Twenty Questions

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Twenty Questions

We have created an online guessing game.

The goal of the game is to think of an object that the game may not easily guess.

Answer the questions based on what you're thinking of.

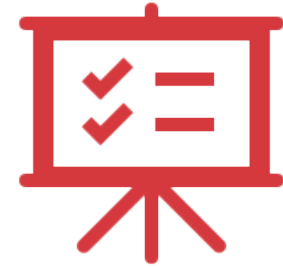After so many questions, the game will try to guess.

If the game is wrong, you submit an answer!

Iterative Model

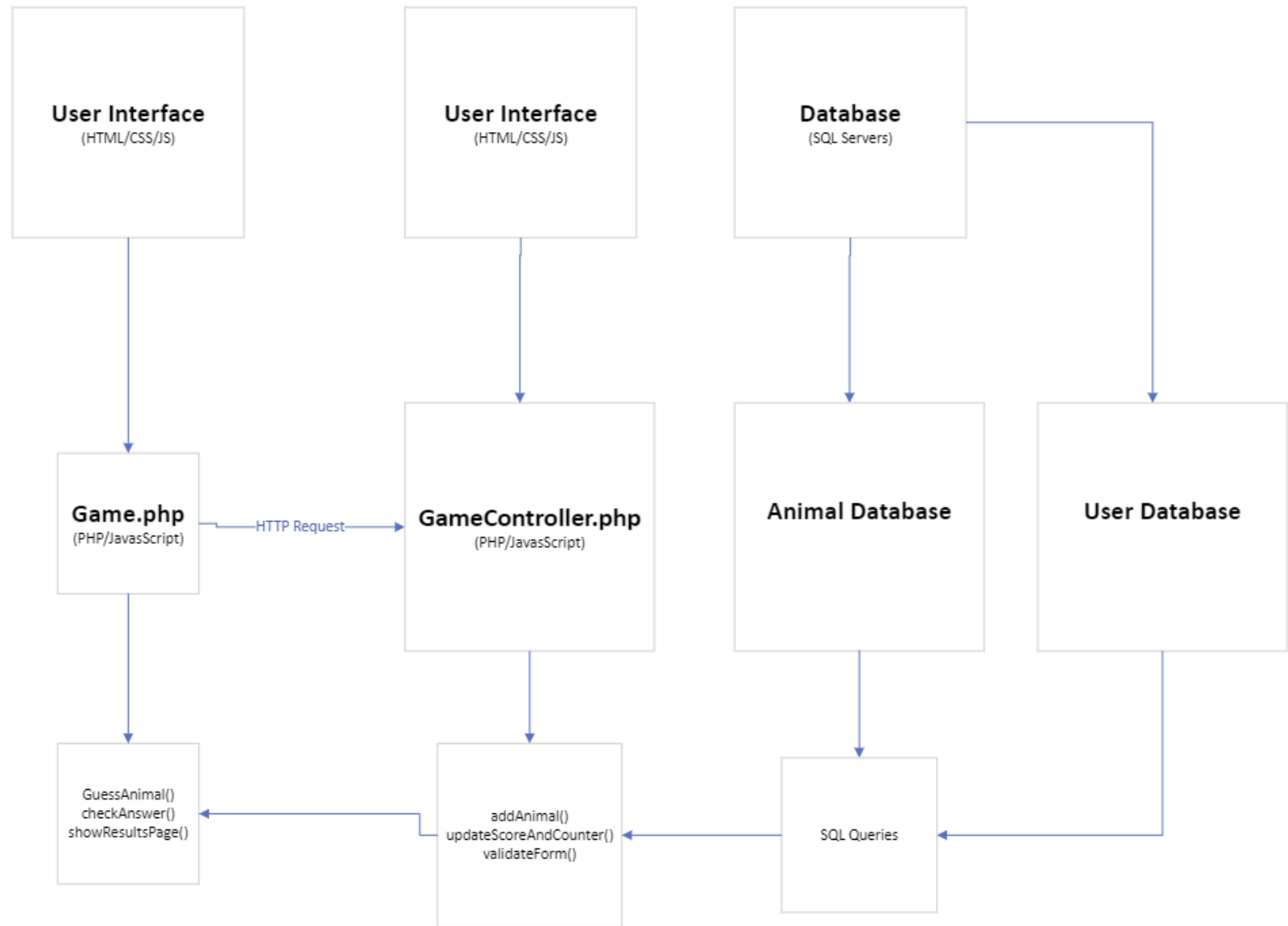Each week or two was a new set of requirements and testing.

