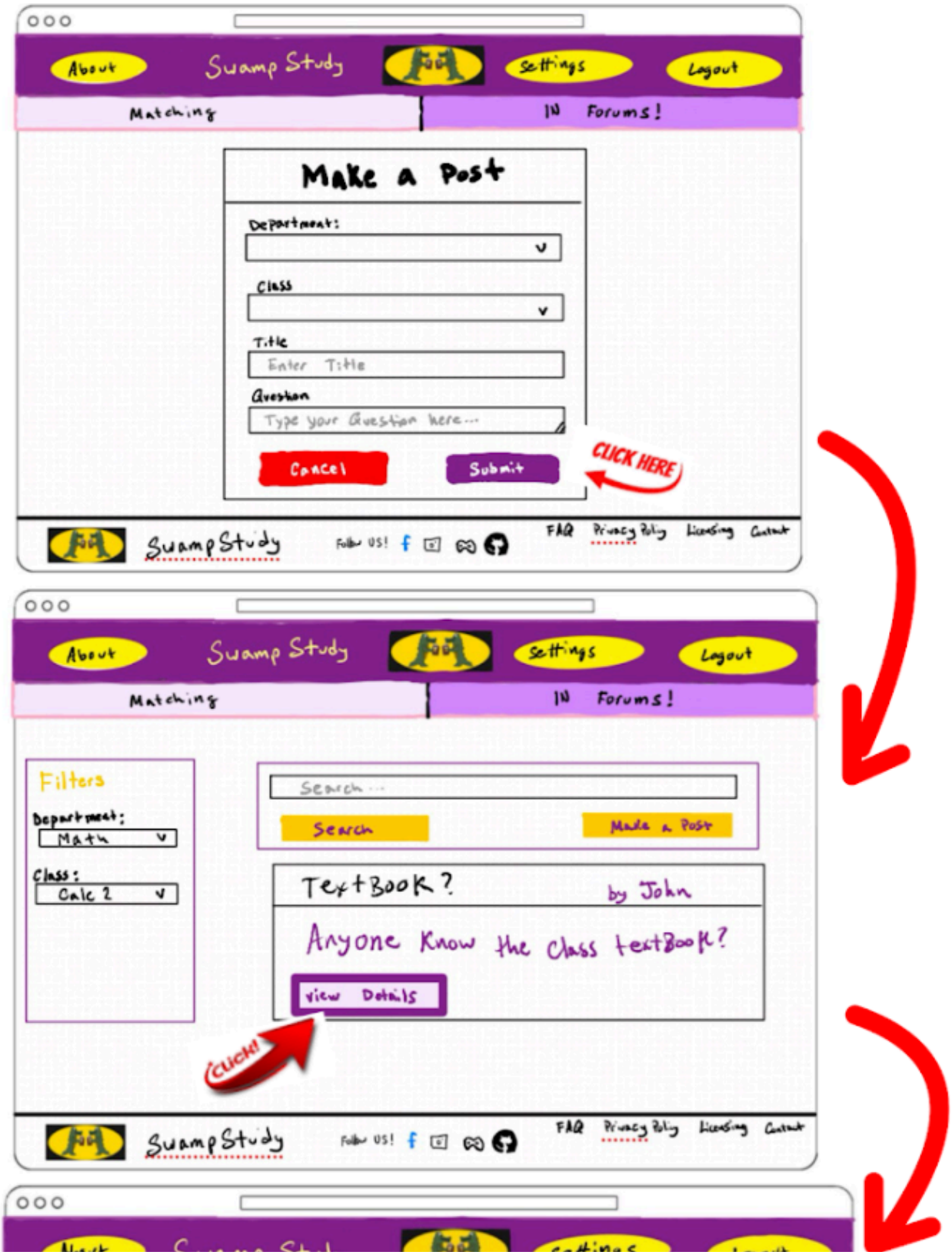
Use Case 12 Storyboard

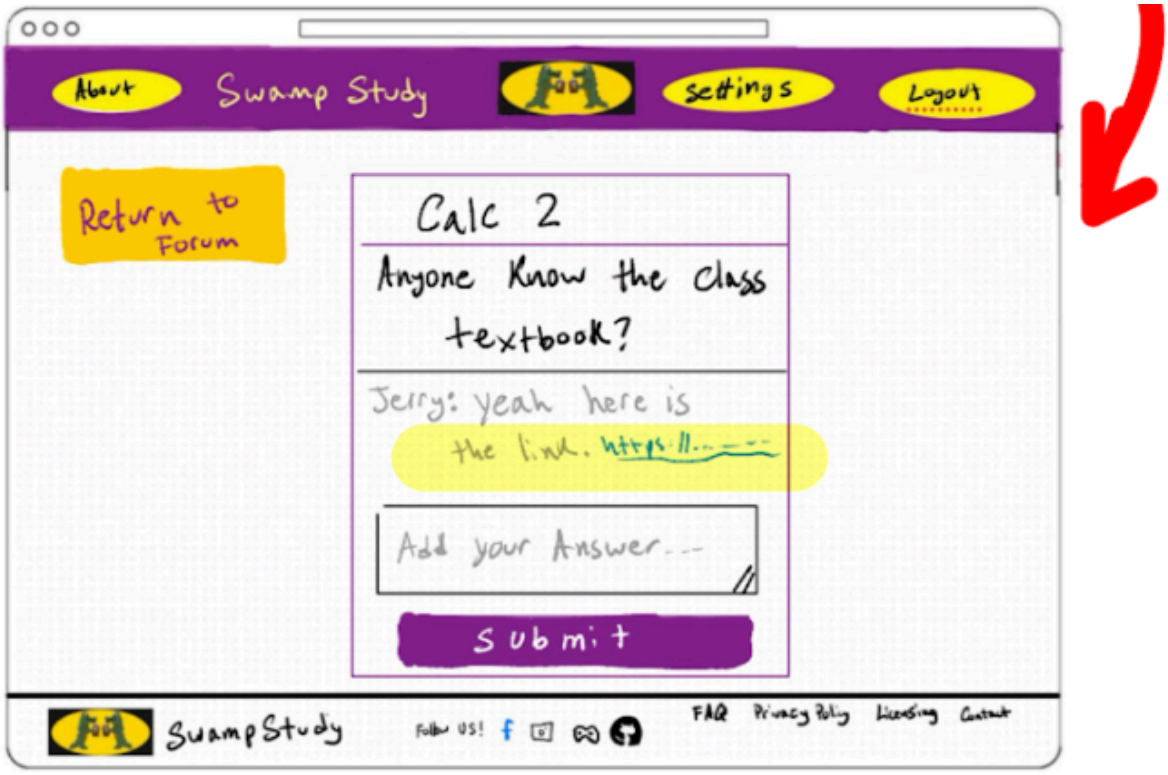
Geronimo missed the first week of an online class, he finds out there is a textbook that is required, but cant find which one i right.

