EECS 647 Final Project Report

Animal Adoption Website

Group 19

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Introduction

For this project, our mini-world is a pet adoption website. A user may either login to the website or create a new account. After logging into the website, the user can view the animals available for adoption, submit an adoption request, or list a new animal for adoption. We utilize HTML, PHP, and MySQL for the system architecture. Our database design consists of three tables: Users, Animals, and AdoptionRequest.

Requirement Analysis

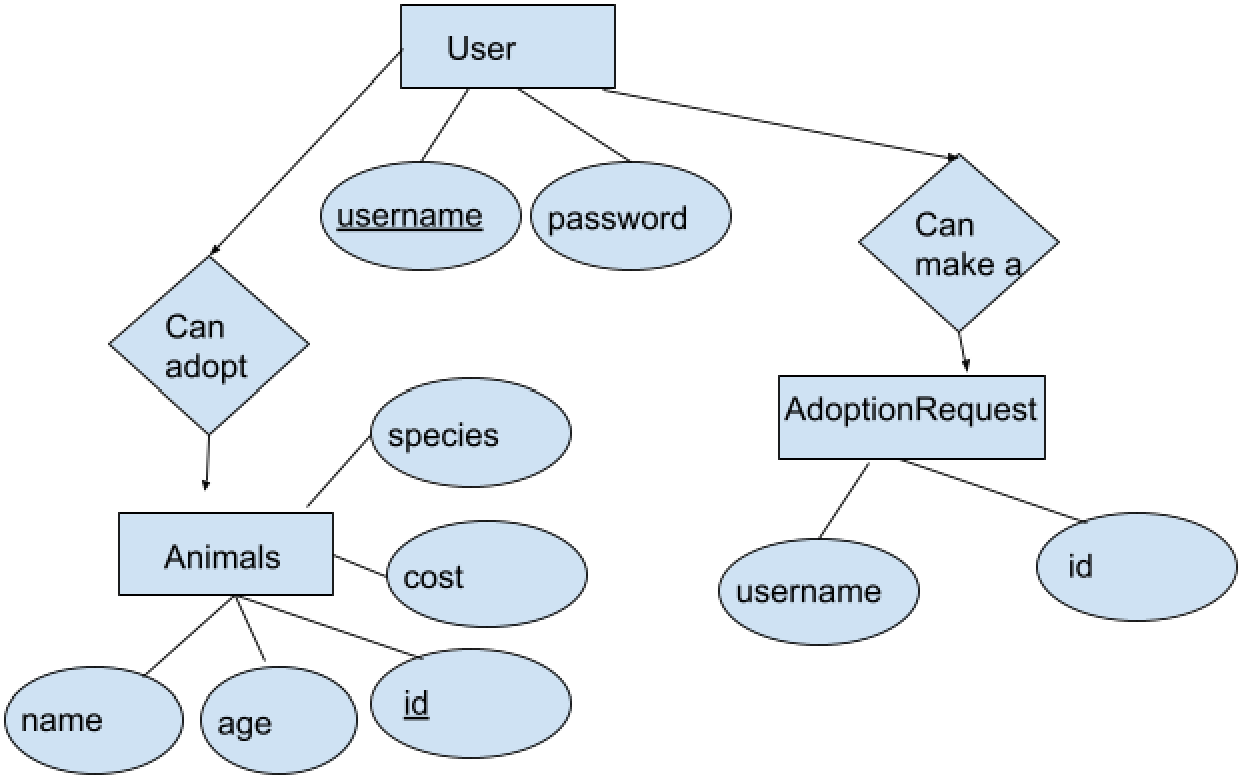
The database stores two types of information. The first is data about the user. This consists of the username and password. The other information that we collect is about the animals available for adoption. Examples of animal attributes include ID, name, age, species, and cost. The operations on our data include adding new users, specifying which animals are available for adoption, showing a user's pending adoption requests, and adding new animals to be adopted. For the project requirements, we use three tables, implement "session", include multiple update queries, and have two queries with a join.

