HAWK HEAP

Team Name: Arthur's Team
Team Members: Arthur Levitsky

Class: CSIT 337: Internet Computing

Instructor: Dr. John Jenq

Date: Tuesday, April 28, 2020

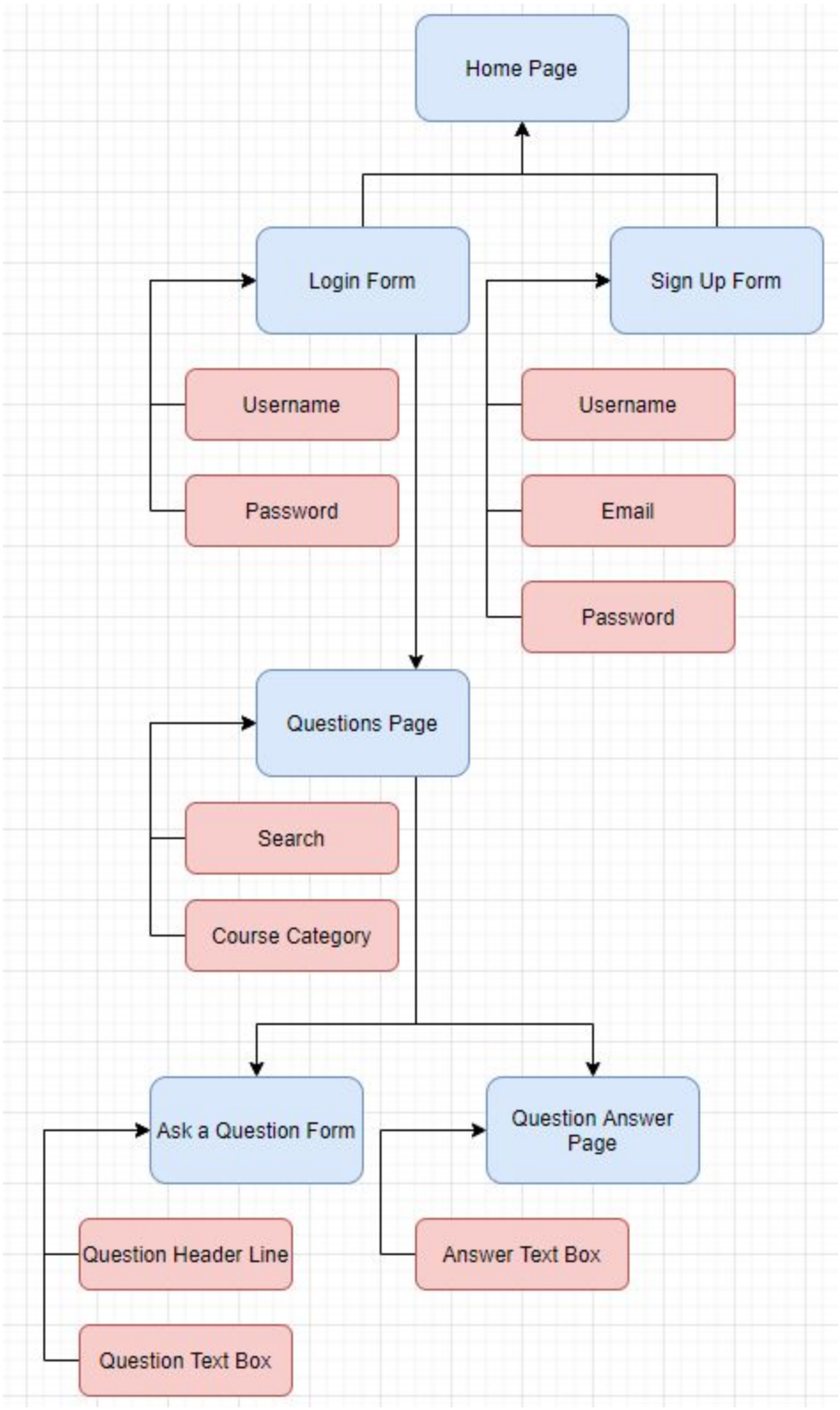
Contribution Sheet:

- This website was fully constructed by Arthur Levitsky. The following scripting languages utilized in this website are:
    - HTML: Arthur Levitsky - 100%
    - CSS: Arthur Levitsky - 100%
    - PHP: Arthur Levitsky - 100%
    - MYSQL: Arthur Levitsky - 100%
- The website was both designed and wired to a database by Arthur Levitsky. The design of this website was created from scratch using just pure HTML and CSS, no frameworks were utilized.
- PHP was used in some files with HTML even though their extension was .php. The purpose was to display dynamic objects such as the questions on the main page as well as display text if there is an error with logging in, signing up, or posting a question on the forms of the website.
- MYSQL was created with three tables known as *answers*, *hh_users*, and *questions*. *Hh_users* holds the user data, *answers* hold answer data to the questions, and *questions* holds question data.

Project Summary:

1. What is the name of the website?
    - Hawk Heap
2. What is the purpose and description of your website?
    - The purpose of this website is to provide users the ability to input questions and answers on computer science based on courses covered in Montclair State University.
    - The website will have sections developed for CSIT courses from MSU so that users can go to those specific sections based on the class they have.
    - The website also hosts a log out button for whenever the user wants to leave the main page of the website and back to the home page.
    - The user will have an option to submit a question that will get posted to the database and displayed on the website.
    - Users will be able to see that question and post an answer to that question.
    - Users will need to create an account to post questions and answers.
    - Users will need to create a unique username as well use a unique
3. Team Name? Team Members? Team Leader?
    - Team Name: Arthur's Team
    - Team Members: Arthur Levitsky
    - Team Leader: Arthur Levitsky
4. Where Does the Team Meet?
    - No team, just Arthur Levitsky

5. Draft Layout of Websites and pages (Site map):



Description and how many front pages? (View: These pages that interact with users), and their relationship if any, what technologies will be used (JavaScript, CSS, xml, or just pure HTML, etc.)

- I have a total of 6 front pages. All of these webpages will be using HTML and CSS. 4 pages will use some sort of form that will post to a database. 1 page would most definitely have to use PHP as it will need to display the questions to the user to view them.

Table of Contents:

Title Page……1
Contribution Page……2
Project Summary Page……..3-5
Table of Contents Page……6
Project Plan Page (UI/UXWireframes)..……7-14
User Manual Page……15-27
Program Source Files Page……...28-70
Database and Script File……...71-76
Website Screenshots……77-84
Website Video Demo……85

Project Plan Page (UI/UX Wireframes):

1. How many server side scripts (can you estimate)?
    - Initially, I have estimated to have roughly **10 server side** scripts for my website.
2. How many scripts do you actually have for your website as a final result? For each php script state the name, purpose, functionality, and which page(s) it related to. If it connects to a database? If it does, state the details of the connection.
    - In total as a final result, I have **11 server side** scripts.
    - **signup_verification.php** → When a user implements username, email, and password, the php script obtains those values from the user and communicates with the database to check whether the username or email already exists. If it does, then the data from the user will not be posted into the *hh_users* database.
        - **signup_page.php** → This page displays the html form for which the signup_verification.php will include. The reason why this page utilizes php as well is because it displays an error message to the user if the contents that he is trying to post has already been used.
        - **signup_success.php** → If signup_verification.php says that the users has implemented a valid username and email, then the user will be prompted with this page that congratulates him on creating an account and also displays his account name.
    - **login_verification.php** → When a user implements a username and password, the php script obtains those values from the user and communicates with the database to check whether the username and password are correct. If what the user has posted isn't correct, then he will not be given entry to the main_search.php
        - **login_page.php** → This page displays the html form for which the login_verification.php will include. The reason why this page utilizes php as well is because it displays an error message if the username or password is incorrect.
    - **main_search.php** → This page displays both the html of the page with the search bar and select course option. It also displays two buttons for creating a question and logging out of the page and returning to the home_page.html. This page also utilizes php by obtaining the questions displayed in a table format from the *questions* table in the database. The user can click on the question to transfer to an answer_page.php
    - **question_verification.php** → When a user implements the course number, question, and the question details, the php script obtains those values from the user and communicates with the database to check whether a question like that

already exists. If the question is EXACTLY the same as the question already implemented in the database, then this script will not pass the data from the user to the database. This saves the database from filling up with the same questions and promotes the use of reading through the questions already posted.

        - **question_page.php** → This page displays the html form for which the question_verification.php will include. The reason why this page utilizes php as well is because it displays an error message if the question already exists in the database.
        - **question_success.php** → If question_verification.php says that the users has implemented a valid question, then the user will be prompted with this page that congratulates him on successfully creating the question that he had posted.
    - **answer_page.php** → When the user clicks on a question from the main_search.php, he will be prompted with a small html form where people could reply to the question. The question will be displayed on top as the title and below that will be the question details. You can return and come back to see that the answers still exist with the question that is displayed.
    - **database_error_page.php** → This is only displayed if the database server is not functioning with the apache web server. It displays an error message.

HAWK HEAP

MONTCLAIR STATE UNIVERSITY

WELCOME TO HAWK HEAP

THIS IS A WEBSITE DESIGNED FOR STUDENTS THAT ARE CSIT OR IT MAJOR! THIS WEBSITE STORES QUESTIONS AND ANSWERS FROM STUDENTS REGARDING SPECIFIC CSIT COURSES AND IT COURSES!

LOGIN SIGN UP

HAWK HEAP
MONTCLAIR
STATE
UNIVERSITY

SIGN UP
USERNAME:
EMAIL:
PASSWORD:

HAWK HEAP
MONTCLAIR
STATE
UNIVERSITY

LOGIN
USERNAME:
PASSWORD:

SEARCH:

CSIT Courses

- CSIT 140
- CSIT 111
- CSIT 112
- CSIT 212
- CSIT 230
- CSIT 315
- CSIT 379
- CSIT 415
- CSIT 313
- CSIT 340
- CSIT 345
- CSIT 355
- CSIT 270

CSIT 340: What does DNS stand for?

CSIT 337: How do you set up mySQL?

ASK A QUESTION

COURSE SECTION: CSIT 340: Computer Networks ▼

WHAT IS YOUR QUESTION?: What does DNS stand for?

QUESTION DETAILS:

Hi There! I'm a little confused on what DNS stands for? could somebody help? Your help is much appreciated!

HAWK HEAP

MONTCLAIR STATE UNIVERSITY

CSIT 340: What does DNS stand for?

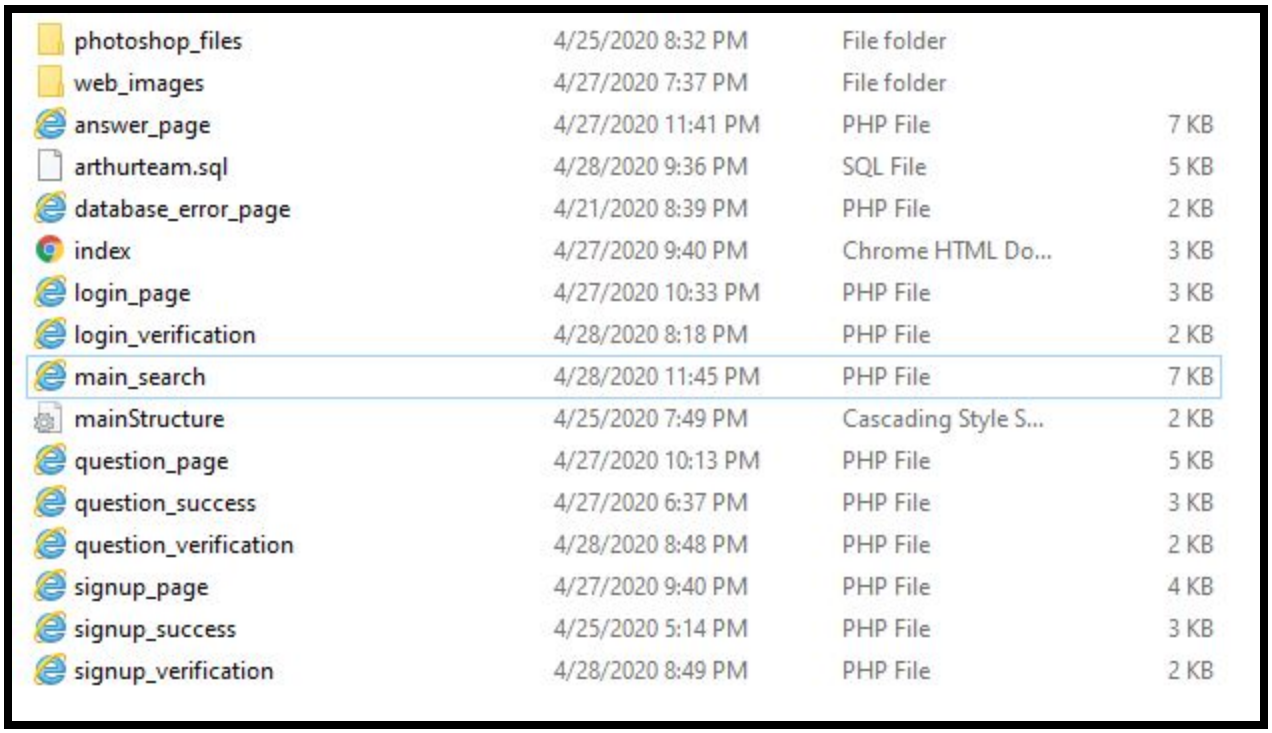
Hi There! I'm a little confused on what DNS stands for? could somebody help? Your help is much appreciated!

ANSWER TO THE QUESTION:

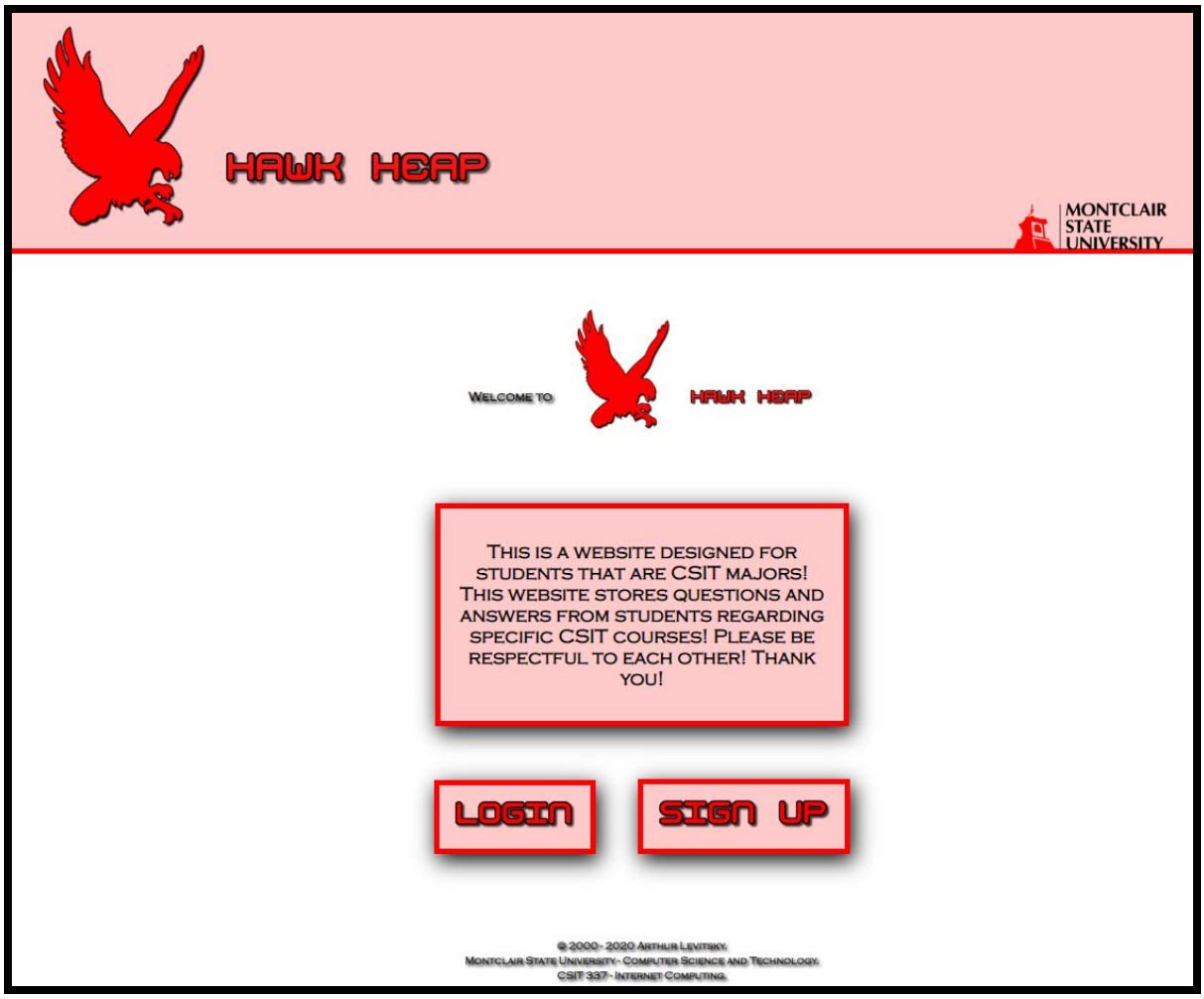
Hi There! DNS stands for Domain Name System! It is used to convert domains numeric ip addresses! For example, when typing out a url, DNS servers locate the ip address associated with that domain

