

# **SOFTWARE VERIFICATION, VALIDATION AND TESTING**

## **TESTING DOCUMENTATION**

Asos.com

Prepared by:  
**Merjem Ahmedspahić**  
**Kerim Kurić**

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# 1. Introduction

In today's digital age, e-commerce has emerged as an integral part of the global economy, facilitating convenient and efficient online shopping experiences. This project focuses on software verification and validation for ASOS.com, a prominent online fashion and beauty retailer. We aim to enhance the functionality, performance, security, and user experience of the ASOS.com web application. By conducting thorough testing, we will identify and address issues that could impact its operations, ultimately improving the platform for its global user base.

## 1.1. About the Project

ASOS.com is a renowned and widely recognized online fashion and beauty retailer catering to a diverse and extensive customer base worldwide. The platform is a one-stop destination for a broad spectrum of fashion products, including clothing, accessories, and beauty items. ASOS.com is committed to delivering a seamless and user-friendly online shopping experience to its customers.

The importance of software verification and validation is paramount for ASOS.com, as the platform undergoes frequent updates and enhancements to meet the ever-evolving expectations of its global user community.

This project focuses on scrutinizing ASOS.com's software for functionality, security, performance, and usability. The goal is to identify and address any potential issues that could affect the website's operations, ensuring a positive and secure shopping experience for its users.

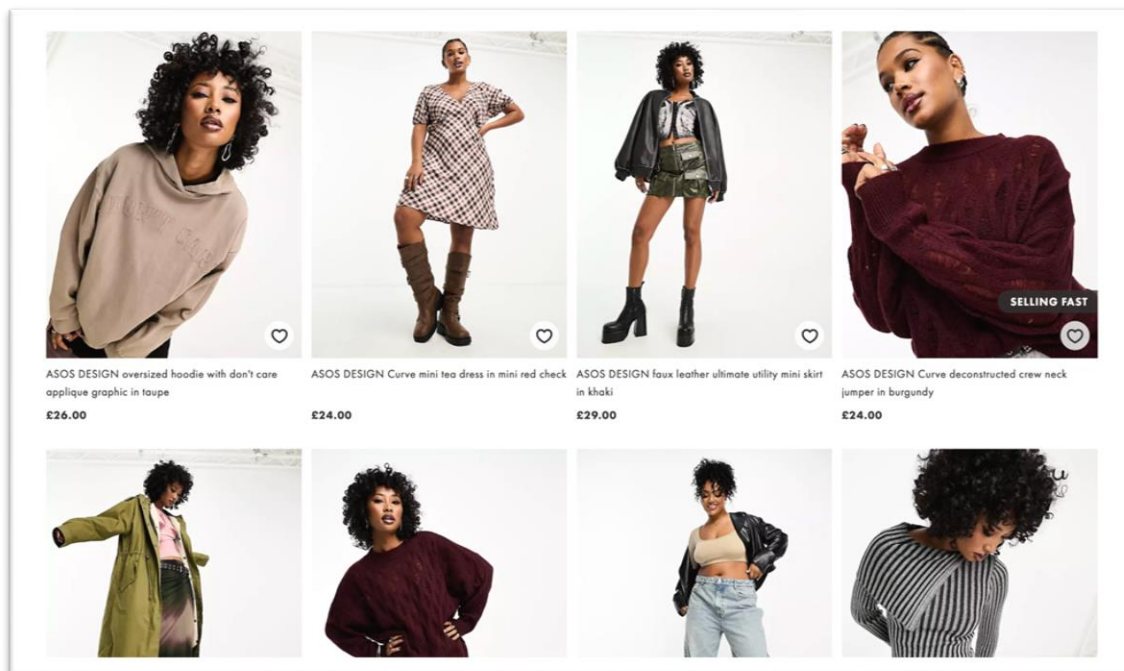
Home Page Link: <https://www.asos.com/women/>