Database Design

Conceptual Design: ER Diagram

There may only be one user with each username, and usernames must be unique. Each animal will have a unique ID number. Users will be able to request as many pets to adopt as he or she wishes because he or she may be denied from adopting a pet or may wish to adopt multiple pets at once.

Pictured below is our ER diagram.



Logical Design: Relational Schemas

Shown below is a conversion of the ER diagram to relational schemas. We did not need to normalize the relations.

User(username varchar(255) PRIMARY KEY, password varchar(255))

Animals(id int PRIMARY KEY, name varchar(255), cost int, age varchar(255))

AdoptionRequest(username varchar(255), id int)

User

username	password

Animals

id	name	cost	age

AdoptionRequest

username	id

Sample Records

Shown below are a few example records.

User Table

username	**password**
user1	password1
user2	password2
user3	password3

Animals Table

id	name	cost	age	species
1	Bug	0	14	cat
2	Spot	200	2	dog
50	geeorge	1	1	cat
3	Sugar	250	12	dog
4	Bubbles	50	2	frog

Adoption Request Table

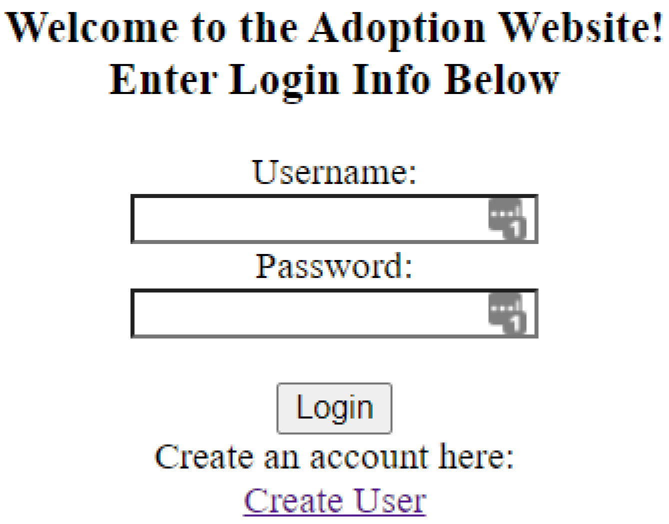
username	id
t	1
jordan	1
test	1
joeytest	1
demo	0
test	2
joeytest2	1
jordan	99

Systems Architecture

We decided to use HTML for the front end of the website and PHP and MySQL for the backend. The code is hosted on the EECS servers. We all had previous experience using these programming languages from past classes and wanted to keep the design straightforward to implement the new concepts learned in this class.

Website Workflow

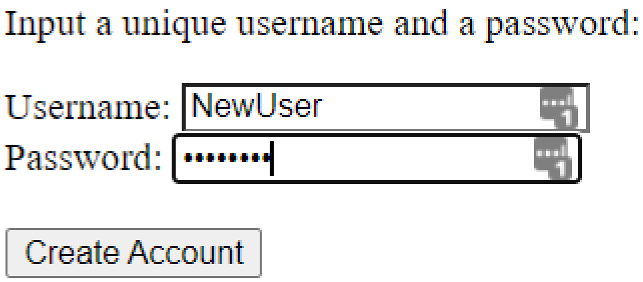
1. Navigate to https://people.eecs.ku.edu/~j226p732/647Project/login.php to login to the website. From the login page, the user can login with an existing account, starting a session, or create a new account.



Welcome to the Adoption Website!
Enter Login Info Below

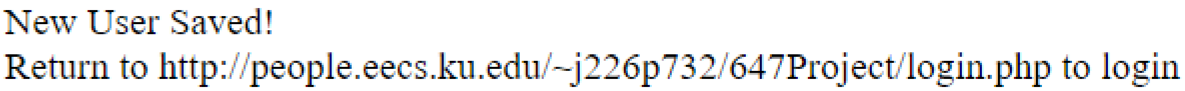
Create an account here:

2. After clicking “Create User”, the user can make a new account with a unique username and password. After successfully creating an account, the user will receive a confirmation message and can now login to the website.



