

Test Case Template and Final Contribution Statement (CS360)

StoreX



Group Number: 06

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Work Division plan

Please share the work plan for each member.

Member name	Work done (**Clearly** write the name of sections, test case numbers, and the other ways you contributed)	Approximate Equal contribution to the group work (Yes/No) + Remarks if any
Mati ur Rehman	Lead Developer for the user side of StoreX. Helped in Acceptance Testing, fixes of bugs and other minor issue during development for the user side.	Yes, happy with the work division
Muhammad Hamza Sajjad	Test cases T09-T17, T35-T39, Section 2.3, 3.1, 4, 4.3, formatting and organizing the testing document, recording the video demo showing functionalities of both user and admin side of StoreX, communicating with development team to ensure typos, minor bugs etc are fixed	Yes, happy with the work division
Muhammad Hamza Shahzad	Lead Developer for the admin side of StoreX. Helped in Acceptance Testing, fixes of bugs and other minor issue during development for the admin side.	Yes, happy with the work division
Muhammad Haris	Ran the test cases T18-T31, T48 and reported the findings. Notified the development team of bugs present, which were then patched. Helped with acceptance testing.	Yes, happy with the work division
Muhammad Raahem Asghar	Section 1, Test cases T01-T08, T32-T34, T40-T47, T49-T50, helped in Acceptance Testing. Was in communication with the development team and helped in development.	Yes, happy with the work division

Test Cases

1. Introduction - Muhammad Raahem Asghar

1.1 Document Purpose

The purpose of this document is to enlighten its reader with the working and methodology behind the various types of testing that have been done on our web application – StoreX. This is done in order to ensure that the end product is well up to standards and has no major or minor issues. This document also helps the reader to understand the behavior of our web application against various different valid or invalid inputs.

The reader begins this document by going through the introduction section and the necessary pre-requisites required, followed by the numerous manual test cases used for testing, then a summary of the manual testing with the outputs, statistics of the test cases and finally, a section on acceptance testing in which an end user performs various test cases. Test data is used alongside test cases and the reader can also see the results of the test cases in order to observe the overall behavior of the system.

1.2 Document Scope

The scope of this document is to describe the testing done on StoreX. Functional and non-functional testing has been done on the web app. Validation and defect testing has been done for most of the test cases by providing valid and invalid inputs to the test cases. Most of the test cases have been done through grey box testing as the members writing this document know some of the implementation behind the different features. Testing has been done in order to ensure that the flow of the application is smooth, and the web app functions without any problems. Manual testing has been carried out with the test cases.

Since the UI is the primary interaction between the web app and the admin and user, testing has mostly been done on the UI. Other than that tests have been carried out in order to ensure that the backend is working properly and the database is being updated accordingly upon the execution of a test case. Another major aspect was the combined testing of the front end and backend to ensure that everything is going smoothly, is integrated properly and the results match the expected output.

1.3 Definitions, Acronyms, Abbreviations

Term	Definition
Admin	The person who has all the control of web application, who is in charge of adding items and controlling their prices.
Credentials	Credentials authenticate a user when logging into an online account over the Internet
End User	The person for whom the application was developed for
SDS	Software Design Specifications
SRS	Software Requirements Specifications
UI	User Interface
User	A person who visits the web application.
Web App	Web Application

1.4 References

- StoreX User Side:
<https://storex-users.web.app>
- StoreX Admin Side:
<https://storex-admin.web.app>
- StoreX SDS:
https://pern-my.sharepoint.com/:b:/g/personal/22100027_lums_edu_pk/EWHMQoku1a5KIOH4QdSS4W4BbNqYBp3Wqi9qdHjMKZX0sA?e=zIJCrc
- StoreX SRS:
https://pern-my.sharepoint.com/:b:/g/personal/22100027_lums_edu_pk/EUVaVv2fSAFKvRgQ5QCWHsQBC4XRkQQ70nWMwhz_aQ597w?e=vsDbn4
- <https://developers.google.com/speed/pagespeed/insights/>

1.5 Overview of Use Cases used

The use cases used in this document are those written in the SRS document which are based on the functional and non-functional requirements of the system. The use cases were selected in order to test their functionality. Some of the use cases used are:

- Login – User
- Signup – User
- Login – Admin
- Shopping Cart – User
- User Account Details – User
- Homepage – User
- Search – User
- Ordering and Checkout – User and Admin
- Add Products – Admin
- Update Products – Admin
- Delete Product – Admin
- View Inventory – Admin
- Sales Analytics – Admin

More detail regarding the above use cases can be found in our SRS document (can be accessed from the references section).

1.6 Prerequisites to Execute Test Cases

There are some main prerequisites required in order to execute test i.e. a stable internet connection via WiFi, Ethernet etc and the latest web browser (Chrome, Edge, Firefox) on a computer system. Other than that, the tester should have access to the web application. These prerequisites will be used for each and every test case in manual testing.

Other than the main prerequisites, there are other prerequisites that depend upon the type of test case, for example, in order to test the login functionality, the web app, StoreX should be opened on the web browser. Another example would be to test whether user is able to log out or not. In this case, the user should be logged in the web app. All in all, other than the main prerequisites mentioned above, other prerequisites are also required for different test cases. The reader can consult the SRS document if he/she wishes to get more information regarding the use cases or he/she can consult the SDS document if he/she wishes to understand the information architecture of the web app.

2. Testing Environments

2.1 Environment used by member 1 Muhammad Raahem Asghar

Machine Name	HP Laptop 15-BS178TX	DB Directory	https://console.firebase.google.com/u/0/project/software-engineering-123/database/software-engineering-123-default-rtdb/data		
Machine Specs	Intel® Core™ i7-8550U CPU @ 1.80GHz 2.00 GHz, 8GB RAM, 1TB HDD	DB	Firebase	Client Server /Back-End	https://console.firebase.google.com/u/0/project/software-engineering-123/overview
Device name	HP Laptop 15-BS178TX	Device specs	Intel® Core™ i7-8550U CPU @ 1.80GHz 2.00 GHz, 8GB RAM, 1TB HDD		
Tester Name	Muhammad Raahem Asghar	Test Date	24 th April, 2021		

2.2 Environment used by member 2 Muhammad Haris

Machine Name	HP ProBook 455 G7	DB Directory	https://console.firebase.google.com/u/0/project/software-engineering-123/database/software-engineering-123-default-rtdb/data		
Machine Specs	Processor AMD Ryzen 7 4700U, 16GB RAM, 1TB HDD	DB	Firebase	Client Server /Back-End	https://console.firebase.google.com/u/0/project/software-engineering-123/overview
Device name	HP ProBook 455 G7	Device specs	Processor AMD Ryzen 7 4700U, 16GB RAM, 1TB HDD		
Tester Name	Muhammad Haris	Test Date	24 th April, 2021		

2.3 Environment used by member 3 Muhammad Hamza Sajjad

Machine Name	Lenovo V330-15IKB	DB Directory	https://console.firebase.google.com/u/0/project/software-engineering-123/database/software-engineering-123-default-rtdb/data		
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Machine Specs	Intel® Core™ i5-8250U, 8GB RAM, 1TB HDD, Windows 10 Pro, 2GB Radeon™ 530	DB	Firestore	Client Server /Back-End	https://console.firebase.google.com/u/0/project/software-engineering-123/overview
Device name	Lenovo V330-15IKB		Device specs	Intel® Core™ i5-8250U, 8GB RAM, 1TB HDD, Windows 10 Pro, 2GB Radeon™ 530	
Tester Name	Muhammad Hamza Sajjad		Test Date	25 th April, 2021	

2.4 Environment used by member 4 Muhammad Hamza Shahzad

Machine Name	Dell Latitude 5480	DB Directory	https://console.firebase.google.com/u/0/project/software-engineering-123/database/software-engineering-123-default-rtdb/data		
Machine Specs	Intel® Core™ i7-6600U, 2.6GHz, 2.8GHz, 16GB Ram	DB	Firestore	Client Server /Back-End	https://console.firebase.google.com/u/0/project/software-engineering-123/overview
Device name	Dell Latitude 5480		Device specs	Intel® Core™ i7-6600U, 2.6GHz, 2.8GHz, 16GB Ram	
Tester Name	Muhammad Hamza Shahzad		Test Date	25 th April, 2021	