GitHub Repository Link: <https://github.com/merjjem/SVVT-Project.git>

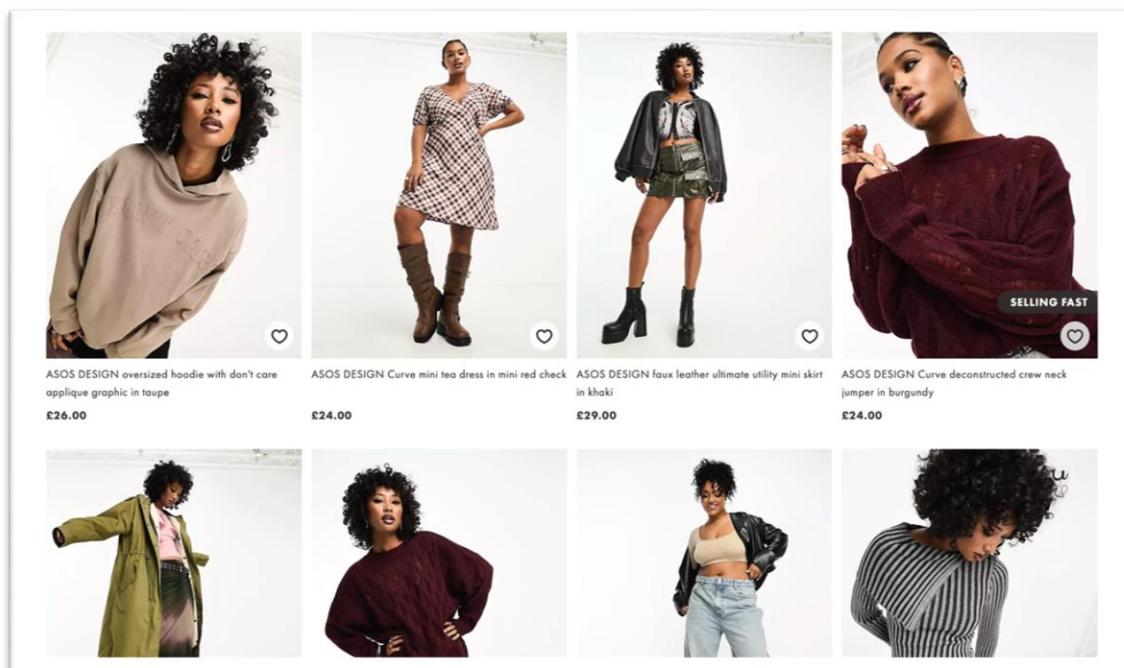
## **1.2. Project Functionalities and Screenshots**

1. Product listings - display products with images, names, prices and filter and sort products based on categories, sizes, colors, etc.
2. Product details - provide detailed information for each product, including descriptions, specifications, and customer reviews.
3. Search functionality - allows user to search for products using keywords or filters and present search results with relevant products.
4. Shopping cart – enables users to add products to their cart, display the cart's contents, including quantities and total cost. Also, it allows users to edit or remove items from the cart.
5. Checkout process - guide users through the steps to complete a purchase, including shipping and payment information and provide order summaries and confirmations.
6. User account management – allows users to create, log in, and manage their accounts and provides options for updating personal information and changing passwords.
7. Wishlist – this functionality enables users to add products to their wish list for future consideration and allow users to manage and prioritize wish list items.
8. Payment processing - offers various payment methods, such as credit cards, PayPal, and other secure options, it ensures secure and efficient payment processing.
9. Order history - allow users to view their order history and check the status of current orders.
10. Newsletter subscription - allow users to subscribe or unsubscribe from newsletters and updates
11. Account recovery - provide options for password reset and account recovery
12. Localization and language preferences – It supports multiple languages and currencies to cater to a global user base
13. Mobile responsiveness: ensure that the website is user-friendly and functional on mobile devices.
14. Browser compatibility - make sure the website works seamlessly across different web browsers.