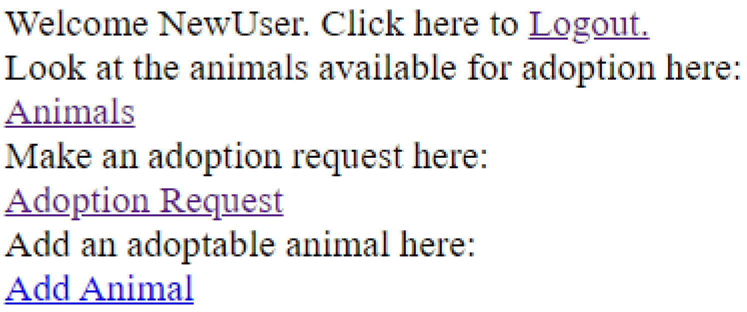
Input a unique username and a password:

Username: NewUser
Password: ••••••••



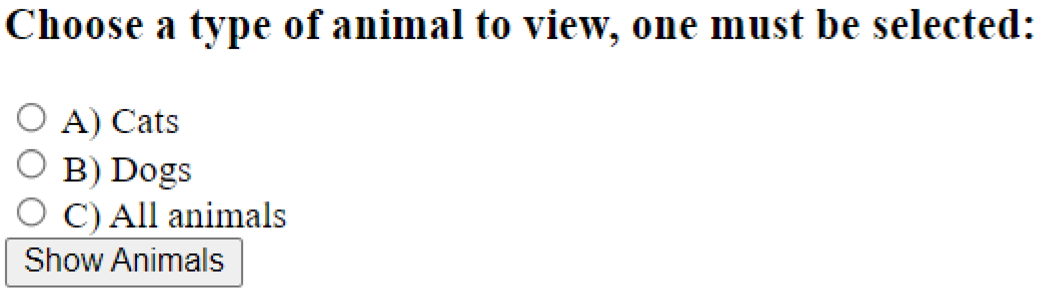
New User Saved!
Return to http://people.eecs.ku.edu/~j226p732/647Project/login.php to login

3. Once logged in, the user is taken to the website’s homepage. From this page, the user can view the animals available for adoption, submit an adoption request, or list an animal from adoption. The user can also log out of the website. If the user attempts to access the homepage without logging in, the page will not be available.



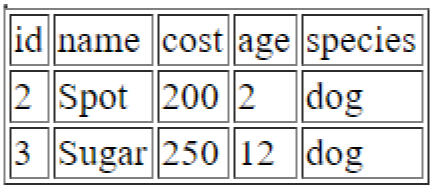
Welcome NewUser. Click here to Logout.
Look at the animals available for adoption here:
Animals
Make an adoption request here:
Adoption Request
Add an adoptable animal here:
Add Animal

4. After clicking the “Animals” link, the user can select to view the available cats, dogs, or all animals for adoption. All available dogs are shown as an example.



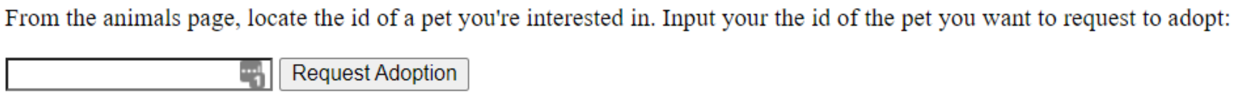
Choose a type of animal to view, one must be selected:

○ A) Cats
○ B) Dogs
○ C) All animals

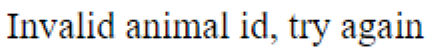


id	name	cost	age	species
2	Spot	200	2	dog
3	Sugar	250	12	dog

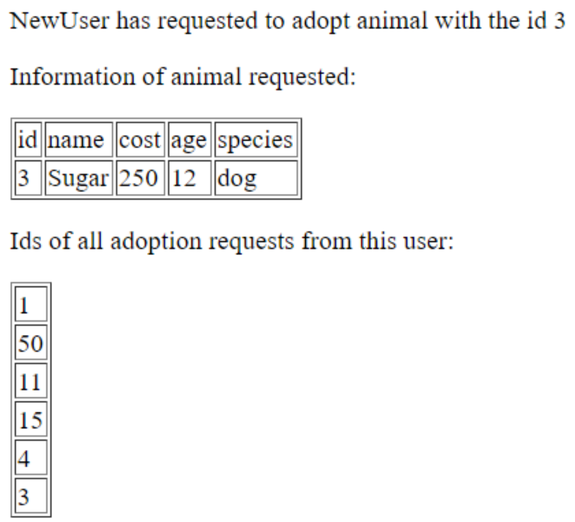
5. From the homepage, the user can click the “Adoption Request” link to submit a request. The user will input the animal ID he or she wishes to adopt. If the input is blank, the user is given an error message. If the user has already submitted a request for an animal, the user will be shown all pending adoption requests categorized by animal. If the user successfully submits an adoption request, he or she will be given a confirmation message.



From the animals page, locate the id of a pet you're interested in. Input your the id of the pet you want to request to adopt:



Invalid animal id, try again



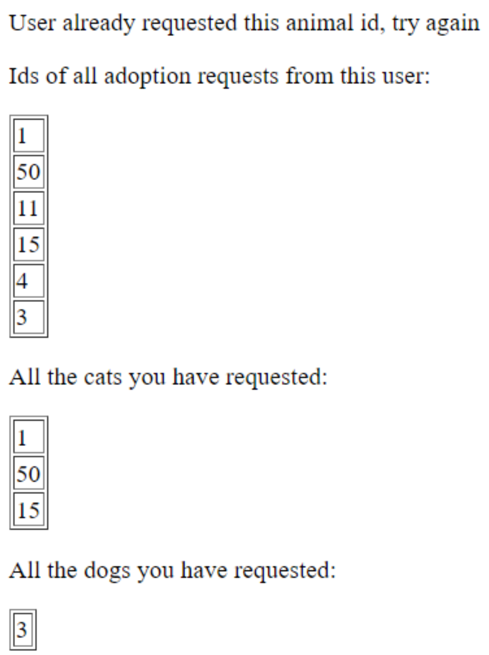
NewUser has requested to adopt animal with the id 3

Information of animal requested:

id	name	cost	age	species
3	Sugar	250	12	dog

Ids of all adoption requests from this user:

1
50
11
15
4
3



User already requested this animal id, try again

Ids of all adoption requests from this user:

1
50
11
15
4
3

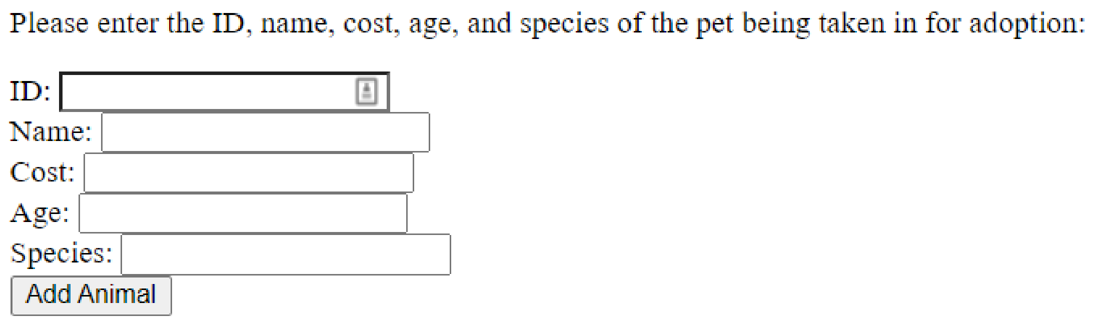
All the cats you have requested:

1
50
15

All the dogs you have requested:

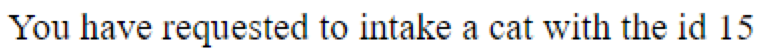
3

6. The user can click the “Add Animal” link to list an animal for adoption. The user will list all necessary information, and the new animal will be added to the database. After clicking the “Add Animal” button, the user is given a confirmation message.



