CEN 4010 Principles of Software Engineering

Summer 2021

07/24/21

Milestone 4 Beta Launch

&

Final Project Reviews

Agile Development Team Group 3

ADevTG3

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History Table

Date	Revision History	Revision Class	Comments
06/15/2021	1.0.0	Original	
06/15/2021	1.0.1	Add/ Remove	Added Key Risks and High Level UML sections Modified High Level System Architecture, Database Organization, Competitive Analysis, Executive Summary, High Level Functional Requirements, and Non-Functional Requirements.
7/23	1.0.2	Add	Product Summary, Usability Test Plan, QA Test Plan, Code Review, Self-Check Best practices for security, Adherence to original Non functional specs

Team

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Product summary

1.)OwlPost is the name of our product

2.) Posts, replies, photos, friends are all the Final Priority 1 functions.

3.) Social media has become a powerful source at spreading news and connecting people worldwide by enabling a seamless exchange of information and ideas. Even though not all information spread are good and can be bad or even harmful, OwlPost is driven to help connect the Florida Atlantic University population connect with each other at ease. Whether its connecting with each other as friends who are within the similar course work and very cooperative together. A fast an easy way to comment and reply on comment post that may be beneficial to one another whether it be conducting activities for organizations, or a simple meet and greet. Lastly, being able to post photos to help empower a organizations influence on campus to bring more participants for a better turn out, or just a simple pizza party that may be held in one of the campus activity room in a dormitory. These are some of the unique feature OwlPost provides.

4.) Lamp.cse.fau.edu/~cen4010_su21_g03/login.php

Usability test plan

Function to be tested: Posting

Test Objectives: To check the reliability of the posting function and to test its ability to handle unexpected inputs.

Test plan:System setup will involve registering for the website if not done so already. If the user has already registered they will login. The starting point will be at the user's welcome page. The task to be completed will be creating a post on the website. The intended user would be for the people who use the website to post content. Completion Criteria is the successful creation of a post. The URL of the system to be tested is https://lamp.cse.fau.edu/~cen4010_su21_g03/welcome.php

Questionnaire Form
Please use an "X" to mark a box.

	Agree	Neutral	Disagree	N/A
It was easy to make a post	X			
The user interface was easy to understand		X		
The website worked as Expected	X			
The website performed quickly	X			
The user interface looked good			X	

QA Test Plan

Test Objectives: Find faults with the posts function by inputting unique and potentially unexpected posts/characters. While also testing its ability to be used on different internet browsers.

Hardware and software setup: A computer is required to post. You must have an internet browser in order to access the page. You will need an account on the website in order to post.

Feature to be tested: The post feature.

QA Browesr - Google Chrome

Test #	Test Title	Description	Input	Correct Output	PASS or Fail
1	Char Limit	Will be inputting 71537 characters into the post	Excluded due to space Reasons	Only the first 250 characters	PASS
2	Special Characters	Using special characters and symbols from other languages	♧♣@½‰ð這是一個測驗	♧♣@½‰ð這是一個測驗	PASS
3	HTML Injection Attack	Will be using a non-destructive injection for safety	<script>alert("123")</script>	<script>alert("123")</script>	FAIL

Test 1: Has passed as it limited the input to 250 characters like expected except it allowed me to put more than 250 characters into the box. Not system breaking only Quality of life.

Test 2: Handled the different characters correctly.

Test 3: The website failed during the test and it ended up posting white space. It then failed to post the next post. After that it returned to normal operations.

QA Browesr - Microsoft Edge

Test #	Test Title	Description	Input	Correct Output	PASS or Fail
1	Char Limit	Will be inputting 71537 characters into the post	Excluded due to space Reasons	Only the first 250 characters	PASS
2	Special Characters	Using special characters and symbols from other languages	♣♣@½‰ð這是一個測驗	♣♣@½‰ð這是一個測驗	PASS
3	HTML Injection Attack	Will be using a non-destructive injection for safety	<script>alert("123")</script>	<script>alert("123")</script>	Complete Failure

Test 1: Has passed as it limited the input to 250 characters like expected except it allowed me to put more than 250 characters into the box. Not system breaking only Quality of life.

Test 2: Handled the different characters correctly.

Test 3: The Website is suddenly no longer able to handle the code correctly and now displays a constant pop up saying "123".

Code Review

The Code for Functions Posts

```php
<?php

$target_dir = "owlPost_img/";
$target_file = $target_dir . basename($_FILES["fileToUpload"]["name"]);
$uploadOk = 1;
$imageFileType = strtolower(pathinfo($target_file,PATHINFO_EXTENSION));
// Check if image file is a actual image or fake image
if(isset($_POST["submit"])) {
  $check = getimagesize($_FILES["fileToUpload"]["tmp_name"]);
  if($check !== false) {
    echo "File is an image - " . $check["mime"] . ".";
    $uploadOk = 1;
  } else {
    echo "File is not an image.";
    $uploadOk = 0;
  }
}
// Check if file already exists
if (file_exists($target_file)) {
  echo "Sorry, file already exists.";
  $uploadOk = 0;
}
// Check file size
if ($_FILES["fileToUpload"]["size"] > 500000) {
  echo "Sorry, your file is too large.";
  $uploadOk = 0;
}
// Allow certain file formats
if($imageFileType != "jpg" && $imageFileType != "png" && $imageFileType != "jpeg"
&& $imageFileType != "gif" ) {
  echo "Sorry, only JPG, JPEG, PNG & GIF files are allowed.";
  $uploadOk = 0;
}
```

```php
// Check if $uploadOk is set to 0 by an error
if ($uploadOk == 0) {
  echo "Sorry, your file was not uploaded.";
// if everything is ok, try to upload file
} else {
  if (move_uploaded_file($_FILES["fileToUpload"]["tmp_name"], $target_file)) {
    echo "The file ". htmlspecialchars( basename( $_FILES["fileToUpload"]["name"])). " has been uploaded.";
  } else {
    echo "Sorry, there was an error uploading your file.";
  }
}
?>
```