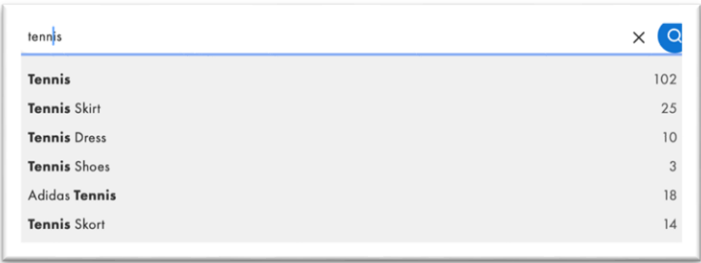
To gain a deeper understanding of the services and features ASOS provides, the following screenshots illustrate some of the key functionalities and capabilities offered by the platform. These visuals will help shed light on how ASOS caters to the diverse needs of its user base.



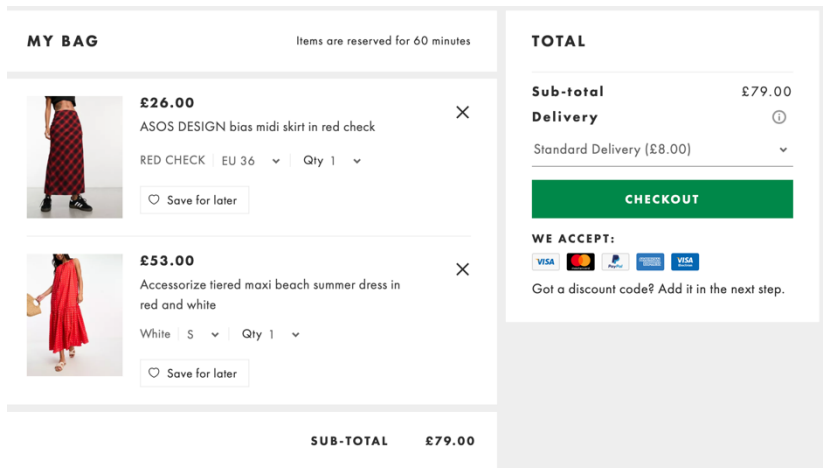
## PRODUCT LISTING



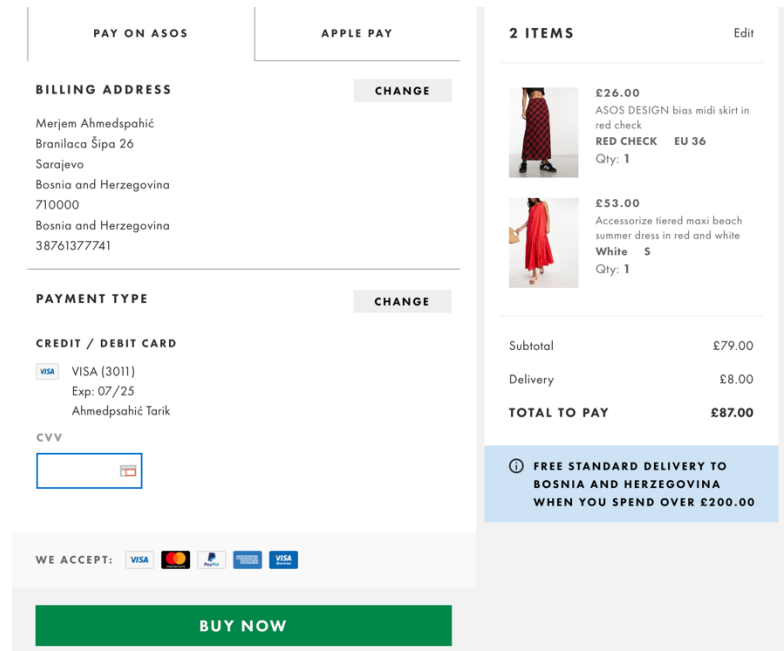
## PRODUCT DETAILS



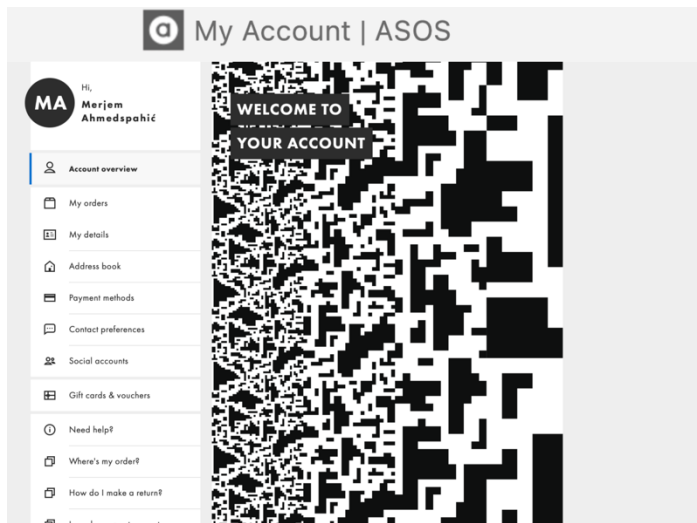