2.5 Environment used by member 5 Mati ur Rehman

Machine Name	Dell Latitude 3480	DB Directory	https://console.firebase.google.com/u/0/project/software-engineering-123/database/software-engineering-123-default-rtdb/data		
Machine Specs	Intel® Core™ i3-7100U, 2.4GHz, 2.4GHz, 8GB Ram	DB	Firestore	Client Server /Back-End	https://console.firebase.google.com/u/0/project/software-engineering-123/overview
Device name	Dell Latitude 3480		Device specs	Intel® Core™ i3-7100U, 2.4GHz, 2.4GHz, 8GB Ram	
Tester Name	Mati Ur Rehman		Test Date	25 th April, 2021	

3. Test Cases

3.1 List of test cases

Testcase ID	Testcase name	Performed by	Successful/Failed
Module: Login and Signup			
T01	Login Credentials – User	Muhammad Raahem Asghar	Successful
T02	Login Credentials – Admin	Muhammad Raahem Asghar	Successful
T03	Signup for New User	Muhammad Raahem Asghar	Successful
T04	User still logged in after refreshing page	Muhammad Raahem Asghar	Successful
T05	Admin still logged in after refreshing page	Muhammad Raahem Asghar	Successful
T06	Checking whether account created or not	Muhammad Raahem Asghar	Successful
Module: User Account			
T07	Update User Details	Muhammad Raahem Asghar	Successful
T08	Delete Account	Muhammad Raahem Asghar	Successful
Module: Shopping Cart			
T09	Add product(s) to cart and check if quantity counter on cart icon increments or not	Muhammad Hamza Sajjad	Successful
T10	View cart by clicking on icon	Muhammad Hamza Sajjad	Successful
T11	Check whether desired product is added or not by opening cart	Muhammad Hamza Sajjad	Successful
T12	Remove product from cart	Muhammad Hamza Sajjad	Successful
T13	Price and Quantity Update upon modifying quantity of added product in cart	Muhammad Hamza Sajjad	Successful
T14	Increment quantity of added product in cart max up till its available stock	Muhammad Hamza Sajjad	Successful
T15	Input Validation in Shipping Information	Muhammad Hamza Sajjad	Successful
T16	Message displayed on placing order	Muhammad Hamza Sajjad	Successful
T17	Navigation from cart to homepage	Muhammad Hamza Sajjad	Successful
Module: Homepage			
T18	Search Product	Muhammad Haris	Successful
T19	Category Check	Muhammad Haris	Successful
T20	Navigation to Product Page	Muhammad Haris	Successful
T21	Out of Stock Check	Muhammad Haris	Successful
T22	Navigating from product page to homepage	Muhammad Haris	Successful
T23	Checking whether scrolling arrows working correctly	Muhammad Haris	Successful

T24	Sale products being displayed properly	Muhammad Haris	Successful
Module: Ordering and Checkout			
T25	Check whether order has been placed or not upon checkout – User	Muhammad Haris	Successful
T26	Check whether order has been received by Admin	Muhammad Haris	Successful
T27	Check whether Admin is able to mark as delivered	Muhammad Haris	Successful
T28	Check whether orders removed from pending when dispatched - Admin	Muhammad Haris	Successful
T29	Check whether order has been delivered – User	Muhammad Haris	Successful
T30	Check whether number of stock of said product decreases upon checkout	Muhammad Haris	Successful
T31	User is not able to checkout without logging in	Muhammad Haris	Successful
Module: Rating			
T32	Check whether the user is able to rate a product	Muhammad Raahem Asghar	Successful
Module: Add Products			
T33	Form Submission	Muhammad Raahem Asghar	Successful
T34	Check whether new product available on homepage	Muhammad Raahem Asghar	Successful
Module: Inventory			
T35	Inventory being displayed correctly	Muhammad Hamza Sajjad	Successful
Module: Update Products			
T36	Accurate Searching in Update Products	Muhammad Hamza Sajjad	Successful
T37	Make Sure Form Input is Correct in Update Products	Muhammad Hamza Sajjad	Successful
T38	Dialog box displayed or not upon clicking Update Product	Muhammad Hamza Sajjad	Successful
T39	Checking whether product details are updated or not	Muhammad Hamza Sajjad	Successful
Module: Delete Products			
T40	Accurate Searching	Muhammad Raahem Asghar	Successful
T41	Checking whether form submitted or not	Muhammad Raahem Asghar	Successful
T42	Checking whether product has been removed from the store or not	Muhammad Raahem Asghar	Successful
Module: Add Category			
T43	Form submission	Muhammad Raahem Asghar	Successful

T44	Checking whether the category has been added or not	Muhammad Raahem Asghar	Successful
Module: Sales Analytics			
T45	Table being displayed or not for a particular date	Muhammad Raahem Asghar	Successful
Module: Logout			
T46	User is able to logout	Muhammad Raahem Asghar	Successful
T47	Admin is able to logout	Muhammad Raahem Asghar	Successful
Module: Availability			
T48	Checking whether web app is available at any time	Muhammad Haris	Successful
Module: Performance			
T49	Checking whether the web app loads within 5 seconds	Muhammad Raahem Asghar	Successful
Module: Portability			
T50	Checking whether web app opens properly on mobile	Muhammad Raahem Asghar	Failed

3.2 Test Case T01: Login Credentials - User – Muhammad Raahem Asghar

3.2.1 Description

On the StoreX login page, the user is asked to enter their login credentials to allow them more functionality on the webapp. The entered credentials must match with the credentials stored in the database to proceed forward.

3.2.2 Pre-conditions for this test case

The user should have an active WiFi connection and the StoreX homepage is opened

3.2.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on Login in the navbar		Login screen/sign up screen opened		Successful	
2	Enter known email ID and password (login side) and press login button	hamza1@gmail.com hello	The user redirected to Homepage of StoreX, “Signed in” written in green in navbar		Successful	
Test Case Status				Successful		

3.2.4 Array of values

Array of values					
	Scenario 2	Scenario 3	Scenario4	Scenario 5	Scenario 6
Value1	hamza1@gmail.com	hamza1@gmail.com		hamza1@gmail.com	
Value2	hello			hell	
...					
ValueX					
Expected Result	Dialog box telling that '@' is missing in email ID	Dialog box telling that password field is empty	Dialog box telling user to enter credentials in the fields	Message: incorrect email or password	
Actual Result (if different from expected)					
Successful/Failed	Successful	Successful	Successful	Successful	
Environment Nbr (if failed)					
Log Number (if failed)					

3.3 Test Case T02: Login Credentials - Admin – Muhammad Raahem Asghar

3.3.1 Description

On the admin side login page, the admin is asked to enter their login credentials to allow them admin access on the webapp. The entered credentials must match with the credentials stored in the database to proceed forward.

3.3.2 Pre-conditions for this test case

The user should have an active WiFi connection and web browser is open

3.3.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Open StoreX admin side on the web browser		Admin Login screen loaded		Successful	
2	Enter known email ID and password and press login button	22100061@lums.edu.pk hellohi	Admin is redirected to Add Products and admin name is written in the dropdown on the header		Successful	
Test Case Status				Successful		

3.3.4 Array of values

Array of values					
	Scenario 2	Scenario 3	Scenario4	Scenario 5	Scenario 6
Value1	22100061lums.edu.pk	22100061 @lums.edu.pk		22100061 @lums.edu.pk	
Value2	hellohi			hello	
...					
ValueX					
Expected Result	Dialog box telling that '@' is missing in email ID	Dialog box telling that password field is empty	Dialog box telling user to enter credentials in the fields	Message: incorrect email or password	
Actual Result (if different from expected)					
Successful/Failed	Successful	Successful	Successful	Successful	

Environment Nbr (if failed)					
Log Number (if failed)					

3.4 Test Case T03: Signup - User – Muhammad Raahem Asghar

3.4.1 Description

A new user should have the option of creating an account in order to get access to more features on the webapp. The credentials entered into the fields will be saved to the database and then can be used for authentication while logging in.

