

SOFTWARE VERIFICATION, VALIDATION AND TESTING

TESTING DOCUMENTATION

ASOS.COM

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TABLE OF CONTENTS

1. Introduction	3
1.1. About the project	3
1.2. Project Functionalities and Screenshots	3
2. Test Plan	5
2.1. Scope	5
2.2. Testing Environment and Tools	5
3. Test Execution	6
3.1. Log in	6
3.2. Checking filters	6
3.3. Gift vouchers	7
3.4. Choosing the right product	8
3.5. Search engine and favorite test	8
3.6. Adding to the bag	9
3.7. Fit assistance test	10
3.8. Social media links test	11
3.9. More information / help test	11
3.10. More about the brand test	12
4. Conclusion	13
4.1. Testing summary	13
4.2. Final thoughts	13

1. Introduction

1.1. About the Project

For this project from Software Verification, Validation and Testing course at IBU, I decided to test ASOS.com webpage. I use it very often to shop online, so I am familiar with all the features and neat things that I can spend time testing. Asos.com offers a variety of brands, products and sales that can be shipped worldwide. They are one of the leading shopping websites in the world, and their expansion became serious over the past two years.

LINK: <https://www.asos.com/>

1.2. Project Functionalities and Screenshots

1. Registration (Join)
2. Sign in / Sign out
3. Men / Women page
4. Search engine
5. Sales offers and promo codes
6. Gift coupons
7. Add to and remove from cart
8. Add to favorites
9. Make an order
10. Online payment

The screenshots of some of the features are provided below:

- Register / Join

OR SIGN UP WITH EMAIL

EMAIL ADDRESS:

We'll send your order confirmation here

FIRST NAME:

LAST NAME:

PASSWORD:

Must be 10 or more characters

DATE OF BIRTH:

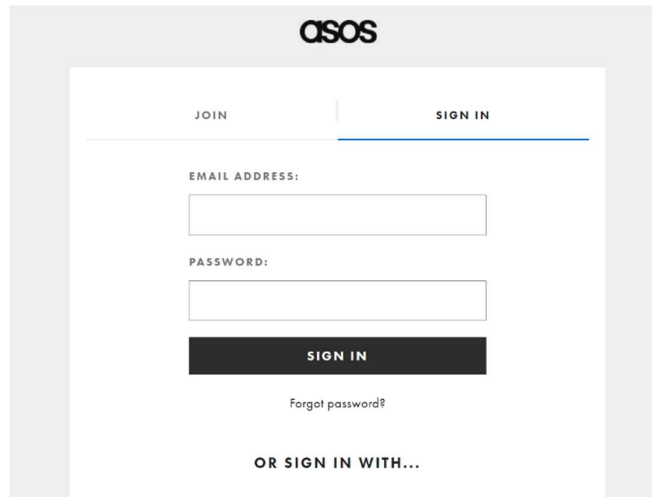
DD Month YYYY

You need to be 16 or over to use ASOS

MOSTLY INTERESTED IN:

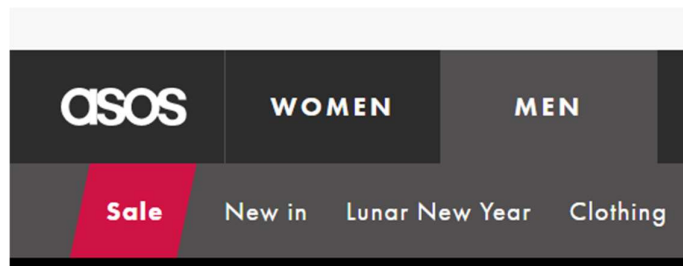
☒ Womenswear ☐ Menswear

- Login

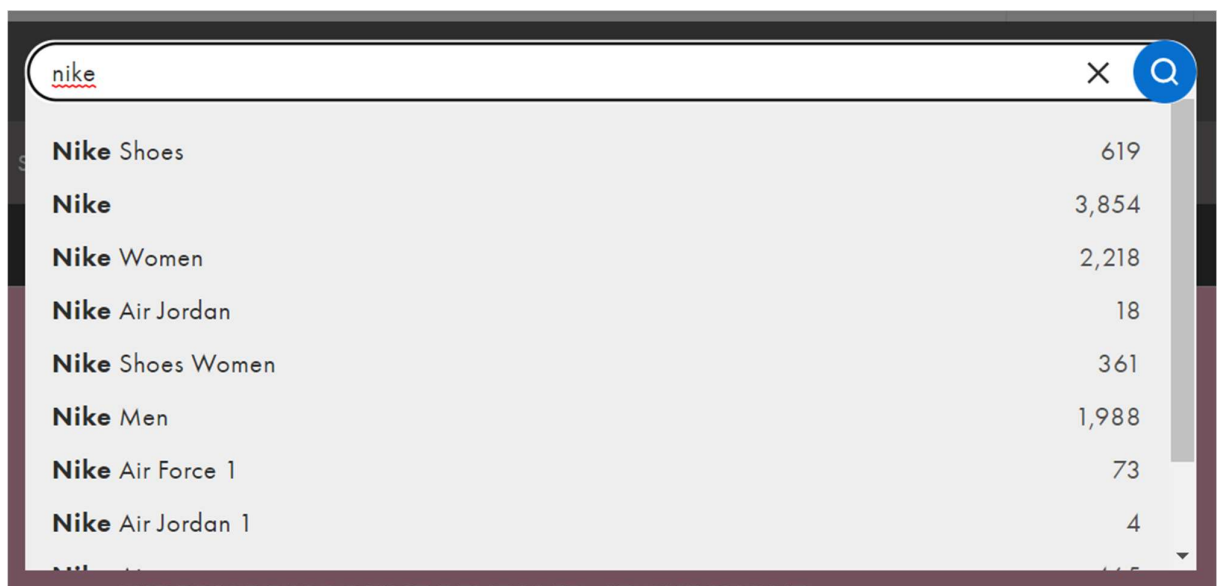


The image shows the ASOS login page. At the top is the ASOS logo. Below it are two tabs: 'JOIN' and 'SIGN IN', with 'SIGN IN' being the active tab. Under the 'SIGN IN' tab, there are two input fields: 'EMAIL ADDRESS:' and 'PASSWORD:'. Below these fields is a black button with the text 'SIGN IN' in white. Under the button is a link that says 'Forgot password?'. At the bottom of the form area is the text 'OR SIGN IN WITH...'.

- Men / women page



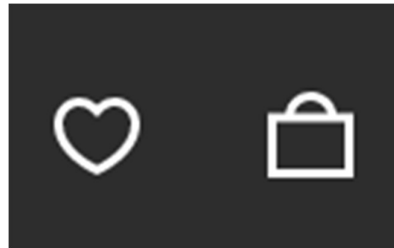
- Search bar



- Promo codes



- Add to cart / Add to favorites



2. Test Plan

2.1. Scope

On this project, I am testing multiple features on the ASOS webpage. Since I use it a lot, I noticed some key features most users interact with. I am testing multiple options, fields and, in general, everything you need to interact with to make a purchase and to search for the specific product such as: login, search engine, making coupons, bestseller brands, filters for clothes, adding to favorites and cart, advertised brands etc.

2.2. Testing Environment and Tools

For testing environment I used Eclipse IDE, since I am most used to it when it comes to working with Java programming language. For the testing itself, I used Selenium tool, and as aforementioned, I used it inside of a Java programming language.

3. Test Execution

3.1. Log in

User wants to login to his account to be able to order and look around the website.