User Manual:

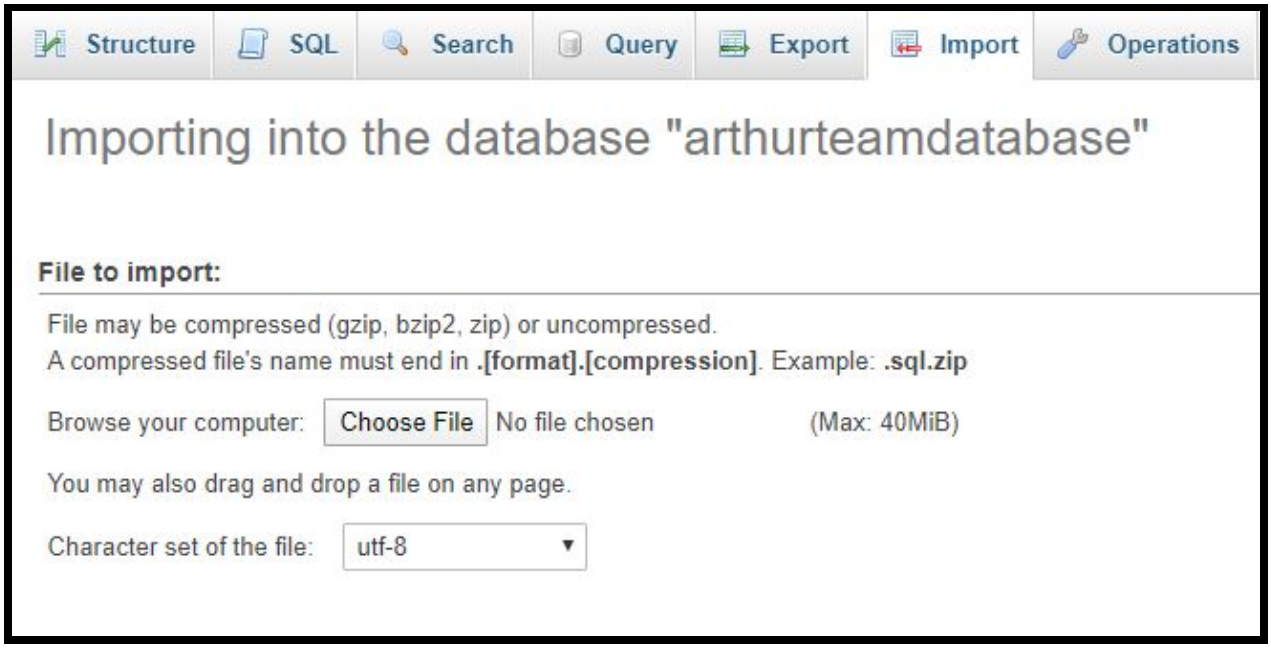
1. When you open the **arthurteamProject** folder, you will see various files within it. **Do not worry** about the photoshop_files folder or the web_images folder. Make sure to have the Apache server on and the MySQL server on as well through XAMPP. Dump this folder into the htdocs folder in XAMPP.



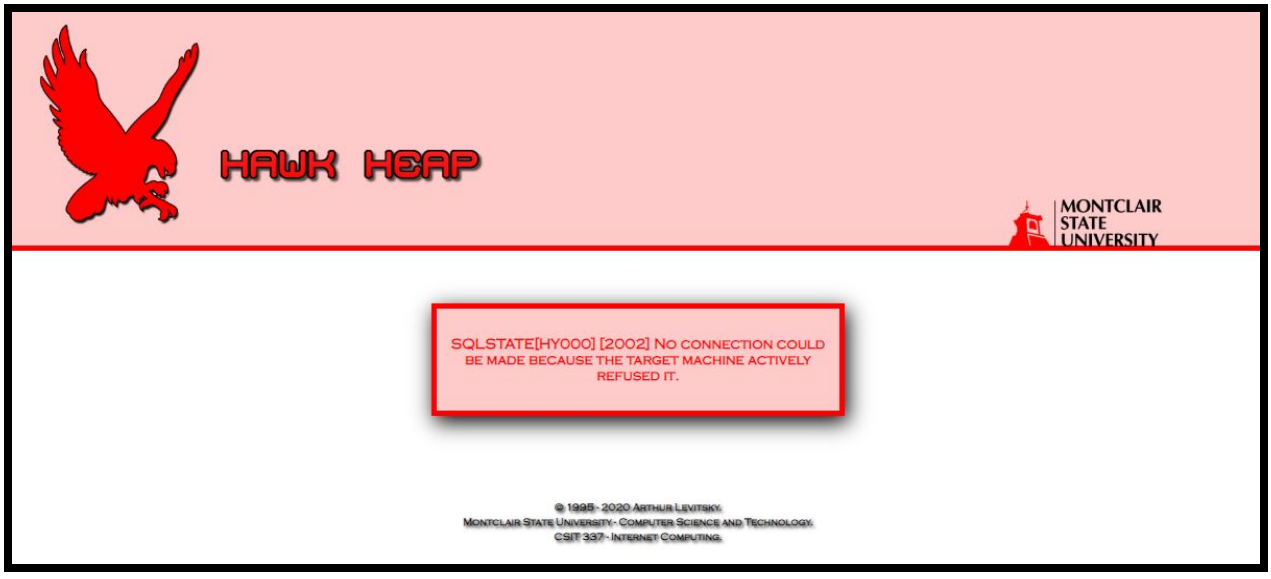
2. Once that is done, type in **localhost/arthurteamProject** in the browser you are using and it should automatically show you the index.html page. This page is the home page of the website. If it doesn't, please click on **index.html**.



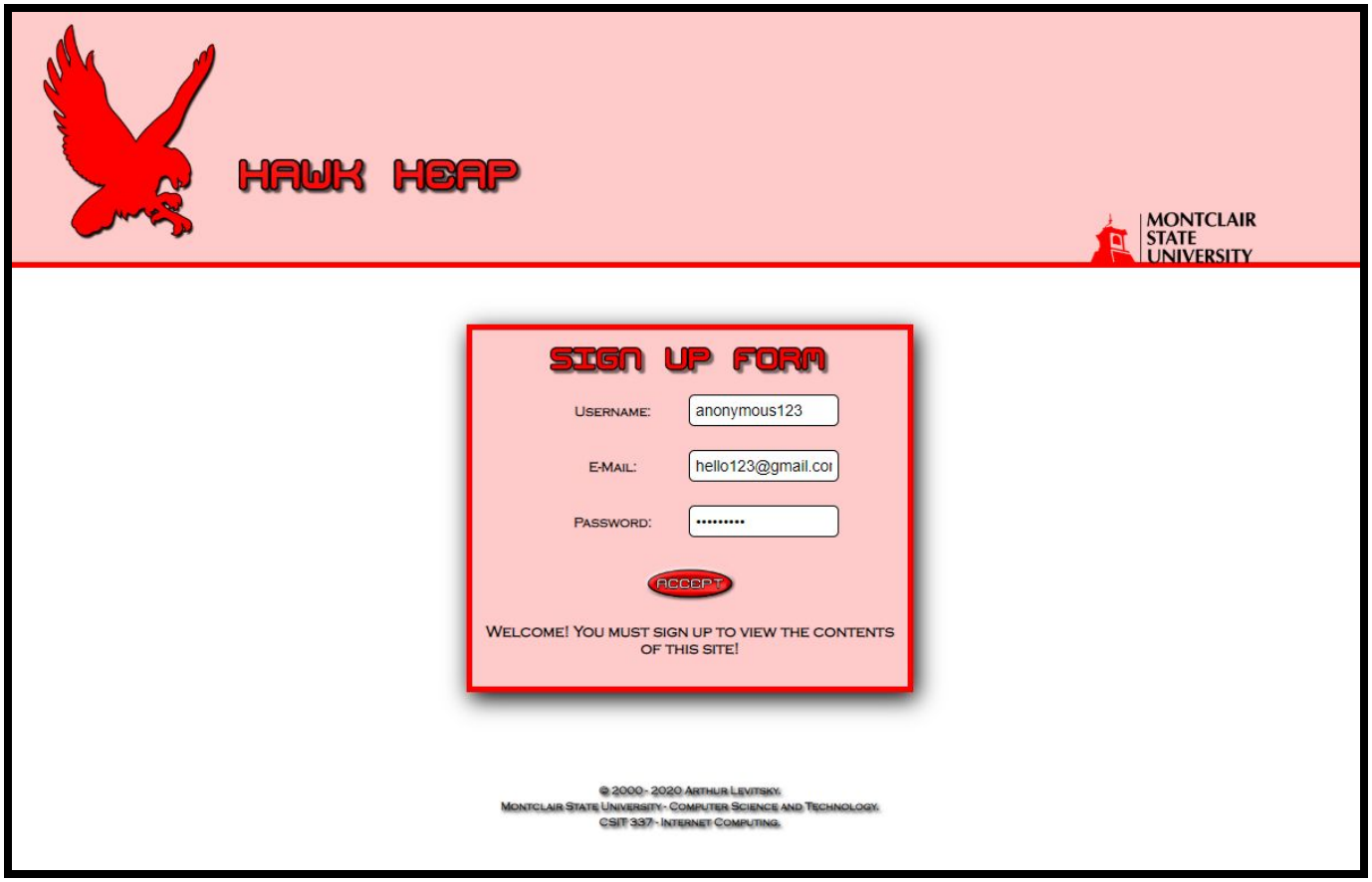
3. Make sure that you have imported the **arthurteam.sql** file into phpMyAdmin. In order to do this you would need to login through **localhost/phpmyadmin** and create a database called **arthurteamdatabase**. Next, go to that database you have created, and click on **import**. Once you have done that open the file from the **arthurteamProject** folder called **arthurteam.sql** and hit **go**. All the tables and privileges will be created in the arthurteamdatabase in your computer.



4. Once you have done that as well, you may now utilize the sign up button and the login button. If the database does not link, then you will receive an error from this php file.



5. Click the **sign up button**, in this page you will be required to implement a username, email and password.

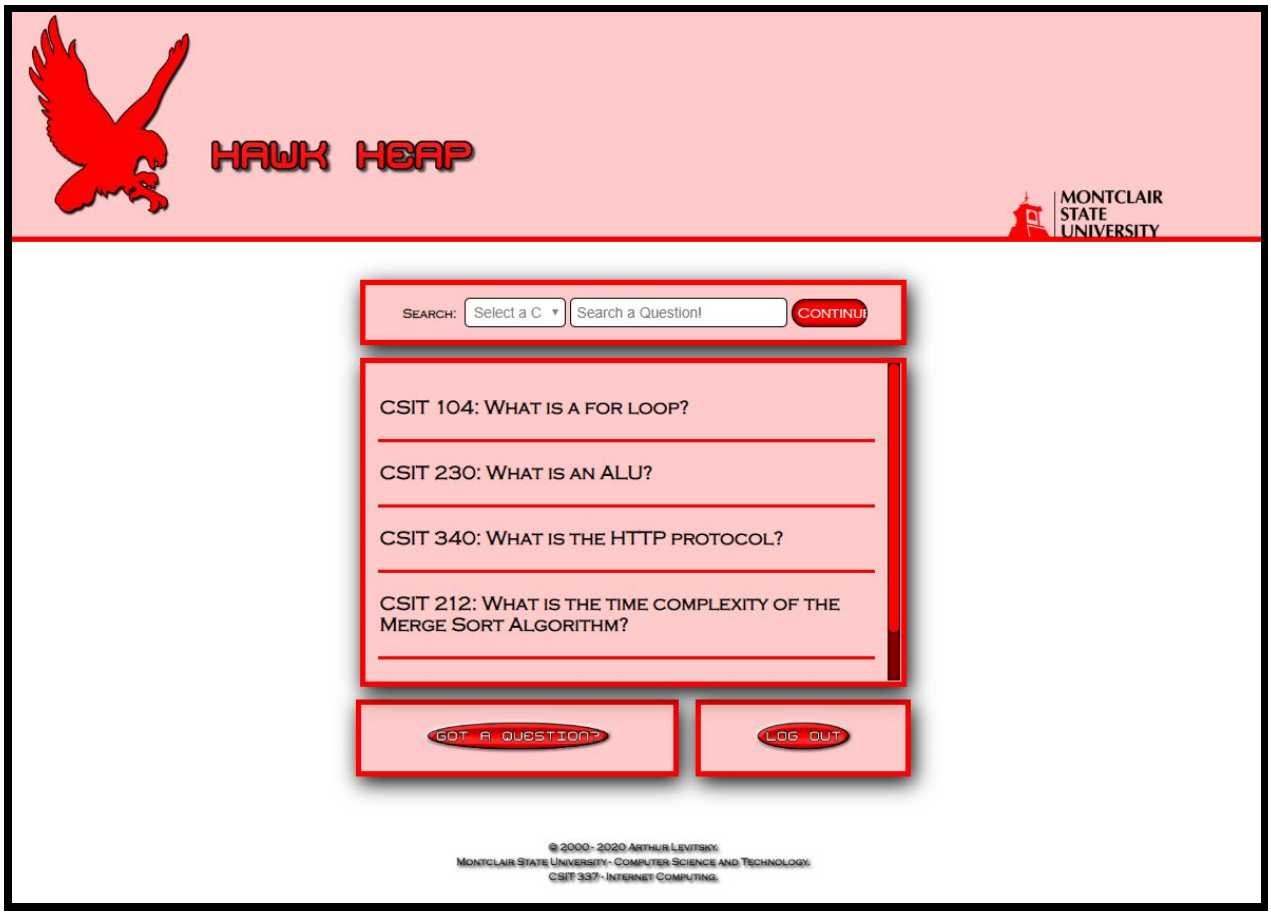


If what you have entered shows up with an **ERROR** sign at the bottom, that means that the username or email has already been taken. Please try again.

If you do not get an **ERROR** and instead redirected to a page that congratulates you on signing up, then that username, email, and password will be published to the *hh_users* in the database.

6. When you click the return button, it should return you back to the **index.html** page. From there, click on the **login button**. Once you do that type in the username and password you have created. If your username or password is incorrect, you will be prompted with an **ERROR** message.

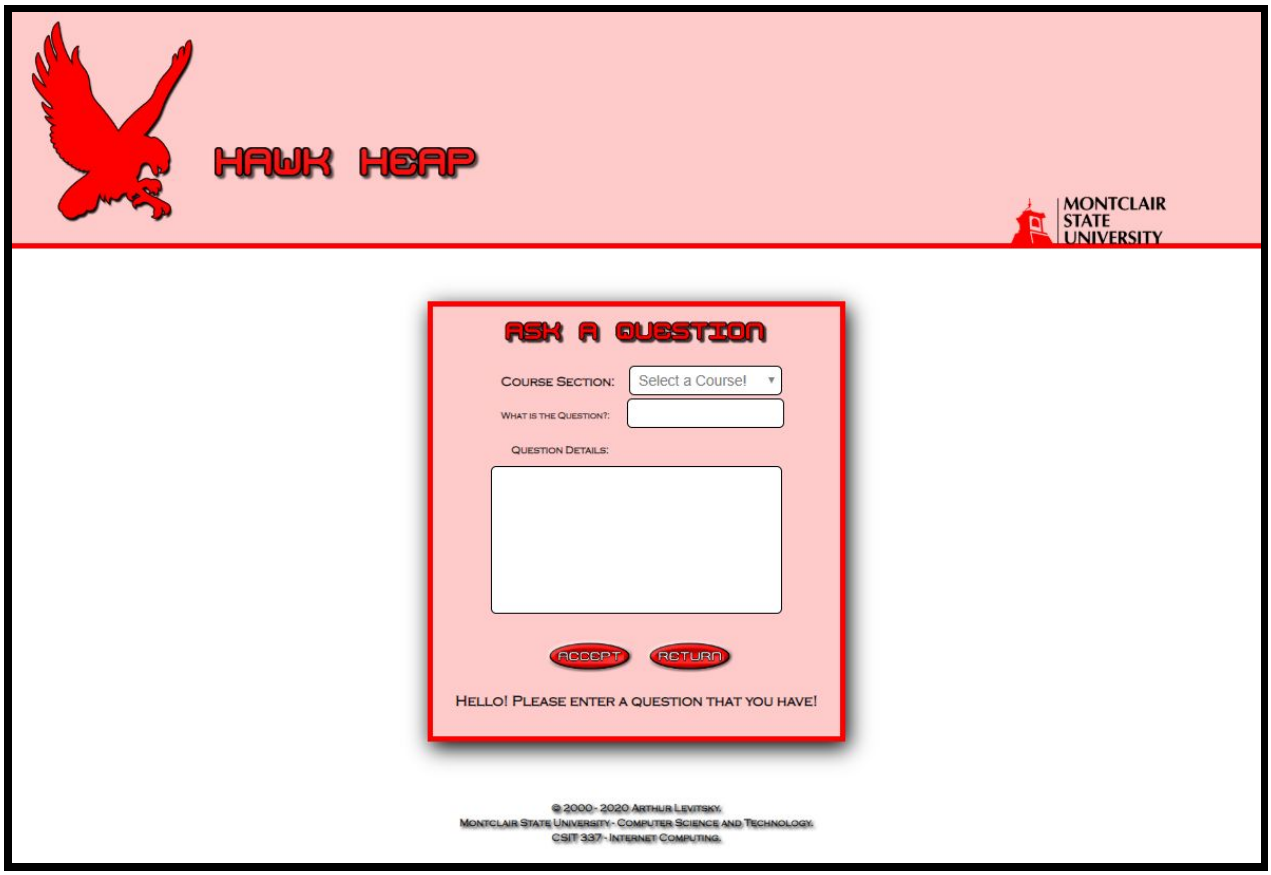
7. Once you implement the **correct** username and password that you created earlier, then you will be provided access to the **main_search.php** page.