3.4.2 Pre-conditions for this test case

The user should have an active WiFi connection and web browser is open.

3.4.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Open StoreX on the web browser		StoreX homepage loaded		Successful	
2	Click on Login in the navbar		Login screen/sign up screen opened		Successful	
2	Fill in the required information on the sign up form, then press sign up button.	Raahem Asghar 03034195464 Lahore 49 A3, Gulberg 3 22100061@lums.edu.pk hellohi1 hellohi1	Message displayed: Account created!		Successful	
Test Case Status				Successful		

3.4.4 Array of values

Array of values					
	Scenario 2	Scenario 3	Scenario4	Scenario 5	Scenario 6
Value1	Raahem Asghar	Raahem Asghar		Raahem Asghar	Raahem Asghar
Value2	03034195464	03034195464			03034195464
Value3	Lahore	Lahore		Lahore	Lahore
Value4	49 A3, Gulberg 3	49 A3, Gulberg 3		49 A3, Gulberg 3	49 A3, Gulberg 3
Value5	22100061lums.edu.pk	22100061lums.edu.pk		22100061lums.edu.pk	hamza1@gmail.com
Value6	hellohi1	hellohi1		hellohi1	hellohi1
Value7	hellohi1	hellohi		hellohi1	hellohi
Expected Result	Dialog box telling that '@' is missing in email ID	Message: Passwords do not match	Dialog box telling user to enter credentials in the fields	Dialog box in the appropriate field where data was not entered	Message: Account already exists
Actual Result (if different from expected)					
Successful/Failed	Successful	Successful	Successful	Successful	Successful
Environment Nbr (if failed)					
Log Number (if failed)					

3.5 Test Case T04: User is still Logged in after refreshing – Muhammad Raahem Asghar

3.5.1 Description

This test case is to check whether the user remains logged in or not upon clicking refresh or if he/she accidentally clicks the refresh page button on the web browser

3.5.2 Pre-conditions for this test case

The user is logged in and is on any page of StoreX

3.5.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Press the refresh button in the web browser		The webapp is reloaded and the user is still logged in i.e. signed in written in green in the navbar		Successful	
Test Case Status				Successful		

3.6 Test Case T05: Admin is still Logged in after refreshing – Muhammad Raahem Asghar

3.6.1 Description

This test case is to check whether the admin remains logged in or not upon clicking refresh or if he/she accidentally clicks the refresh page button on the web browser

3.6.2 Pre-conditions for this test case

The admin is logged in the admin side of StoreX and is on any page of the webapp.

3.6.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Press the refresh button in the web		The webapp is reloaded and the		Successful	

	browser		user is still logged in i.e. signed in written in green in the navbar			
Test Case Status				<i>Successful</i>		

3.7 Test Case T06: New Account Created or Not After Signup - User – Muhammad Raahem Asghar

3.7.1 Description

Once the user has created the account, it is important to ensure that the user details have been added to the database so that it can be used later on for authentication while logging in

3.7.2 Pre-conditions for this test case

The user should have an active WiFi connection and user has just created his/her account and is on the login page

3.7.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Enter known email ID and password (login side) and press login button	hamza1@gmail.com hello	The user redirected to Homepage of StoreX, “Signed in” written in green in navbar		Successful	
Test Case Status				<i>Successful</i>		

3.8 Test Case T07: Update User Details – Muhammad Raahem Asghar

3.8.1 Description

An existing user should have the option of updating his/her information and this test case ensures that this information has been updated correctly or not.

3.8.2 Pre-conditions for this test case

The user should have an active WiFi connection, the user is logged in StoreX

3.8.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on settings in navbar		Account settings page loaded with form showing current details of the user		Successful	
2	Fill in the required information on the form, then press update button.	Raahem Asghar 03034195464 137 J, DHA Lahore hellohi123	Message displayed: changes have been made successfully, the form now shows the updated details of the user		Successful	
Test Case Status				Successful		

3.8.4 Array of values

Array of values					
	Scenario 2	Scenario 3	Scenario 4	Scenario 5	Scenario 6
Value1		Raahem Asghar			
Value2		03034195464			

Value3		137 J, DHA			
Value4		Lahore			
Value5					
Expected Result	Message: Please fill out all the fields	Message: Please fill out all the fields			
Actual Result (if different from expected)					
Successful/Failed	Successful	Successful			
Environment Nbr (if failed)					
Log Number (if failed)					

3.9 Test Case T08: Delete Account – Muhammad Raahem Asghar

3.9.1 Description

On the account settings page, there is an option for deleting the user account if the user wishes to do so. On clicking that button, all information related to the user will be erased from the database

3.9.2 Pre-conditions for this test case

The user should have an active WiFi connection, the user is logged in StoreX

3.9.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on settings in navbar		Account settings page loaded with form showing current		Successful	

			details of the user			
2	Press the Delete button		Redirected to the homepage and the green signed in option isn't visible in the navbar, confirming the deletion		Successful	
Test Case Status				<i>Successful</i>		

3.10 Test Case T09: Add product(s) to cart and check if quantity counter on cart icon increments or not – Muhammad Hamza Sajjad

3.10.1 Description

The user can click on the add to cart icon in the box of a displayed product (e.g on homepage, category page, search results etc). When the user clicks on the add to cart icon, the product will be added to the user's shopping cart, and the counter on top of the cart icon will be incremented by one to indicate that the product has been added.

3.10.2 Pre-conditions for this test case

The user should have an active WiFi connection and should have a web browser installed.

3.10.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Open homepage of StoreX by visiting the URL of user-side StoreX		Homepage of StoreX is loaded		Successful	
2	Click once on add to cart icon in bottom left of a displayed product's box		The value of the quantity counter on top of the cart icon is incremented by one		Successful	
Test Case Status				<i>Successful</i>		

3.10.4 Scenario 2

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Add 9 different products one time each so quantity counter on cart icon reaches 9		Quantity counter value is 9		Successful	
2	Click once on add to cart icon in bottom left of another displayed product's box		The value of the quantity counter on top of the cart icon is incremented by one and reaches 10		Successful	
Test Case Status				Successful		

3.10.5 Scenario 3

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Try to add one product multiple times to the cart by clicking on its add to cart icon 3 times		Quantity counter remains the same (after incrementing once on the first addition of the product to the cart)		Successful	
Test Case Status				Successful		

3.11 Test Case T10: View cart by clicking on icon – Muhammad Hamza Sajjad

3.11.1 Description

The user can view their shopping cart at any given time by clicking on the cart icon located in the top-right of the screen in the header bar.

3.11.2 Pre-conditions for this test case

The user should have an active WiFi connection and should have a web browser installed. The user must have opened up StoreX in their web browser.

3.11.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on the cart icon in the top-right of the screen in the header bar (without any adding any products i.e. quantity counter on top of cart icon is 0).		The shopping cart of the user is loaded and displays 'No items in cart'.		Successful	
Test Case Status				Successful		

3.12 Test Case T11: Check whether desired product is added or not by opening cart – Muhammad Hamza Sajjad

3.12.1 Description

The user, after adding a product to their cart, can go to their cart by clicking on the cart icon to check whether that product has actually been added to the cart or not. If it is, it should be displayed in the cart along with its price and quantity.

3.12.2 Pre-conditions for this test case

The user should have an active WiFi connection and should have a web browser installed.

3.12.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Add a product to the shopping cart from any page by clicking on its add to cart icon once.		Quantity counter of cart increments by one.		Successful	
2	Click on cart icon in top right of screen to open cart.		The shopping cart should be opened, and the added product		Successful	

			should be displayed there along with its image, price and quantity equal to one, along with the shipping information section.			
			Test Case Status	<i>Successful</i>		

3.12.4 Scenario 2

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Add 3 different products to the shopping cart from any page by clicking on their add to cart icons.		Quantity counter of cart increments by three.		Successful	
2	Click on cart icon in top right of screen to open cart.		The shopping cart should be opened, and all 3 added products should be displayed there along with their images, prices and quantities (equal to one each), along with the shipping information section. The products should be scrollable if needed.		Successful	
			Test Case Status	<i>Successful</i>		

3.13 Test Case T12: Remove product from cart – Muhammad Hamza Sajjad

3.13.1 Description

The user can remove a product added to their shopping cart by decrementing its quantity until it reaches zero.