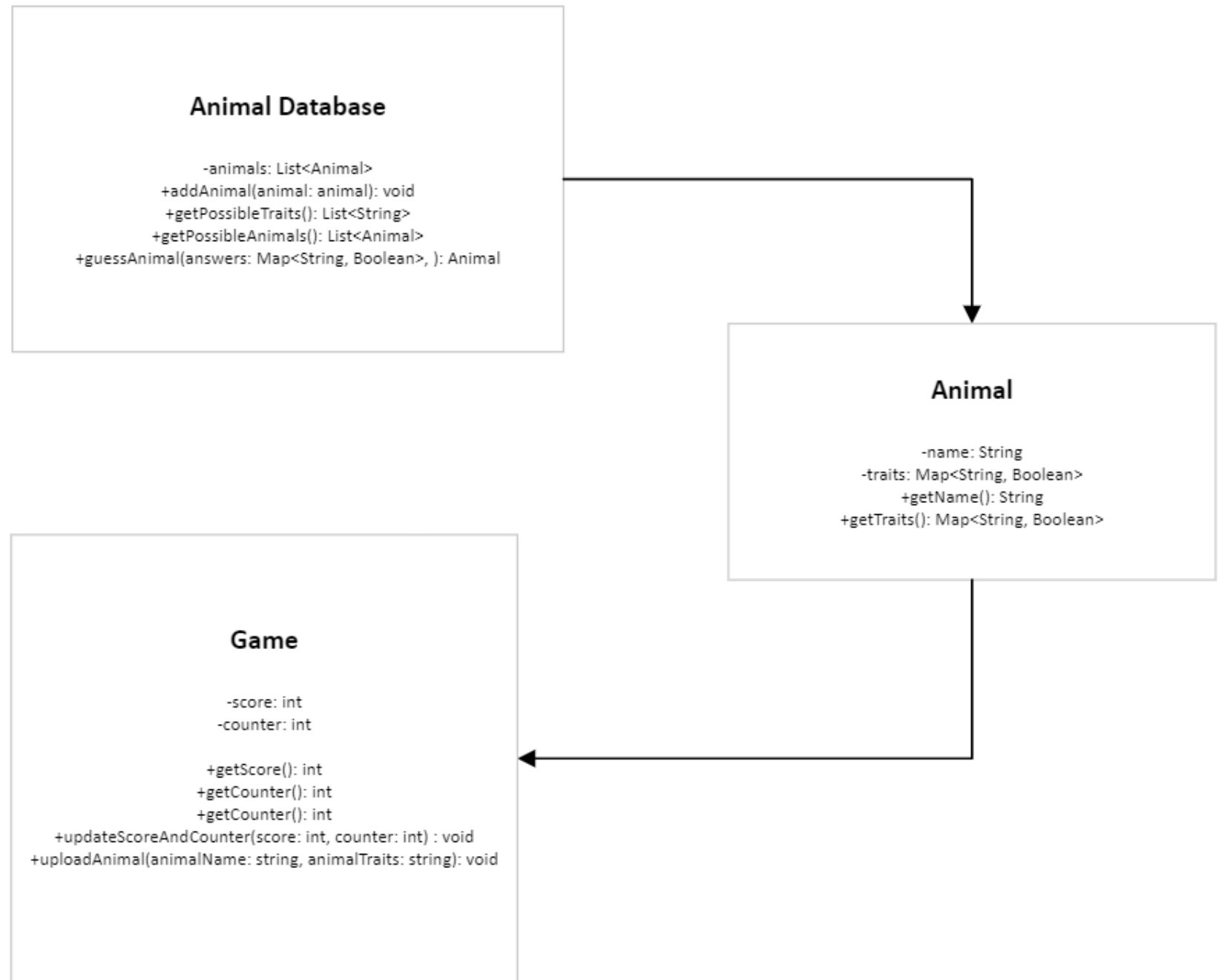Requirements and priorities change based on issues or progress made at the end of the week.