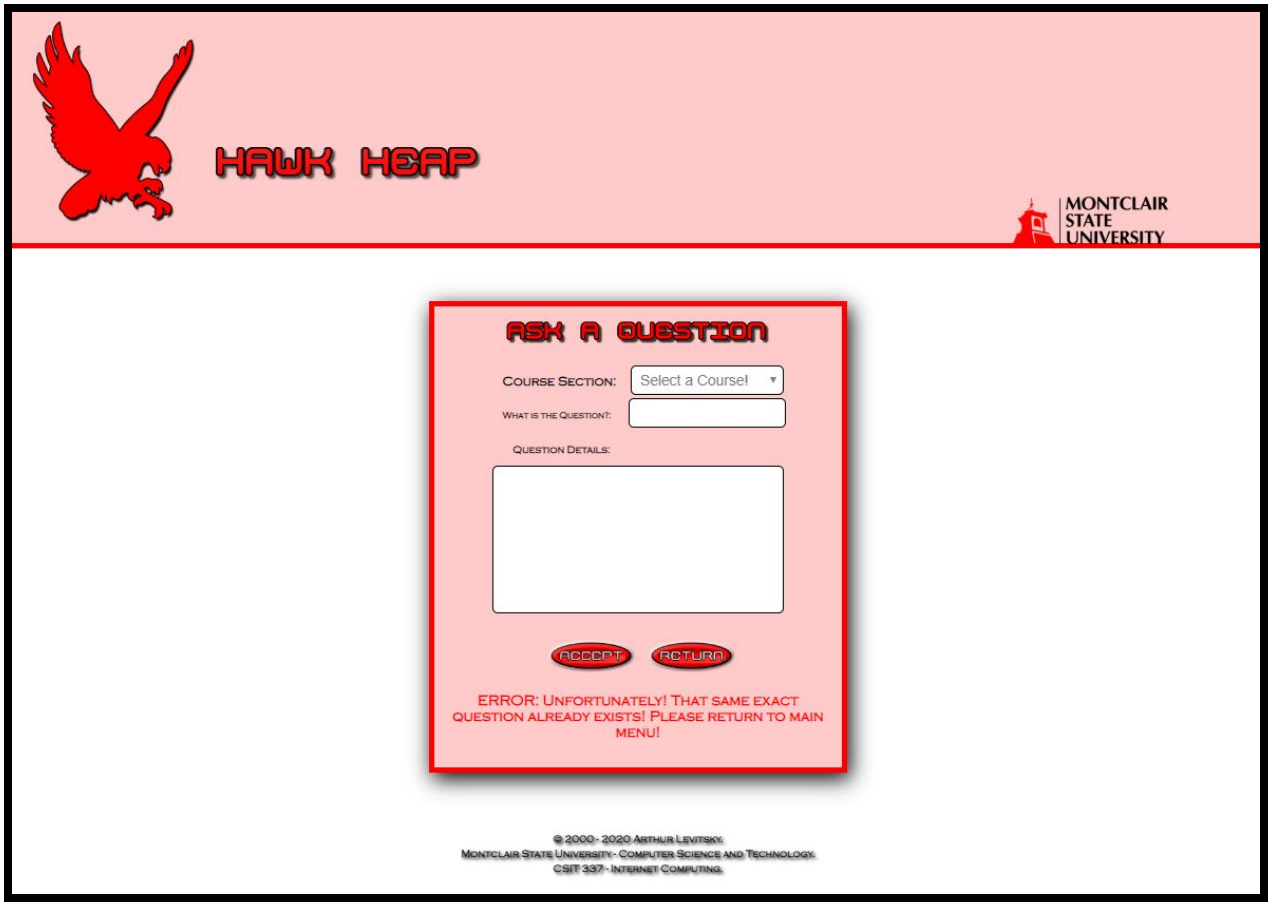
	questionID	courseID	question	questionDetail
Edit Copy Delete	10	CSIT 104	What is a for loop?	Hello! I am fairly new to programming! So far I am...
Edit Copy Delete	16	CSIT 230	What is an ALU?	Sorry! Just been having trouble understanding what...
Edit Copy Delete	42	CSIT 340	What is the HTTP protocol?	Hello! I need help with HTTP protocol. What is it?
Edit Copy Delete	46	CSIT 212	What is the time complexity of the Merge Sort Algo...	Hello there! I am a bit confused about the time co...
Edit Copy Delete	49	CSIT 340	What is MIPS assembly?	Hello! I am very confused on MIPS assembly!

Check all *With selected:* Edit Copy Delete Export

8. In the **search bar**, you can use the **course search option** if you want to search questions based on the courses or you could use the **search bar** to search up **specific keywords**. If you want to use the search bar, make sure that course search is selected to **None Courses Selected**.
9. If you want to **log out** of the **main_search.php** page, click on the **log out button**, it will redirect you to the **index.html** page.
10. If you want to **create a question**, then click on the **question button** in the **main_search.php**. It will redirect you to the **question_page.php**

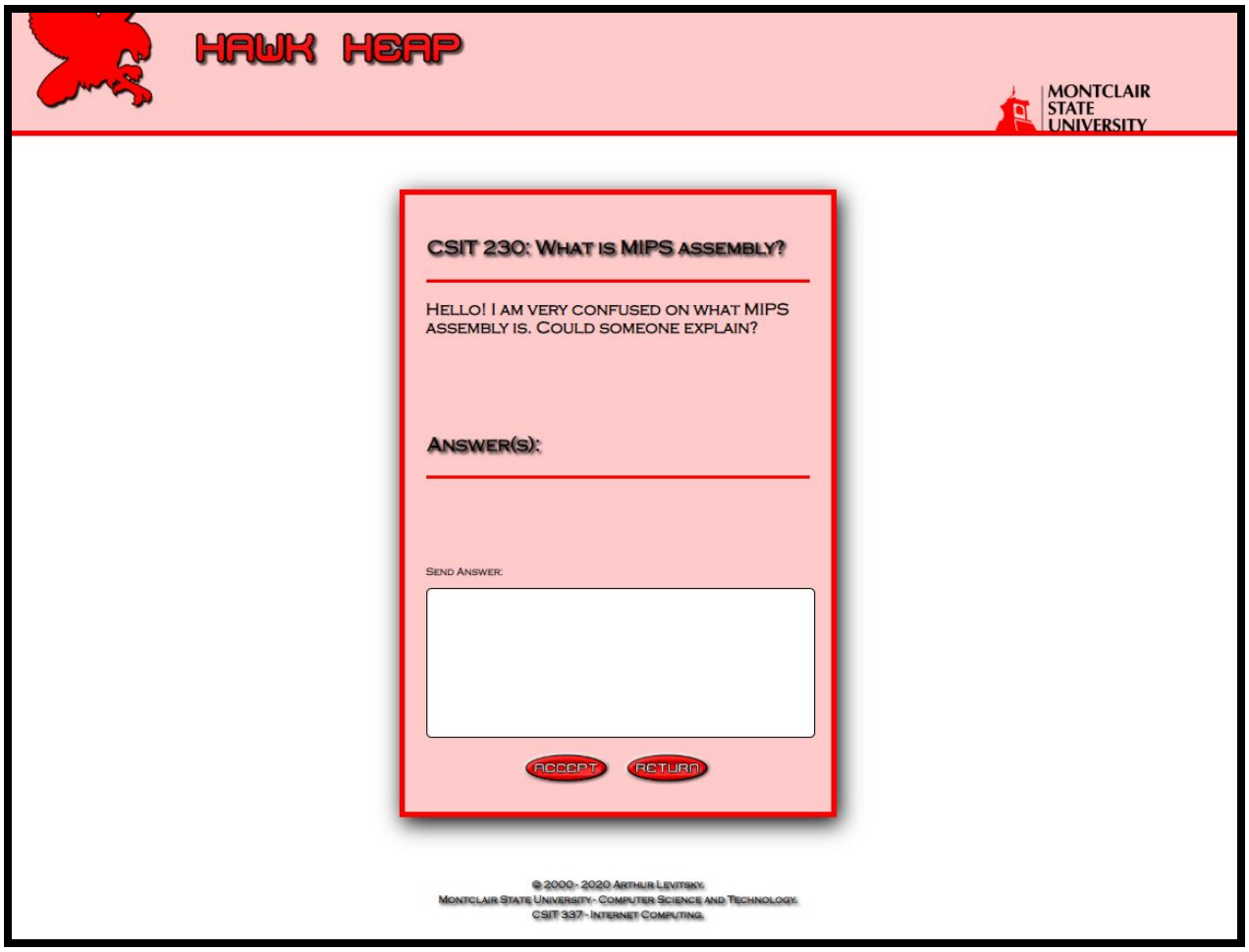


11. In the **question_page.php**, you need to implement the course section, the question that you have, and the details in it as well. All of that is **required** otherwise you will not be able to post. If your question is the same exact question as the one that is already in the database, then you will be prompted with an **ERROR** saying that the question already exists so try a different question.

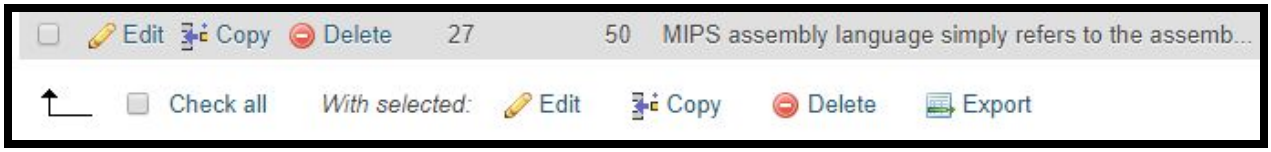


12. Once you do manage to post a question, you will be redirected to the **question_sucess.php** which will congratulate you on successfully posting your question to the website. The return button prompts you back to the main page of the website.

13. Click on any of the questions that you see, the questions in the **main_search.php** act as a hyperlink that transfers the question over to a new page called **answer_page.php.**

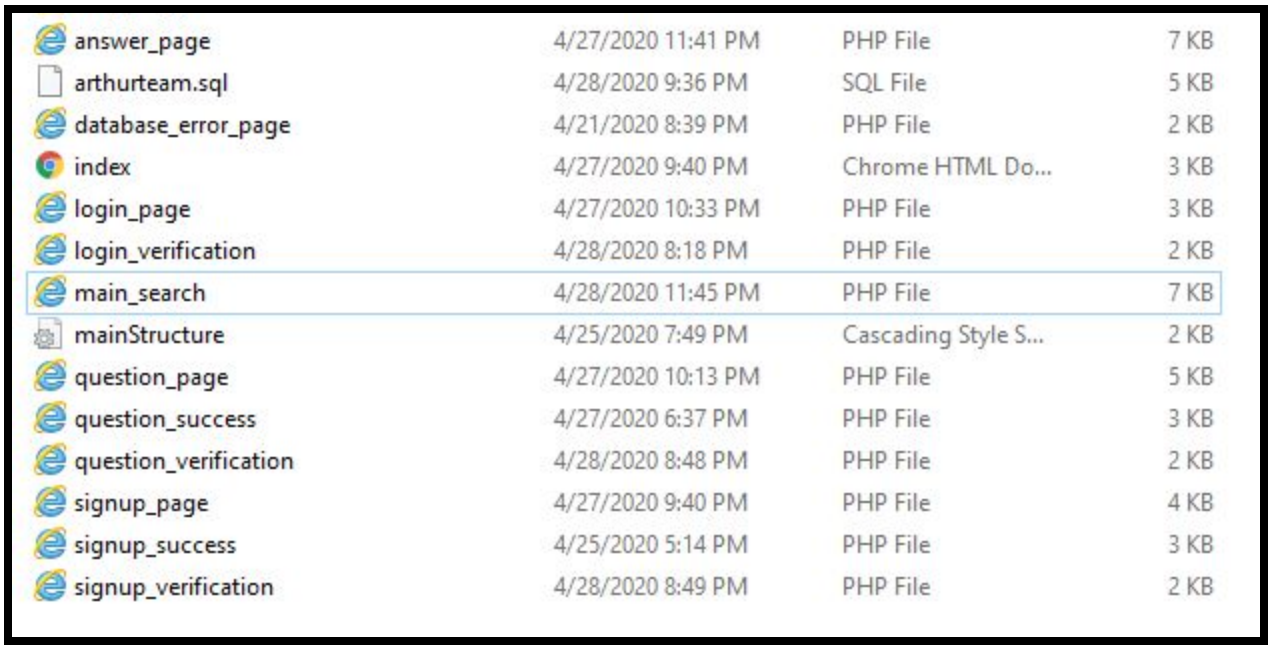


14. In this page, you are able to reply to the question. The answers are linked with the **questionID** therefore when you click on a **different question, different answers show up**. Once you hit accept, the **page refreshes** and the answer shows below.



- Congratulations! You have gone through the entire User Manual! If you are stuck on anything make sure to just reference back with the pictures. A Video demo is also posted, please head to the **Website Video Demo** section.