3.13.2 Pre-conditions for this test case

The user should have an active WiFi connection and should have a web browser installed. The user must have opened up StoreX in their web browser. The user must have added a product to their shopping cart.

3.13.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Only one product is added in the cart. Click once on the negative/decrement button next to quantity of the added product in the cart (which currently has quantity equal to one).		The product is removed from the cart and screen now displays 'No items in cart'.		Successful	
Test Case Status				Successful		

3.13.4 Scenario 2

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Two products are added in the cart. Click once on the minus/decrement button next to quantity of the first added product in the cart (which currently has quantity equal to one).		The first product is removed from the cart and the second product moves up to replace the removed first product in its position.		Successful	
Test Case Status				Successful		

3.14 Test Case T13: Price and Quantity Update upon modifying quantity of added product in cart – Muhammad Hamza Sajjad

3.14.1 Description

The user can modify the quantity of an added product, which will update the quantity and price for ordering that product with the updated quantity, as well as update the total price of the products in the shopping cart.

3.14.2 Pre-conditions for this test case

The user should have an active WiFi connection and should have a web browser installed. The user must have opened up StoreX in their web browser.

3.14.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Add Study Table product to the cart by clicking on its add to cart icon.		Study Table product is added to the cart.		Successful	
2	Click once on plus button next to quantity of Study Table.		The quantity of the product is incremented to two, and the price for the product changes from Rs 25000 to 50000. The total price changes from Rs 25000 to Rs 50000 too.		Successful	
Test Case Status				Successful		

3.14.4 Scenario 2

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Add Study Table product to the cart by clicking on its add to cart icon.		Study Table product is added to the cart.		Successful	
2	Click once on the plus button next to quantity of Study Table.		The quantity of the product is incremented to two, and the price for the product changes from Rs 25000 to Rs 50000. The total price changes from Rs 25000 to Rs 50000.		Successful	
3	Click once on the minus button next to quantity of Study Table.		The quantity of the product is decremented to one, and the		Successful	

			price for the product changes from Rs 50000 to Rs 25000. The total price changes from Rs 50000 to Rs 25000.			
Test Case Status				<i>Successful</i>		

3.15 Test Case T14: Increment quantity of added product in cart max up till its available stock – Muhammad Hamza Sajjad

3.15.1 Description

This test case ensures that the user can only increase the quantity for a specific product added in their cart up till its available stock.

3.15.2 Pre-conditions for this test case

The user should have an active WiFi connection and should have a web browser installed. The user must have opened up StoreX in their web browser.

3.15.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Add a product to the cart by clicking on its add to cart icon.		The product is added to the cart.		Successful	
2	Click on plus button next to quantity of the added product until it reaches the mentioned available stock quantity.		The quantity of the product is incremented till it reaches the value of its available stock quantity.		Successful	
3	Click once more on the plus button next to quantity of the added product.		The quantity does not increment and remains the same.		Successful	
Test Case Status				<i>Successful</i>		

3.16 Test Case T15: Input validation in shipping information – Muhammad Hamza Sajjad

3.16.1 Description

This test case ensures that there are no blank fields left before placing the order, and that phone number has only numbers input in it.

3.16.2 Pre-conditions for this test case

The user should have an active WiFi connection and should have a web browser installed. The user must have opened up StoreX in their web browser.

3.16.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	The user is logged in. The user goes to their shopping cart by clicking on the shopping cart icon. The user has already added at least one product to their cart. The user does not fill any field in the shipping information and clicks the Place Order button.		A tooltip appears asking the user to fill out the empty field(s).		Successful	
Test Case Status				Successful		

3.16.4 Scenario 2

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	The user is logged in. The user opens the cart by clicking on the cart icon. The user has already	Phone: abcdefghijklmnopq rstuvwxyz	The Phone field does not accept any alphabets as input.		Successful	

	added at least one product to their cart. The user fills out the first three fields in shipping information and tries to enter all alphabets one by one in the Phone field.					
2	The user now tries to enter numbers in the Phone field.	Phone: 1234567890	The Phone field accepts numbers as input.		Successful	
Test Case Status				<i>Successful</i>		

3.17 Test Case T16: Message displayed on placing order – Muhammad Hamza Sajjad

3.17.1 Description

This test case checks if a message is displayed to the user after they place an order from their shopping cart.

3.17.2 Pre-conditions for this test case

The user should have an active WiFi connection and should have a web browser installed. The user must have opened up StoreX in their web browser.

3.17.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	The user is logged in. The user opens the cart by clicking on the cart icon. The user has already added at least one product in their cart. The user adds their full name, shipping address, city, and phone. The user then clicks the Place Order button.	Full Name: Muhammad Hamza Sajjad Shipping Address: 24 Crater Street, Brown Town, Mars City: Martiana Phone:1234567890	A message is displayed to the user saying 'Your order has been placed successfully!' Then, it vanishes after a few seconds and the cart now says 'No items in cart'.		Successful	
Test Case Status				<i>Successful</i>		

3.18 Test Case T17: Navigation from cart to homepage – Muhammad Hamza Sajjad

3.18.1 Description

This test case checks if the user is able to navigate to the homepage from the shopping cart, and if the added products remain added in the cart.

3.18.2 Pre-conditions for this test case

The user should have an active WiFi connection and should have a web browser installed. The user must have opened up StoreX in their web browser.

3.18.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	The user has added at least one product in their cart. The user is present on the shopping cart screen. The user clicks on Home in the header bar.		The homepage is loaded and displayed. The quantity counter on the cart icon remains the same		Successful	
2	The user clicks on the cart icon to go back to the shopping cart.		The shopping cart is displayed with the shipping information. Previously added products are still there and are displayed along with their images, prices and quantities too.		Successful	
Test Case Status				Successful		

3.19 Test Case T18: Search Product – Muhammad Haris

3.19.1 Description

Check if the user is returned expected output when searching for a product. The input is entered into the search bar and then the search button is clicked.

3.19.2 Pre-conditions for this test case

The database has been populated with items.

3.19.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Select the search box by clicking it		Shows text cursor blinking		Successful	
2	Enter product to search	tricycle	The text is entered correctly		Successful	
3	Click the search icon to get result		Returns the product to select		Successful	
Test Case Status				Successful		

3.19.4 Array of values

Array of values					
	Scenario 2	Scenario 3	Scenario4	Scenario 5	Scenario 6
Value1	phone	Enter nothing and click search	abcdef	1234	/
Expected Result	Returns product related to input	Should not do anything	Returns nothing	Returns nothing	Returns nothing
Actual Result (if different from expected)					

Successful/Failed	Successful	Successful	Successful	Successful	Successful
Environment Nbr (if failed)					
Log Number (if failed)					

3.20 Test Case T19: Category Check (click in navbar to check whether page opens) – Muhammad Haris

3.20.1 Description

When the user clicks the categories present on the side navbar they should get all the products in that category.

3.20.2 Pre-conditions for this test case

The database has been populated with items.

3.20.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click the Groceries category		Returns all grocery items		Successful	
Test Case Status				Successful		

3.20.4 Array of values

Array of values					
	Scenario 2	Scenario 3	Scenario4	Scenario 5	Scenario 6
Action performed	Click electronics category	Click sports category	Click toys category	Click furniture category	Click stationary category
Expected Result	Return items in that category	Return items in that category	Return items in that category	Return items in that category	Return items in that category
Actual Result (if different from expected)					
Successful/Failed	Successful	Successful	Successful	Successful	Successful
Environment Nbr (if failed)					
Log Number (if failed)					

3.21 Test Case T20: Navigation to Product Page – Muhammad Haris

3.21.1 Description

Clicking the product will take user to the product page.

3.21.2 Pre-conditions for this test case

An item is returned.

3.21.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click the image of item chosen		Open the product page		Successful	
Test Case Status				Successful		

3.22 Test Case T21: Out of Stock Check – Muhammad Haris

3.22.1 Description

If an item the user is ordering is out of stock then they will be notified.

3.22.2 Pre-conditions for this test case

An item in cart is out of stock.