He panics as the professor doesn't answer emails, and he does not have anyone else's contact information.

He tried to search the conventional places, but had no luck
Until he found the Swamp Study Website, here he was able to
Ask in the class specific forum and get his answer.


About
Swamp Study
Welcome to StudySwamp!
We make finding your next study buddy easy!
Email
Password
Login
Don't have an account?
Register
Login or Create an account to get started!
Click!
SwampStudy
Follow us!
FAQ
Privacy Policy
Licensing
Contact
About
Swamp Study
Settings
Logout
Matching
Forums!
Filters
Department:
Class:
Search...
Search
Make a Post
Click!
SwampStudy
Follow us!
FAQ
Privacy Policy
Licensing
Contact


About
Swamp Study
Settings
Logout
Matching
IN Forums!
Make a Post
Department:
Class
Title
Enter Title
Question
Type your Question here...
Cancel
Submit
CLICK HERE
SwampStudy
Follow US!
FAQ
Privacy Policy
Licensing
Content
About
Swamp Study
Settings
Logout
Matching
IN Forums!
Filters
Department:
Math
Class:
Calc 2
Search...
Search
Make a Post
TextBook?
by John
Anyone Know the class textBook?
view Details
CLICK!
SwampStudy
Follow US!
FAQ
Privacy Policy
Licensing
Content


About
Swamp Study
settings
Logout
Return to Forum
Calc 2
Anyone Know the class textbook?
Jerry: yeah here is the link. https://...
Add your Answer...
submit
SwampStudy
Follow us!
FAQ
Privacy Policy
Licensing
Content

Database Architecture

1. Database Requirements
    - 1.1. Registered User (Weak)
        - 1.1.1. A User shall be able to make many matches
        - 1.1.2. A User shall be able to post many questions
        - 1.1.3. A User shall be able to answer many question
        - 1.1.4. A User shall have zero or one account
    - 1.2. Account (Strong)
        - 1.2.1. An Account shall belong to one or zero Registered User
        - 1.2.2. An Account shall be in many matches
        - 1.2.3. An Account shall have many attributes
        - 1.2.4. An Account shall have one or zero profiles
        - 1.2.5. An Account shall have many Ratings
        - 1.2.6. An Account shall take many Classes
    - 1.3. Match (Strong)
        - 1.3.1. A Match shall contain two users
        - 1.3.2. A Match shall have a class associated with it
        - 1.3.3. A Match shall have one meeting
        - 1.3.4. A Match shall have one meeting link
        - 1.3.5. A Match shall have one meeting time
    - 1.4. Question (Weak)
        - 1.4.1. A Questions shall be posed by one Account
        - 1.4.2. A Question shall have one or many answers
        - 1.4.3. A Question shall have a class associated with it
        - 1.4.4. A Question shall be in one and only one thread
    - 1.5. Answer (Weak)
        - 1.5.1. An Answer shall belong to one and only one Thread
        - 1.5.2. An Answer shall have one account author
        - 1.5.3. An Answer shall have one rating
    - 1.6. Rating (Weak)
        - 1.6.1. A Rating shall belong to one and only one question
    - 1.7. Thread (Weak)
        - 1.7.1. A Thread shall contain one and only one question
        - 1.7.2. A Thread shall contain one or many answers
        - 1.7.3. A Thread shall be marked with its status
    - 1.8. Class (Strong)
        - 1.8.1. A Class shall belong to many questions
        - 1.8.2. A Class shall belong to many matches
        - 1.8.3. A Class shall be associated with many users
        - 1.8.4. A Class shall be taken by many Users
    - 1.9. Profile (Weak)
        - 1.9.1. A Profile shall belong to one account

1.9.2. A Profile shall have one or many attributes

1.10. Like (Weak)

1.10.1. A Like shall have one or more accounts

2. Entity Attributes, Relationships, and Domains

2.1. user (Weak)