Program Source Files Page:



answer_page	4/27/2020 11:41 PM	PHP File	7 KB
arthurteam.sql	4/28/2020 9:36 PM	SQL File	5 KB
database_error_page	4/21/2020 8:39 PM	PHP File	2 KB
index	4/27/2020 9:40 PM	Chrome HTML Do...	3 KB
login_page	4/27/2020 10:33 PM	PHP File	3 KB
login_verification	4/28/2020 8:18 PM	PHP File	2 KB
main_search	4/28/2020 11:45 PM	PHP File	7 KB
mainStructure	4/25/2020 7:49 PM	Cascading Style S...	2 KB
question_page	4/27/2020 10:13 PM	PHP File	5 KB
question_success	4/27/2020 6:37 PM	PHP File	3 KB
question_verification	4/28/2020 8:48 PM	PHP File	2 KB
signup_page	4/27/2020 9:40 PM	PHP File	4 KB
signup_success	4/25/2020 5:14 PM	PHP File	3 KB
signup_verification	4/28/2020 8:49 PM	PHP File	2 KB

mainStructure.css

```
#headerBoxDesign {
	width: 100vw;
	height: 225px;
	background-color: #ffcaca;
	border-bottom: 5px solid #ff0000;
}

#hawkHeapLogo {
	position: absolute;
	width: 208px;
	height: 200px;
	top: 10px;
}

#hawkHeapTitle {
	position: absolute;
	width: 260px;
	top: 130px;
	left: 200px;
}

#msuLogo {
	position: absolute;
	margin-top: -4.29%;
	width: 13%;
	top: 226px;
	right: 8%;
}

body {
	margin: 0;
	overflow-x: hidden;
}

p.bodyParagraph {
	text-align: center;
	font-family: Copperplate,Copperplate Gothic Light,fantasy;
	font-size: 2vw;
	font-size: 2vh;
	font-weight: bold;
}
```

```
div.centerContents {
	margin-top: 50px;
	text-align:center;
}

p.boldedText {
	font-family: Copperplate,Copperplate Gothic Light,fantasy;
	display: inline-block;
	position: relative;
	font-size: 1vw;
	bottom: 2.5vw;
	font-weight: bolder;
	text-shadow: 2px 2px 3px;
	line-height: 1.5;
}

::-webkit-scrollbar {
	width: 12px;
}

::-webkit-scrollbar-track {
	box-shadow: inset 0 0 5px black;
	background: darkred;
}

::-webkit-scrollbar-thumb {
	background: red;
	border: 1px solid black;
	border-radius: 5px;
}
```

index.html

```
<!DOCTYPE html>

<html>

	<head>
		<meta charset = "utf-8"/>
		<title>Hawk Heap - Home Page</title>
		<link rel = "shortcut icon" href = "web_images/favicon_hawkheap.png" type = "image/png"/>

		<!-- Style sheet implemented from mainStructure.css as well as style used within the file-->
		<link rel = "stylesheet" href = "mainStructure.css" type = "text/css"/>
		<style>
			#bodyBoxDesign {
				margin-left: auto;
				margin-right: auto;
				padding: 1%;
				margin-top: 50px;
				width: 30%;
				height: 30%;
				background-color: #ffcaca;
				border: 5px solid #ff0000;
				box-shadow: 3px 6px 20px;
			}

			#logoBody {
				width: 10vw;
			}

			#titleBody {
				position: relative;
				width: 10vw;
				bottom: 2vw;
			}

			#loginButton {
				position: relative;
				display:inline-block;
				width: 10vw;
			}

			#signupButton {
				position: relative;
```

```
                        display:inline-block;
                        width: 14vw;
                }

                img:hover.tiltImage {
                        transform: rotate(-5deg);
                }

                a.linkVisibility {
                        text-decoration: none;
                }
        </style>
</head>

<body>
        <!-- Create top heading section of the website with the image and hawk heap title as well as
                montclair state university logo to the right-->
        <div id = "headerBoxDesign">
                <img id = "hawkHeapLogo" src = "web_images/hawkheap_logo.png" alt = "Hawk Heap
Logo"/>
                <img id = "hawkHeapTitle" src = "web_images/hawkheap_title.png" alt = "Hawk Heap
Title"/>
                <img id = "msuLogo" src = "web_images/msu_logo.png" alt = "Montclair State University
Logo"/>
        </div>

        <!-- Include the words 'welcome to' to be aligned with the hawk image and hawk heap title -->
        <div class = "centerContents">
                <p class = "boldedText">Welcome to</p>
                <img id = "logoBody" src = "web_images/hawkheap_logo.png" alt = "Hawk Heap
Logo"/>
                <img id = "titleBody" src = "web_images/hawkheap_title.png" alt = "Hawk Heap Title"/>
        </div>

        <!-- Red box design with a paragraph inside the box -->
        <div id = "bodyBoxDesign">
                <p class = "bodyParagraph">This is a website designed for students that are CSIT majors!
                This website stores questions and answers from students regarding specific
                CSIT courses! Please be respectful to each other! Thank you!</p>
        </div>

        <!-- Create a box seperately for the login button and one for the sign up button. The buttons will
redirect to
                specific pages with forms in it -->
```

```
                <div style = "text-align:center">
                        <div id = "bodyBoxDesign" style = "display: inline-block; width: 10%; height: 30%;
margin-right: 3%">
                                <a href = "login_verification.php" class = "linkVisibility">
                                        <img id = "loginButton" class = "tiltImage" src =
"web_images/login_button.png" alt = "Login Button"/>
                                </a>
                        </div>
                        <div id = "bodyBoxDesign" style = "display:inline-block; width: 14%; height: 30%">
                                <a href = "signup_verification.php" class = "linkVisibility">
                                        <img id = "signupButton" class = "tiltImage" src =
"web_images/signup_button.png" alt = "Signup Button"/>
                                </a>
                        </div>
                </div>
        </body>
        <!-- Implement copyright and year as well as my name and other footer details -->
        <footer>
                <div class = "centerContents">
                        <p class = "boldedText" style = "margin-top: 5%; font-size: 0.8vw">
                                &copy; 2000 - 2020 Arthur Levitsky.<br/>
                                Montclair State University - Computer Science and Technology.<br/>
                                CSIT 337 - Internet Computing.
                        </p>
                </div>
        </footer>
</html>
```

signup_page.php

```
<!DOCTYPE html>

<html>
	<head>
		<meta charset = "utf-8"/>
		<title>Hawk Heap - Signup Page</title>
		<link rel = "shortcut icon" href = "web_images/favicon_hawkheap.png" type = "image/png"/>

		<!-- Style sheet implemented from mainStructure.css as well as style used within the file-->
		<link rel = "stylesheet" href = "mainStructure.css" type = "text/css"/>
		<style>
			#bodyBoxDesign {
				margin-left: auto;
				margin-right: auto;
				padding: 1%;
				margin-top: 50px;
				width: 30%;
				height: 30%;
				background-color: #ffcaca;
				border: 5px solid #ff0000;
				box-shadow: 3px 6px 20px;
			}

			img.imgResize {
				width: 70%;
			}

			label.labelStyle {
				display:inline-block;
				font-family: Copperplate,Copperplate Gothic Light,fantasy;
				font-size: 1vw;
				font-weight: bold;
				width: 35%;
			}

			input {
				width: 10vw;
				padding: 5px 5px;
				border: 1px solid black;
				font-size: 1.5vw;
				font-size: 1.5vh;
				border-radius: 5px;
```

```
                        }

                        div.divSpacing {
                                display: block;
                                line-height: 4vw;
                        }

                        button.submitButton {
                                background-color: transparent;
                                border: none;
                                cursor: pointer;
                                overflow: hidden;
                                outline: none;
                        }

                        button:hover {
                                transform: rotate(-5deg);
                        }
                </style>
        </head>

        <body>
                <!-- Create top heading section of the website with the image and hawk heap title as well as
                        montclair state university logo to the right-->
                <div id = "headerBoxDesign">
                        <img id = "hawkHeapLogo" src = "web_images/hawkheap_logo.png" alt = "Hawk Heap
Logo"/>
                        <img id = "hawkHeapTitle" src = "web_images/hawkheap_title.png" alt = "Hawk Heap
Title"/>
                        <img id = "msuLogo" src = "web_images/msu_logo.png" alt = "Montclair State
University Logo"/>
                </div>

                <!-- Create a form that takes a username, email, and password. If the requirements are met, then
                        post the user details to the database -->
                <div id = "bodyBoxDesign" class = "centerContents">
                        <img class = "imgResize" src = "web_images/signup_form.png" alt = "Signup Title"/>

                        <form action = "signup_verification.php" method = "post" autocomplete = "off">
                                <div class = "divSpacing">
                                        <label class = "labelStyle" for = "username_sec">Username:</label>
                                        <input name = "username" type = "name" id = "username_sec"
placeholder = "username123" required/>
                                </div>
```

```
                        <div class = "divSpacing">
                                <label class = "labelStyle" for = "email_sec">E-Mail:</label>
                                <input name = "email" type = "email" id = "email_sec" placeholder =
"you@email.com" required/>
                        </div>
                        <div class = "divSpacing">
                                <label class = "labelStyle" for = "pass_sec">Password:</label>
                                <input name = "password" type = "password" id = "pass_sec"
placeholder = "********" required/>
                        </div>
                        <div style = "margin-top: 1vw">
                                <button class = "submitButton" type = "submit">
                                        <img style = "width: 7vw" src =
"web_images/accept_button.png" alt = "Accept Button"/>
                                </button>
                        </div>
                        <!-- Dynamic message that tells you if there is an ERROR but originally will
welcome you to the form -->
                        <div>
                                <p class = "bodyParagraph" style = "font-size: 1.5vw; font-size:
1.5vh;"><?php echo $signup_message;?></p>
                        </div>
                </form>
        </div>
    </body>
    <!-- Implement copyright and year as well as my name and other footer details -->
    <footer>
        <div class = "centerContents">
            <p class = "boldedText" style = "margin-top: 5%; font-size: 0.8vw">
                &copy; 2000 - 2020 Arthur Levitsky.<br/>
                Montclair State University - Computer Science and Technology.<br/>
                CSIT 337 - Internet Computing.
            </p>
        </div>
    </footer>
</html>
```

signup_verification.php

```
<?php

	/* Use the following variables to connect to the database 'arthurteamdatabase'
		If the user receives a MYSQL error, that means that script was unsuccessful
		in connecting to the database.
	*/

	$dsn = 'mysql:host=localhost; dbname=arthurteamdatabase';
	$user = 'arthurteam';
	$pass = 'arthurteampass';

	try {
		$db = new PDO($dsn, $user, $pass);
	}
	catch (PDOException $e) {
		$error = $e->getMessage();
		include('database_error_page.php');
		exit();
	}

	// If the user posts from signup_page.php, then this will be true.
	if ($_POST) {

		// Assign the values that the user posted to this variables.
		$username = $_POST['username'];
		$email = $_POST['email'];
		$password = $_POST['password'];

		// Generate a query for username.
		$usernameData = 'SELECT * FROM hh_users
		WHERE username = :username';

		// Generate a query for email.
		$emailData = 'SELECT * FROM hh_users
		WHERE email = :email';

		// Create a statement that will bind values with what the user posted (username)
		$statementUsername = $db->prepare($usernameData);
		$statementUsername->bindValue(':username', $username);
		$statementUsername->execute();

		// Create a statement that will bind values with what the user posted (email)
```

```
                $statementEmail = $db->prepare($emailData);
                $statementEmail->bindValue(':email', $email);
                $statementEmail->execute();

                // Check for both variables if rowCount for the statements provides 1 or not.
                // We use this as it describes if there already is a username or email that exists in the database.
                $usedCredUsername = ($statementUsername->rowCount() == 1);
                $usedCredEmail = ($statementEmail->rowCount() == 1);
                $statementUsername->closeCursor();
                $statementEmail->closeCursor();

                // If either email or username already exists, this is true
                if ($usedCredUsername || $usedCredEmail) {
                        $signup_message = '<span style = "color: red">ERROR: Please use a different
username or email!</span>';
                        include('signup_page.php');
                }
                // Otherwise insert into the database for hh_users table
                else {
                        $user_info = "INSERT INTO hh_users (email, username, password) VALUES
                        ('$email','$username','$password')";
                        $db->query($user_info);
                        $obtainUsername = $username;
                        include('signup_success.php');
                }
        }
        // If the user did not post from the form, this is true.
        else {
                $signup_message = 'Welcome! You must sign up to view the contents of this site!';
                include('signup_page.php');
        }
?>
```

signup_success.php

```
<!DOCTYPE html>

<html>
	<head>
		<meta charset = "utf-8"/>
		<title>Hawk Heap - Signup Successful</title>
		<link rel = "shortcut icon" href = "web_images/favicon_hawkheap.png" type = "image/png"/>

		<!-- Style sheet implemented from mainStructure.css as well as style used within the file-->
		<link rel = "stylesheet" href = "mainStructure.css" type = "text/css"/>
		<style>
			#bodyBoxDesign {
				margin-left: auto;
				margin-right: auto;
				padding: 1%;
				margin-top: 50px;
				width: 30%;
				height: 30%;
				background-color: #ffcaca;
				border: 5px solid #ff0000;
				box-shadow: 3px 6px 20px;
			}

			div.divSpacing {
				margin-top: 1vw;
			}

			#returnButton {
				position: relative;
				display:inline-block;
				width: 7vw;
			}

			img:hover.tiltImage {
				transform: rotate(-5deg);
			}

			a.linkVisibility {
				text-decoration: none;
			}
		</style>
	</head>
```

```
	<body>
		<!-- Create top heading section of the website with the image and hawk heap title as well as
			montclair state university logo to the right-->
		<div id = "headerBoxDesign">
			<img id = "hawkHeapLogo" src = "web_images/hawkheap_logo.png" alt = "Hawk Heap
Logo"/>
			<img id = "hawkHeapTitle" src = "web_images/hawkheap_title.png" alt = "Hawk Heap
Title"/>
			<img id = "msuLogo" src = "web_images/msu_logo.png" alt = "Montclair State
University Logo"/>
		</div>

		<!-- Red box design with a paragraph inside the box. This paragraph congratulates the user for
		creating an account and dynamically displays his username. -->
		<div id = "bodyBoxDesign" class = "centerContents">
			<div>
				<p class = "bodyParagraph" style = "font-size: 1.5vw; font-size: 1.5vh;">
				Congradulations <span style = "color: red"><?php echo
$obtainUsername;?></span>!
				You have successfully created an account at Hawk Heap!
				Please click on the return button to return back to the home page!</p>
			</div>
			<!-- Return back to the index.html page -->
			<div class = "divSpacing">
				<a href = "index.html" class = "linkVisibility">
					<img id = "returnButton" class = "tiltImage" src =
"web_images/return_button.png" alt = "Return Button"/>
				</a>
			</div>
		</div>
	</body>
	<footer>
		<!-- Implement copyright and year as well as my name and other footer details -->
		<div class = "centerContents">
			<p class = "boldedText" style = "margin-top: 5%; font-size: 0.8vw">
				&copy; 1995 - 2020 Arthur Levitsky.<br/>
				Montclair State University - Computer Science and Technology.<br/>
				CSIT 337 - Internet Computing.
			</p>
		</div>
	</footer>
</html>
```

login_page.php

```
<!DOCTYPE html>

<html>
	<head>
		<meta charset = "utf-8"/>
		<title>Hawk Heap - Login Page</title>
		<link rel = "shortcut icon" href = "web_images/favicon_hawkheap.png" type = "image/png"/>

		<!-- Style sheet implemented from mainStructure.css as well as style used within the file-->
		<link rel = "stylesheet" href = "mainStructure.css" type = "text/css"/>
		<style>
			#bodyBoxDesign {
				margin-left: auto;
				margin-right: auto;
				padding: 1%;
				margin-top: 50px;
				width: 30%;
				height: 30%;
				background-color: #ffcaca;
				border: 5px solid #ff0000;
				box-shadow: 3px 6px 20px;
			}

			img.imgResize {
				width: 60%;
			}

			label.labelStyle {
				display:inline-block;
				font-family: Copperplate,Copperplate Gothic Light,fantasy;
				font-size: 1vw;
				font-weight: bold;
				width: 35%;
			}

			input {
				width: 10vw;
				padding: 5px 5px;
				border: 1px solid black;
				font-size: 1.5vw;
				font-size: 1.5vh;
				border-radius: 5px;
```

```
                        }

                        div.divSpacing {
                                display: block;
                                line-height: 4vw;
                        }

                        button.submitButton {
                                background-color: transparent;
                                border: none;
                                cursor: pointer;
                                overflow: hidden;
                                outline: none;
                        }

                        button:hover {
                                transform: rotate(-5deg);
                        }
                </style>
        </head>

        <body>
                <!-- Create top heading section of the website with the image and hawk heap title as well as
                        montclair state university logo to the right-->
                <div id = "headerBoxDesign">
                        <img id = "hawkHeapLogo" src = "web_images/hawkheap_logo.png" alt = "Hawk Heap
Logo"/>
                        <img id = "hawkHeapTitle" src = "web_images/hawkheap_title.png" alt = "Hawk Heap
Title"/>
                        <img id = "msuLogo" src = "web_images/msu_logo.png" alt = "Montclair State
University Logo"/>
                </div>

                <!-- Create a form that takes a username and password. If the requirements are met, then the
                        user will be granted access to the main_search.php page. -->
                <div id = "bodyBoxDesign" class = "centerContents">
                        <img class = "imgResize" src = "web_images/login_form.png" alt = "Signup Title"/>

                        <form action = "login_verification.php" method = "post" autocomplete = "off">
                                <div class = "divSpacing">
                                        <label class = "labelStyle" for = "username_sec">Username:</label>
                                        <input name = "username" type = "name" id = "username_sec"
placeholder = "username123" required/>
                                </div>
```

```
                        <div class = "divSpacing">
                                <label class = "labelStyle" for = "pass_sec">Password:</label>
                                <input name = "password" type = "password" id = "pass_sec"
placeholder = "********" required/>
                        </div>
                        <div style = "margin-top: 1vw">
                                <button class = "submitButton" type = "submit" name = "submit_login">
                                        <img style = "width: 7vw" src =
"web_images/accept_button.png" alt = "Accept Button"/>
                                </button>
                        </div>
                        <!-- Dynamic message that tells you if there is an ERROR but originally will
welcome you to the form -->
                        <div>
                                <p class = "bodyParagraph" style = "font-size: 1.5vw; font-size:
1.5vh;"><?php echo $signup_message;?></p>
                        </div>
                </div>
        </body>
                <!-- Implement copyright and year as well as my name and other footer details -->
        <footer>
                <div class = "centerContents">
                        <p class = "boldedText" style = "margin-top: 5%; font-size: 0.8vw">
                                &copy; 1995 - 2020 Arthur Levitsky.<br/>
                                Montclair State University - Computer Science and Technology.<br/>
                                CSIT 337 - Internet Computing.
                        </p>
                </div>
        </footer>
</html>
```