Test Name: Test login				
Description: Check if user credentials are correct				
Pre-condition(s): Account must already exist				
Test Steps:	Test Data:	Expected Result:	Actual Result:	Status:
1. Open website 2. Find the login button on the top right 3. Proceed to login page and enter credentials 4. Click continue and proceed to the website	Email: m.novalic23@gmail.com Password: mirza12345	User is logged in the page and can proceed to shopping	Credentials are right but the access is denied	FAIL
Notes: Reason why access is denied is that ASOS.com website have protection from bots and robots, and it recognizes Selenium test as robot.				

```
@Test
void test() throws InterruptedException {
    webDriver.get(baseUrl);
    webDriver.manage().window().maximize();
    Thread.sleep(1000);
    webDriver.findElement(By.xpath("/html/body/div[2]/div/div[2]/header/div[3]/div/div[1]/div/ul/li[1]/div/div/div/button/span")).click();
    Thread.sleep(1000);
    webDriver.findElement(By.xpath("/html/body/div[2]/div/div[2]/header/div[3]/div/div[1]/div/ul/li[1]/div/div/div/div/div/div/div[1]/div/span/a[1]")).click();
    Thread.sleep(1000);
    WebElement username = webDriver.findElement(By.name("Username"));
    username.sendKeys("m.novalic23@gmail.com");
    Thread.sleep(500);
    WebElement pass = webDriver.findElement(By.name("Password"));
    pass.sendKeys("mirza12345");
    Thread.sleep(500);
    webDriver.findElement(By.id("signin")).click();
    Thread.sleep(2000);
}
```

3.2. Checking filters

Check for men items that are advertised on the homepage with 30% discounts.

Test Name: Filter test				
Description: Check if the website will offer specific hoodie after adapting the filters				
Pre-condition(s):				
Test Steps:	Test Data:	Expected Result:	Actual Result:	Status:
1. Click on ad for 30% sales 2. Adapt the filters to male black hoodies 3. Assert that the first product that pops up is the hoodie with the specific name provided in the code below	Product name: Le Breve centre stitch crew neck sweatshirt in black	The specific product will be the first choice	The specific product is the first choice	PASS

Notes:

```
@Test
void test() throws InterruptedException {
    webDriver.get(baseUrl);
    webDriver.manage().window().maximize();
    Thread.sleep(2000);

    webDriver.findElement(By.id("men-floor")).click();
    Thread.sleep(1000);

    String currentUrl = webDriver.getCurrentUrl();
    assertEquals("https://www.asos.com/men/", currentUrl);

    webDriver.findElement(By.xpath("/html/body/div[2]/div/main/section[1]/div/a/div/div[2]/div/h2")).click();
    Thread.sleep(1000);
    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/section/div/div/div[2]/ul/li[2]/a")).click();
    Thread.sleep(1000);

    js.executeScript("window.scrollTo(0, 300)");
    Thread.sleep(2000);

    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div[1]/div/div/div[1]/ul/li[6]/div/button")).click();
    Thread.sleep(1000);
    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div[1]/div/div/div[1]/ul/li[6]/div/div/div/div[1]/li[1]/div/div/div[2]")).click();
    Thread.sleep(3000);

    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div[1]/div/div/div[1]/ul/li[6]/div/button")).click();
    Thread.sleep(1000); //close the dropdown so it can scroll

    js.executeScript("window.scrollTo(0, 600)");
    Thread.sleep(2000);

    WebElement firstHoodie = webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[2]/div/div[1]/section/article[1]/a/div[2]/div/div/h2"));
    // js.executeScript("arguments[0].scrollIntoView(true);", firstHoodie); does not perform scroll to where it should
    assertEquals("Le Breve centre stitch crew neck sweatshirt in black", firstHoodie.getText());
    Thread.sleep(2000);
}
```

3.3. Gift vouchers

Test Name: Voucher test

Description: Check if the all features on the vouchers work correctly

Pre-condition(s):

Test Steps:	Test Data:	Expected Result:	Actual Result:	Status:
1. Open the “Lunar New Year field” 2. Choose voucher option 3. Provide details about the gift 4. Proceed to checkout	Input field are entered as anybody wish	The voucher will be created, all features work	The voucher is created perfectly	PASS