2.1.1. id: PK, Numeric, Generated

2.1.2. email: unique, alphanumeric

2.1.3. password: alphanumeric, hashed

2.1.4. created: datetime, generated

2.1.5. account: Numeric, ForeignKey

2.2. account (Strong)

2.2.1. id: PK, Numeric, Generated

2.2.2. first_name: alphanumeric

2.2.3. last_name: alphanumeric

2.2.4. profile_picture, upload (S3 Link)

2.2.5. educator: tinyint (Boolean)

2.2.6. introvert: tinyint (Boolean)

2.2.7. biography: varchar(500)

2.2.8. userFKId: Numberi, Foreign Key

2.2.9. weekavailability: smallInt

2.2.10. isHidden: tinyInt

2.3. match (Strong)

2.3.1. id: PK, Numeric, Generated

2.3.2. classId: FK, Numeric, class_id

2.3.3. meetingTime: datetime

2.3.4. meetingLink: Alphanumeric

2.4. match_users_account (Weak)

2.4.1. matchId: PK, Numeric, Generated

2.4.2. accountId: FK, Account, user_id

2.5. class (Strong)

2.5.1. id: PK, INT

2.5.2. name: Alphanumeric

2.5.3. number: INT

2.5.4. department: Alphanumeric

2.6. question (Weak)

2.6.1. id: PK, Numeric, Generated

2.6.2. accountId: FK, Numeric, account_id

2.6.3. question: alphanumeric

2.7. answer (Weak)

2.7.1. id: PK, Numeric, Generated

2.7.2. accountId: FK, Numeric, account_id

2.7.3. answer: alphanumeric

2.7.4. threadId: FK, Numeric, thread_id

2.8. thread (Weak)

2.8.1. id: PK, Numeric, Generated
2.8.2. classId: FK, Numeric class_id
2.8.3. questionId: FK, Numeric, question_id
2.8.4. title: alphanumeric

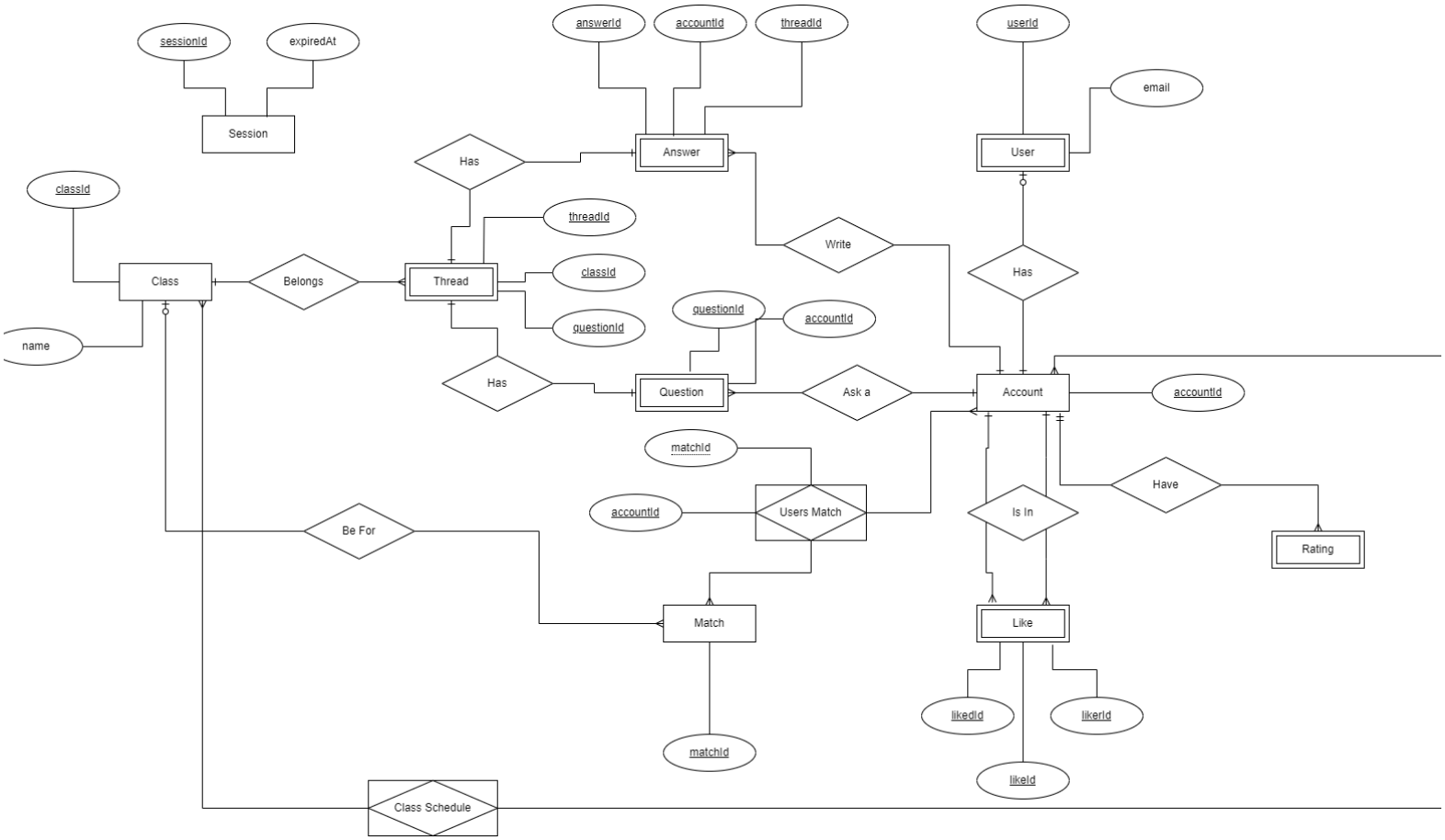
2.9. like (Weak)
2.9.1. id: PK, Numeric, Generated
2.9.2. likerId: FK, Numeric, Account ID
2.9.3. likedId, FK, Numeric, Account ID
2.9.4. timestamp: Date time, Generated