## SEARCH FUNCTIONALITY



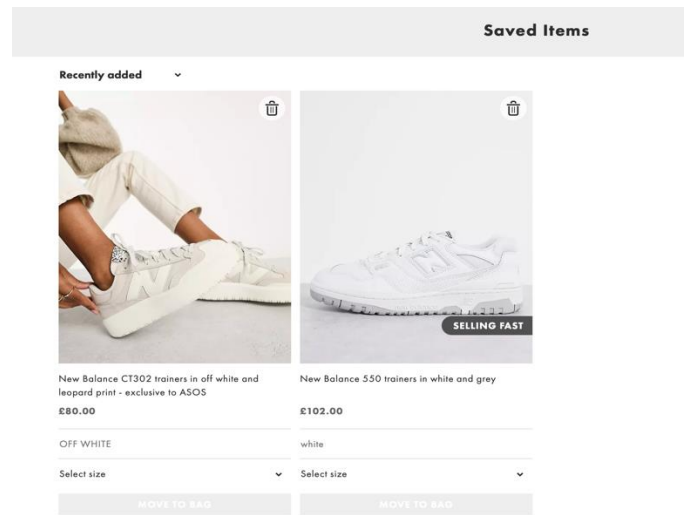
## SHOPPING CART



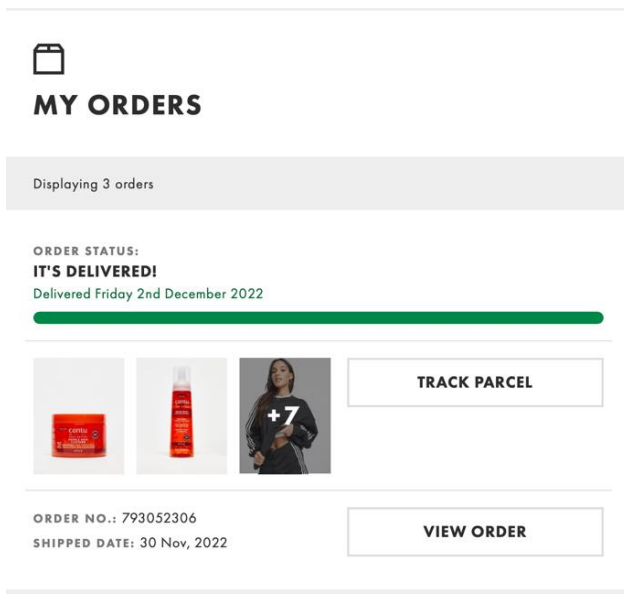
## CHECKOUT



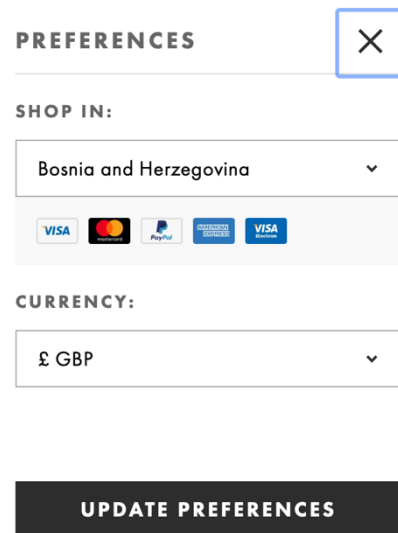
USER ACCOUNT MANAGEMENT



WHISHLIST



ORDER HISTORY



LOCALIZATION AND LANGUAGE PREFERENCES



MOBILE RESPONSIVENESS

## 2. Bug Report Example

Title: Unable to Login to User Account

Date: October 27, 2023

Reporter: Kerim Kurić (kerim.kuric@stu.ibu.edu.ba)

