МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ

КРЕМЕНЧУЦЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ

ІМЕНІ МИХАЙЛА ОСТРОГРАДСЬКОГО

КАФЕДРА АВТОМАТИЗАЦІЇ ТА ІНФОРМАЦІЙНИХ СИСТЕМ

ЗВІТ

З ЛАБОРАТОРНИХ РОБІТ

З НАВЧАЛЬНОЇ ДИСЦИПЛІНИ

«ТЕСТУВАННЯ ПРОГАРМНОГО ЗАБЕЗПЕЧЕННЯ»

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**Лабораторна робота № 3**

**Тема.** **Основи тест-дизайну. Тест-кейси. Техніки розбиття на класи еквівалентності й аналізу граничних значень**

**Мета:** освоєння практичних прийомів написання тест-кейсів із використанням технік розбиття на класи еквівалентності і аналізу граничних значень.

**Постанова задачі**

1. Для дослідження оберіть будь-які два веб-сайти.
2. Виділіть основні класи еквівалентності для кожного поля вводу даних.
3. Проведіть аналіз можливих граничних значень для кожного поля введення даних.
4. Розробіть позитивні й негативні тест-кейси кількістю не менше 5 на кожен сайт.

**Хід роботи**

Два сайти для проведення тестування: <https://opensource-demo.orangehrmlive.com/login> та [https://magento2demo.firebearstudio.com](https://magento2demo.firebearstudio.com/admin_k1b5n8/admin/). Проводжу тестування першого сайту та створюю для нього тест-кейси позитивний (табл. 1) та негативний (табл. 2). Аналогічно для другого сайту (табл. 3 та табл. 4 відповідно).

Переважно тестую валідацію полів при створенні об’єкта та створення аккаунтів. В таблицях надані передумови та кроки які я виконував під час знаходження багів. Також надані результати, які очікуються та є насправді.

Таблиця 1

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| № | Назва | Передумова | Кроки | Очікуваний результат | Фактичний результат |
| 1 | Successful login with standart valid data (positive) | 1. Click the link:   [https://opensource-demo.orangehrmlive.com/login](https://opensource-demo.orangehrmlive.com/web/index.php/auth/login) | Enter Admin in field Username & admin123 in field Password then click Login. | The user successfully logs in and enters the Dashboard. | The user successfully logs in and enters the Dashboard. |
| 2 | Adding a new Employee  (positive) | 1. Click the link: <https://opensource-demo.orangehrmlive.com/login> | In Employee Full Name input Oleh Temchenko in First Name & Last Name accordingly. Then click on Save | Get a pop-up window about successful creation Employee & see him in list | Get a pop-up window about successful creation Employee & see him in list |
| 1. Login with standart data |
| 1. Click on PIM in sidebar & tap on +Add |
| 3 | Adding a new Admin  (positive) | 1. Click the link: <https://opensource-demo.orangehrmlive.com/login> | In field User Role input Admin & select Oleh Temchenko in field Employee Name. Then select Status: Enabled & in field Username input: Olezha. Finally input password in first password field & repeat it in Confirm Password. Click Save. | Get a pop-up window about successful creation Admin & see him in list | Get a pop-up window about successful creation Admin & see him in list |
| 1. Login with standart data |
| 1. Click on Admin in sidebar & tap on +Add |
| 4 | Editing posts  (posistive) | 1. Click the link: <https://opensource-demo.orangehrmlive.com/login> | Type something into field & click Post. Then click on 3 dots in your posts & choose Edit Post. Type something new. | The created post will be replaced by the edited post. | There are created post & edited post above it. (It looks more answered then edited post) |
| 1. Login with creating data |
| 1. Click on Buzz |
| 5 | Change password  (positive) | 1. Click the link: <https://opensource-demo.orangehrmlive.com/login> | Input current password in relevant field. Then input new password & repeat it. Log out & log in with new data. | User successfully log in with new data. | User successfully log in with new data. |
| 1. Login with creating data |
| 1. Click on your profile & choose Change password |

Таблиця 2

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| № | Назва | Передумова | Кроки | Очікуваний результат | Фактичний результат |
| 1 | Сhecking the date range in Leave List  (negative) | 1. Click the link: <https://opensource-demo.orangehrmlive.com/login> | Select a date in the From date field that is later than the To date field. | Should be a warning about an incorrect date entered | The filter works, but shows an empty list |
| 1. Login with creating data |
| 1. Click on Leave in sidebar |
| 2 | Adding existing Employee (negative) | 1. Click the link: <https://opensource-demo.orangehrmlive.com/login> | In Employee Full Name input Oleh Temchenko in First Name & Last Name accordingly again. Then click on Save | An employee is not created. Show an error that such a user exists and point to the First Name and Last Name fields. | Get a pop-up window about successful creation Employee & see him in list |
| 1. Login with standart data |
| 1. Click on PIM in sidebar & tap on +Add |
| 3 | Adding invalid data in Personal Details  (negative) | 1. Click the link: <https://opensource-demo.orangehrmlive.com/login> | Input invalid data (#4132OP$%) in field Middle Name. Then input invalid data (number!!!!) in field Employee Id. Click on Save. | New data don’t save. Show invalid fields & inform about it. | Invalid data successfully saved. |
| 1. Login with creating data |
| 1. Click on My Info in sidebar |
| 4 | Adding file to resume  (negative) | 1. Click the link: <https://opensource-demo.orangehrmlive.com/login> | In field Resume choose don’t accepted type file. | Candidate doesn’t save. Show incorrectly filled fields and error messages. | Candidate doesn’t save. Show incorrectly filled fields and error messages. |
| 1. Login with creating data |
| 1. Click on Recruitment in sidebar |
| 5 | Invalid date  (negative) | 1. Click the link: <https://opensource-demo.orangehrmlive.com/login> | In field Date of Application choose future date. | Candidate doesn’t save. Show incorrectly filled fields and error messages. | Candidate doesn’t save. Show incorrectly filled fields and error messages. |
| 1. Login with creating data |
| 1. Click on Recruitment in sidebar |