3.22.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Login as user		Homepage is shown with notification of being logged in.		Successful	
2	Search for out-of-stock item		The item is not shown		Successful	
			Test Case Status	Successful		

3.22.4 Scenario 2

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Login as user		Homepage is shown with notification of being logged in.		Successful	
2	Adding item to cart more than the available stock		The item should not be added		Successful	
			Test Case Status	Successful		

3.23 Test Case T22: Navigating from product page to homepage – Muhammad Haris

3.23.1 Description

The user can return from the product page. User can click the website icon to go to homepage.

3.23.2 Pre-conditions for this test case

The product page is open.

3.23.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click the homepage icon		Homepage will be open		Successful	
Test Case Status				Successful		

3.24 Test Case T23: Checking whether scrolling arrows working correctly – Muhammad Haris

3.24.1 Description

When the user clicks the arrow, new products are shown.

3.24.2 Pre-conditions for this test case

List of items are shown.

3.24.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click the arrow for more results		More products are returned		Successful	
2	Keep clicking until reach out of items		Should loop over the list		Successful	

Test Case Status	<i>Successful</i>
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3.25 Test Case T24: Sale products being displayed properly – Muhammad Haris

3.25.1 Description

The items are displayed on sale with discounted price.

3.25.2 Pre-conditions for this test case

There are items on sale.

3.25.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	View the items on sale in homepage		Products are shown		Successful	
2	Scroll through them using arrows		Should loop over the list		Successful	
Test Case Status				<i>Successful</i>		

3.26 Test Case T25: Check whether order has been placed or not upon checkout – User (display dialog box) – Muhammad Haris

3.26.1 Description

When the user places an order they are a confirmation.

3.26.2 Pre-conditions for this test case

The items are added to the cart.

3.26.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	The user is logged in		Shows the logged in icon		Successful	
2	Add products to cart		Displays the items in cart		Successful	
3	Click checkout after adding details		Displays your order has been successfully placed		Successful	
Test Case Status				Successful		

3.27 Test Case T26: Check whether order has been received by Admin – Muhammad Haris

3.27.1 Description

The admin should receive the order that is made in the list of orders tab.

3.27.2 Pre-conditions for this test case

An order is received.

3.27.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Open the orders tab on admin side		Gives list of order. Shows the recently added order.		Successful	
Test Case Status				Successful		

3.28 Test Case T27: Check whether Admin is able to mark as delivered – Muhammad Haris

3.28.1 Description

When the item has been delivered the admin can click the mark as delivered button. This button will show the order has been delivered.

3.28.2 Pre-conditions for this test case

An order was received.

3.28.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Open the concerned order		Show details of the order		Successful	
2	Click the mark as delivered button		Takes back to the pending orders		Successful	
Test Case Status				Successful		

3.29 Test Case T28: Check whether orders removed from pending when dispatched – Muhammad Haris

3.29.1 Description

When the order has been marked as delivered

3.29.2 Pre-conditions for this test case

The marked as delivered was clicked for an order.

3.29.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Marked as delivered was clicked		Takes back to the list of orders		Successful	
2	See if the order was removed from the list		The number of pending orders has decreased as the order		Successful	

			marked was deleted			
			Test Case Status	<i>Successful</i>		

3.30 Test Case T29: Check whether order has been delivered – User (notifications or history) – Muhammad Haris

3.30.1 Description

The user is given notification when their order has been marked as delivered.

3.30.2 Pre-conditions for this test case

The admin has marked the user's order as delivered.

3.30.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Login as user		Taken to homepage		Successful	
2	Check the order history		The order was moved from pending to past orders		Successful	
			Test Case Status	<i>Successful</i>		

3.31 Test Case T30: Check if stock decreases– Muhammad Haris

3.31.1 Description

When the user uses the checkout after adding products to his/her cart then the stock of that remaining product should decrease.

3.31.2 Pre-conditions for this test case

An item was ordered by a user.

3.31.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Login to admin site		Shows the admin side		Successful	
2	Open view inventory		Shows the item in stock and their data		Successful	
3	See if the stock of tricycle decreases by 2 after buying them		The Stock remaining value for tricycle decreases by 2		Successful	
Test Case Status				Successful		

3.32 Test Case T31: User is not able to checkout without logging in – Muhammad Haris

3.32.1 Description

The user is given a message when they try to checkout without logging in.

3.32.2 Pre-conditions for this test case

User is logged out and has something in cart.

3.32.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Add items to cart		Items are displayed in the cart		Successful	
2	Click the checkout button		A message for the user is displayed, asking them to login or signup		Successful	
Test Case Status				Successful		

3.33 Test Case T32: Check whether the user is able to rate a product – Muhammad Raahem Asghar

3.33.1 Description

This test case is done to ensure that the user is able to rate the product and his/her rating has been taken into account while calculating the average rating of the product

3.33.2 Pre-conditions for this test case

StoreX is opened and user is logged in.

3.33.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Navigate to product page by clicking on a product		Information about the product is displayed		Successful	
2	Click on the number of stars to give as a rating		The number of stars selected are highlighted and the rating has been stored.			
Test Case Status				Successful		

3.34 Test Case T33: Add Products Form Submission - Admin – Muhammad Raahem Asghar

3.34.1 Description

This test case ensures that the add products form is being displayed and new products that are being added to the database and the appropriate output is being displayed or not

3.34.2 Pre-conditions for this test case

The user should have an active WiFi connection, the admin is logged in StoreX.

3.34.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on Add Products in the navbar		Add Product form is loaded		Successful	
2	Fill in the required information on the form, then press Add Product button.	OnePlus 5 OnePlus Electronics 58000 25 0 https://th.bing.com/th/id/Ref776126835c92fdce7f308baedbcc67?rik=5oRq6RO5DGJz3A&pid=ImgRaw Very fast Android phone with the latest OS	Add Product page reloaded indicating that the product has been added successfully		Successful	
Test Case Status				Successful		

3.34.4 Array of values

Array of values					
	Scenario 2	Scenario 3	Scenario4	Scenario 5	Scenario 6
Value1		OnePlus 5	OnePlus 5		
Value2		OnePlus	OnePlus		
Value3		Electronics	Electronics		
Value4		58000	Abcdef		
Value5		25	Abcdef		

Value6		0	0		
Value7			https://th.bing.com/th/id/Ref776126835c92fdce7f308baedbccc67?rik=5oRq6RO5DGJz3A&pid=ImgRaw		
Value8		Very fast Android phone with the latest OS	Very fast Android phone with the latest OS		
Expected Result	Dialog box with the message Please fill out all the fields	Dialog box over the field which is left empty	Does not allow entry of string in fields that require a numeric value		
Actual Result (if different from expected)					
Successful/Failed	Successful	Successful			
Environment Nbr (if failed)					
Log Number (if failed)					

3.35 Test Case T34: Check whether the product has been added to StoreX - Admin – Muhammad Raahem Asghar

3.35.1 Description

This test case ensures that upon submitting the add product form, the new product has been added to the database and can be seen on the StoreX homepage.

3.35.2 Pre-conditions for this test case

The user should have an active WiFi connection, web browser is open

3.35.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Admin opens the StoreX webapp by entering the URL		Homepage is displayed		Successful	
2	Clicks on the category of the new product added (e.g. Electronics)		Category page is opened with the new product as the last item being displayed on that page		Successful	
Test Case Status				Successful		

3.36 Test Case T35: Inventory being displayed correctly - Admin – Muhammad Hamza Sajjad

3.36.1 Description

This test case ensures that on the admin side of StoreX, the inventory of products is being displayed in a correct and organized tabular format.

3.36.2 Pre-conditions for this test case

The user should have an active WiFi connection, the web browser should be open and the admin is logged into StoreX.

3.36.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on View Inventory in the side navigation bar.		The inventory is loaded and displayed to the admin. The table's columns should be Product ID, Product Name, Brand Name, Category, Price, Stock Remaining, Total Sold. Each product should be displayed per each row.		Successful	
Test Case Status				Successful		

3.37 Test Case T36: Accurate Searching in Update Products - Admin – Muhammad Hamza Sajjad

3.37.1 Description

This test case checks if the search functionality in the Update Products in admin side is working accurately and as intended or not.