Priority: High

Platform: Web

Description:

I encountered a critical issue while trying to log in to my user account on the website. Upon entering my valid credentials and clicking the "Login" button, the following problems occurred

Steps to Reproduce:

1. Open the website in Google Chrome (www.asos.com ).
2. Click on the "Login" button.
3. Enter the correct username ("kerim123") and password ("kurickuric3").
4. Click the "Login" button.

Expected result:

The website should log me into my user account, and I should have access to my account dashboard

Actual result:

Instead of logging in, the website displayed an error message login failed please try again without terror code or specific details were provided to help diagnose the issue. Repeated login attempts resulted in the same error message.



## 3. TEST PLAN

### Introduction

**This test plan outlines the testing approach for a ASOS website, aiming to ensure that the project's features function as intended. The testing process will focus on verifying the correctness and user-friendliness of the project.**

### 3.1. SCOPE

- Verify new user registration
- Validate input data
- Test user login functionality
- Ensure search returns relevant results
- Confirm product details display
- Verify the ability to add products to the cart
- Validate cart contents and pricing
- Validate the ability to add products to the wish list
- Validate accessing help center
- Validate sorting function

### 3.2. Testing Environment and Tools

In our testing environment, we leverage a powerful combination of tools and frameworks to ensure robust and efficient test automation. Our primary focus is on utilizing Visual Studio Code (VS Code) as our integrated development environment (IDE), Selenium WebDriver for browser automation, Jest for JavaScript testing, and TypeScript to enhance the overall reliability and maintainability of our codebase.

## 4. Test Execution

### TEST SCENARIO – SEARCHING FOR PRODUCT AND SHOPPING.

Test step	Test Data	Expected result
Go to <a href="http://www.asos.com">www.asos.com</a> home page		Homepage is loaded
Click on the “Sale” category in navigation bar at the top of the page		New bar pops up with the list of different categories
Click on the “Selling Fast” subcategory in pop up bar		New page is loaded that list only “Selling fast” items
Hover over one item and click on it		New page is loaded with product details
Click on the dropdown or selection area for choosing the size		A list of available size options should appear in a dropdown menu
Select a size from the available options		Users can choose a size from the available options
Click the "Add to Bag" or button to add the product to the shopping cart		The product is successfully added to the shopping cart with the chosen size
Scroll up and click on cart at the top of the page on the right side to verify that item is added to cart		My cart page is loaded and items is in the cart
On the shopping cart page, locate and click the "Checkout" button		New pages is loaded with sign in form
Enter valid e-mail address in an e-mail address field	Kerim.kuric@stu.ibu.edu.ba	E-mail address is entered

Enter valid password in the password input filed	kerakera	Password is entered
Click on a black and white sing in button below fields		User is successfully logged in and new page is loaded
In the checkout page enter valid shipping address	Branilaca Šipa 26	Address is entered
Enter customers name	Kerim Kuric	Name is entered
Enter valid country	Bosnia and Herzegovina	Country is entered
Enter valid postal code	71000	Postal code is entered
Enter phone number	+378 222 222	Phone number is entered
In the shipping section, choose a shipping method (e.g., standard shipping or express shipping)		Users can choose a shipping method
Choose a payment method		User can choose a payment method
Enter credit card information	Kerim Kuric 07/27 4000 3000 2000 1000 123	Credit card information are entered
Click the "Buy now" button to finalize the order		New page is loaded with the message indicating that order has been successfully placed
Click on the "Shop more" button		User return to the homepage successfully