Implementation

1. We developed a basic layout for our HTML pages

2. Developed login and register PHP/SQL pages

3. Designed profile and category pages

4. Developed prototype of game

5. Fixed bugs within PHP pages

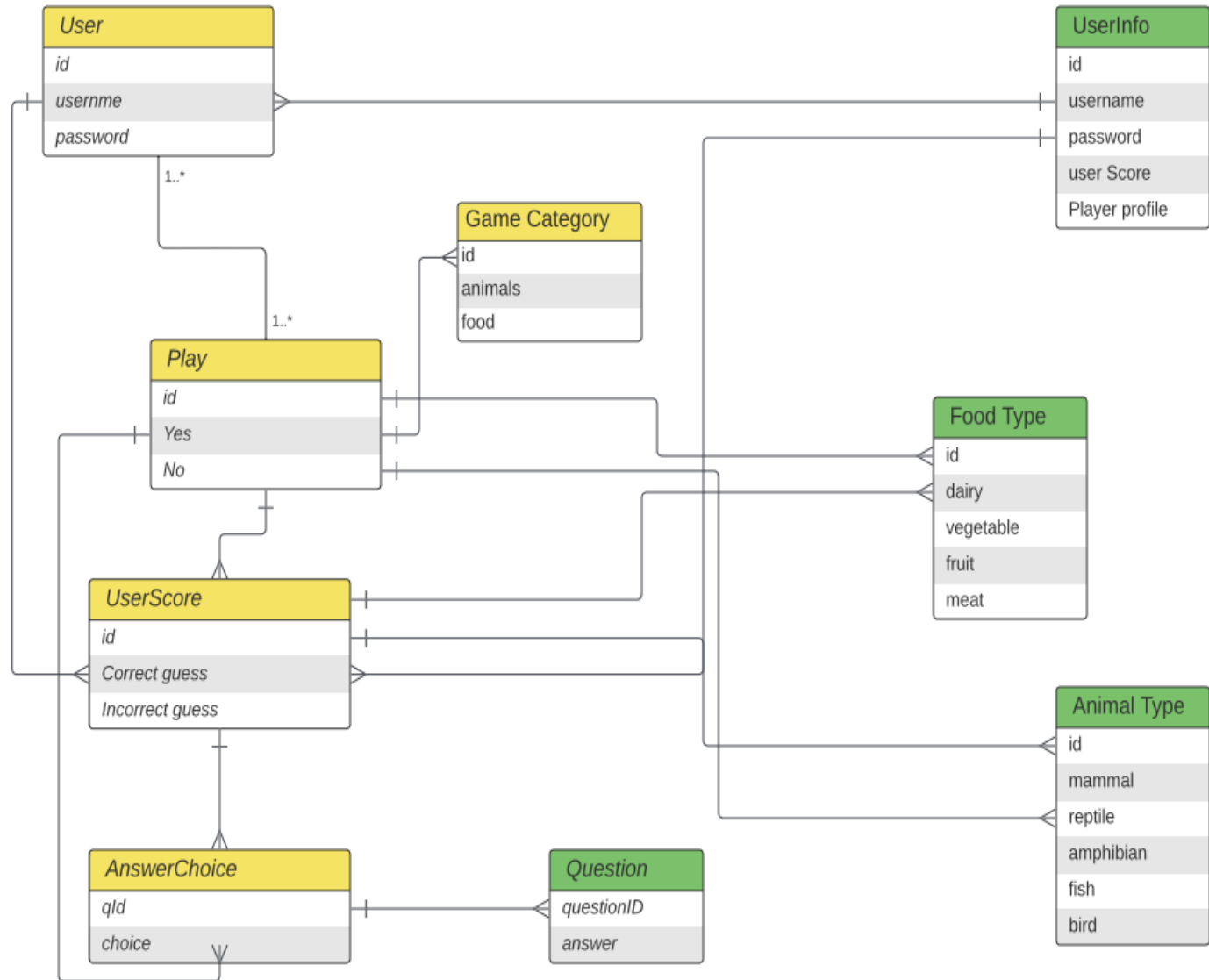6. Re-Developed game design

Architecture Design

Class Diagram

Animal Database

-animals: List<Animal>
+addAnimal(animal: animal): void
+getPossibleTraits(): List<String>
