CEN 4010 Principles of Software Engineering, Spring 2018.

Milestone 4:

Beta Launch and Final Project Reviews

Date: FEB 19th, 2018

Team Name: ELEVEN, PROJECT ELEVEN.

Team Number: 11

Repository Link: [Team 11 Github](https://github.com/cen4010-s2018-g11/Team_11)

Roster:

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Product Summary: The part store

Our website is an Online store with hardware parts for classes such as Logic Design, Microprocessors and Electronics.

* Functions:

Under Services we have following functions:

-Appointment with a Consultant. For people that do not know what hardware parts they need, we created a button that allows you to pick a date and time and sign up for an appointment with one of our consultants.

-Soldering workshop. For beginners we created a Soldering workshop that we can sign up for under services. The workshop is free and provides soldering equipment with one of our consultants that can help you learn how to solder.

-Online user guide. If a person is not familiar with hardware parts we created an online user guide that is available under a button on the services page. The user guide offers pictures and description of the hardware.

* Rentals:

-if a person can not afford certain equipment we have an option to rent items.

Available hardware for rent:

Logic Boards, Microprocessor packet, Design packet with Raspberry pie, Soldering iron, Digital multimeter, wire stripper and third hand tool.

Returns- if a person is not satisfied with a product there is an option to return it. Under returns the user can choose a part and write the reason for return. The user has an option to replace an item or get a refund.

Our online store has many unique features such as being able to sign up for free soldering workshop and also a free online user guide which could be very helpful for beginners.

<http://lamp.cse.fau.edu/~CEN4010_S2018g11/homepage/rentals.php>

<http://lamp.cse.fau.edu/~CEN4010_S2018g11/homepage/services.php>

<http://lamp.cse.fau.edu/~CEN4010_S2018g11/homepage/returns.php>

<http://lamp.cse.fau.edu/~CEN4010_S2018g11/About.html>

<http://lamp.cse.fau.edu/~CEN4010_S2018g11/user/register.php>

Usability test plan

Testing:

I will be testing one of functions which is SEARCH.

The objective for this test is to see if a user is able to search parts in our database. I will enter a serial number and names of few parts and see if the function will find the item in the database and display it. If the name entered does not match the item in the database the error will occur NO ITEMS FOUND. No items found can also occur if the user wants to buy a part that we do not have in stock.

Test plan and system setup :

This test is intended for future costumers of our store.

-in order to get to our store a costumer has to open an internet browser and go to our website. In the menu bar on the top of our page the user has to click on the SEARCH button. In order to test the functionality of our page I will search few part names and see if the product comes up. The test is completed if all criteria are met which are, website connecting with the database, finding the part based on name and serial number and displaying the item on the page. Many costumers do not know the serial number of each item so during this test I will focus mostly on part’s names.

<http://lamp.cse.fau.edu/~CEN4010_S2018g11/search.php>

Survey:

In scale of 1 to 5 ,was it easy to find the search function on our website ?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Poor | Below Avg. | Average | Above Avg. | Great |
| 1 | 2 | 3 | 4 | 5 |

Were you able to find the part that you were looking for, if yes are you happy with the way it was displayed ?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Poor | Below Avg. | Average | Above Avg. | Great |
| 1 | 2 | 3 | 4 | 5 |

In scale of 1 to 5, how well is the website implemented and is it user friendly and easy to use ?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Poor | Below Avg. | Average | Above Avg. | Great |
| 1 | 2 | 3 | 4 | 5 |

QA test plan

The objective of this test is to see how well the search function is implemented.

In order to complete the test the user/costumer has to have an access to a Computer or smartphone and access our store online. The feature that we are testing is a search bar under SEARCH button on the menu that displays searched items. The goal of this test is to see if searched items are being displayed and how well the information is displayed on the page.

LINK to test done on the live server: <https://youtu.be/MiHn5bcNRBU>

Test results:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test # | Test Title | Test Input | Expected output | Test results  (pass/fail) | Google Chrome | Safari |
| Test 1 | Item number 1 | RQ-10R  10 Ohm 5% MCF | RQ-10r  Part name : 10 Ohm 5% MCF | Pass | Worked on chrome | Worked on iphone version in Safari |
| Test 2 | Item number 2 | Transistor | All available transistors | Pass | Worked on Chrome | Safari works great |
| Test 3 | Item number 3 | Zener Diode | Serial number : 1n751a, product name and image | Pass | Worked on chrome | Worked in Safari |

The Search function works properly and is very easy to use. After entering the part name, an item is displayed with all information about it and also a picture which is great for beginners. The function is well implemented and is easy to locate on the store’s page. In todays age most people browse the internet through smartphones so one of the goals of this test was to see how well the product works on the iphone. After completing the test, I thing the web page is very good customized and looks great on both PC and a smartphone device.