## 1. TEST SCENARIO- REGISTRATION OF A NEW USER

Test step	Test data	Expected result
Navigate to the <a href="http://www.asos.com">www.asos.com</a> homepage.		Homepage is loaded
Click on the "User icon" in the top right corner		The User icon feature loads without errors.
Click on "Join" button in the dropdown menu		The registration feature loads without errors.
Enter your e-mail in the "e-mail" input field	merjem.ahmedspahic@stu.ibu.edu.ba	Email is entered successfully
Enter your first name in the input field	Merjem	First name is entered successfully
Enter last name in the input field	Ahmedspahić	Last name is entered successfully
Enter a valid test password	meriMeri1234	Password is entered successfully
Select birth day in a Birth Date field	3	Birth day is selected successfully
Select birth month in a Birth Date field	1	Birth month is selected successfully
Select birth year in a Birth Date field	2002	Birth year is selected successfully
Click the "Join Asos" button		User is registered successfully

## 2. TEST SCENARIO – LOGIN OF A USER

Test step	Test data	Expected result
Navigate to the <a href="http://www.asos.com">www.asos.com</a> homepage		Homepage is loaded successfully
Click on the User icon in the top right corner		The User icon feature loads without errors.
Click on the "Sign In" button in the dropdown menu		Sign in button loads successfully
Enter the correct email	merjem.ahmedspahic@stu.ibu.edu.ba	E-mail is entered successfully
Enter correct password for provided e-mail	nisamSigurna6767	Password is entered successfully
Click the "Sign in" button to submit the login information		User logged in successfully

## 3. TEST SCENARIO – SEARCHING FOR PRODUCT

Test step	Test data	Expected result
Go to <a href="http://www.ASOS.com">www.ASOS.com</a> website		Homepage is loaded
Click on the Search bar		Search bar loads successfully
In the search bar, enter the name of a product you want to search for	"Men Tshirt"	Users can initiate a product search by entering a valid product name
Click the "Search" icon to initiate the search		The search results page displays relevant product listings

#### 4. TEST SCENARIO- ADDING PRODUCT TO THE WISH LIST

Test step	Test data	Expected result
Navigate to the <a href="http://www.asos.com">www.asos.com</a> homepage		Asos website is loaded
Click on the Search bar		Search bar loads successfully
In the search bar, enter the name of a product you want to search for	"Men Tshirt"	Users can initiate a product search by entering a valid product name
Click the "Search" icon to initiate the search		The search results page displays relevant product listings
Click on the wanted item		Item details load successfully
Click wish list button in the right side of a product details page		Product is successfully added to a wish list

#### 5. TEST SCENARIO - SIZE CHOOSING

Test step	Test data	Expected result
Go to <a href="http://www.ASOS.com">www.ASOS.com</a> website		Homepage is loaded
Click on the Search bar		Search bar loads successfully
In the search bar, enter the name of a product you want to search for	"Men Tshirt"	Users can initiate a product search by entering a valid product name
Click the "Search" icon to initiate the search		The search results page displays relevant product listings
Click on the wanted item		Item details load successfully
Select size by clicking on a size selection field	"XS"	The selected size is clearly visible and selected successfully

## 6. TEST SCENARIO – SORTING PRODUCTS

Test step	Test data	Expected result
Go to <a href="http://www.ASOS.com">www.ASOS.com</a> website		Homepage is loaded
Click on the Search bar		Search bar loads successfully
In the search bar, enter the name of a product you want to search for	"Men Tshirt"	Users can initiate a product search by entering a valid product name
Click the "Search" icon to initiate the search		The search results page displays relevant product listings
Click on a "Sort" button in the top left corner		Dropdown menu loads successfully
Click on a "New In" button in the dropdown menu		New In products are loaded successfully

## 7. TEST SCENARIO – ADD TO CART

Test step	Test data	Expected result
Go to <a href="http://www.ASOS.com">www.ASOS.com</a> website		Homepage is loaded
Click on the Search bar		Search bar loads successfully
In the search bar, enter the name of a product you want to search for	"Men Tshirt"	Users can initiate a product search by entering a valid product name
Click the "Search" icon to initiate the search		The search results page displays relevant product listings
Click on the wanted item		Item details load successfully
Select "ADD TO CART" button on a product details page		Item is added to cart successfully