+getPossibleAnimals(): List<Animal>
+guessAnimal(answers: Map<String, Boolean>,): Animal

Animal

-name: String
-traits: Map<String, Boolean>
+getName(): String
+getTraits(): Map<String, Boolean>

Game

-score: int
-counter: int

+getScore(): int
+getCounter(): int
+getCounter(): int
+updateScoreAndCounter(score: int, counter: int) : void
+uploadAnimal(animalName: string, animalTraits: string): void
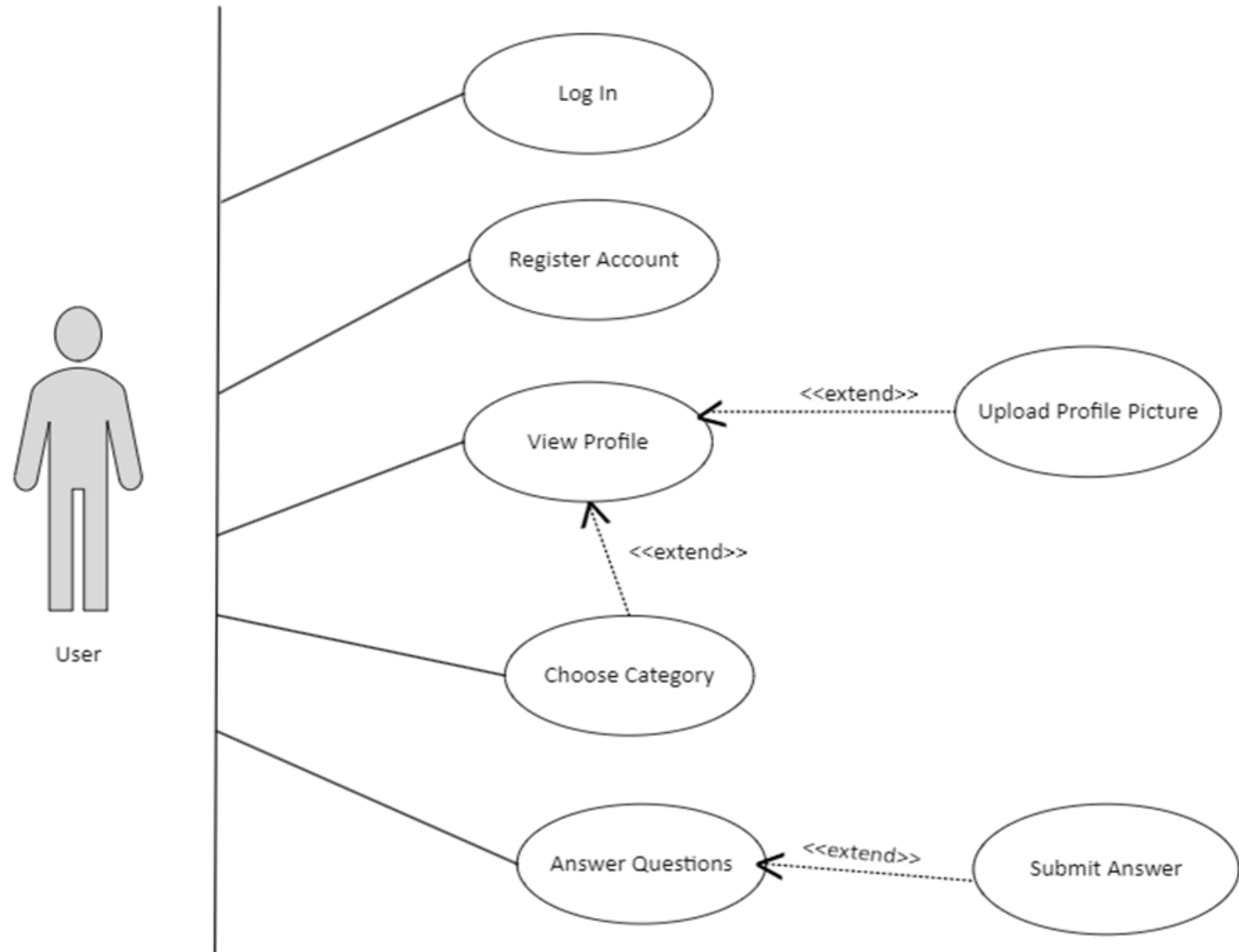
Use Case Diagram