login_verification.php

```
<?php

	/* Use the following variables to connect to the database 'arthurteamdatabase'
		If the user recieves a MYSQL error, that means that script was unsuccessful
		in connecting to the database.
	*/

	$dsn = 'mysql:host=localhost; dbname=arthurteamdatabase';
	$user = 'arthurteam';
	$pass = 'arthurteampass';

	try {
		$db = new PDO($dsn, $user, $pass);
	}
	catch (PDOException $e) {
		$error = $e->getMessage();
		include('database_error_page.php');
		exit();
	}

	// If the user posts his username and password, this will be true.
	if (isset($_POST['submit_login'])) {

		// Take the username and password from the form and store them in the variables.
		$username = $_POST['username'];
		$password = $_POST['password'];

		// Generate a query from the hh_users table that takes username data and password data
		// from the database.
		$query = 'SELECT * FROM hh_users WHERE username = :username AND password =
:password';

		// Create a statement that binds the values to compare with anything
		// from the database and what the user has posted.
		$statementCreds = $db->prepare($query);
		$statementCreds->bindValue(':username', $username);
		$statementCreds->bindValue(':password', $password);
		$statementCreds->execute();

		// Create a condition if the username or password exists.
		$credidentialValid = ($statementCreds->rowCount() == 1);
		$statementCreds->closeCursor();
```

```
		// If they do exist, that means that what the user implemented is correct in the username and password field.
		if ($credidentialValid) {
			$db = null;
			include('main_search.php');
		}
		// Otherwise, the username did not implement the correct username and password that the database could identify.
		else {
			$signup_message = '<span style = "color: red">ERROR: Unfortunately the username or password you entered is not correct! Please try again!</span>';
			include('login_page.php');
		}
	}
	// This will show if user has not hit the submit button for the form.
	else {
		$signup_message = 'Please enter your username and password to proceed!';
		include('login_page.php');
	}
?>
```

main_search.php

```
<?php

	/* Use the following variables to connect to the database 'arthurteamdatabase'
		If the user recieves a MYSQL error, that means that script was unsuccessful
		in connecting to the database.
	*/

	$dsn = 'mysql:host=localhost; dbname=arthurteamdatabase';
	$user = 'arthurteam';
	$pass = 'arthurteampass';

	try {
		$db = new PDO($dsn, $user, $pass);
	}
	catch (PDOException $e) {
		$error = $e->getMessage();
		include('database_error_page.php');
		exit();
	}

	// Create an empty string called rowCreate
	// Create a query that selects all the courseID and question
	// data values from the questions table.
	$rowCreate = '';
	$query = 'SELECT courseID, question FROM questions';
	$result = $db->prepare($query);
	$result->execute();

	// Count how many rows there are in total
	$queryResult = $result->rowCount();

	// If you hit the continue button for search, this is true.
	if(isset($_POST['Submit'])) {


		// Table the search text and the course number selected and
		// store them in these variables.
		$search = $_POST['search'];
		$course = $_POST['course_numb'];


		// If the course variable is empty and the search is empty,
```

```
                // post all the data values from questions table regarding
                // course numbers and questions.
                if ($course == "" && $search == null) {
                        $query = 'SELECT courseID, question FROM questions';
                        $result = $db->prepare($query);
                        $result->execute();
                        $queryResult = $result->rowCount();
                }
                // If only search is empty but not course number, then
                // find specific courses with the course number you selected.
                else if ($search == null) {
                        $query = "SELECT * FROM questions WHERE courseID = :course";
                        $result = $db->prepare($query);
                        $result->bindValue(":course", $course);
                        $result->execute();
                        $queryResult = $result->rowCount();
                }
                // If course number is empty but search isn't, then
                // find questions with specific keywords that search text had.
                else if ($course == "") {
                        $query = "SELECT * FROM questions WHERE question LIKE ?";
                        $param = array("%$search%");
                        $result = $db->prepare($query);
                        $result->execute($param);
                        $queryResult = $result->rowCount();
                }
                // Otherwise, if both values exist, find a question with the course number
                // as well as with a keyword from search.
                else {
                        $query =  "SELECT * FROM questions WHERE question LIKE '%$search%' AND
courseID = :course";
                        $result = $db->prepare($query);
                        $result->bindValue(":course", $course);
                        $result->execute();
                        $queryResult = $result->rowCount();
                }
        }
        // If there are rows of data in the questions table, this is true
        if ($queryResult > 0) {
                // while the result variable can still fetch data from the questions table, this is true
                while ($row = $result->fetch()) {
                        // Fill up the rowCreate string with some html elements for creating rows and cells.
                        $rowCreate .= '<tr><td><a href = "answer_page.php?question='.$row['question'].'"><p
class = "bodyParagraph" style = "text-align: left">'. $row['courseID'].': '. $row['question']
```

```
.'</p></a></td></tr>';
                }
        }
        else {
                // Otherwise leave the rowCreate string empty.
                $rowCreate = '';
        }
?>
<!DOCTYPE html>

<html>
        <head>
                <meta charset = "utf-8"/>
                <title>Hawk Heap - Main Page</title>
                <link rel = "shortcut icon" href = "web_images/favicon_hawkheap.png" type = "image/png"/>

                <!-- Style sheet implemented from mainStructure.css as well as style used within the file-->
                <link rel = "stylesheet" href = "mainStructure.css" type = "text/css"/>
                <style>
                        #bodyBoxDesign {
                                margin-left: auto;
                                margin-right: auto;
                                padding: 1%;
                                width: 40%;
                                background-color: #ffcaca;
                                border: 5px solid #ff0000;
                                box-shadow: 3px 6px 20px;
                                overflow-y: auto;
                        }

                        table {
                                border-collapse: collapse;
                                width: 100%;
                        }

                        tr {
                                border-bottom: 3px solid #ff0000;
                        }

                        td {
                                width: 12%;
                        }

                        a {
```

```
                color: black;
                text-decoration: none;
            }

            label.labelStyle {
                display:inline-block;
                font-family: Copperplate,Copperplate Gothic Light,fantasy;
                font-size: 1vw;
                font-weight: bold;
                width: 12%;
            }

            input {
                width: 40%;
                padding: 5px 5px;
                border: 1px solid black;
                font-size: 1.5vw;
                font-size: 1.5vh;
                border-radius: 5px;
                display: inline;
            }

            select {
                width: 20%;
                padding: 4px 4px;
                border: 1px solid black;
                font-size: 1.5vw;
                font-size: 1.5vh;
                border-radius: 5px;
            }

            select:required:invalid {
                color: gray;
            }

            option {
                color: black;
            }

            img:hover.imgHover {
                transform: rotate(-5deg);
            }
        </style>
    </head>
```

```
	<body>
		<!-- Create top heading section of the website with the image and hawk heap title as well as
			montclair state university logo to the right-->
		<div id = "headerBoxDesign">
			<img id = "hawkHeapLogo" src = "web_images/hawkheap_logo.png" alt = "Hawk Heap
Logo"/>
			<img id = "hawkHeapTitle" src = "web_images/hawkheap_title.png" alt = "Hawk Heap
Title"/>
			<img id = "msuLogo" src = "web_images/msu_logo.png" alt = "Montclair State
University Logo"/>
		</div>

		<!-- Create a box that holds a form where a user can select from a drop down menu specific
courses
			as well as type in specific keywords to search for specific questions he is looking for.
-->
		<div id = "bodyBoxDesign" style = "margin-top: 3%; text-align: center">
			<form method = "post" action = "main_search.php" autocomplete = "off">
				<label class = "labelStyle" for = "search_sec">Search:</label>
				<select id = "search_sec" name = "course_numb" required>
					<option value = "" disabled selected>Select a Course!</option>
					<option value = "">No Course Selected</option>
					<option value = "CSIT 104">CSIT 104: Computational
Concepts</option>
					<option value = "CSIT 111">CSIT 111: Fundamentals of Programming
I</option>
					<option value = "CSIT 112">CSIT 112: Fundamentals of Programming
II</option>
					<option value = "CSIT 212">CSIT 212: Data Structures and
Algorithms</option>
					<option value = "CSIT 230">CSIT 230: Computer Systems</option>
					<option value = "CSIT 379">CSIT 379: Computer Science
Theory</option>
					<option value = "CSIT 315">CSIT 315: Software Engineering
I</option>
					<option value = "CSIT 415">CSIT 415: Software Engineering
II</option>
					<option value = "CSIT 340">CSIT 340: Computer Networks</option>
					<option value = "CSIT 355">CSIT 355: Database Systems</option>
					<option value = "CSIT 313">CSIT 313: Foundations of Programming
Languages</option>
					<option value = "CSIT 345">CSIT 345: Operating Systems</option>
					<option value = "CSIT 337">CSIT 337: Internet Computing</option>
				</select>
```

```
                                <input type = text name = "search" id = "search_sec" placeholder = "Search a
Question!"/>
                                <input type = submit style = "background-color: red; font-family:
Copperplate,Copperplate Gothic Light,fantasy;
                                border-radius: 50px; width: 15%; box-shadow: inset 0 0 5px black; color: white"
                                name = Submit value = "Continue"/>
                        </form>
                </div>
                <!-- Generate the rows and cells for the questions that are displayed from the questions table in
the database
                        The rows will be initially fully displayed however this can change if the user uses the
search feature.-->
                <div id = "bodyBoxDesign" style = "height: 400px; margin-top: 1%; height: 30vh;">
                        <table>
                                <?php echo $rowCreate;?>
                        </table>
                </div>

                <!-- Create a 'got a question' button and a 'log out' button. The log out button returns the  users
to index.html, the
                        'got a question' button sends the user to the question_verification.php page. -->
                <div style = "text-align:center">
                        <div id = "bodyBoxDesign" style = "margin-top: 1vw; text-align: center; width: 22.5%;
display:inline-block; margin-right: 1%">
                                <a href = "question_verification.php" class = "linkVisiblity">
                                        <img style = "width: 15vw" class = "imgHover" src =
"web_images/question_button.png" alt = "Question Button"/>
                                </a>
                        </div>
                        <div id = "bodyBoxDesign" style = "margin-top: 1vw; text-align: center; width: 14%;
display:inline-block">
                                <a href = "index.html" class = "linkVisiblity">
                                        <img style = "width: 8vw" class = "imgHover" src =
"web_images/log_out.png" alt = "Question Button"/>
                                </a>
                        </div>
                </div>
        </body>
                <!-- Implement copyright and year as well as my name and other footer details -->
        <footer>
                <div class = "centerContents">
                        <p class = "boldedText" style = "margin-top: 3%; font-size: 0.8vw">
                                &copy; 2000 - 2020 Arthur Levitsky.<br/>
                                Montclair State University - Computer Science and Technology.<br/>
```

```
                    CSIT 337 - Internet Computing.
                </p>
            </div>
        </footer>
</html>
```

question_page.php

```
<!DOCTYPE html>

<html>
	<head>
		<meta charset = "utf-8"/>
		<title>Hawk Heap - Question Page</title>
		<link rel = "shortcut icon" href = "web_images/favicon_hawkheap.png" type = "image/png"/>

		<!-- Style sheet implemented from mainStructure.css as well as style used within the file-->
		<link rel = "stylesheet" href = "mainStructure.css" type = "text/css"/>
		<style>
			#bodyBoxDesign {
				margin-right: auto;
				margin-left: auto;
				padding: 1%;
				width: 30%;
				background-color: #ffcaca;
				border: 5px solid #ff0000;
				box-shadow: 3px 6px 20px;
			}

			img.imgResize {
				width: 70%;
			}

			label.labelStyle {
				display:inline-block;
				font-family: Copperplate,Copperplate Gothic Light,fantasy;
				font-size: 1vw;
				font-weight: bold;
				width: 35%;
			}

			div.divSpacing {
				display: block;
				line-height: 2.5vw;
			}

			select {
				width: 40%;
				padding: 4px 4px;
				border: 1px solid black;
```

```
        font-size: 1.5vw;
        font-size: 1.5vh;
        border-radius: 5px;
}

select:required:invalid {
        color: gray;
}

option {
        color: black;
}

img:hover.imgHover {
        transform: rotate(-5deg);
}

input {
        width: 10vw;
        padding: 5px 5px;
        border: 1px solid black;
        font-size: 1.5vw;
        font-size: 1.5vh;
        border-radius: 5px;
}

textarea {
        width: 73%;
        padding: 5px 5px;
        border: 1px solid black;
        font-size: 1.5vw;
        font-size: 1.5vh;
        border-radius: 5px;
        resize: none;
}

button.submitButton {
        background-color: transparent;
        border: none;
        cursor: pointer;
        overflow: hidden;
        outline: none;
}
```

```
                        button:hover {
                                transform: rotate(-5deg);
                        }

                        img:hover.imgHover {
                                transform: rotate(-5deg);
                        }

                </style>
        </head>
        <body>
                <!-- Create top heading section of the website with the image and hawk heap title as well as
                        montclair state university logo to the right-->
                <div id = "headerBoxDesign">
                        <img id = "hawkHeapLogo" src = "web_images/hawkheap_logo.png" alt = "Hawk Heap
Logo"/>
                        <img id = "hawkHeapTitle" src = "web_images/hawkheap_title.png" alt = "Hawk Heap
Title"/>
                        <img id = "msuLogo" src = "web_images/msu_logo.png" alt = "Montclair State
University Logo"/>
                </div>

                <!-- Design a form where you can input a question into the website, in here the user
                        needs to provide a course number, the question, and the question details -->
                <div id = "bodyBoxDesign" class = "centerContents">
                        <img class = "imgResize" src = "web_images/ask_question.png" alt = "Question
Title"/>
                        <form action = "question_verification.php" method = "post" autcomplete = "off">
                                <div class = "divSpacing" style = "margin-top: 1vw">
                                        <label class = "labelStyle" for = "course_sec">Course Section:</label>
                                        <select id = "course_sec" name = "course_numb" required>
                                                <option value = "" disabled selected>Select a Course!</option>
                                                <option value = "CSIT 104">CSIT 104: Computational
Concepts</option>
                                                <option value = "CSIT 111">CSIT 111: Fundamentals of
Programming I</option>
                                                <option value = "CSIT 112">CSIT 112: Fundamentals of
Programming II</option>
                                                <option value = "CSIT 212">CSIT 212: Data Structures and
Algorithms</option>
                                                <option value = "CSIT 230">CSIT 230: Computer
Systems</option>
                                                <option value = "CSIT 379">CSIT 379: Computer Science
Theory</option>
```

```
                                        <option value = "CSIT 315">CSIT 315: Software Engineering
I</option>
                                        <option value = "CSIT 415">CSIT 415: Software Engineering
II</option>
                                        <option value = "CSIT 340">CSIT 340: Computer
Networks</option>
                                        <option value = "CSIT 355">CSIT 355: Database
Systems</option>
                                        <option value = "CSIT 313">CSIT 313: Foundations of
Programming Languages</option>
                                        <option value = "CSIT 345">CSIT 345: Operating
Systems</option>
                                        <option value = "CSIT 337">CSIT 337: Internet
Computing</option>
                                </select>
                        </div>
                        <div class = "divSpacing">
                                <label class = "labelStyle" style = "font-size: 0.7vw" for =
"question_sec">What is the Question?:</label>
                                <input type = "text" style = "width: 38%" name = "quest_box" id =
"question_sec" required>
                        </div>
                        <div class = "divSpacing">
                                <label class = "labelStyle" style = "margin-right: 40%; font-size: 0.8vw"
for = "detail_sec">Question Details:</label>
                        </div>
                        <div class = "divSpacing">
                                <textarea rows = "8" name = "quest_detail" required></textarea>
                        </div>
                        <div style = "margin-top: 1vw; display: inline-block">
                                <button class = "submitButton" type = "submit" name =
"submit_button">
                                        <img style = "width: 7vw" src =
"web_images/accept_button.png" alt = "Accept Button"/>
                                </button>
                        </div>
                        <div style = "display: inline-block">
                                <a href = "main_search.php">
                                        <img class = "imgHover" style = "width: 7vw" src =
"web_images/return_button.png" alt = "Return Button"/>
                                </a>
                        </div>
                        <!-- Dynamic message that provides an ERROR if the same exact question
already exists in the database.-->
```

```
                                <div>
                                        <p class = "bodyParagraph" style = "font-size: 1.5vw; font-size:
1.5vh;"><?php echo $signup_message;?></p>
                                </div>
                        </form>
                </div>
        </body>
                        <!-- Implement copyright and year as well as my name and other footer details -->
        <footer>
                <div class = "centerContents">
                        <p class = "boldedText" style = "margin-top: 3%; font-size: 0.8vw">
                                &copy; 2000 - 2020 Arthur Levitsky.<br/>
                                Montclair State University - Computer Science and Technology.<br/>
                                CSIT 337 - Internet Computing.
                        </p>
                </div>
        </footer>
</html>
```