Comments

Ssolos 07/18/2021
I see

tonkatonk 07/18/2021
since it's no longer part of the original registration

Ssolos 07/18/2021
okay give me a min and ill try to come up with something
SELECT UserID FROM Users WHERE fname is NULL
with the little ' around userid and users

tonkatonk 07/18/2021
beautiful
ok, can we narrow it down a little bit more. I specifically want it to check if a specific userID/username has a NULL fname

Ssolos 07/18/2021
if the user has a null hmm

tonkatonk 07/18/2021
yeah idk if there's a way for sql to return that check

Ssolos 07/18/2021
I think i can make something
SELECT CASE WHEN EXISTS (SELECT *
        FROM UserID
        WHERE UserID =
        AND fname is NULL
)
        THEN CAST(1 AS BIT)
        ELSE CAST(0 AS BIT) END

*

No promise it will work as SQL doesnt really return stuff like this
but basially you put the UserID where on the right side of the "UserID =" and it should return either a 1 or 0
and idk if end needs to be their prob not

July 19, 2021

tonkatonk 07/18/2021
So if I go to sql and I enter `INSERT INTO Posts(UserID, txtPosts) Values (?,?)` (I changed content to txtPosts in db)
it adds stuff to the database, however, when I'm trying to do it through php it's saying I have an issue with database

Ssolos 07/18/2021
Did you also add a postid and a datacreated
as I make it so they cant be NULL

tonkatonk 07/18/2021
shouldn't the ID and date be auto generating?
Because in sql it auto generates them

Ssolos 07/18/2021
hang on
any more info from the error or is just legit just issue with database

tonkatonk 07/18/2021
I wish I had more, and the issue with the database is "loose" as it's an error code that's coded into my stuff

Ssolos 07/18/2021
I see

tonkatonk 07/18/2021
It's the same command, Idk how it could be failing

```
if(empty($txt_err)){

    // Prepare an insert statement
    $sql = "INSERT INTO Posts(UserID, txtPost) VALUES (?,?)";

    if($stmt = mysqli_prepare($link, $sql)){
        // Bind variables to the prepared statement as parameters
        mysqli_stmt_bind_param($stmt, "ss", $param_UserID, $param_txt);

        // Set parameters
        $param_txt = $txt;
        $param_UserID = $_SESSION["id"];

        // Attempt to execute the prepared statement
        if(mysqli_stmt_execute($stmt)){
            // Refresh page
            header("location: post.php");
        } else{
            echo "Oops! Something went wrong with database. Please try again later.";
        }
    }
```

Ssolos 07/18/2021
ah you have been memed on
The name is not txtPosts its txtPost
oh wait your code has it right

tonkatonk 07/18/2021
lol the switcharoo
I've tried making sure userID is an integer so the variable type matches and all

tonkatonk 07/18/2021
yeah
And I've verified that the $_SESSION returns that userID

Ssolos 07/18/2021
SQL query:

INSERT INTO Posts(UserID, txtPost) Values (1,12)
MySQL said: Documentation

#1452 - Cannot add or update a child row: a foreign key constraint fails (`cen4010_su21_g03`.`Posts`, CONSTRAINT `UserID` FOREIGN KEY (`UserID`) REFERENCES `Users` (`UserID`) ON DELETE CASCADE ON UPDATE NO ACTION)
this is prob the issue

tonkatonk 07/18/2021
try it with userID 13

Ssolos 07/18/2021
SQL query:

INSERT INTO Posts(UserID, txtPost) Values (13,12)
MySQL said: Documentation

#1062 - Duplicate entry '13' for key 'Foreign'
okay mistake found also
as we cant have multiple posts from one suer

tonkatonk 07/18/2021
AHH so it is the userID
that's a big problem

Self-check on best practices for security

Major assets-

system, application output file, document, database, or web page

text content, graphics, photographs, videos, audio files, and databases

Db Encryption-

The database encryption if followed through by HTTPS through our _____ which is a cloud computing platform for developing and hosting web applications. Ensuring that passwords are protected.

Input Data Validation-

We checked the validation of inputting the email address ensuring that the email address provided by the user contains two parts and separated with an @ symbol. Secondly the domain part of the user's email contains only letters, numbers, hyphens (-) and periods (.).Lastly the first part of the email (before the @) should be no more than a certain amount characters in which we decided 43 characters assuming the total length of the user email address not being more than 86 characters, and that the application can successfully send emails to it.

Self-check: Adherence to original Non-functional specs

Security DONE

1. Login requirements - access levels, CRUD levels

2. Password requirements - length, special characters, expiry, recycling policies

3. Inactivity timeouts – durations, actions

Performance DONE

1. Response times - application loading, screen open and refresh times

2. Processing times – functions, calculations, imports, exports

3. Query and Reporting times – initial loads and subsequent loads

Recovery ON TRACK

1. Recovery process – User able to recover where left off

Compatibility ON TRACK

1. Compatibility on different operating systems – IOS, Android, Windows

2. Compatibility on different platforms – Mobile devices such as Cell Phones and tablets, PC

Usability DONE

1. Look and feel standards - screen element density, layout and flow, colors, UI metaphors, keyboard shortcuts

2. Internationalization / localization requirements – languages, spellings, keyboards, paper sizes

Documentation DONE

1. Required documentation items and audiences for each item