Major Operations

Step 1: Create Account

Pre-condition: None

Post-condition: Account created

Input: First name, Last name, eMail, Username, Password

Output: Login Page

Process:

get username;

get password;

if (username && password != NULL)

insert username && password into members;

Major Operations

Step 2: Log In

Pre-condition: Account created

Post-condition: Logged in

Input: Username, Password

Output: Player Options

Process:

    check username;

    check password;

    if (Username == username && Password == password)

        Open playeroptions.html;

Major Operations

Step 3: Upload Profile Picture

Pre-condition: Logged In

Post-condition: New PFP

Input: image file upload

Output: display image

Process:

    get file_name;

    get username;

    if (Username == username)

       Insert into members (filename) file_name Where Username = username;

     set pfp = 'file_name';

Major Operations

Step 4: Submit Answer

Pre-condition: Animal Category

Post-condition: New animal in database

Input: Animal Name

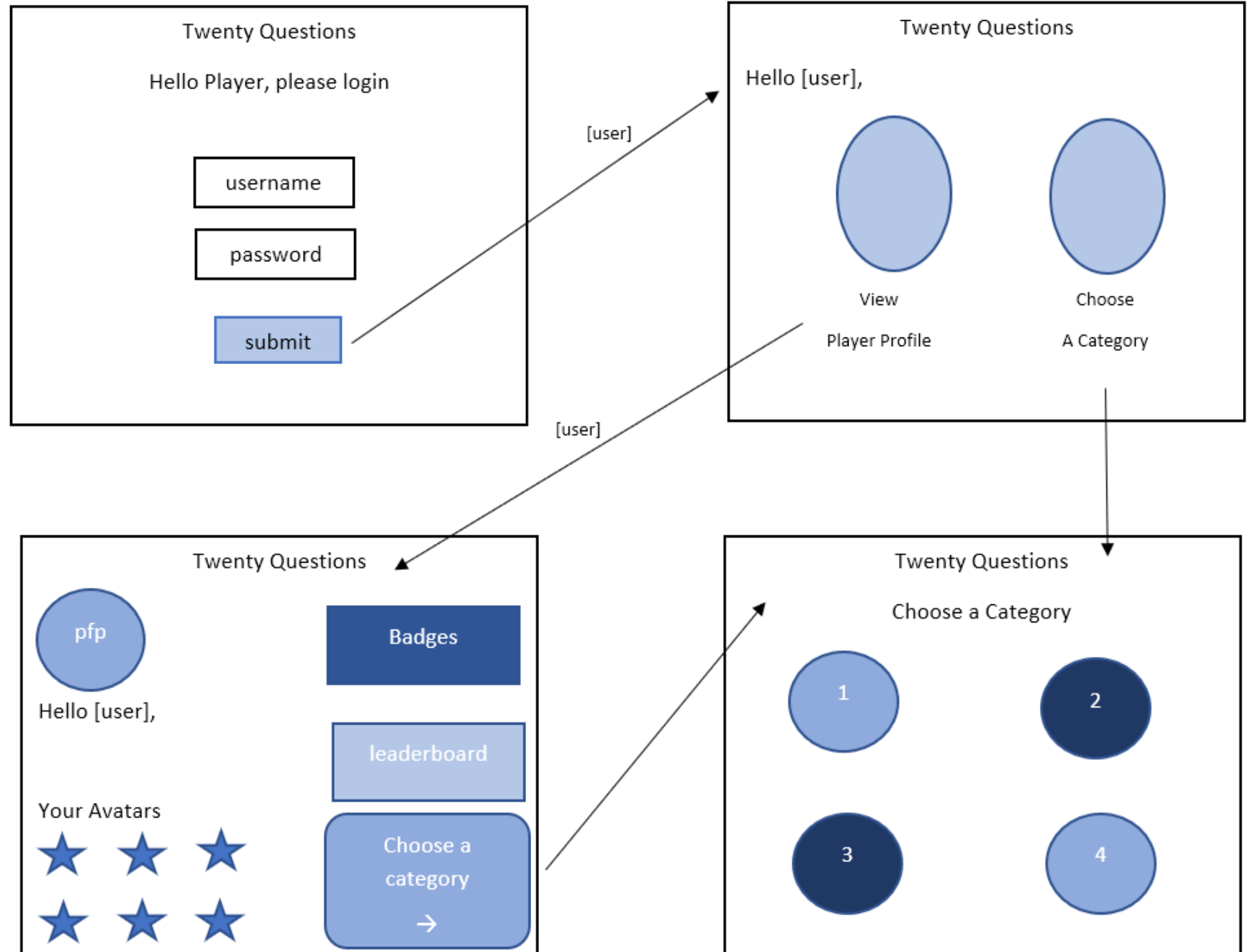Output: Submission Successful

Process:

    get animal_name;

    if (animal_name != Animal)
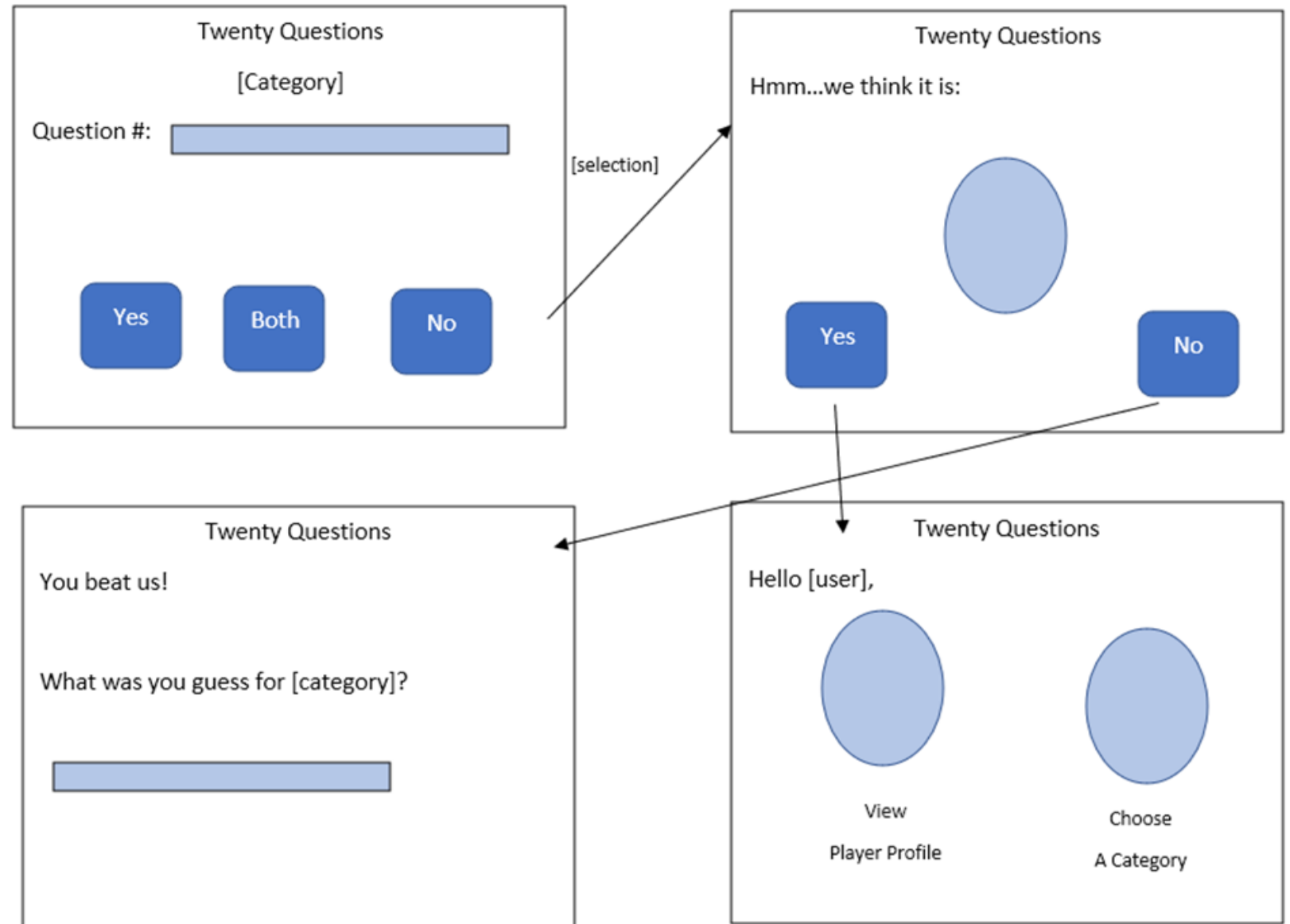
        Insert into animals(animal_name) Animal;