Таблиця 3

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| № | Назва | Передумова | Кроки | Очікуваний результат | Фактичний результат |
| 1 | Add new customer  (positive) | 1. Click the link: [https://magento2demo.firebearstudio.com](https://magento2demo.firebearstudio.com/admin_k1b5n8/admin/) | Click on Add New Customer. Input data into required fields. Then click Save Customer. | Successful adding new customer. | Successful adding new customer. |
| 1. Login with standart data |
| 1. Click on Customers in sidebar, choose All customers. |
| 2 | Add new product (positive) | 1. Click the link: [https://magento2demo.firebearstudio.com](https://magento2demo.firebearstudio.com/admin_k1b5n8/admin/) | Click on Add Product. Input data into required fields. Then click Save. | Successful adding new product. | Successful adding new product. |
| 1. Login with standart data |
| 1. Click on Catalog in sidebar, choose Products. |
| 3 | Add new block (positive) | 1. Click the link: [https://magento2demo.firebearstudio.com](https://magento2demo.firebearstudio.com/admin_k1b5n8/admin/) | Click New Block. Input data into required fields. Then click Save. | Successfull adding new Block. | Successfull adding new Block. |
| 1. Login with standart data |
| 1. Click on Content in sidebar, choose Blocks. |
| 4 | Delete created block (positive) | 1. Click the link: [https://magento2demo.firebearstudio.com](https://magento2demo.firebearstudio.com/admin_k1b5n8/admin/) | Choose created block & click Edit. Then click Delete Block. | Successfull deleting created Block. | Successfull deleting created Block. |
| 1. Login with standart data |
| 1. Click on Content in sidebar, choose Blocks. |
| 5 | Adding product to shopping cart.  (positive) | 1. Click the link: [https://magento2demo.firebearstudio.com](https://magento2demo.firebearstudio.com/admin_k1b5n8/admin/) | Choose [Aether Gym Pant](https://magento2demo.firebearstudio.com/aether-gym-pant.html) as a product. Select Brown Color & 34 size. Qty: 3. Click Add to Cart. | Successful adding product to Cart. Correct displaying the appropriate quantity of goods in the cart and the total price in it. | Successful adding product to Cart. Correct displaying the appropriate quantity of goods in the cart and the total price in it. |
| 1. Select Men & choose Bottoms |
| 1. Select product |

Таблиця 4

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| № | Назва | Передумова | Кроки | Очікуваний результат | Фактичний результат |
| 1 | Add advanced pricing into Product (negative) | 1. Click the link: <https://magento2demo.firebearstudio.com> | Click on Add Product. Select Advanced Pricing. Input into calendar form past date. | Displaying an error that the date should not be expired & pricing doesn’t added. | No errors & pricing has been added. |
| 1. Login with standart data. |
| 1. Click on Catalog in sidebar, choose Products. |
| 2 | Add new tax rule  (negative) | 1. Click the link: [https://magento2demo.firebearstudio.com](https://magento2demo.firebearstudio.com/admin_k1b5n8/admin/) | Click on Add new tax rule & input invalid data into required fields | Displaying an error that data is invalid & tax rule doesn’t added. | No errors & tax rule has been added. |
| 1. Log in with standart data. |
| 1. Click on Stores in sidebar, choose Tax rules. |
| 3 | Add new tax rate (negative) | 1. Click the link: [https://magento2demo.firebearstudio.com](https://magento2demo.firebearstudio.com/admin_k1b5n8/admin/) | Click on Add new tax rate & input invalid data into required fields | Displaying an error that data is invalid & tax rate doesn’t added. | No errors & tax rate has been added. |
| 1. Log in with standart data. |
| 1. Click on Stores in sidebar, choose Tax rate. |
| 4 | Create account (negative) | 1. Click the link: [https://magento2demo.firebearstudio.com](https://magento2demo.firebearstudio.com/admin_k1b5n8/admin/) | Input invalid data into required field. | Displaying an error that data is invalid & account doesn’t added. | No errors & account has been added. |
| 1. Click Create account. |
| 5 | Adding negative number of product to shopping cart.  (negative) | 1. Click the link: [https://magento2demo.firebearstudio.com](https://magento2demo.firebearstudio.com/admin_k1b5n8/admin/) | Choose [Aether Gym Pant](https://magento2demo.firebearstudio.com/aether-gym-pant.html) as a product. Select Brown Color & 34 size. Qty: -3. Click Add to Cart. | Displaying an error message: the quantity of products must be greater than 0. the product cannot be added to the cart. | Displaying an error message: the quantity of products must be greater than 0. the product cannot be added to the cart. |
| 1. Select Men & choose Bottoms |
| 1. Select product |