question_verification.php

```
<?php

	/* Use the following variables to connect to the database 'arthurteamdatabase'
		If the user recieves a MYSQL error, that means that script was unsuccessful
		in connecting to the database.
	*/

	$dsn = 'mysql:host=localhost; dbname=arthurteamdatabase';
	$user = 'arthurteam';
	$pass = 'arthurteampass';

	try {
		$dv = new PDO($dsn, $user, $pass, array(PDO::ATTR_PERSISTENT => true));

	}
	catch (PDOException $e) {
		$error = $e->getMessage();
		include('database_error_page.php');
		exit();
	}

	// If the user posts the course number, question, and question detal. This is true.
	if ($_POST) {

		// Take the course number, question, and question detail and store them in variables.
		$courseNumber = $_POST['course_numb'];
		$question = $_POST['quest_box'];
		$questionDet = $_POST['quest_detail'];

		// Create a query where the database selects the question column from the questions table.
		$query = 'SELECT * FROM questions WHERE question = :question';

		// Create a statement that prepares and binds the value from the database to the
		// value created by the user.
		$statementQuest = $dv->prepare($query);
		$statementQuest->bindValue(':question', $question);
		$statementQuest->execute();

		// If there is a matching question in the database to the question the user created, this is true.
		$usedQuestion = ($statementQuest->rowCount() == 1);
		$statementQuest->closeCursor();
```

```
                // If the question is already used, this is true.
                if ($usedQuestion) {
                        $signup_message = '<span style = "color: red">ERROR: Unfortunately! That same
exact
                        question already exists! Please return to main menu!</span>';
                        include('question_page.php');
                }
                // Otherwise post the question to the questions table in the database.
                else {
                        $user_info = "INSERT INTO questions (courseID, question, questionDetail) VALUES
                        ('".$courseNumber."','".$question."','".$questionDet."')";
                        $dv->query($user_info);
                        $dv = null;
                        include('question_success.php');
                }
        }
        // If the user did not post a question yet, display this message below.
        else {
                $signup_message = 'Hello! Please enter a question that you have!';
                include('question_page.php');
        }
?>
```

question_success.php

```
<!DOCTYPE html>

<html>
	<head>
		<meta charset = "utf-8"/>
		<title>Hawk Heap - Signup Successful</title>
		<link rel = "shortcut icon" href = "web_images/favicon_hawkheap.png" type = "image/png"/>

		<!-- Style sheet implemented from mainStructure.css as well as style used within the file-->
		<link rel = "stylesheet" href = "mainStructure.css" type = "text/css"/>
		<style>
			#bodyBoxDesign {
				margin-left: auto;
				margin-right: auto;
				padding: 1%;
				margin-top: 50px;
				width: 30%;
				height: 30%;
				background-color: #ffcaca;
				border: 5px solid #ff0000;
				box-shadow: 3px 6px 20px;
			}

			div.divSpacing {
				margin-top: 1vw;
			}

			#returnButton {
				position: relative;
				display:inline-block;
				width: 7vw;
			}

			img:hover.tiltImage {
				transform: rotate(-5deg);
			}

			a.linkVisibility {
				text-decoration: none;
			}
		</style>
	</head>
```

```
        <body>
                <!-- Create top heading section of the website with the image and hawk heap title as well as
                        montclair state university logo to the right-->
                <div id = "headerBoxDesign">
                        <img id = "hawkHeapLogo" src = "web_images/hawkheap_logo.png" alt = "Hawk Heap
Logo"/>
                        <img id = "hawkHeapTitle" src = "web_images/hawkheap_title.png" alt = "Hawk Heap
Title"/>
                        <img id = "msuLogo" src = "web_images/msu_logo.png" alt = "Montclair State
University Logo"/>
                </div>
                <!-- Red box design with a paragraph inside the box. This paragraph congratulates the user for
                creating a question and dynamically displays their question with the course number. -->
                <div id = "bodyBoxDesign" class = "centerContents">
                        <div>
                                <p class = "bodyParagraph" style = "font-size: 1.5vw; font-size: 1.5vh;">
                                Congradulations! your question <span style = "color: red"><?php echo
$courseNumber .': '. $question;?></span> has been successfully published to Hawk Heap!
                                Please click on the return button to return back to the main page!</p>
                        </div>
                        <!-- Hit the return button to return to the main page of the website. -->
                        <div class = "divSpacing">
                                <a href = "main_search.php" class = "linkVisibility">
                                        <img id = "returnButton" class = "tiltImage" src =
"web_images/return_button.png" alt = "Return Button"/>
                                </a>
                        </div>
                </div>
        </body>
                <!-- Implement copyright and year as well as my name and other footer details -->
        <footer>
                <div class = "centerContents">
                        <p class = "boldedText" style = "margin-top: 5%; font-size: 0.8vw">
                                &copy; 1995 - 2020 Arthur Levitsky.<br/>
                                Montclair State University - Computer Science and Technology.<br/>
                                CSIT 337 - Internet Computing.
                        </p>
                </div>
        </footer>
</html>
```

answer_page.php

```
<?php

	/* Use the following variables to connect to the database 'arthurteamdatabase'
		If the user recieves a MYSQL error, that means that script was unsuccessful
		in connecting to the database.
	*/

	$dsn = 'mysql:host=localhost; dbname=arthurteamdatabase';
	$user = 'arthurteam';
	$pass = 'arthurteampass';

	try {
		$db = new PDO($dsn, $user, $pass, array(PDO::ATTR_PERSISTENT => true));
	}
	catch (PDOException $e) {
		$error = $e->getMessage();
		include('database_error_page.php');
		exit();
	}

	// If the user hits the accept button to answer the question, this is true.
	if (isset($_POST['submit_button'])) {

		// Take the answer details that you posted and place them into a variable
		// Take the hidden value and post it into the $question variable.
		$answer = $_POST['quest_detail'];
		$question = $_POST['questionValue'];
		$rowCreate = '';

		// Generate a query from the questions table that utilizes the question column.
		$query = 'SELECT * FROM questions WHERE question = :question';
		$statementQuest = $db->prepare($query);
		$statementQuest->bindValue(":question", $question);
		$statementQuest->execute();

		// If the question is valid, this variable will be true.
		$questionValid = ($statementQuest->rowCount() == 1);
		$result = $statementQuest->fetch();
		$statementQuest->closeCursor();

		// Since the question is valid, fetch the course number and details of this question.
		if ($questionValid) {
```

```
                $courseNumb = $result['courseID'];
                $questionDetail = $result['questionDetail'];
                $questionID = $result['questionID'];
            }

            // Post the answer and questionID into the answers table.
            $insertToDatabase = "INSERT INTO answers (questionID, answer) VALUES
            ('$questionID', '$answer')";
            $db->query($insertToDatabase);

            // Create a query where the answer table displays all the answers that are associated
            // with this question based on the questionID. the answer table also utilizes the questionID
column
            $queryAnswers = 'SELECT * FROM answers WHERE questionID = :questionID';
            $statementAns = $db->prepare($queryAnswers);
            $statementAns->bindValue(":questionID", $questionID);
            $statementAns->execute();

            $allMatches = $statementAns->rowCount();
            $rowCreate = '';

            // If there are answers associated with the question, this will be true.
            if ($allMatches > 0) {
                // while the statement is still fetching the answers associated with the question...
                while ($row = $statementAns->fetch()) {
                    // keep adding onto the string the row and cell as well as the answer to the
question.
                    $rowCreate .= '<tr><td><p class = "bodyParagraph" style = "text-align: left;
font-size: 0.8vw">'. $row['answer'] .'</p></td></tr>';
                }
            }
            $db = null;
        }
        // If the user has not posted an answer, this will be true instead.
        else {

            // Previously, all questions that were generated in a table in the main page utilized
            // a hyperlink, when you click that link, it would direct to this page. However, that
            // hyperlink would also carry the actual question into this script as well meaning that
            // this variable holds the question with the hyper link you clicked on.
            $question = $_GET['question'];

            // Create a query for the question column in the questions table.
            $query = 'SELECT * FROM questions WHERE question = :question';
```

```
                $statementQuest = $db->prepare($query);
                $statementQuest->bindValue(":question", $question);
                $statementQuest->execute();

                // If the question is valid, and is in the database, this will be true.
                $questionValid = ($statementQuest->rowCount() == 1);
                $result = $statementQuest->fetch();
                $statementQuest->closeCursor();

                // If the statement is true, fetch the course number and question detail associated
                // with this question.
                if ($questionValid) {
                        $courseNumb = $result['courseID'];
                        $questionDetail = $result['questionDetail'];
                        $questionID = $result['questionID'];
                }

                // Create a query where the answer table displays all the answers that are associated
                // with this question based on the questionID. the answer table also utilizes the questionID
column
                $queryAnswers = 'SELECT * FROM answers WHERE questionID = :questionID';
                $statementAns = $db->prepare($queryAnswers);
                $statementAns->bindValue(":questionID", $questionID);
                $statementAns->execute();

                $allMatches = $statementAns->rowCount();
                $rowCreate = '';

                // If there are answers associated with the question, this will be true.
                if ($allMatches > 0) {
                        // while the statement is still fetching the answers associated with the question...
                        while ($row = $statementAns->fetch()) {
                                // keep adding onto the string the row and cell as well as the answer to the
question.
                                $rowCreate .= '<tr><td><p class = "bodyParagraph" style = "text-align: left;
font-size: 0.8vw">'. $row['answer'] .'</p></td></tr>';
                        }
                }
                // Otherwise, rowCreate will be empty string.
                else {
                        $rowCreate = '';
                }
                $db = null;
        }
```

```
?>
<!DOCTYPE html>

<html>
	<head>
		<meta charset = "utf-8"/>
		<title>Hawk Heap - Answer Page</title>
		<link rel = "shortcut icon" href = "web_images/favicon_hawkheap.png" type = "image/png"/>

		<!-- Style sheet implemented from mainStructure.css as well as style used within the file-->
		<link rel = "stylesheet" href = "mainStructure.css" type = "text/css"/>
		<style>
			#bodyBoxDesign {
				margin-left: auto;
				margin-right: auto;
				padding: 20px;
				margin-top: 50px;
				width: 30%;
				height: 30%;
				background-color: #ffcaca;
				border: 5px solid #ff0000;
				box-shadow: 3px 6px 20px;
			}

			table {
				border-collapse: collapse;
				width: 100%;
			}

			tr {
				border-bottom: 3px solid #ff0000;
			}

			td {
				width: 12%;
			}

			div.divSpacing {
				display: block;
				line-height: 2.5vw;
			}

			textarea {
				width: 98%;
```

```
                padding: 5px 5px;
                border: 1px solid black;
                font-size: 1.5vw;
                font-size: 1.5vh;
                border-radius: 5px;
                resize: none;
        }

        label.labelStyle {
                margin-top: 20%;
                display:inline-block;
                font-family: Copperplate,Copperplate Gothic Light,fantasy;
                font-size: 1vw;
                font-weight: bold;
                width: 35%;
        }

        button.submitButton {
                margin: auto;
                background-color: transparent;
                border: none;
                cursor: pointer;
                overflow: hidden;
                outline: none;
        }

        button:hover {
                transform: rotate(-5deg);
        }

        img:hover.imgHover {
                transform: rotate(-5deg);
        }

        a {
                color: black;
                text-decoration: none;
        }

        div.inline {
                display: inline-block;
        }

</style>
```

```
	</head>
	<body>
		<!-- Create top heading section of the website with the image and hawk heap title as well as
			montclair state university logo to the right-->
		<div id = "headerBoxDesign">
			<img id = "hawkHeapLogo" src = "web_images/hawkheap_logo.png" alt = "Hawk Heap
Logo"/>
			<img id = "hawkHeapTitle" src = "web_images/hawkheap_title.png" alt = "Hawk Heap
Title"/>
			<img id = "msuLogo" src = "web_images/msu_logo.png" alt = "Montclair State
University Logo"/>
		</div>

		<!-- Display the course number and title of the question as the title in this page. -->
		<div id = "bodyBoxDesign">
			<table>
				<tr>
					<td><p class = "bodyParagraph" style = "text-align: left; text-shadow:
2px 2px 3px;">
						<?php echo $courseNumb .': '. $question;?></p></td>
				</tr>
			</table>
				<!-- Display the question details of that question you clicked on. -->
				<p class = "bodyParagraph" style = "text-align: left; font-size: 1.7vw; font-size:
1.7vh; margin-bottom: 20%"><?php echo $questionDetail?></p>

			<table>
				<tr>
					<td><p class = "bodyParagraph" style = "text-align: left; text-shadow:
2px 2px 3px;">
					Answer(s):</p></td>
				</tr>
				<!-- Display all the answers associated with the question in this table-->
				<?php echo $rowCreate ?>
			</table>

			<!-- Create a form that holds a hidden value from the question, the reason we do this is
because when you reload the page after
				submitting the question, the $question will not exist anymore and will provide
errors. We need to somehow save this question. -->
			<form method = "post" action = "answer_page.php">
				<input type = "hidden" name = "questionValue" value = "<?php echo
$question;?>"/>
				<div class = "divSpacing">
```

```
                                        <label class = "labelStyle" style = "margin-right: 40%; font-size: 0.8vw"
for = "detail_sec">Send Answer:</label>
                                </div>
                                <div class = "divSpacing">
                                        <textarea rows = "8" name = "quest_detail" required></textarea>
                                </div>
                                <div class = "inline" style = "text-align: center; margin-left: 23%">
                                        <button class = "submitButton" type = "submit" name =
"submit_button">
                                                <img style = "width: 7vw" src =
"web_images/accept_button.png" alt = "Accept Button"/>
                                        </button>
                                </div>
                                <div class = "inline" style = "text-align: center">
                                        <a href = "main_search.php" class = "linkVisibility">
                                                <img class = "imgHover" style = "width: 7vw" src =
"web_images/return_button.png" alt = "Return Button"/>
                                        </a>
                                </div>
                        </form>
                </div>
        </body>
                <!-- Implement copyright and year as well as my name and other footer details -->
        <footer>
                <div class = "centerContents">
                        <p class = "boldedText" style = "margin-top: 3%; font-size: 0.8vw">
                                &copy; 2000 - 2020 Arthur Levitsky.<br/>
                                Montclair State University - Computer Science and Technology.<br/>
                                CSIT 337 - Internet Computing.
                        </p>
                </div>
        </footer>
</html>
```

database_error_page.php

```
<!DOCTYPE html>

<html>
	<head>
		<meta charset = "utf-8"/>
		<title>Hawk Heap - Database Error</title>
		<link rel = "shortcut icon" href = "web_images/favicon_hawkheap.png" type = "image/png"/>

		<!-- Style sheet implemented from mainStructure.css as well as style used within the file-->
		<link rel = "stylesheet" href = "mainStructure.css" type = "text/css"/>
		<style>
			#bodyBoxDesign {
				margin-left: auto;
				margin-right: auto;
				padding: 1%;
				margin-top: 50px;
				width: 30%;
				height: 30%;
				background-color: #ffcaca;
				border: 5px solid #ff0000;
				box-shadow: 3px 6px 20px;
			}
		</style>
	</head>

	<body>
		<!-- Create top heading section of the website with the image and hawk heap title as well as
			montclair state university logo to the right-->
		<div id = "headerBoxDesign">
			<img id = "hawkHeapLogo" src = "web_images/hawkheap_logo.png" alt = "Hawk Heap
Logo"/>
			<img id = "hawkHeapTitle" src = "web_images/hawkheap_title.png" alt = "Hawk Heap
Title"/>
			<img id = "msuLogo" src = "web_images/msu_logo.png" alt = "Montclair State
University Logo"/>
		</div>
		<!-- Create a box with the text inside being the error message that describes that the database is
not connected to the web server.-->
		<div id = "bodyBoxDesign" class = "centerContents">
			<div>
				<p class = "bodyParagraph" style = "font-size: 1.5vw; font-size: 1.5vh;"><span
style = "color: red"><?php echo $error;?></span>
```

```
                        </div>
                </div>
        </body>
                <!-- Implement copyright and year as well as my name and other footer details -->
        <footer>
                <div class = "centerContents">
                        <p class = "boldedText" style = "margin-top: 5%; font-size: 0.8vw">
                                &copy; 1995 - 2020 Arthur Levitsky.<br/>
                                Montclair State University - Computer Science and Technology.<br/>
                                CSIT 337 - Internet Computing.
                        </p>
                </div>
        </footer>
</html>
```