3.37.2 Pre-conditions for this test case

The user should have an active WiFi connection, the web browser should be open, the admin is logged into StoreX.

3.37.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on Update Products in the side navigation bar.		The Update Product page is loaded and displayed.		Successful	
2	Enter the following values in Product ID and Product Name (these are valid and matching values as stored in inventory), and then click on Search button.	Product ID: 8 Product Name: Kettle	Product Details of the searched product are loaded. These can be modified and updated as needed.		Successful	
3	Change quantity, price and discount to a negative value (e.g. -1) one by one, and click Update Product button.	Quantity: -1	A tooltip appears for each of these three fields having a negative value, which tells the user that 'Value must be greater than or equal to 0'.		Successful	
Test Case Status				Successful		

3.37.4 Array of values

Array of values

	Scenario 2	Scenario 3	Scenario4	Scenario 5	Scenario 6
Value1	8			999	
Value2		Kettle		Milo	
Expected Result	Dialog box with the message: Please fill the empty field	Dialog box with the message: Please fill the empty field	Dialog box with the message: Please fill the empty field	Dialog box with the message: This product is not present in your inventory	
Actual Result (if different from expected)					
Successful/Failed	Successful	Successful	Successful	Successful	
Environment Nbr (if failed)					
Log Number (if failed)					

3.38 Test Case T37: Make Sure Form Input is Correct in Update Products - Admin – Muhammad Hamza Sajjad

3.38.1 Description

This test case validates the input in the price, discount and quantity fields for a searched product in Update Products.

3.38.2 Pre-conditions for this test case

The user should have an active WiFi connection, the web browser should be open, the admin is logged into StoreX.

3.38.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on Update Products in the side navigation bar.		The Update Product page is loaded and displayed.		Successful	

2	Enter the following values in Product ID and Product Name (these are valid and matching values as stored in inventory), and then click on Search button.	Product ID: 8 Product Name: Kettle	Product Details of the searched product are loaded. These can be modified and updated as needed.		Successful	
3	Change quantity, price and discount to a negative value (e.g. -1) one by one, and click Update Product button.	Quantity: -1	A tooltip appears for each of these three fields having a negative value, which tells the user that 'Value must be greater than or equal to 0'.		Successful	
Test Case Status				<i>Successful</i>		

3.39 Test Case T38: Dialog box displayed or not upon clicking Update Product - Admin – Muhammad Hamza Sajjad

3.39.1 Description

This test case checks if a dialog box is displayed to the user telling them that the product details have been updated successfully upon clicking Update Product.

3.39.2 Pre-conditions for this test case

The user should have an active WiFi connection, the web browser should be open, the admin is logged into StoreX.

3.39.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on Update Products in the side navigation bar.		The Update Product page is loaded and displayed.		Successful	
2	Enter the following values in Product ID and Product Name (these are valid and matching values as stored in inventory), and then click on Search button.	Product ID: 8 Product Name: Kettle	Product Details of the searched product are loaded. These can be modified and updated as needed.		Successful	

3	Change quantity to 2, price to 3400, discount to 50 and then click Update Product button.	Quantity: 2 Price: 3400 Discount: 50	A dialog box is displayed to the user with the message 'This product has been updated successfully' when the Update Product button is clicked.		Successful	
Test Case Status				<i>Successful</i>		

3.40 Test Case T39: Checking whether product details are updated or not- Admin – Muhammad Hamza Sajjad

3.40.1 Description

This test case checks if the product details are successfully updated after updating it through Update Products, by checking its details in the inventory and on the user side of StoreX.

3.40.2 Pre-conditions for this test case

The user should have an active WiFi connection, the web browser should be open, the admin is logged into StoreX.

3.40.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on Update Products in the side navigation bar.		The Update Product page is loaded and displayed.		Successful	
2	Enter the following values in Product ID and Product Name (these are valid and matching values as stored in inventory), and then click on Search button.	Product ID: 8 Product Name: Kettle	Product Details of the searched product are loaded. These can be modified and updated as needed.		Successful	
3	Change quantity to 2, price to 3400, discount to 50 and then click Update Product button.	Quantity: 2 Price: 3400 Discount: 50	A message is displayed telling the admin 'Product updated successfully'.		Successful	
4	Click on View Inventory in the side navigation bar and check if the		The product with Product ID 8 and Product Name Kettle has		Successful	

	product with product ID 8 has updated details or not.		the updated quantity/stock remaining equal to 2 and updated price equal to 3400.			
5	Open the user side of StoreX by visiting its URL. Search for the product Kettle.		The search results show the product Kettle with discounted price of Rs 1700 (hence, 50% discount).		Successful	
Test Case Status				<i>Successful</i>		

3.41 Test Case T40: Accurate Searching in Delete Products - Admin – Muhammad Raahem Asghar

3.41.1 Description

This test case ensures that searching of a product to be deleted is being done properly and the correct result is being displayed.

3.41.2 Pre-conditions for this test case

The user should have an active WiFi connection, the admin is logged in StoreX.

3.41.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on Delete Products option in the navbar		Delete Products page is loaded		Successful	
2	Fill in the required information on the form, then press Search button.	1 Tricycle	Information related to the product with product ID 1 and product name Tricycle will be displayed		Successful	
Test Case Status				<i>Successful</i>		

3.41.4 Array of values

Array of values					
	Scenario 2	Scenario 3	Scenario4	Scenario 5	Scenario 6
Value1	1			1000	
Value2		Tricycle		Naruto	
Expected Result	Dialog box with the message: Please fill the empty field	Dialog box with the message: Please fill the empty field	Dialog box with the message: Please fill the empty field	Modal with the message: Product not found in the inventory	
Actual Result (if different from expected)					
Successful/Failed	Successful	Successful	Successful	Successful	
Environment Nbr (if failed)					
Log Number (if failed)					

3.42 Test Case T41: Checking whether Delete Products form has submitted or not - Admin – Muhammad Raahem Asghar

3.42.1 Description

This test case ensures that the delete product form functions correctly and it is submitted so that the product is deleted from the inventory.

3.42.2 Pre-conditions for this test case

The user should have an active WiFi connection, the admin is logged in StoreX.

3.42.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on Delete Products option in the navbar		Delete Products page is loaded		Successful	
2	Fill in the required information on the form, then press Search button.	1 Tricycle	Information related to the product with product ID 1 and product name Tricycle will be displayed		Successful	
3	Presses the delete button once the admin has confirmed that the displayed product is the one he/she wishes to delete.		Modal displayed asking for confirmation		Successful	
4	Presses Yes on the modal		Delete Products page reloaded, indicating that the form has been submitted		Successful	
Test Case Status				Successful		

3.42.4 Scenario 2

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on Delete Products option in the navbar		Delete Products page is loaded		Successful	
2	Fill in the required information on the form, then press Search button.	1 Tricycle	Information related to the product with product ID 1 and product name Tricycle will be displayed		Successful	
3	Presses the delete button once the admin has confirmed that the		Modal displayed asking for confirmation		Successful	

	displayed product is the one he/she wishes to delete.					
4	Presses No on the modal		Returns to the same form with the details about the product being displayed		Successful	
Test Case Status				<i>Successful</i>		

3.43 Test Case T42: Checking whether the product has been deleted from the inventory or not - Admin – Muhammad Raahem Asghar

3.43.1 Description

This test case ensures that after the delete product form has been submitted, it is not being displayed in the inventory i.e. it has been removed from the inventory

3.43.2 Pre-conditions for this test case

The user should have an active WiFi connection, the admin is logged in StoreX and has just submitted the Delete Products form

3.43.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on View Inventory option in the navbar		Delete Products page is loaded		Successful	
2	Try to find the deleted product in the inventory		The product Tricycle and its related details have been removed from the inventory		Successful	
Test Case Status				<i>Successful</i>		

3.44 Test Case T43: Add Category Form Submission - Admin – Muhammad Raahem Asghar

3.44.1 Description

This test case ensures that the add category form is being displayed and the new category is being added to the database and the appropriate output is being displayed or not

3.44.2 Pre-conditions for this test case

The user should have an active WiFi connection, the admin is logged in StoreX.