Code Review

1. <!DOCTYPE html**>**
2. **<html>**
3. **<head>**
4. **<title>**Home**</title>**
5. **<link** rel="stylesheet" type="text/css" href="style.css"**>**
7. **<head>**
8. **<title>**Registration system PHP and MySQL**</title>**
9. **<link** rel="stylesheet" type="text/css" href="style.css"**>**
11. **<meta** name="viewport" content="width=device-width, initial-scale=1"**>**
12. **<style>**
13. body {
14. margin: 0;
15. font-family: Arial, Helvetica, sans-serif;
16. background-color: LIGHTGRAY;
17. }
19. .topnav {
20. overflow: hidden;
21. background-color: ROYALBLUE;
22. border: 3px solid red;
23. }
25. .topnav a {
26. float: left;
27. color: #f2f2f2;
28. text-align: center;
29. padding: 14px 16px;
30. text-decoration: none;
31. font-size: 17px;
33. }
35. .topnav a:hover {
36. background-color: #ddd;
37. color: black;
38. }
40. .topnav a.active {
41. background-color: ROYALBLUE;
42. color: white;
43. }
44. footer {
45. position: fixed;
46. left: 0;
47. bottom: 0;
48. right: 0;
49. background-color: ROYALBLUE;
50. color: ROYALBLUE;
51. text-align: center;
52. border: 3px solid red;
54. }
55. **</style>**
56. **</head>**
57. **<body>**
58. **<div** class="topnav"**>**
59. **<a** class="active" href="#home"**>**E11even**</a>**
60. **<a** href="Products.php"**>**Products**</a>**
61. **<a** href="search.php"**>**Search**</a>**
62. **<a** href="../About.html"**>**About**</a>**
63. **<a** href="login.php"**>**Login**</a>**
64. **<a** href="register.php"**>**Register**</a>**
65. **</div>**
66. **<div** align="center"**>**
67. **<div** class="mainHeader"**>**
68. **<h1>**E11even**</h1>**
69. **<h2>**We supply and assist, you build it.**</h2>**
70. **</div>**

73. **<div** class="header"**>**
74. **<h2>**Parts**</h2>**
75. **</div>**
76. **<div** class="content"**>**
77. **<form** method="POST"**>**
78. **<input** type="TEXT" name="search" class="mytext"**/>**
79. **<input** type="SUBMIT" name="submit" value="Search" class="mysubmit"**/>**
80. **</form>**
81. **<?php**
82. $output = NULL;
83. if(isset($\_POST['submit'])){
84. $mysqli = NEW MySQLi("localhost", "CEN4010\_S2018g11", "cen4010\_s2018", "CEN4010\_S2018g11");
85. $search = $\_POST['search'];
86. $resultSet = $mysqli-**>**query("SELECT \* FROM Inventory WHERE Keyword1 LIKE '$search%' OR Keyword2 LIKE '$search%' OR Part\_Name LIKE '$search%'");
87. if($resultSet-**>**num\_rows **>** 0)
88. {
89. while($rows = $resultSet-**>**fetch\_assoc())
90. {
91. $quantity = $rows['quantity'];
92. $Part\_Name = $rows['Part\_Name'];
93. $SKU = $rows['SKU'];
94. $Price = $rows['price each'];
95. $Newark = $rows['Newark p/n'];
96. $Img = $rows['Image'];
97. $output = "Serial Number: $SKU <br/> Part Name: $Part\_Name <br/> Newark p/n: $Newark <br/> Quantity: $quantity <br/> Price each: $Price <br/> ";
98. echo '**<img** src="data:image/jpeg;base64,'.base64\_encode( $Img ).'"**/>**';
99. echo "**<br/>** $output **<br/>**";
100. }
101. }
102. else{
103. echo "**<br/>** No Results found.";
104. }
106. }
107. **?>**
108. **</div></div>**
110. **</body>**
111. **<footer>**footer**</footer>**
112. **</html>**

The code is well written and optimized. After testing this product I liked how the items came up after searching however page numbers can be added if multiple parts have the same name such as: Transistor. Overall, the code is executed very good.