Database and Script File:

arthurteam.sql

```
-- phpMyAdmin SQL Dump
-- version 5.0.1
-- https://www.phpmyadmin.net/
--
-- Host: 127.0.0.1
-- Generation Time: Apr 29, 2020 at 03:36 AM
-- Server version: 10.4.11-MariaDB
-- PHP Version: 7.4.3

SET SQL_MODE = "NO_AUTO_VALUE_ON_ZERO";
SET AUTOCOMMIT = 0;
START TRANSACTION;
SET time_zone = "+00:00";


/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!40101 SET NAMES utf8mb4 */;

--
-- Database: `arthurteamdatabase`
--

-- --------------------------------------------------------

--
-- Table structure for table `answers`
--

CREATE TABLE `answers` (
  `ansID` int(11) NOT NULL,
  `questionID` int(1) NOT NULL,
  `answer` varchar(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--
-- Dumping data for table `answers`
--
```

```
INSERT INTO `answers` (`ansID`, `questionID`, `answer`) VALUES
(7, 10, 'In computer science, a for-loop (or simply for loop) is a control flow statement for specifying iteration, which allows code to be executed repeatedly.'),
(19, 42, 'HTTP is the foundation of data communication for the World Wide Web, where hypertext documents include hyperlinks to other resources that the user can easily access, for example by a mouse click or by tapping the screen in a web browser.'),
(22, 46, 'Merge Sort is a stable sort which means that the same element in an array maintain their original positions with respect to each other. Overall time complexity of Merge sort is O(nLogn).'),
(24, 10, 'I really like for loops. They are very nice to use.'),
(25, 49, 'MIPS assembly is very fun to use. There is a lot that goes into it. Pay attention to your professor. ');

-- --------------------------------------------------------

--
-- Table structure for table `hh_users`
--

CREATE TABLE `hh_users` (
  `userID` bigint(11) NOT NULL,
  `username` varchar(255) NOT NULL,
  `email` varchar(255) NOT NULL,
  `password` varchar(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;

--
-- Dumping data for table `hh_users`
--

INSERT INTO `hh_users` (`userID`, `username`, `email`, `password`) VALUES
(27, 'anonymous123', 'hello123@gmail.com', 'sesame101');

-- --------------------------------------------------------

--
-- Table structure for table `questions`
--

CREATE TABLE `questions` (
  `questionID` int(11) NOT NULL,
  `courseID` tinytext DEFAULT NULL,
  `question` text NOT NULL,
  `questionDetail` text NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
```

```
--
-- Dumping data for table `questions`
--

INSERT INTO `questions` (`questionID`, `courseID`, `question`, `questionDetail`) VALUES
(10, 'CSIT 104', 'What is a for loop?', 'Hello! I am fairly new to programming! So far I am enjoying this class! I just had a question, what is a for loop? Thank you in advance.'),
(16, 'CSIT 230', 'What is an ALU?', 'Sorry! Just been having trouble understanding what an ALU is. Thank you!'),
(42, 'CSIT 340', 'What is the HTTP protocol?', 'Hello! I need help with HTTP protocol. What is it?'),
(46, 'CSIT 212', 'What is the time complexity of the Merge Sort Algorithm?', 'Hello there! I am a bit confused about the time complexity of the merge sort algorithm. Please help me! It would be much appreciated!'),
(49, 'CSIT 340', 'What is MIPS assembly?', 'Hello! I am very confused on MIPS assembly!');

--
-- Indexes for dumped tables
--

--
-- Indexes for table `answers`
--
ALTER TABLE `answers`
  ADD PRIMARY KEY (`ansID`);

--
-- Indexes for table `hh_users`
--
ALTER TABLE `hh_users`
  ADD PRIMARY KEY (`userID`);

--
-- Indexes for table `questions`
--
ALTER TABLE `questions`
  ADD PRIMARY KEY (`questionID`);

--
-- AUTO_INCREMENT for dumped tables
--

--
-- AUTO_INCREMENT for table `answers`
--
```

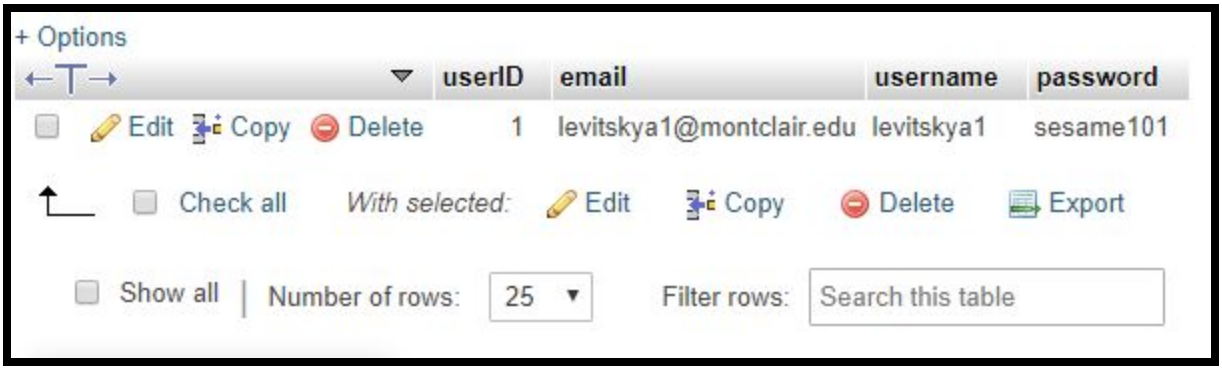
```
ALTER TABLE `answers`
  MODIFY `ansID` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=26;

--
-- AUTO_INCREMENT for table `hh_users`
--
ALTER TABLE `hh_users`
  MODIFY `userID` bigint(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=28;

--
-- AUTO_INCREMENT for table `questions`
--
ALTER TABLE `questions`
  MODIFY `questionID` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=50;
COMMIT;

/*!40101 SET CHARACTER_SET_CLIENT=@OLD_CHARACTER_SET_CLIENT */;
/*!40101 SET CHARACTER_SET_RESULTS=@OLD_CHARACTER_SET_RESULTS */;
/*!40101 SET COLLATION_CONNECTION=@OLD_COLLATION_CONNECTION */;
```

The Database Layout: What are the database tables and their attributes?

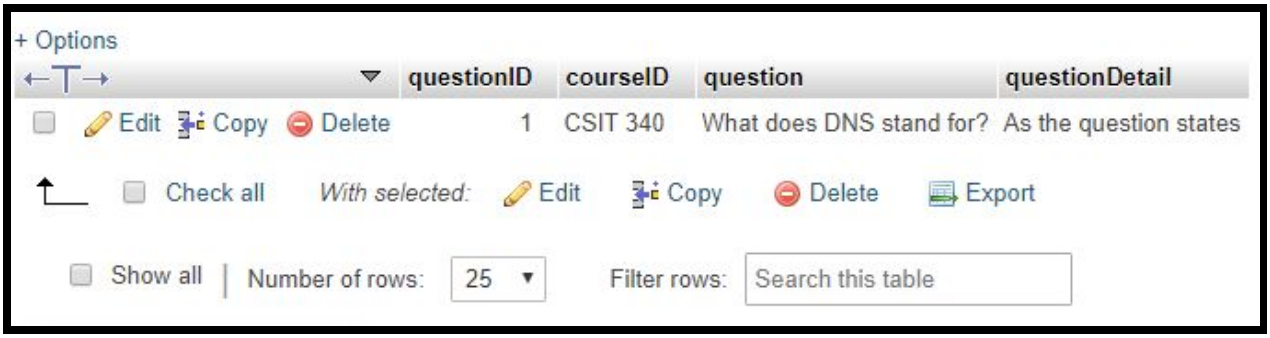
- All the tables in *arthurteamdatabase* database in MySQL.

Table	Action	Rows	Type	Collation	Size	Overhead
answers	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
hh_users	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
questions	Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
3 tables	Sum	0	InnoDB	utf8mb4_general_ci	48.0 KiB	0 B

- The attributes inside the *hh_users* table. The current values inside the table are place holders for what the actual database would look like if it filled up with accounts.



- The attributes inside *questions* table. The current values inside the table are place holders for what the actual database would look like if it filled up with questions.

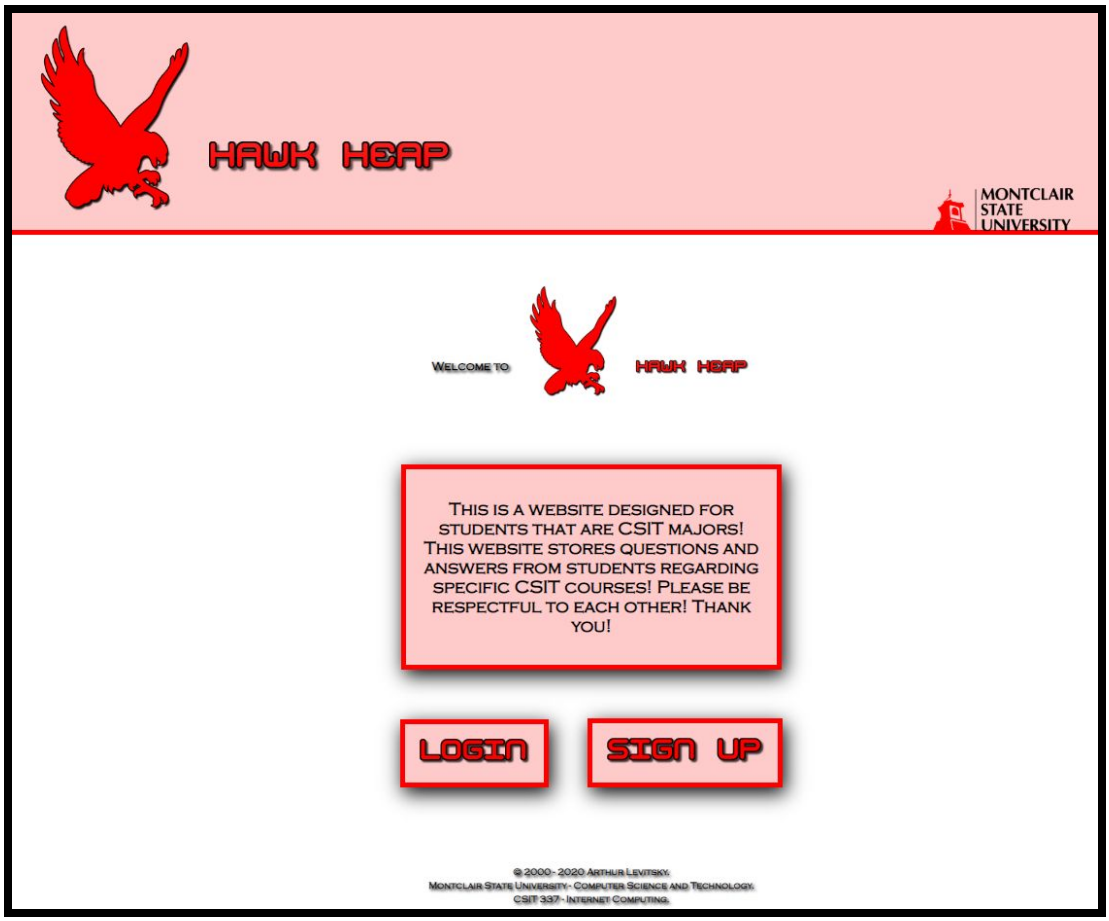


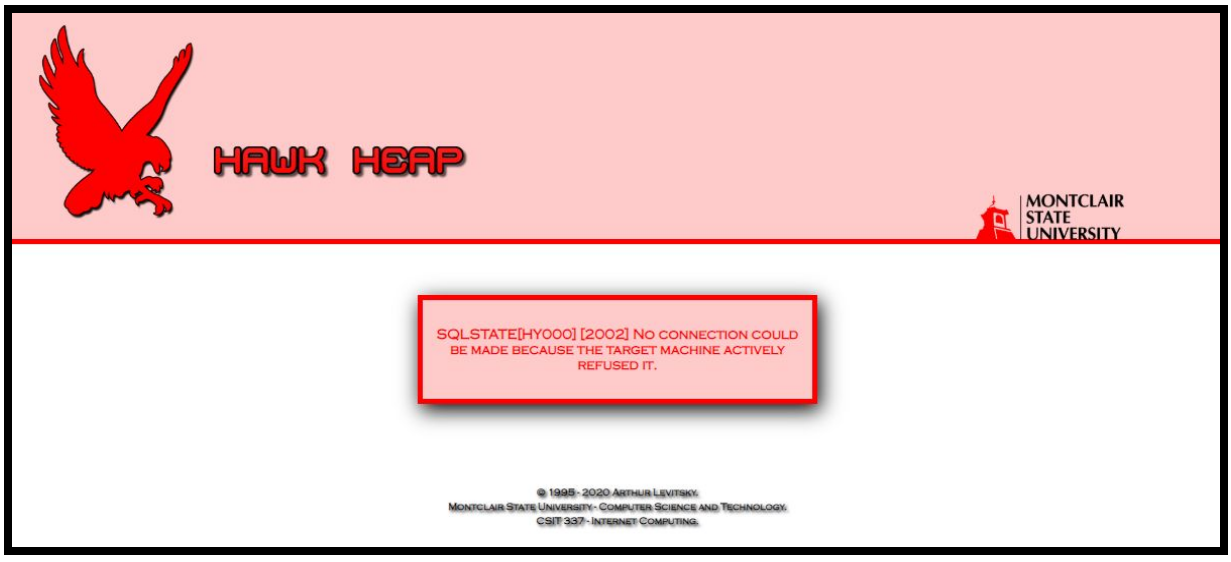
- The attributes inside *answers* table. The current values inside the table are place holders for what the actual database would look like if it filled up with answers.

- The user access username for *arthurteamdatabase*

Website Screenshots:

- NOTE: You can visit the user manual if you want to use the screenshots with the steps to use the website.





HAWK HEAP
MONTCLAIR STATE UNIVERSITY
SIGN UP FORM
USERNAME:
anonymous123
E-MAIL:
hello123@gmail.co
PASSWORD:
ACCEPT
WELCOME! YOU MUST SIGN UP TO VIEW THE CONTENTS OF THIS SITE!
© 2000 - 2020 ARTHUR LEVITSKY.
MONTCLAIR STATE UNIVERSITY - COMPUTER SCIENCE AND TECHNOLOGY.
CSIT 337 - INTERNET COMPUTING.

HAWK HEAP
MONTCLAIR STATE UNIVERSITY
SIGN UP FORM
USERNAME:
username123
E-MAIL:
you@email.com
PASSWORD:
ACCEPT
ERROR: PLEASE USE A DIFFERENT USERNAME OR EMAIL!
© 2000 - 2020 ARTHUR LEVITSKY.
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HAWK HEAP
MONTCLAIR STATE UNIVERSITY
CONGRADULATIONS ANONYMOUS123! YOU HAVE SUCCESSFULLY CREATED AN ACCOUNT AT HAWK HEAP! PLEASE CLICK ON THE RETURN BUTTON TO RETURN BACK TO THE HOME PAGE!
RETURN
© 1995 - 2020 ARTHUR LEVITSKY.
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CSIT 337 - INTERNET COMPUTING.