Notes:

```
@Test
void test() throws InterruptedException {
    webDriver.get(baseUrl);
    webDriver.manage().window().maximize();
    Thread.sleep(1000);
    webDriver.findElement(By.xpath("/html/body/div[2]/div/div[2]/header/div[3]/div/div[2]/div[2]/nav/div/div/button[3]")).click();
    Thread.sleep(500);
    webDriver.findElement(By.xpath("/html/body/div[2]/div/div[2]/header/div[3]/div/div[2]/div[2]/nav/div/div/div[3]/div/div[2]/div/div[3]/ul/li[4]/a/div/div")).click();
    Thread.sleep(1000);
    String currentUrl = webDriver.getCurrentUrl();
    assertEquals("https://www.asos.com/gift-vouchers/", currentUrl);

    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div/form/div[1]/div/fieldset/div/div[3]/label/div")).click();
    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div/form/div[2]/div/fieldset/div[1]/div[5]/label/div")).click();
    Thread.sleep(2000);

    WebElement to = webDriver.findElement(By.id("voucher-toName"));
    to.sendKeys("Jasmina");
    WebElement from = webDriver.findElement(By.id("voucher-fromName"));
    from.sendKeys("Mirza");
    Thread.sleep(1000);

    Select dropdown = new Select(webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div/form/div[3]/div/div/fieldset[2]/div[2]/div/select")));
    dropdown.selectByValue("2023-01-26");
    Thread.sleep(1000);

    WebElement message = webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div/form/div[3]/div/div/fieldset[2]/div[3]/textarea"));
    message.sendKeys("Happy birthday, Jasmina! :)");
    Thread.sleep(2000);
}
```

3.4. Choosing the right product

Test Name: Product test				
Description: Check if the other filters work with the other products				
Pre-condition(s):				
Test Steps: 1. Choose men slides 2. Adapt certain filters 3. Scroll and chose specific ones	Test Data:	Expected Result: Right items will appear	Actual Result: Right items appeared	Status: PASS
Notes: Test similar to second one but it is not rare that some filters work for certain products and others don't				

```

@Test
void test() throws InterruptedException {
    webDriver.get(baseUrl);
    webDriver.manage().window().maximize();
    Thread.sleep(1000);
    webDriver.findElement(By.xpath("/html/body/div[2]/div/div[2]/header/div[3]/div/div[2]/div[2]/nav/div/div/button[5]/span/span")).click();
    Thread.sleep(2000);
    webDriver.findElement(By.xpath("/html/body/div[2]/div/div[2]/header/div[3]/div/div[2]/div[2]/nav/div/div/div[5]/div/div[2]/div/div[1]/ul/li[9]/a")).click();
    Thread.sleep(2500);
    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div[1]/div/div/div[1]/ul/li[4]/div/button/div")).click();
    Thread.sleep(1000);
    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div[1]/div/div/div[1]/ul/li[4]/div/div/div[1]/li[1]/div/label/div/span")).click();
    Thread.sleep(1000);
    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[2]/div/div[1]/section[1]/article[6]/a/div[1]/img")).click();
    Thread.sleep(1500);

    String delivery = webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div[5]/section/div/div[2]/div[2]/div[2]/div[3]/div/div[1]")).getText();
    assertEquals("Free Delivery.", delivery);

    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div[5]/section/div/div[2]/div[3]/div/ul/li[1]/div/h2/button")).click();
    Thread.sleep(1000);

    String code = webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div[5]/section/div/div[2]/div[3]/div/ul/li[1]/div/div/div/div/p")).getText();
    assertEquals("Product Code: 118698789", code);
}