2.10. session (Strong)
2.10.1. id: PK, VarChar, Generated
2.10.2. expiredAt: Big Int
2.10.3. json: text
2.10.4. deletedAt: datetime

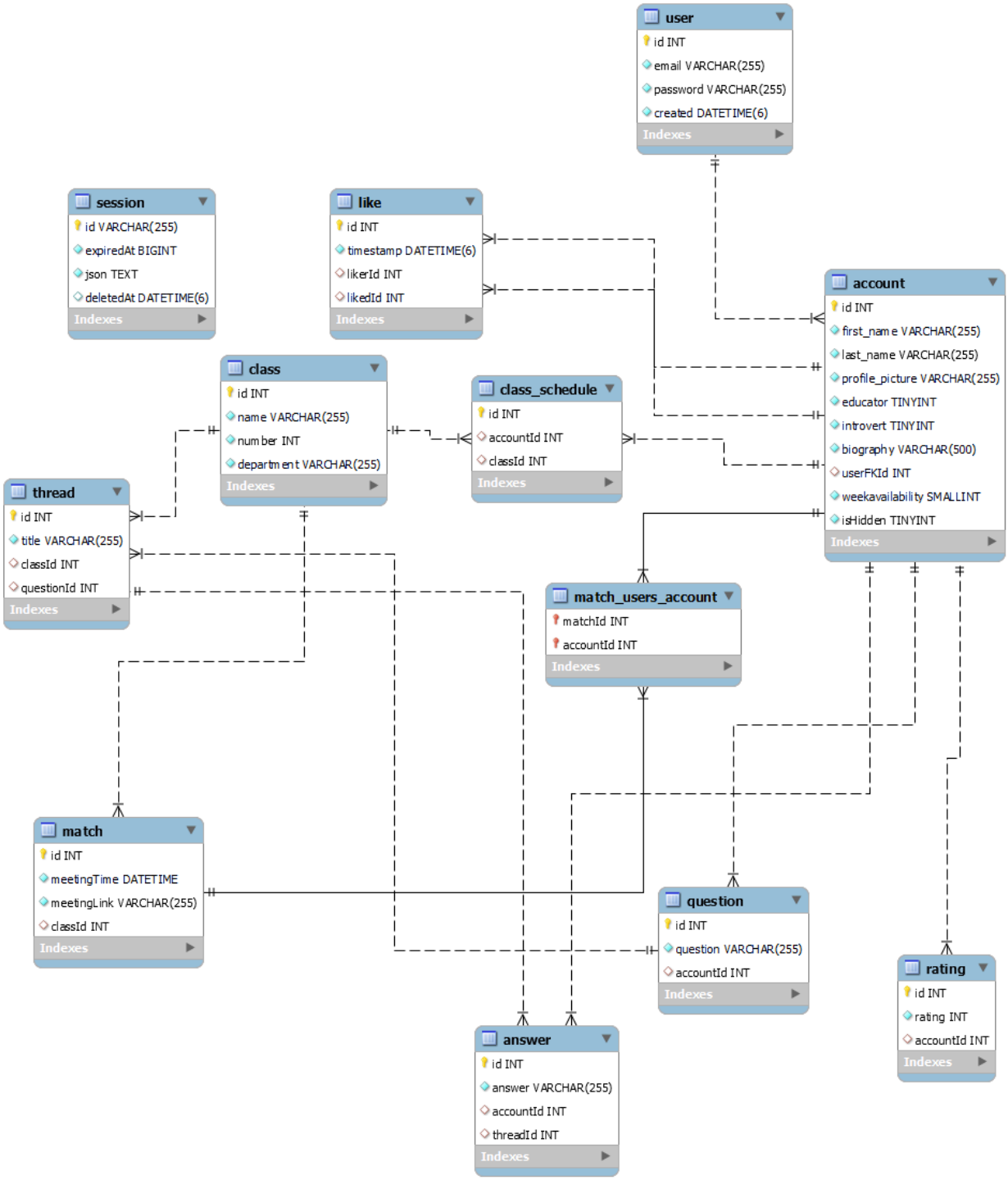
2.11. rating (weak)
2.11.1. id: PK, Numeric, Generated
2.11.2. rating: Numeric, int
2.11.3. accountId, int

2.12. classSchedule (weak)
2.12.1. Id: PK, Numeric, Generated
2.12.2. account: FK, Numeric Account ID
2.12.3. class: FK, Numeric, Class ID

Entity Relationship Diagram



Entity Establishment Relation Diagram (EER)



DBMS System

The DBMS system we chose is MySQL. We made this decision since it's the system we have the most experience with and there are existing integrations. We also integrated TypeORM into our application which is a TypeScript ORM library which allows us to define our database within our application code.

Media Storage

For our media storage we are using an AWS S3 bucket and storing the links to the images within our database. The integration is done using the AWS SDK which integrates into our express application.

Searching the Database

All the searching is done through the TypeORM library.