     Alert('Submission Successful');

Major Acceptance Test Cases

Test Case #	Test Description	Test Data	Expected Result	Status
1	Check User login with correct values.	Known: Username Password	Successful login and go to the next page.	Pass/Fail
2	Check User login with incorrect values.	Unknown: Username Password	Unsuccessful login, prompt to make new account.	Pass/Fail
3	Proper selection of player profile	Known: Player username and relevant data	Successful transfer to player profile page	Pass/Fail
4	Proper selection of game category	Known: Player username and relevant data	Successful transfer to game page	Pass/Fail
5	Check user input	Known: Player username and relevant data	Successful capture of user inputs	Pass/Fail
6	Check database update	Known: Proper user input	Successful addition to database category	Pass/Fail

Test Case 2: User Response

Test Case #	Test Description	Test Data	Expected Result	Status
1	User clicks on response button	Known: Username Password	Successful transition to next question	Pass/Fail
2	Check questions appear in correct order	Known: User response to previous question	Successful transition to next appropriate question	Pass/Fail
3	Player profile displays when user clicks option	Known: Username	Successful display of user profile page	Pass/Fail
4	Player category displays when user clicks option	Known: Username	Successful display of user category page	Pass/Fail
5	Player game displays when	Known: Category	Successful display of user	Pass/Fail

Test Case 1: User Login

Test Case	Description	Input	Expected Output	Pass/Fail
1	Login with correct username & password	User1 password	Login Success	Pass
2	Login with incorrect password	User1 user	Login Failure	Fail
3	Login with incorrect username	User password	Login Failure	Fail
4	Login with nonexistent credentials	UserTwo ThisIsMyPassword	Login Failure	Fail

Acceptance Test Results

TEST CASE #	TEST DESCRIPTION	TEST DATA	EXPECTED RESULT	STATUS
1	Check User login with correct values.	Known: Username Password	Successful login and go to the next page.	Pass
2	Check User login with incorrect values.	Unknown: Username Password	Unsuccessful login, prompt to make new account.	Fail
3	Proper selection of player profile	Known: Player username and relevant data	Successful transfer to player profile page	Pass
4	Proper selection of game category	Known: Player username and relevant data	Successful transfer to game page	Pass
5	Check user input	Known: Player username	Successful capture of user inputs	Pass

Future Enhancements

- We would like to implement more categories for users to unlock and a progress bar while the user plays the game.

- More improvements could also be made to:
  - Leaderboard
  - Achievements
  - Avatars