```

3.5. Search engine and favorite test

Test Name: Search and add to favorite test				
Description: Check if the search engine finds exactly the product user enters and adding some to favorites				
Pre-condition(s):				
Test Steps: 1. Enter the product and click search 2. After the results, find the product and add them to favorites 3. Open saved items and see products user saved	Test Data:	Expected Result: Right items will be shown in both cases, fast search engine	Actual Result: Search engine really fast and accurate, as well as add to favorite items button	Status: PASS
Notes: Sometimes test may fail because updating of the page				

[illegible]

3.6. Adding to the bag

Test Name: Add to bag Test				
Description: Check if add to bag feature works correctly				
Pre-condition(s):				
Test Steps: 1. Go to women page 2. Search for certain products, than navigate back and choose bestsellers 3. After finding the product, add it to bag	Test Data:	Expected Result: Product will be added to the bag	Actual Result: Issues with adding it to the bag	Status: FAIL
Notes: Test is correct but the issue is the same as in the first test case				

```
//Test
void test() throws InterruptedException {
    WebDriver driver = new ChromeDriver();
    driver.manage().window().maximize();
    Thread.sleep(1000);

    WebElement button11 = driver.findElement(By.xpath("//html/body/div[2]/div/div[2]/header/div[3]/div/div[2]/div[11]/nav/div/div/button[11]"));
    button11.click();
    Thread.sleep(2000);

    WebElement button11_1 = driver.findElement(By.xpath("//html/body/div[2]/div/div[2]/header/div[3]/div/div[2]/div[11]/nav/div/div[11]/div/div[2]/div/div[2]/div[11]/div/a"));
    button11_1.click();
    Thread.sleep(2000);

    driver.navigate().back();
    Thread.sleep(2000);

    WebElement button11_2 = driver.findElement(By.xpath("//html/body/div[2]/div/div[2]/header/div[3]/div/div[2]/div[11]/nav/div/div/button[11]"));
    button11_2.click();
    Thread.sleep(1500);

    WebElement button11_3 = driver.findElement(By.xpath("//html/body/div[2]/div/div[2]/header/div[3]/div/div[2]/div[11]/nav/div/div[11]/div/div[2]/div/div[2]/div[11]/div/a"));
    button11_3.click();
    Thread.sleep(1500);

    js.executeScript("window.scrollTo(0, 500)");
    Thread.sleep(2000);

    WebElement article11 = driver.findElement(By.xpath("//html/body/div[1]/div/main/div/div[1]/div[2]/div/div[1]/section/article[11]"));
    article11.click();
    Thread.sleep(1800);

    js.executeScript("window.scrollTo(0, 200)");
    Thread.sleep(2000);

    String price = driver.findElement(By.xpath("//html/body/div[1]/div/main/div[5]/section/div/div[2]/div[1]/div[1]/div/span[2]")).getText();
    assertEquals("£32.00", price);

    WebElement button11_4 = driver.findElement(By.xpath("//html/body/div[1]/div/main/div[5]/section/div/div[2]/div[2]/div[2]/div[2]/div[1]/div/button"));
    button11_4.click();
    Thread.sleep(4000);

    //problem with adding to the bag
}
```