3.44.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Click on Add Category options in the navbar		Add Category form is loaded		Successful	
2	Fill in the required information on the form, then press Add Product button.	1 st field is automatically filled School	Message displayed: Category		Successful	
Test Case Status				Successful		

3.44.4 Array of values

Array of values					
	Scenario 2	Scenario 3	Scenario4	Scenario 5	Scenario 6
Value1					

Expected Result	Dialog box with the message: Please fill the empty field				
Actual Result (if different from expected)					
Successful/Failed	Successful				
Environment Nbr (if failed)					
Log Number (if failed)					

3.45 Test Case T44: Check whether the category has been added to StoreX - Admin – Muhammad Raahem Asghar

3.45.1 Description

This test case ensures that upon adding the category, it is being displayed on the user side of the webapp

3.45.2 Pre-conditions for this test case

The user should have an active WiFi connection, logged in the Admin side and has just added a new category

3.45.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Admin opens the StoreX webapp by entering the URL		Homepage is displayed		Successful	
2	Checks the navbar		The new category has been added to the end of the navbar		Successful	
Test Case Status				<i>Successful</i>		

3.46 Test Case T45: Sales Analytics Table being displayed or not after entering a date - Admin – Muhammad Raahem Asghar

3.46.1 Description

This test case ensures that the sales analytics functionality is working for the admin as intended by entering different dates and checking the output for each scenario

3.46.2 Pre-conditions for this test case

The admin is logged in into the admin side of StoreX

3.46.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Clicks on sales analytics in the navbar		Sales Analytics page is loaded		Successful	
2	Clicks on daily tab		Dropdown menus appear in which the admin needs to enter the day, month, year		Successful	
3	Selects the day, month, year from the dropdown and clicks the search icon	2021 April 26	The daily number of products sold along with their total are displayed in the form of a table		Successful	
Test Case Status				Successful		

3.46.4 Array of values

Array of values					
	Scenario 2	Scenario 3	Scenario4	Scenario 5	Scenario 6
Value1		2021	2021	2021	2021
Value2		April			March
Value3				6	25

Expected Result	Dialog box with the message: Incorrect Date entered	Dialog box with the message: Incorrect Date entered	Dialog box with the message: Incorrect Date entered	Dialog box with the message: Incorrect Date entered	Dialog box with the message: No products were sold in this period
Actual Result (if different from expected)					
Successful/Failed	Successful	Successful	Successful	Successful	Successful
Environment Nbr (if failed)					
Log Number (if failed)					

3.46.5 Scenario 7

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Clicks on sales analytics in the navbar		Sales Analytics page is loaded		Successful	
2	Clicks on monthly tab		Dropdown menus appear in which the admin needs to enter the day, month, year		Successful	
3	Selects the year, month from the dropdown and clicks the search icon	2021 April	The monthly number of products sold along with their total are displayed in the form of a table		Successful	
Test Case Status				<i>Successful</i>		

3.46.6 Array of values

Array of values					
	Scenario 8	Scenario 9	Scenario 10	Scenario 11	Scenario 12

Value1		2021	2021	2021	2021
Value2		April			March
Expected Result	Dialog box with the message: Incorrect Date entered	Dialog box with the message: Incorrect Date entered	Dialog box with the message: Incorrect Date entered	Dialog box with the message: Incorrect Date entered	Dialog box with the message: No products were sold in this period
Actual Result (if different from expected)					
Successful/Failed	Successful	Successful	Successful	Successful	Successful
Environment Nbr (if failed)					
Log Number (if failed)					

3.46.7 Scenario 13

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Clicks on sales analytics in the navbar		Sales Analytics page is loaded		Successful	
2	Clicks on yearly tab		Dropdown menus appear in which the admin needs to enter the day, month, year		Successful	
3	Selects the year from the dropdown and clicks the search icon	2021 April	The yearly number of products sold along with their total are displayed in the form of a table		Successful	
Test Case Status				Successful		

3.46.8 Array of values

Array of values					
	Scenario 14	Scenario 15	Scenario 16	Scenario 17	Scenario 18
Value1		2021	2021	2021	2021
Expected Result	Dialog box with the message: Incorrect Date entered	Dialog box with the message: Incorrect Date entered	Dialog box with the message: Incorrect Date entered	Dialog box with the message: Incorrect Date entered	Dialog box with the message: No products were sold in this period
Actual Result (if different from expected)					
Successful/Failed	Successful	Successful	Successful	Successful	Successful
Environment Nbr (if failed)					
Log Number (if failed)					

3.47 Test Case T46: User Logout – Muhammad Raahem Asghar

3.47.1 Description

This test case ensures that the user has successfully logged out of his/her account.

3.47.2 Pre-conditions for this test case

The user should have an active WiFi connection, the user is logged in StoreX and is on any page of the webapp

3.47.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	User presses the logout option in the navbar		Redirected to homepage and green Signed in not written in		Successful	

			the navbar and is replaced by login confirming that the user has logged out.			
			Test Case Status	<i>Successful</i>		

3.48 Test Case T47: Admin Logout – Muhammad Raahem Asghar

3.48.1 Description

This test case ensures that the admin has successfully logged out of his/her account.

3.48.2 Pre-conditions for this test case

The user should have an active WiFi connection, the admin is logged in admin side of StoreX and is on any page of the webapp

3.48.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Admin presses the logout option in the header		Redirected to login screen and asked to enter login credentials if he/she wants to login again		Successful	
			Test Case Status	<i>Successful</i>		

3.49 Test Case T48: Checking whether web app is available at any time – Muhammad Haris

3.49.1 Description

The webapp should be always available to the users.

3.49.2 Pre-conditions for this test case

There is no internet connectivity issue for the user.

3.49.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Open the user webapp at 10:45 pm		Displays the homepage		Successful	
2	Open the admin webapp at 10:45 pm		Displays the homepage		Successful	
Test Case Status				Successful		

3.49.4 Array of values

Array of values				
	Scenario 2	Scenario 3	Scenario4	Scenario 5
Time of test for user and admin side	12:00 am	4:00 am	10:00 am	2:00 pm
Expected Result	Displays the homepage for admin and user	Displays the homepage for admin and user	Displays the homepage for admin and user	Displays the homepage for admin and user
Actual Result (if different from expected)				
Successful/Failed	Successful	Successful	Successful	Successful
Environment Nbr (if failed)				
Log Number (if failed)				

3.50 Test Case T49: Checking whether the web app loads within 5 seconds – Muhammad Raahem Asghar

3.50.1 Description

This test case is done to measure the time taken by the web app to load and ensure that it meets the requirement of less than 5 seconds as set before.

3.50.2 Pre-conditions for this test case

User has an active internet connection and a web browser and has the website: <https://developers.google.com/speed/pagespeed/insights/> open

3.50.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Copy and paste the link to the web app in the website mentioned in the precondition and press Analyze		The time taken to load would be less than 5 seconds		Successful	
Test Case Status				Successful		

3.51 Test Case T50: Checking whether the web app opens properly on mobile – Muhammad Raahem Asghar

3.51.1 Description

This test case is done to ensure that the web app opens properly on a mobile, so that it is usable from the mobile phone as well.

3.51.2 Pre-conditions for this test case

User has an active internet connection and an Android phone or an iPhone

3.51.3 Scenario 1

Test Case						
UC Step	Step Description	Data/Value (1 to n)	Expected Result	Actual Result (if different from expected)	Successful/Failed	Log Number (if failed)
1	Open the webapp in the browser of the device			The layout is distorted, is not	Failed	

				portable i.e. cannot be used from the mobile device		
			Test Case Status	<i>Failed</i>		

4. Summary of manual testing results

A total of 50 test cases, out of which 47 were functional and 3 were non-functional, were tested in manual testing. 49 test cases passed, and only 1 test case failed. The testing carried out was grey box testing as the testers were not completely aware of the underlying implementation of the functionality of the web application. We tested individual components as well as how well they are integrated with each other overall. In almost all of the testing, valid and invalid outputs were given to see whether the web app functions as per the requirements or does it crash for invalid inputs. The UI was overall responsive to all user actions like the cards highlighting on the user side and the web application was interacting with the user through dialog boxes, messages, modals, tooltips etc. All in all, the testing results of the main use cases of our web application were mostly positive and were handled correctly and the use cases were properly functioning for various edge cases. We learned how to systematically go about testing a software or application, and organizing all tests in separate test cases, and further dividing them into scenarios in tabular formats helped us test the web app in an organized manner. This enabled us to test both the user and admin side of StoreX thoroughly. In the future, further testing can be done as the web app scales to a large number of users as well as more products in its inventory, as that can help us determine if StoreX is scalable and works well under potential heavy load from many users visiting it at the same time.