There are 2 mechanisms for searching, EntityManager, and Repository, our application utilizes the Repository feature.

```
const result = await myDataSource
  .getRepository(Account)
  .findOneBy({ id: userId as unknown as number });
```

The above example is using the Repository, which is meant for grabbing single tables/entities from the database. The one above is an example of getting an Account based on the User Id

We can also build more complex search queries by combining the Repository with the QueryBuilder

```
const matches = await myDataSource
  .getRepository(Match)
  .createQueryBuilder("match")
  .innerJoin("match.users", "account")
  .where("account.id = :userID", { userID: id })
  .getMany();
```

With the QueryBuilder we are able to join tables and build virtually any SQL query that we need.

To Optimize searching we can mark tables with relations as eager, which then automatically loads the tables marked in the relation which makes for faster and more efficient searching.

```
@ManyToMany((type) => Category, (category) => category.questions, {
    eager: true,
})
```

High Level API’s and Main Algorithms

Login API:

The login API lets the existing users access their accounts by verifying their email and passwords with the database. The API checks if the email and password fields are provided and will respond if there is anything missing. Should there be no user found it will return a not found response. The API will check the database for the user name then check if the password stored matches using bcrypt’s compare function adding a layer of protection. A session for the user is generated with userId.

Logout API:

The logout api handles user logout by ensuring that the session is properly destroyed and removed from the database.

Register API:

The Register API processes a new user to SwampStudy. It starts by validating the essential fields like first name, last name, and etc. If there were to be a missing field then the return will be a bad request response. The API will check for existing users in the database. When all the checks are successful it will hash the password, and create a new user entity with corresponding account entity.

Match API

The match API retrieves a given user's matches and returns the information for the match in JSON format. The API returns an array of a user’s matches or an empty array

if there are none. On error it returns a negative status code along with a response message.

Like API

The Like API sends a request to create a like, based on the current user and the profile the current user wishes to like. Requests are sent with the two profiles, the liker and the liked. Once the request is sent in the background the matching algorithm determines whether there is a match. On success returns a positive status code and response message. On failure returns a negative error code and error message.

Forum API:

The forum API facilitates the creation, retrieval, and management of questions, answers, and discussion threads within the forum. It supports operations such as posting new questions and answers to questions, fetching questions along with their corresponding answers, and organizing discussions by classes and departments. This ensures a structured and interactive environment for users to engage in topic specific discussions, leveraging data integrity and validation to maintain a robust platform.

Like and Match Algorithm

The Matching algorithm gets run every time a user likes another user. As soon as this action takes place, the algorithm checks if there is a reciprocal like in the system. If that exists, a match is formed and put into the system for the user to interact with. If not the like gets inserted and can be used to create a potential match if the other person ever likes this user.

Session Algorithm

The session management algorithm in SwampStudy encompasses session creation , validation, and destruction across both frontend and backend areas. This begins at user login, where existing users pass an email, and password to the backend. When the backend receives the request to login, it is routed to the user controller, where in the email is used to query for the corresponding users information stored in the db provided that the password passes a comparison check using bcrypts compare function against the stored hash. This user information is then used to set key session data used for validation at different junctions of our web application. In our backend, sensitive routes are protected using a session validation middleware, which ensures the session is valid by checking that the appropriate data is present in the session. This middleware is attached to the request and calls next() upon successful validation of the session indicating to continue to the next function or it'll return an error response indicating the session is invalid. At different points in the web application, the frontend will check that a session is authenticated to determine whether to grant or prevent a user from accessing certain site resources and or updating the appearance of the UI dynamically. This check for session validity is primarily handled by the authentication controller, which sends back a status upon checking that the session is populated with the correct data. This data can only be accessed from the db itself and is set at the login phase.

Search Algorithm

The Search algorithm is implemented using the ORM database connection. In order to search for Forum Posts using title keywords, we take the Keyword placed into the