3.7. Fit assistance test

Test Name: Test fit assistance				
Description: After searching for the shirt, try out help from fit assistance				
Pre-condition(s):				
Test Steps:	Test Data:	Expected Result:	Actual Result:	Status:
1. Search for the product and click on it 2. Click for fit assistance 3. Enter data and see if the assistance works	Data such as height, weight, years, and body types	The assistance will offer you a size	Size is false	FAIL
Notes:				

```

@Test
void test() throws InterruptedException {
    webDriver.get(baseUrl);
    webDriver.manage().window().maximize();
    Thread.sleep(2000);

    WebElement tnf = webDriver.findElement(By.xpath("/html/body/div[2]/div/main/section[6]/article/div[3]/ul/li[2]/a/img"));
    js.executeScript("arguments[0].scrollIntoView(true);", tnf);
    Thread.sleep(1000);
    tnf.click();
    Thread.sleep(3000);

    WebElement loadMore = webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div/a[2]"));
    js.executeScript("arguments[0].scrollIntoView(true);", loadMore);
    Thread.sleep(1000);
    loadMore.click();
    Thread.sleep(2500);

    WebElement tshirt = webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div/div[1]/section[2]/article[20]/a/div[1]/img"));
    js.executeScript("arguments[0].scrollIntoView(true);", tshirt);
    Thread.sleep(2000);
    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div[2]/div/div[1]/section[2]/article[20]/a/div[2]/div/div/h2")).click();
    Thread.sleep(3000);

    js.executeScript("window.scrollTo(0, 500)");
    Thread.sleep(1000);

    webDriver.findElement(By.id("fit-upper")).click();
    Thread.sleep(2000);

    WebElement height = webDriver.findElement(By.xpath("/html/body/div[5]/div[3]/div/div[2]/div[1]/div/div[2]/div/div[3]/div/div[1]/div/div/div[1]/div/div[1]/input"));
    height.sendKeys("190");
    WebElement weight = webDriver.findElement(By.xpath("/html/body/div[5]/div[3]/div/div[2]/div[1]/div/div[2]/div/div[3]/div/div[2]/div/div/div[1]/div/div[1]/input"));
    weight.sendKeys("90");
    Thread.sleep(1000);

    webDriver.findElement(By.xpath("/html/body/div[5]/div[3]/div/div[2]/div[1]/div/div[2]/div/div[4]/button")).click();
    Thread.sleep(2000);
    webDriver.findElement(By.xpath("/html/body/div[5]/div[3]/div/div[2]/div[1]/div[2]/div/div[2]/button")).click();
    Thread.sleep(1500);
    webDriver.findElement(By.xpath("/html/body/div[5]/div[3]/div/div[2]/div[1]/div[2]/div/div[2]/button")).click();
    Thread.sleep(1500);
    WebElement age = webDriver.findElement(By.xpath("/html/body/div[5]/div[3]/div/div[2]/div[1]/div[2]/div/div[2]/div/div[1]/input"));
    age.sendKeys("21");
    webDriver.findElement(By.xpath("/html/body/div[5]/div[3]/div/div[2]/div[1]/div[2]/div/div[2]/div/button")).click();
    Thread.sleep(1500);
    webDriver.findElement(By.xpath("/html/body/div[5]/div[3]/div/div[2]/div[1]/div[3]/div/div[2]/button")).click();
    Thread.sleep(1500);
    //for some reason can not assert that the size is false and this feature does not work properly
}

```

3.8. Social media links test

Test Name: Social Media links Test				
Description: Check if the website will open right social media page after clicking on it				
Pre-condition(s):				
Test Steps:	Test Data:	Expected Result:	Actual Result:	Status:
1. Scroll down to facebook link 2. Click on it 3. Check if the link works		Link will open a new tab with ASOS facebook page	Link opens the correct page	PASS
Notes:				

```

@Test
void test() throws InterruptedException {
    webDriver.get(baseUrl);
    webDriver.manage().window().maximize();
    Thread.sleep(2000);

    WebElement fb = webDriver.findElement(By.xpath("/html/body/div[2]/div/div[4]/footer/div[1]/div[1]/ul[1]/li[1]/a"));
    js.executeScript("arguments[0].scrollIntoView(true);", fb);
    Thread.sleep(2000);

    String handle1 = webDriver.getWindowHandle();
    fb.click();
    Thread.sleep(3500);

    for(String handle: webDriver.getWindowHandles()) {
        if (!handle.equals(handle1)) {
            webDriver.switchTo().window(handle);
            break;
        }
    }

    String currentURL = webDriver.getCurrentUrl();
    assertEquals("https://www.facebook.com/ASOS/", currentURL);

    webDriver.close();
    webDriver.switchTo().window(handle1);
}