## 8. TEST SCENARIO – RETURNS INFORMATION

Test step	Test data	Expected result
Navigate to the <a href="http://www.asos.com">www.asos.com</a> homepage.		Homepage is loaded
Click on the User icon in the top right corner		The User icon feature loads without errors.
Click on the “Returns Information” option in a dropdown menu		Return information help center is loaded successfully

## 9. TEST SCENARIO – ORDER ISSUES

Test step	Test data	Expected result
Navigate to the <a href="http://www.asos.com">www.asos.com</a> homepage.		Homepage is loaded
Click on the User icon in the top right corner		The User icon feature loads without errors.
Click on the “Returns Information” option		Return information help center is loaded successfully
Click on the “Order issues” button on a left side of Returns Information’s page		Order issues information’s are loaded successfully



## 10. TEST SCENARIO – ASOS DELIVERY

Test step	Test data	Expected result
Navigate to the <a href="http://www.asos.com">www.asos.com</a> homepage.		Homepage is loaded
Click on the User icon in the top right corner		The User icon feature loads without errors.
Click on the “Returns Information” option		Return information help center is loaded successfully
Click on the “Delivery” button on a left side of Returns Information’s page		Delivery information’s are loaded successfully

#### 4.1. Test scenario name

<b>Test Name:</b> joinAsos				
<b>Description:</b> To ensure that the user registration feature on the ASOS page functions correctly.				
<b>Pre-condition(s):</b> Access to the registration page. Valid and unique email address for registration. Stable internet connection.				
<b>Test Steps:</b>  10	<b>Test Data:</b> email:"merjem.ahmedspahic@stu.ibu.edu.ba" firstName: Merjem lastName: Ahmedspahic, password: meriMeri1234	<b>Expected Result:</b>  The user should be redirected to a confirmation page or see an on-screen message confirming successful registration.	<b>Actual Result:</b>  It denied access	<b>Status:</b> PASS

<b>Test Name:</b> signInAsos				
<b>Description:</b> To ensure that the user sign-in feature on the ASOS page functions correctly.				
<b>Pre-condition(s):</b> Access to the ASOS website. A valid and existing ASOS account. Correct login credentials (email and password).				
<b>Test Steps:</b>  5	<b>Test Data:</b> email:merjem.ahmedspahic@stu.ibu.edu.ba password:nisamSigurna6767	<b>Expected Result:</b>  The user should be redirected to the ASOS homepage or account dashboard upon successful sign-in.	<b>Actual Result:</b>  It denied access	<b>Status:</b> PASS

<b>Test Name:</b> searchAsos				
<b>Description:</b> To ensure that the search functionality on the ASOS page successfully retrieves the desired item.				
<b>Pre-condition(s):</b> Access to the ASOS website. A clear understanding of the specific item to be searched for.				
<b>Test Steps:</b>  2	<b>Test Data:</b> item: MenTshirt	<b>Expected Result:</b>  The search results page should display a list of items matching the entered keywords.  The desired item should be present in the search results.	<b>Actual Result:</b>  All steps are executed without errors.  The search results page is displayed promptly.  The desired item is present in the search results.	<b>Status:</b> PASS

<b>Test Name:</b> wishListAdd				
<b>Description:</b> To verify that users can successfully add a product to their wish list on the ASOS page.				
<b>Pre-condition(s):</b> A product page with items available for adding to the wish list.				
<b>Test Steps:</b>  4	<b>Test Data:</b>	<b>Expected Result:</b>  A confirmation message should be displayed indicating that the product has been added to the wish list.	<b>Actual Result:</b>  All steps are executed without errors.  The confirmation message is clear and confirms the addition to the wish list.	<b>Status:</b> PASS

Test Name: sizeCheck				
<b>Description:</b> To verify that users can successfully choose a size for a product on the ASOS page.				
<b>Pre-condition(s):</b> Access to the ASOS website. A product page featuring an item with available size options. A stable internet connection.				
Test Steps:	Test Data:	Expected Result:	Actual Result:	Status:
4		<p>The available sizes for the product should be clearly displayed.</p> <p>Clicking on the drop-down menu or selecting a size should update the display to indicate the chosen size.</p> <p>The selected size should be reflected in the product details and any relevant confirmation messages.</p>	<p>All steps are executed without errors.</p> <p>The selected size is visually indicated on the product page.</p>	PASS