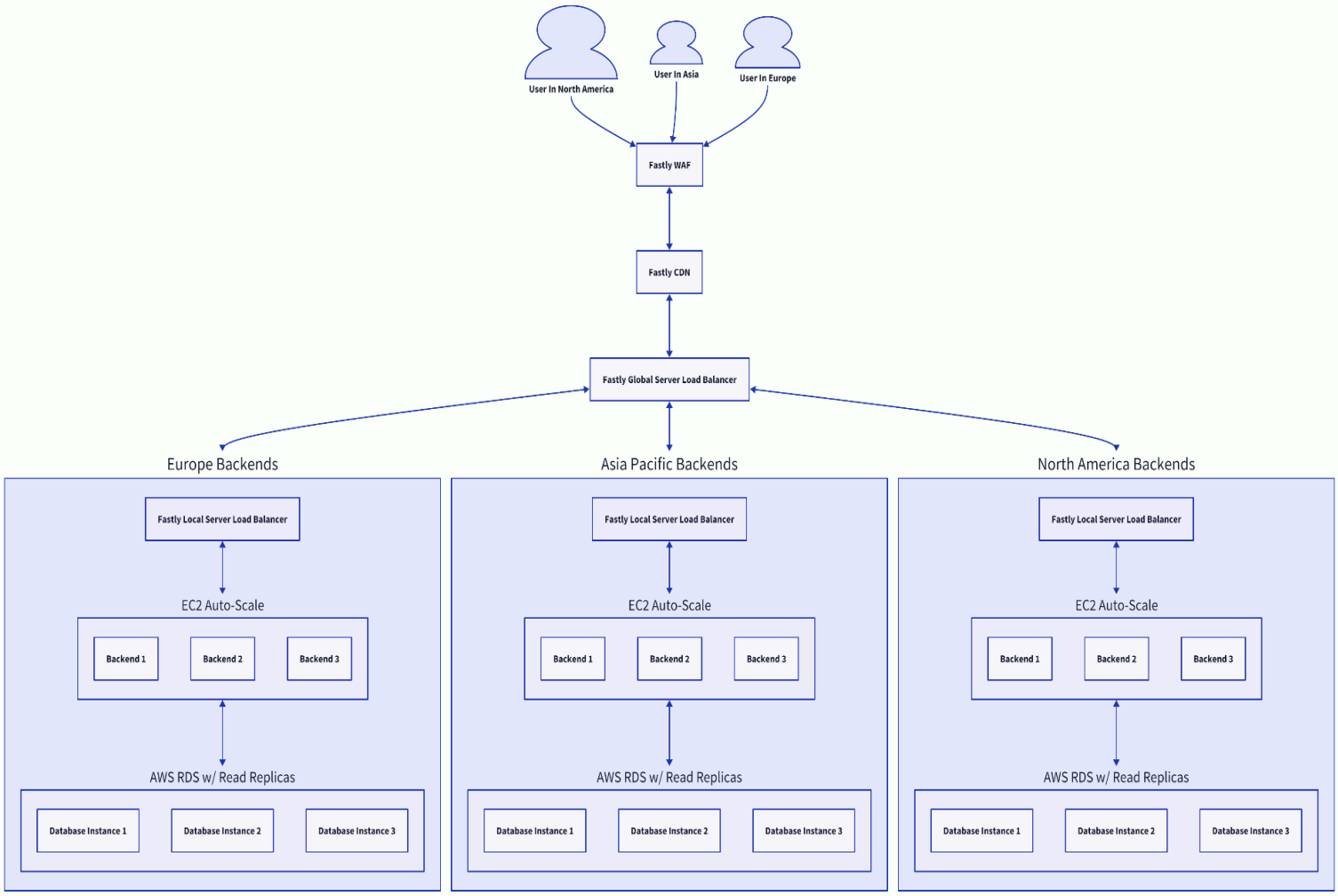
search box and then use a query with the ‘where’ keyword and regex wildcards to determine which posts fit the given criteria and then filter and display the results based on that keyword. We also scan the answers of each question as well in order to give a more comprehensive search. What gets returned are any threads with question/titles/answers that contain the requested keywords. This gives the customers a more comprehensive result given that it also takes into account the answers provided by other users.

System Design

UML Class Diagram:

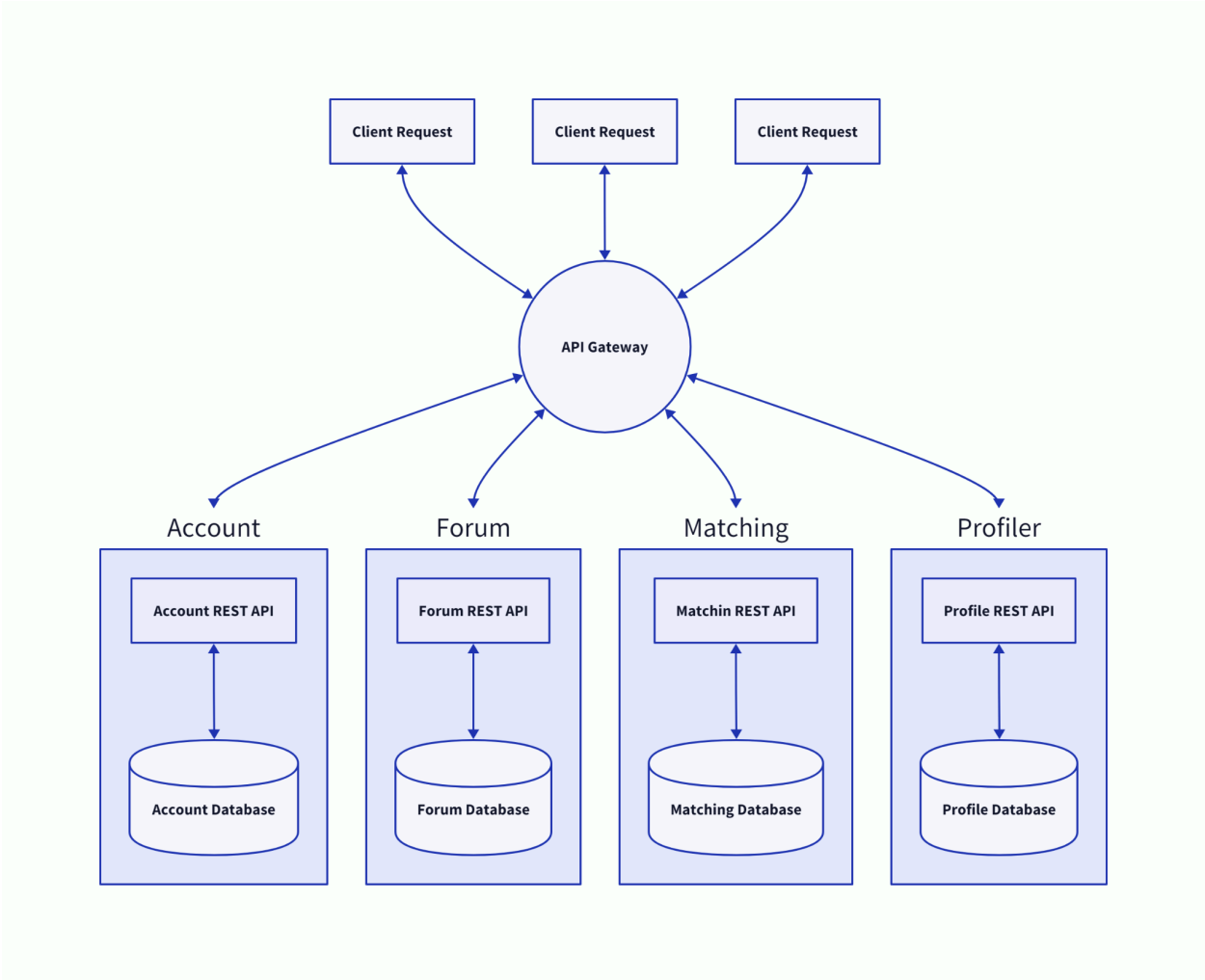
See the end of the Document for full size diagram