```

3.9. More information / help test

Test Name: More info / Help Test				
Description: Check for the payment information on the help feature				
Pre-condition(s):				
Test Steps:	Test Data:	Expected Result:	Actual Result:	Status:
1. Scroll down to help option 2. Click on it 3. Enter the payment keyword and search information about payment		Website will offer payment info	Website offers payment info	PASS
Notes:				

```

test() throws InterruptedException {
    webDriver.get(baseUrl);
    webDriver.manage().window().maximize();
    Thread.sleep(1000);

    WebElement help = webDriver.findElement(By.xpath("/html/body/div[2]/div/div[4]/div[3]/div/div[1]/div[1]/a"));
    js.executeScript("arguments[0].scrollIntoView(true);", help);
    Thread.sleep(2000);
    help.click();
    Thread.sleep(2000);

    WebElement search = webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div/div/form/input"));
    search.sendKeys("payment");
    Thread.sleep(1000);

    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div/div/form/button")).click();
    Thread.sleep(2000);

    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div/div[1]/div/a/div[2]")).click();
    Thread.sleep(1000);

    js.executeScript("window.scrollTo(0, 600)");
    Thread.sleep(1000);

    WebElement authorisation = webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div/p[3]"));
    assertEquals("If your card is not authorised, payment will not be taken and we'll email to let you know that your bank or card issuer wouldn't authorise the payment.", authorisation.getText());
    Thread.sleep(1000);
}

```

3.10. More about brand test

Test Name: More about the brand Test				
Description: Check for information about the brand user is looking for				
Pre-condition(s):				
Test Steps:	Test Data:	Expected Result:	Actual Result:	Status:
1. Find product 2. Click on it 3. Open the “More about the brand” information button		Website should provide accurate info about the brand	Website provides accurate information	PASS
Notes:				

```

@Test
void test() throws InterruptedException {
    webDriver.get(baseUrl);
    webDriver.manage().window().maximize();
    Thread.sleep(1000);

    WebElement fp = webDriver.findElement(By.xpath("/html/body/div[2]/div/main/section[3]/ul/li[4]/a/div[1]/div/img"));
    js.executeScript("arguments[0].scrollIntoView(true);", fp);
    Thread.sleep(1000);

    webDriver.findElement(By.xpath("/html/body/div[2]/div/main/section[3]/ul/li[4]/a/div[2]/div[1]")).click();
    Thread.sleep(2000);

    WebElement hat = webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div[2]/div/div[1]/section/article[20]/a/div[1]/img"));
    js.executeScript("arguments[0].scrollIntoView(true);", hat);
    Thread.sleep(1000);

    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div/div/div[1]/div[2]/div/div[1]/section/article[20]/a/div[2]/div")).click();
    Thread.sleep(3000);

    js.executeScript("window.scrollTo(0, 500)");
    Thread.sleep(1000);

    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div[5]/section/div/div[2]/div[2]/div[2]/div[1]/div/button")).click();
    Thread.sleep(3000);

    webDriver.findElement(By.xpath("/html/body/div[1]/div/main/div[5]/section/div/div[2]/div[3]/div/ul/li[2]/div/h2/button")).click();
    Thread.sleep(3000);

    js.executeScript("window.scrollTo(0, 200)");
    Thread.sleep(3000);
}

```

4. Conclusion

4.1. Testing Summary

Testing Tool	Total Tests	Passed Tests	Failed Tests
Selenium	10	7	3

Failed test in this project usually fail because ASOS website has a strong protection from bots and robots, as I mentioned in notes section about these tests. I tried multiple solution to “mask” my tests, and some of them are included in the code, but their protection is probably too good. Third test that fail is the feature that is not build properly on the webpage, so I am pretty surprised I found the feature that actually does not work correctly.

Failed tests: 3.1, 3.6 and 3.7.

4.2. Final Thoughts

I was really excited to work on this project, and I am happy that I actually found a flaw on this big brand website that I hope they will fix in the future. The code is simple and everyone with basic knowledge of Selenium should understand it, and I am happy that I applied most of the knowledge I learnt through this course.