HAWK HEAP
MONTCLAIR STATE UNIVERSITY
LOGIN FORM
USERNAME:
username123
PASSWORD:
****
ACCEPT
ERROR: UNFORTUNATELY THE USERNAME OR PASSWORD YOU ENTERED IS NOT CORRECT! PLEASE TRY AGAIN!
© 1995 - 2020 ARTHUR LEVITSKY.
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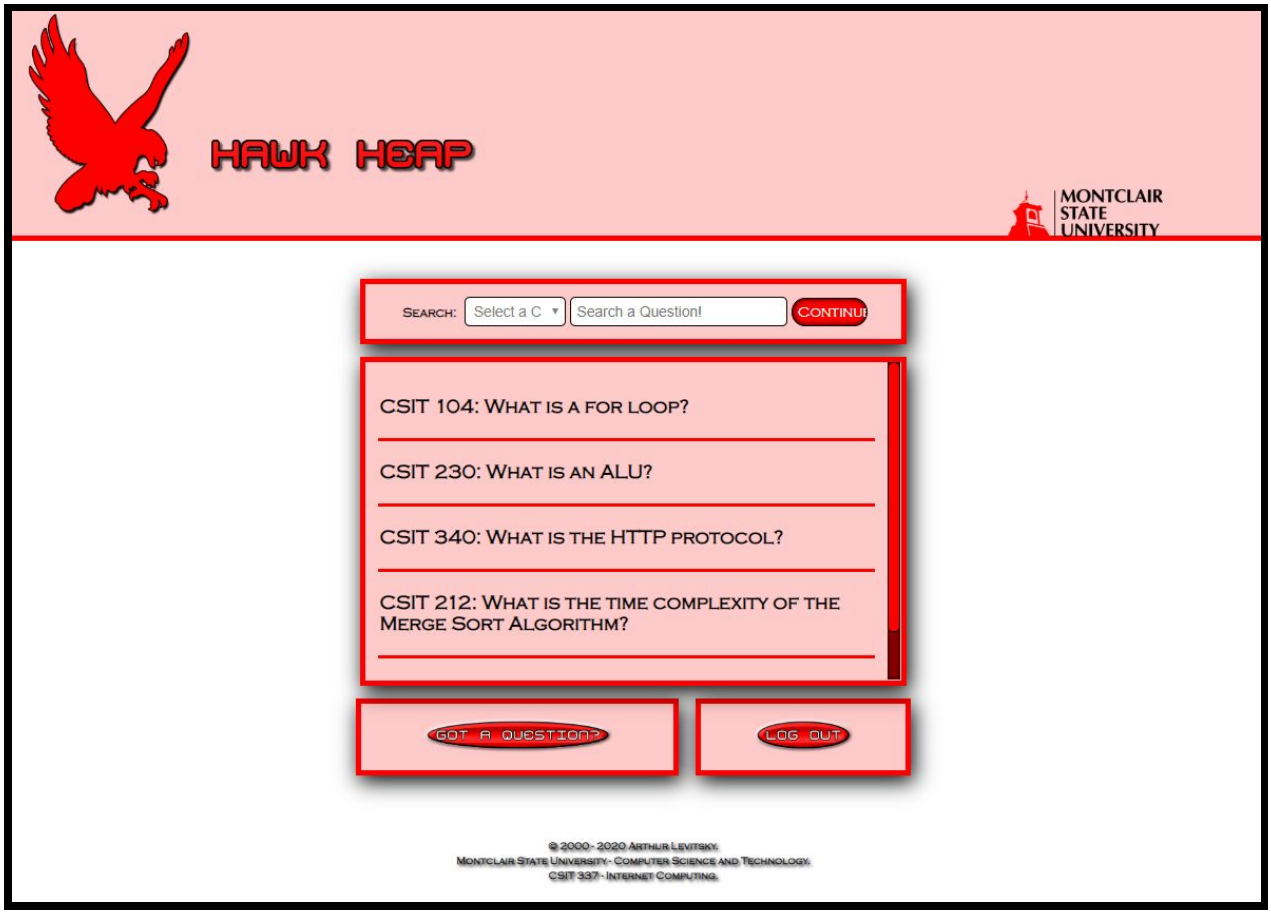
CSIT 337 - INTERNET COMPUTING.


HAWK HEAP
MONTCLAIR STATE UNIVERSITY
SEARCH:
Select a C
Search a Question!
CONTINUE
CSIT 104: WHAT IS A FOR LOOP?
CSIT 230: WHAT IS AN ALU?
CSIT 340: WHAT IS THE HTTP PROTOCOL?
CSIT 212: WHAT IS THE TIME COMPLEXITY OF THE MERGE SORT ALGORITHM?
GOT A QUESTION?
LOG OUT
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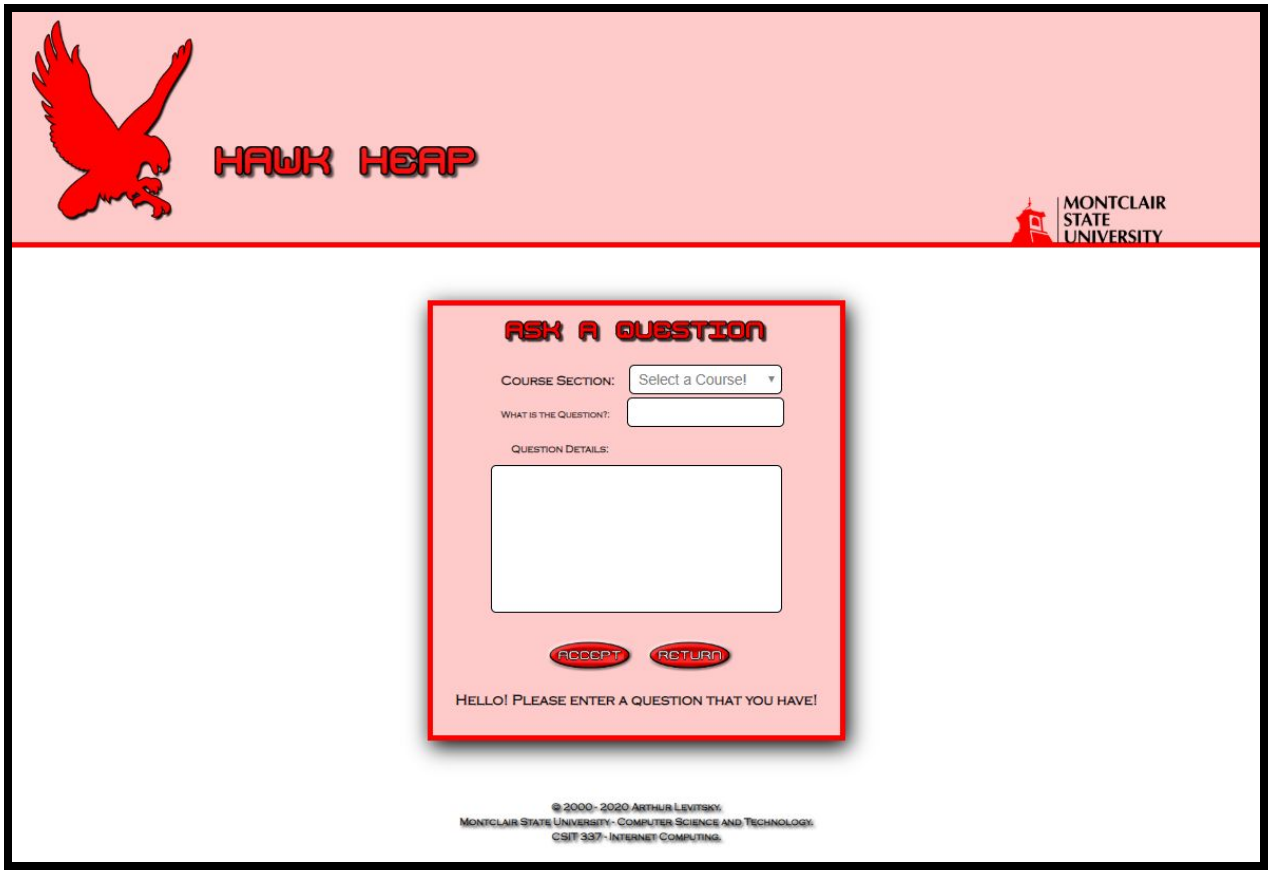
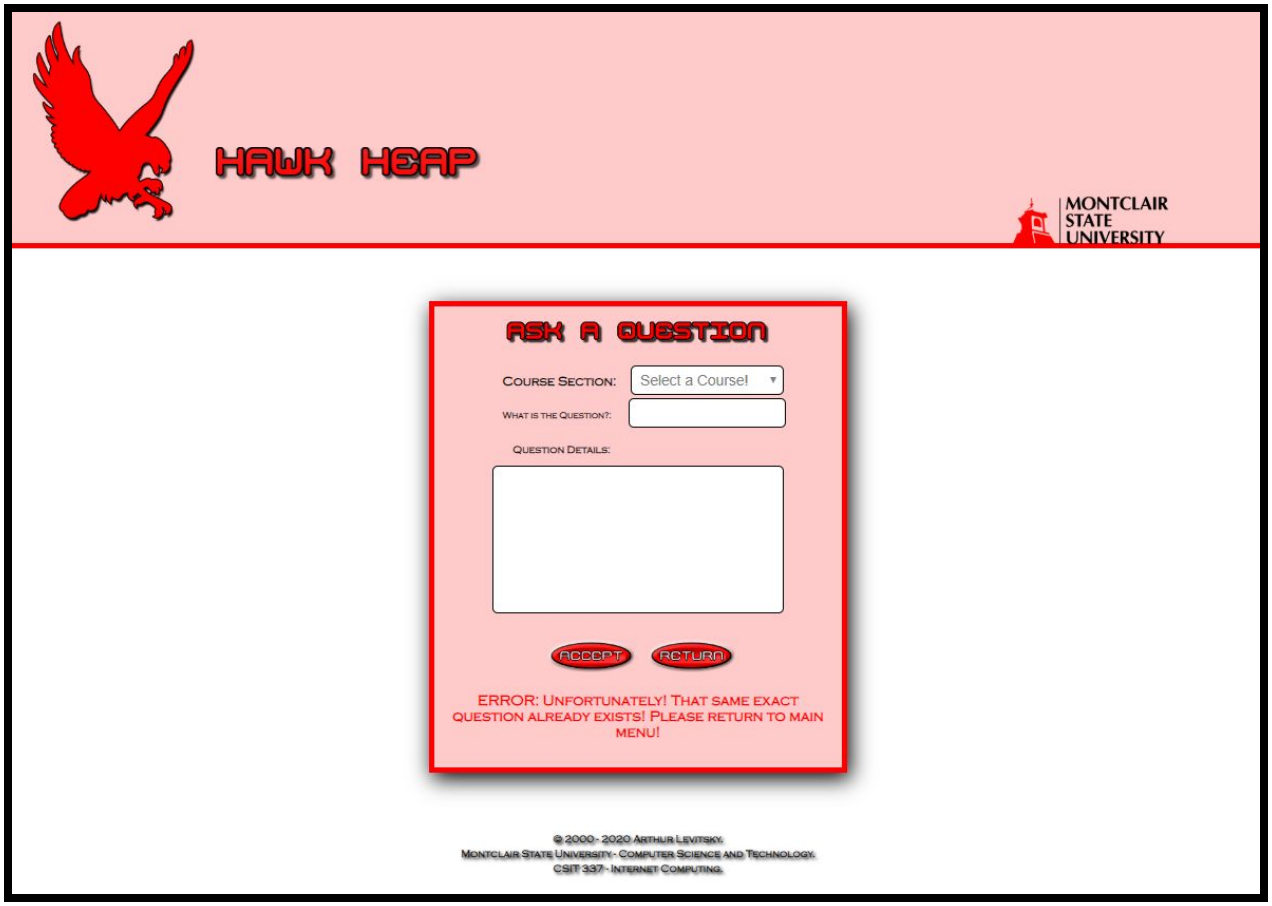
CSIT 337 - INTERNET COMPUTING.


HAWK HEAP
MONTCLAIR STATE UNIVERSITY
ASK A QUESTION
COURSE SECTION:
Select a Course!
WHAT IS THE QUESTION?:
QUESTION DETAILS:
ACCEPT
RETURN
HELLO! PLEASE ENTER A QUESTION THAT YOU HAVE!
© 2000 - 2020 ARTHUR LEVITSKY,
MONTCLAIR STATE UNIVERSITY - COMPUTER SCIENCE AND TECHNOLOGY.
CSIT 337 - INTERNET COMPUTING.


HAWK HEAP
MONTCLAIR STATE UNIVERSITY
ASK A QUESTION
COURSE SECTION:
Select a Course!
WHAT IS THE QUESTION?:
QUESTION DETAILS:
ACCEPT
RETURN
ERROR: UNFORTUNATELY! THAT SAME EXACT QUESTION ALREADY EXISTS! PLEASE RETURN TO MAIN MENU!
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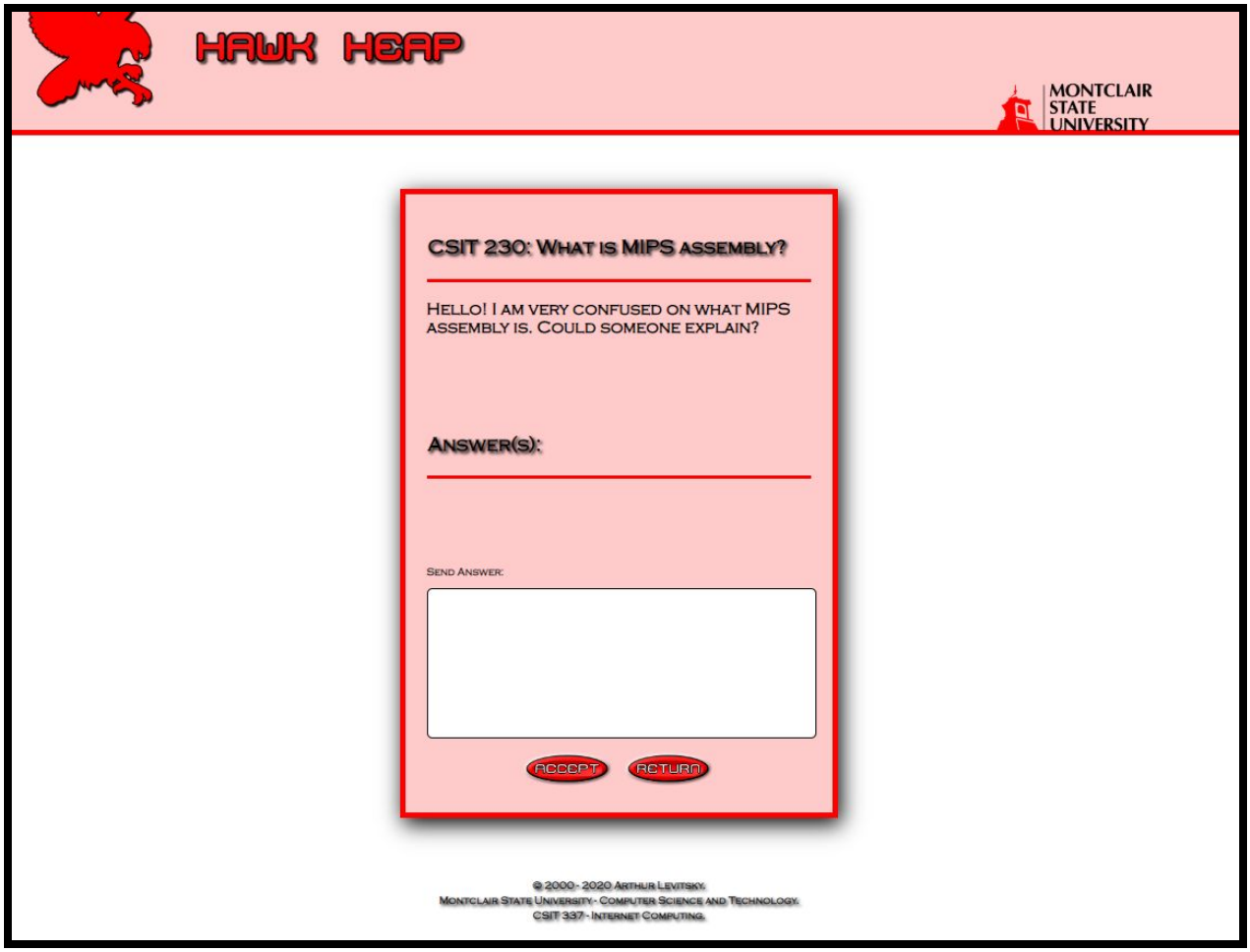
CSIT 337 - INTERNET COMPUTING.

HAWK HEAP
MONTCLAIR STATE UNIVERSITY
CONGRADULATIONS! YOUR QUESTION CSIT 230: WHAT IS MIPS ASSEMBLY? HAS BEEN SUCCESSFULLY PUBLISHED TO HAWK HEAP! PLEASE CLICK ON THE RETURN BUTTON TO RETURN BACK TO THE MAIN PAGE!
RETURN
© 1995 - 2020 ARTHUR LEVITSKY.
MONTCLAIR STATE UNIVERSITY - COMPUTER SCIENCE AND TECHNOLOGY.
CSIT 337 - INTERNET COMPUTING.


HAWK HEAP
MONTCLAIR STATE UNIVERSITY
CSIT 230: WHAT IS MIPS ASSEMBLY?
HELLO! I AM VERY CONFUSED ON WHAT MIPS ASSEMBLY IS. COULD SOMEONE EXPLAIN?
ANSWER(S):
SEND ANSWER:
ACCEPT
RETURN
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MONTCLAIR STATE UNIVERSITY - COMPUTER SCIENCE AND TECHNOLOGY.
CSIT 337 - INTERNET COMPUTING.

MONTCLAIR STATE UNIVERSITY
CSIT 230: What is MIPS assembly?
Hello! I am very confused on what MIPS assembly is. Could someone explain?
Answer(s):
MIPS assembly language simply refers to the assembly language of the MIPS processor. The term MIPS is an acronym which stands for Microprocessor without Interlocked Pipeline Stages.
Send Answer:
Accept
Return
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CSIT 337 - Internet Computing.

Website Demo Video:

This is a video demonstration on my website:

- https://www.youtube.com/watch?v=izXsBuYLUuM