Scalability Diagram



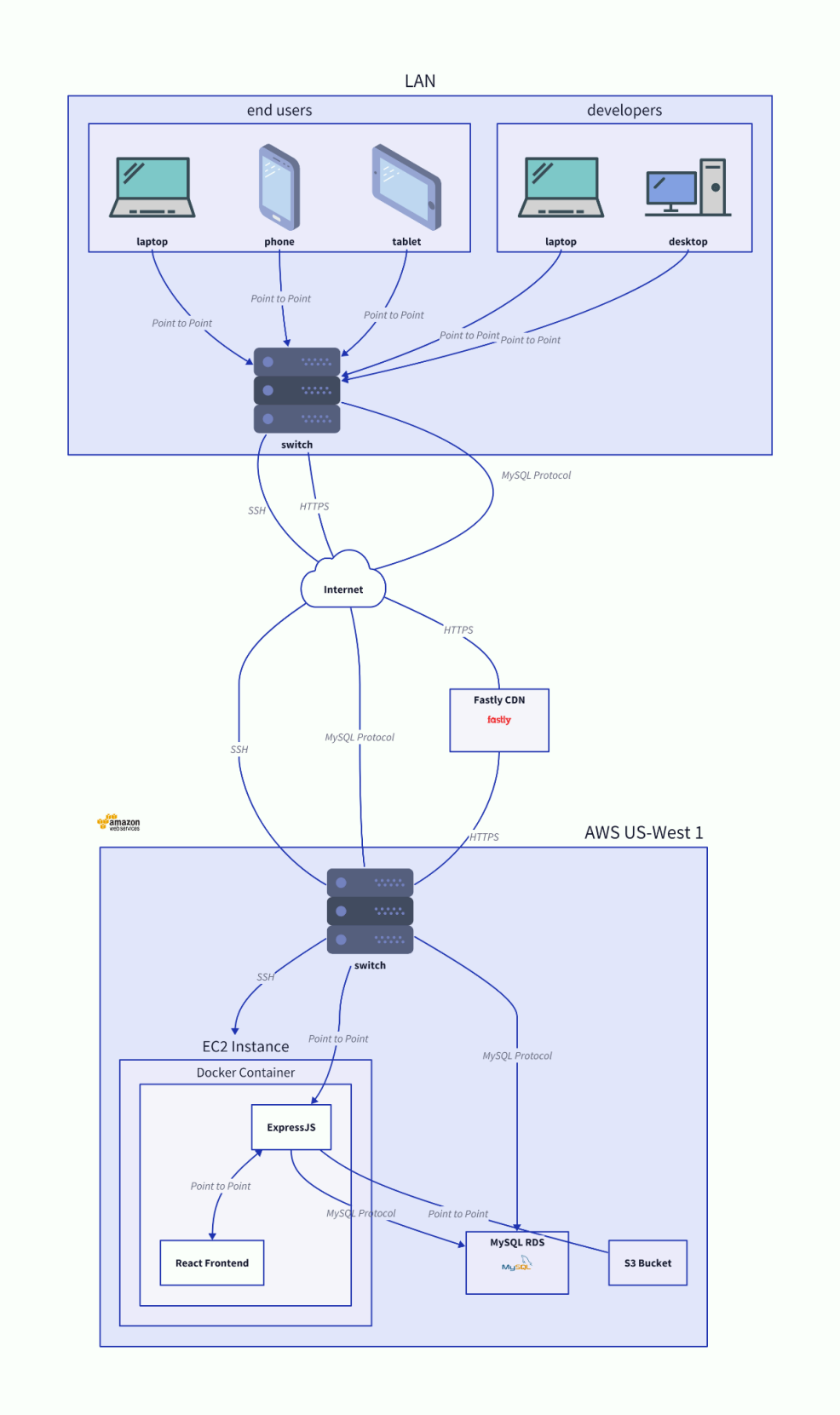
To let our service scale with ease, we first introduce a WAF at the top of the chain. This will allow us to filter malicious requests and bots trying to gain access to the system. We then run all the requests through our CDN which allows for request collapsing and to deliver cached content far quicker from the edge. After that requests hit the global load balancer which decides which server is the fastest and most responsive to handle that traffic. After being sent to a local region there is another load balancer which checks the availability of the local servers and determines the most appropriate server. The servers then have multiple Read Replicas of the Database they can access in order to make the reading quicker. All the servers/EC2 instances have a Auto-Scale setup which means if the traffic ever exceeds the current resources more will be created to handle with the increased demand