Self-check on best practices for security

Link to test done on live server: <https://youtu.be/WqMWwLwY4Y0>

Code used in order to validate input Data:

1. **<?php**
2. session\_start();
4. // variable declaration
5. $znumber = "";
6. $email    = "";
7. //
8. $firstname = "";
9. //
10. $errors = array();
11. $\_SESSION['success'] = "";
12. //
14. //
16. // connect to database
17. $db = mysqli\_connect('localhost', 'CEN4010\_S2018g11', 'cen4010\_s2018', 'CEN4010\_S2018g11');
19. // REGISTER USER
20. if (isset($\_POST['reg\_user'])) {
21. // receive all input values from the form
22. $firstname = mysqli\_real\_escape\_string($db, $\_POST['firstname']);
23. $lastname = mysqli\_real\_escape\_string($db, $\_POST['lastname']);
24. $email = mysqli\_real\_escape\_string($db, $\_POST['email']);
25. $znumber = mysqli\_real\_escape\_string($db, $\_POST['znumber']);
26. $password\_1 = mysqli\_real\_escape\_string($db, $\_POST['password\_1']);
27. $password\_2 = mysqli\_real\_escape\_string($db, $\_POST['password\_2']);
29. // form validation: ensure that the form is correctly filled
30. if (empty($firstname)) { array\_push($errors, "first name is required"); }
31. if (empty($lastname)) { array\_push($errors, "last name is required"); }
33. if (empty($email)) { array\_push($errors, "Email is required"); }
34. if (empty($znumber)) { array\_push($errors, "Z-Number is required"); }
35. if (empty($password\_1)) { array\_push($errors, "Password is required"); }
37. if ($password\_1 != $password\_2) {
38. array\_push($errors, "The two passwords do not match");
39. }
41. // register user if there are no errors in the form
42. if (count($errors) == 0) {
43. //encrypt the password before saving in the database
44. $password = md5($password\_1); <--------- encryption method
45. $password = $password\_1;
47. $query = "INSERT INTO users (firstname, lastname, email, znumber, password)
48. VALUES('$firstname', '$lastname', '$email', '$znumber', '$password')";
49. mysqli\_query($db, $query);
51. $\_SESSION['znumber'] = $znumber;
52. $\_SESSION['success'] = "You are now logged in";
53. header('location: index.php');
54. }
56. }
58. // ...
60. // LOGIN USER
61. if (isset($\_POST['login\_user'])) {
62. $znumber = mysqli\_real\_escape\_string($db, $\_POST['znumber']);
63. $password = mysqli\_real\_escape\_string($db, $\_POST['password']);
65. if (empty($znumber)) {
66. array\_push($errors, "Z-Number is required");
67. }
68. if (empty($password)) {
69. array\_push($errors, "Password is required");
70. }
72. if (count($errors) == 0) {
73. $password = md5($password);  <--------- encryption method
74. $password = $password;
75. $query = "SELECT \* FROM users WHERE znumber='$znumber' AND password='$password'";
76. $results = mysqli\_query($db, $query);
78. if (mysqli\_num\_rows($results) == 1) {
79. $\_SESSION['znumber'] = $znumber;
80. //

83. //
84. $\_SESSION['success'] = "You are now logged in";
85. header('location: index.php');
86. }else {
87. array\_push($errors, "Wrong username/password combination");
88. }
89. }
90. }
92. **?>**

In order to protect our consumer’s personal data we had to encrypt the passwords. The md5(password) encrypts users passwords and protects it.

Self-Check : Adherence to original Non-functional specs

Original specs:

Search - search for products or kits by using keywords, if not found then offers to request the item -Done   
Navbar - for website browsing -Done  
Sign-up (Customer/Employee) - create a user profile with login details, user information, what kind of customer (teacher/student) or employee. Done  
Login (All Users) - create session ID and access to more features depending on type of user account. Done  
Product Details/Docs - product description box and related downloadable documents such as datasheets On Track  
Cart/Checkout - add to cart option and purchase. Credits the user account, asks for reason of purchase, provides order ID Issue ( we did not implement user accounts at this point)   
 Item Request Form - provides user with a form to submit to admin On Track  
Job Request - different job request page for each type of job. Allows user to upload documents and images as well as leaving comments for the job Issue (we did not implement job requests yet)  
  
View Order Transaction - shows order details and tracking ID Issue (we didn’t implement it yet)   
  
 **HISTORY TABLE**

contents will go below this point.