Test Name: sortItem				
<b>Description:</b> To verify that users can successfully sort and search for products on the ASOS page.				
<b>Pre-condition(s):</b> A variety of products available for sorting and searching.				
Test Steps:	Test Data:	Expected Result:	Actual Result:	Status:
4		<p>The search results should display relevant products based on the entered keywords or selected category.</p> <p>The sorting options should be clearly visible and selectable.</p>	<p>All steps are executed without errors.</p> <p>The search results are relevant to the entered keywords or selected category.</p> <p>The chosen sorting option successfully rearranges the products.</p>	PASS

Test Name: addToCart				
<b>Description:</b> To verify that users can successfully add a product to their cart on the ASOS page.				
<b>Pre-condition(s):</b> A product page featuring an item available for purchase.				
<b>Test Steps:</b>  4	<b>Test Data:</b>	<b>Expected Result:</b>  A confirmation message should be displayed indicating that the product has been added to the cart.	<b>Actual Result:</b>  All steps are executed without errors.  The confirmation message is clear and confirms the addition to the cart.	<b>Status:</b> PASS

Test Name: returnsInformation				
<b>Description:</b> To verify that users can successfully access the Return Information Center on the ASOS page.				
<b>Pre-condition(s):</b> Access to the ASOS website.				
<b>Test Steps:</b>  2	<b>Test Data:</b>	<b>Expected Result:</b>  The Return Information Center should be easily accessible from the order details or account dashboard.	<b>Actual Result:</b>  All steps are executed without errors.  The Return Information Center is accessible and provides relevant details.	<b>Status:</b> PASS

Test Name: orderIssues				
<b>Description:</b> To verify that users can successfully access information related to order issues on the ASOS page.				
<b>Pre-condition(s):</b> no				
<b>Test Steps:</b>  2	<b>Test Data:</b>	<b>Expected Result:</b>  The Order Issues Information should be easily accessible.	<b>Actual Result:</b>  All steps are executed without errors.  The Order Issues Information is accessible and provides relevant details.	<b>Status:</b> PASS

Test Name: asosDelivery				
Description: To verify that users can successfully access delivery information on the ASOS page.				
Pre-condition(s): no				
Test Steps:	Test Data:	Expected Result:	Actual Result:	Status:
2		The Delivery Information should be easily accessible	<p>All steps are executed without errors.</p> <p>The Delivery Information is accessible and provides relevant details.</p>	PASS

**Notes:** We want to state that registration of a new user and sign in test cannot be fully proceed because Asos.com doesn't allow accessing account through web driver in any way. We assume that it is protection of a site. All tests pass but access is denied. We hope that you will take this fact in consideration.

## 5. Conclusion

### 5.1. Testing Summary

Testing Tool	Total Tests	Passed Tests	Failed Tests
Visual Studio Code Selenium Webdriver Jest Typescript	11	11	0

## 5.2. Final Thoughts

Engaging in this university project as part of the Software Verification and Validation course has been a valuable learning experience for our team. The intricacies of quality assurance, coupled with the challenges encountered, have contributed significantly to our academic and practical understanding of software testing. Navigating through the project, we found the intricacies of testing on the ASOS platform particularly challenging due to its protected nature. The constraints imposed on testing, especially for functionalities requiring registration or login, posed a substantial hurdle. Despite these challenges, the project provided an insightful perspective into real-world testing scenarios, emphasizing the importance of adaptability and creative problem-solving within secure environments.

While the comprehensive documentation required considerable effort, we acknowledge its importance in aligning with the principles of software verification and validation. This documentation not only serves as a testament to our testing efforts but also stands as a valuable artifact for academic assessment. As we conclude this project, we express our gratitude for the opportunity to partake in this academic journey. The insights gained from testing within a secure environment will undoubtedly shape our approach to future projects and real-world testing challenges.

Thank you for the guidance and mentorship throughout this course, and we look forward to carrying these lessons forward in our academic and professional endeavors