Microservices Diagram

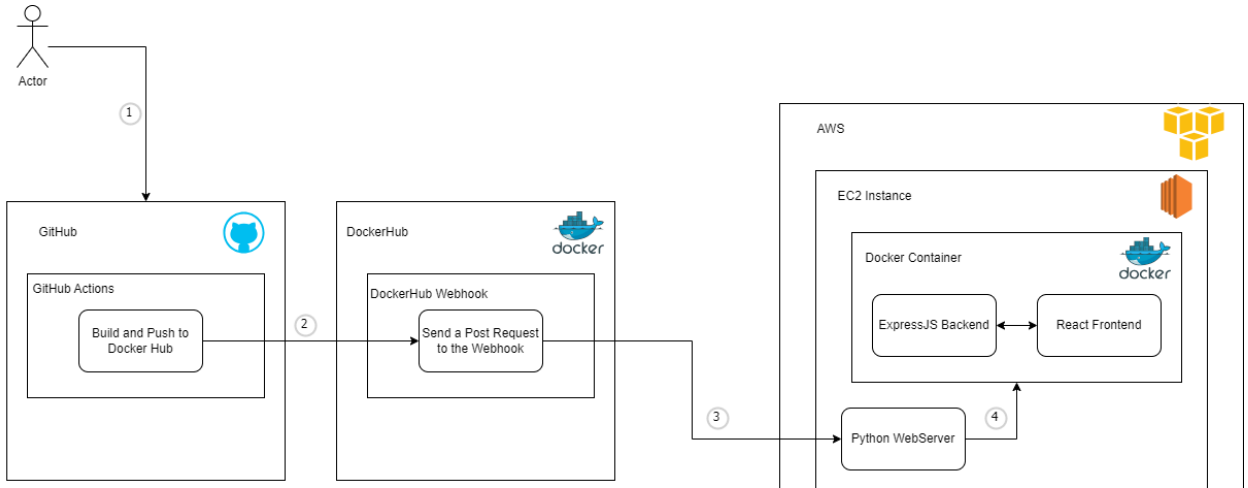


High Level Application Network and Deployment Design

Network Diagram



Deployment Diagram



1. User pushes to the repository and starts the Build and Push to Docker Hub Action

2. DockerHub notices a new push and initiates a post request sent to the webhook

3. Python WebServer receives the Post request notifying of a new version of the application

4. Python WebServer downloads the new Docker image, and then restarts the application with the new image

Key Risks

Skills Risks:

Even though we chose a Tech Stack we were all mostly comfortable with. Working across a Full Stack project with many integrations and interactions is still a challenge at times. We have been taking these skills risks head on by discussing frequently on Discord meetings in person and making videos to explain tricky pieces of code and integrations that might not be 100% intuitive.

Schedule Risks:

With 7 weeks remaining in the Semester we will be definitely pushing the limits with our full suite of requirements. I have full faith in our ability to get the application into a workable state. One of our risks also includes the passion of the team to add more features and ideas that pop up along the way. We have to be very selective in admitting new ideas and they have to be fully thought out to gain admission. All team members have also been very proactive to make meetings and complete their work which gives us the best chance of finishing this project in a timely manner.

Project Management

For Project Management we have been using Notion as our tool of choice. Using Notion has allowed us to create a new sub project for each Milestone. By doing this we are able to see at a glance what our progress is and where we need to make more progress. Every team meeting we go through our Notion Board/Tasks and evaluate deadlines and priorities, shifting as needed. Each task in our Notion has an assigned contributor and deadline. For our future Milestones we are going to continue using Notion, so far it has served us very well and allowed us to have a great overview with fine detail control. We also have internal documentation within Notion that everyone can contribute to which allows us to have a centralized location for all our notes. Along with Notion we use Discord for our team communication and quick exchanges. And Zoom as our meeting platform where we host our weekly team meetings, as well as other shorter brainstorming sessions.

Team Evaluation

Lennart (Team Lead) 10

- Project Planning
- Developed Backend API for Matching
- Developed Backend API for Likes
- Various Bug Fixes
- Network Diagram
- Deployment Diagram
- Scalability Diagram
- Microservice Diagram
- Attended all meetings
- Responsive on Discord

Rafael (Backend Lead) 10

- Session API
- Session Implementation
- Bug Fixes in Forum
- Assisted in Front-End Development
- The Connection between front and back end
- Session API Description
- Reviewed Diagrams for the Document
- Bug Fixes on the front end
- Implemented the Search bar and algorithm
- Attended all meetings
- Responsive on Discord

Edmund (Frontend Lead) 10

- Drew Mockups
- Drew Storyboards
- Login Component
- Logout Component
- Registration Form
- Terms and Conditions
- Attended all meetings
- Worked with UX Researcher
- Responsive on Discord

Julio (Docs-Editor) 10

- Drew Mockups
- Drew Storyboards
- Aided in organization of Document
- M1V2 Submission
- Nav Bar on Website
- Registration Form on Website
- Forum implementation on Website
- Meeting Summaries
- Attended all meeting
- Worked with UX Researcher
- Responsive on Discord
- Reserved Library rooms

Conrad (Github-Admin) 10

- Managed GitHub Conflicts
- UML Diagram for Document
- API Description for Forum
- API Implementation for Forum
- Forum Entities
- Reviewed and improved all Entities
- Attended all meeting
- Responsive on Discord