4.1 Muhammad Raahem Asghar

I conducted 21 test cases, out of which only 1 failed. These 21 cases were divided into 19 functional requirements test cases and 2 non-functional test cases. The expected output of different outputs of the test cases was compared with the actual output for different scenarios and through this comparison it could be determined that the test case was passing or not. In the test cases dealing with the functional requirements, validation and defect testing was done by entering valid and invalid inputs to observe the behavior. The test case dealing with the portability of the web app (non-functional requirement) failed as the layout of the web app was not being displayed properly on the smaller resolution screen. All in all, almost all of the test cases assigned to me were passing.

4.2 Muhammad Haris

The tests conducted by me were successful. Different scenarios were checked, and the web app did not fail. Total of 15 test cases were run. 14 functional test cases and 1 non-functional test case. Non-functional test case was related to the availability of the web app, which was checked by opening the web app at different times. For functional testing the expected actions from the users were performed and it was checked if the app behaved as it should. All my tests except the one for search did not require a direct user input but clicking specific buttons. So, the expected flow for the user was followed and tested.

4.3 Muhammad Hamza Sajjad

I conducted 14 functional test cases, which all passed successfully. The primary focus was on testing the shopping cart functionality on the user side, and the inventory and update products functionalities on the admin side. The expected outputs in these tests matched the actual outputs. The testing types were validation and defect testing. In validation testing, I entered values as one would do in regular usage, and hence tried to determine if it was working correctly and as intended. In defect testing, I intentionally entered invalid inputs which were meant to 'break' the system, and so it is useful for detecting any potential bugs. I also detected a few typos, which were then fixed by the development team.

5. Acceptance Testing

5.1 Environment Used for User Side

Machine Name	HP Pavilion Q741NVOK	DB Directory	https://console.firebase.google.com/u/0/project/software-engineering-123/database/software-engineering-123-default-rtdb/data		
Machine Specs	Intel® Core™ i5-8250U CPU @ 1.60GHz 1.80 GHz, 12GB RAM, 1TB HDD	DB	Firebase	Client Server /Back-End	https://console.firebase.google.com/u/0/project/software-engineering-123/overview
Device name	HP Pavilion Q741NVOK	Device specs	Intel® Core™ i5-8250U CPU @ 1.60GHz 1.80 GHz, 12GB RAM, 1TB HDD		
Tester Name	Roshan Asghar	Test Date	26 th April, 2021		

5.2 Environment Used for AdminSide

Machine Name	Dell Latitude 3500	DB Directory	https://console.firebase.google.com/u/0/project/software-engineering-123/database/software-engineering-123-default-rtdb/data		
Machine Specs	Intel® Core™ i5-8265U CPU @ 1.60GHz 1.80 GHz, 8GB RAM, 1TB HDD	DB	Firebase	Client Server /Back-End	https://console.firebase.google.com/u/0/project/software-engineering-123/overview
Device name	Dell Latitude 3500	Device specs	Intel® Core™ i5-8265U CPU @ 1.60GHz 1.80 GHz, 8GB RAM, 1TB HDD		
Tester Name	Raacikh Asghar	Test Date	26 th April, 2021		

5.3 Test Cases for Acceptance Testing

5.3.1 User

Test Case ID	Successful/Failed	General Feedback
Module: Login and Signup		
T01, T03, T06	Successful	The interface is user friendly. It was easy to navigate to the login tab and the sign up process was pretty smooth and easy. To confirm I was logged in on the user side, “Signed In” was written in the the options menu found on the left. Other than that, after pressing refresh, I was still logged in.
Module: Homepage		
T18, T19, T20	Successful	The homepage has a very user-friendly interface, is easy to navigate to and from, has a fully functional sidebar and toolbar, and every button shown on the page is functional and smooth. The search bar is right there in front of you and not that hard to locate. The search feature is very accurate as it didn’t show me any items that weren’t in the database and also didn’t show me any incorrect results. When I searched for something that didn’t exist in the store’s database, a blank page appeared indicating that the searched item wasn’t available.
Module: Shopping Cart		
T09, T10	Successful	After signing up and then logging in, I went through the catalog of products and selected a product of my choice. I added the item in my cart, the number on top of the cart icon incremented and navigated to the cart to place my order. The items were successfully added to the cart. Placing the order was pretty easy and straightforward too. I was given the appropriate message as soon as my order was placed.
Module: Ordering and Checkout		
T25, T29	Successful	To check whether my order had actually been placed, I navigated to the My Orders tab which was, again, very easy to locate. I was shown my order under the

		Pending tab and I could access all my details when I clicked on the view details tab. After having received my order, the admin marked it as delivered and my order moved from the Pending section to the Past Orders section with all the details with it.
Module: Rating a Product		
T32	Successful	To rate the product I had ordered, I easily navigated to it from the grocery section and opened the said product. There I could see the 5 stars to rate the product out of. I gave it my rating and I could see it under the product.
Module: Logout		
T46	Successful	Once I was done with my online shopping, I wanted to logout. When I clicked on logout from the options on the left, I was redirected to the homepage and to confirm if I had logged out, I checked that the left menu showed the login option rather than the logout one that was being shown before.

5.3.2 Admin

Test Case ID	Successful/Failed	General Feedback
Module: Login and Signup		
T02	Successful	After opening the link of StoreX admin side, I was shown the login page of the admin side. I logged in using the provided credentials. The interface was easy to follow. To confirm I was logged in, the Add Products page was opened with the name of the owner of the admin account in the top right of the page. Other than that, after pressing refresh, I was still logged in.
Module: Add Products		
T33, T34	Successful	When I wanted to add products to the store, I navigated to the Add Products page from the numerous options on the left, which opened an Add Product form. When I filled the details of a product and pressed submit, the page reloads and the add product form is displayed

		again indicating that the product has been added which is confirmed on checking the inventory for the product I just added.
Module: View Inventory		
T35	Successful	When I pressed the View Inventory option on the left menu, I was redirected to a page which shows the current inventory of the store with full description of the items in stock along with those that have been sold so far.
Module: Ordering and Checkout		
T26, T27, T28	Successful	When I want to check whether I have pending orders or not, I navigate to the Orders section by selecting the Orders option from the left menu and just mark them delivered if I have any. Marking them makes them disappear from the page confirming that they've been delivered.
Module: Delete Products		
T40, T41, T42	Successful	If I want to delete a product, I navigate to the Delete Product section which shows me a delete product form. I search for the product first by entering its details. Then once the details of the product appear on the screen in a tabulated form, I press the delete button which causes a pop-up to appear asking for confirmation. When I press No, I get returned to the same page but if I press Yes, I get redirected to the original Delete Products page. Other than that when I try to find an item that isn't in the inventory, I get a pop-up stating that the said item doesn't exist. In order to make sure that the product I deleted has been removed, I go to the inventory to double check and see that it has indeed been removed.
Module: Logout		
T47	Successful	After using the admin functionalities, I wanted to logout. When I clicked on logout from the dropdown menu on the top right, I was redirected to the admin login screen, indicating that I had successfully logged out.

5.4 Summary of Acceptance Testing

Acceptance testing was done by two end users who did not know the underlying implementation of the features of the system i.e. black box testing. One end user was assigned with the task of testing the user side whereas another end user was assigned with the task of testing the admin side. For the admin side, login credentials were provided to the end user so that he could access and test the admin features. Different modules of the system were tested by both the end users and their general feedback was recorded. By the above tables, it can be seen that the test cases were passing and the general feedback was positive. The end users were relatively satisfied with the end system.