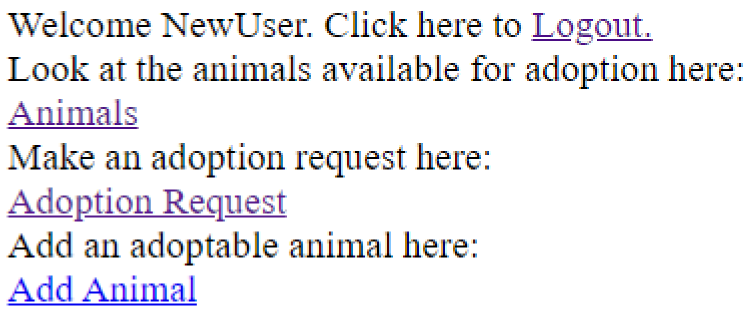
Please enter the ID, name, cost, age, and species of the pet being taken in for adoption:

ID:
Name:
Cost:
Age:
Species:



You have requested to intake a cat with the id 15

7. Lastly, the user can end the session by clicking the “Logout” link at the top of the page.



Welcome NewUser. Click here to Logout.
Look at the animals available for adoption here:
Animals
Make an adoption request here:
Adoption Request
Add an adoptable animal here:
Add Animal

Queries

Below is a table of all queries and a brief description of the output. We have over 5 different dynamic queries, 3 tables, 2 queries with join, three database updates, and “session” is used on login and session information is utilized in AdoptionReq.php where the username is retrieved without the user having to enter in their username.

Query	Description
`INSERT INTO Animals (id, name, cost, age, species) VALUES ('$id', '$name', '$cost', '$age', '$species')`	Insert a new animal into the Animals table. This one one of our queries with a database update.
`SELECT username, password FROM User WHERE username='$username' AND password='$password`	Validate username and password exist
`SELECT id FROM Animals WHERE id='$id`	IDs from Animals for adoption request
`SELECT username FROM AdoptionRequest WHERE id='$id' AND username='$username`	Username of the user who has submitted a request for a specific animal
`INSERT INTO AdoptionRequest (username, id) VALUES ('$username', '$id')`	Insert a new request into the AdoptionRequest table. This one one of our queries with a database update. The username is retrieved through session.

SELECT * FROM Animals WHERE id='$id	All animal data of a specific animal
SELECT distinct id FROM AdoptionRequest WHERE username='$username	IDs of all adoption requests from a user
SELECT distinct Animals.id FROM AdoptionRequest, Animals WHERE username='$username' AND species='cat' AND AdoptionRequest.id = Animals.id	IDs of cat adoption requests from a user. This is one of our queries using join.
SELECT distinct Animals.id FROM AdoptionRequest, Animals WHERE username='$username' AND species='dog' AND AdoptionRequest.id = Animals.id	IDs of dog adoption requests from a user. This is one of our queries using join.
SELECT * FROM Animals	All animal data
SELECT * FROM Animals WHERE species='dog'	All dog data
SELECT * FROM Animals WHERE species='cat'	All cat data
SELECT username FROM User WHERE username='$username'	Validate new username when creating account
INSERT INTO User (username, password) VALUES ('$username', '$password')	Insert a new account into the Users table. This one one of our queries with a database update.
SELECT * FROM User WHERE username='" . $_POST["username"] . "' and password = '". $_POST["password"]	Logs user into website

Conclusion

In summary, this project allowed us to gain necessary hands-on database experience. We were able to construct a website using HTML, PHP, and MySQL to implement the many lessons we learned from the class while also furthering our knowledge of web development.

Github Link

https://github.com/katherinelucas/647Project

Project Log/Division of Work

The table below briefly describes the work that each group member contributed to the project.

Group Member	**Description of Work**
Katie Lucas	Created the majority of the initial code base, worked on presentation video slides
Jordan Love	Implemented AddAnimal pages, added/fixed querying in code base, worked on presentation video slides
Joey Pennington	Implemented session, worked on presentation video slides, edited video, final report draft