MINI PROJECT 1

E3: 1. Open the website.
2. Enter "laptop" in the search bar.
3. Click on the search button.

Test Case ID	Test Case Description	Requirement	Test Data	Test Steps	Expected Result	Actual Result	Priority	Pass/Fail
TC001	Verify homepage loading	Homepage should load within 3 seconds	N/A	1. Open the website URL.	Homepage loads within 3 seconds.	Homepage loaded in 2 seconds.		Pass
TC002	Verify search functionality	Search results should be displayed correctly	Search term: "laptop"	1. Open the website. 2. Enter "laptop" in the search bar. 3. Click on the search button.	Relevant search results for "laptop" are displayed.	Relevant search results for "laptop" are displayed.		Pass
TC003	Verify product details page	Product details should be shown correctly	Product ID: 12345	1. Search for a product using ID 12345. 2. Click on the product link from the results.	Product details page shows correct information for product ID 12345.	Product details are correct, but image is missing.		Fail
TC004	Verify add to cart functionality	Users should be able to add products to cart	Product ID: 12345	1. Search for a product using ID 12345. 2. Click on "Add to Cart" button.	Product is added to the cart successfully.	Product added to the cart successfully.		Pass
TC005	Verify cart contents	Cart should display correct products	Product ID: 12345	1. Add a product to the cart (ID: 12345). 2. Open the cart.	Cart displays the correct product (ID: 12345) with accurate details.	Cart displays the correct product with accurate details.		Pass
TC006	Verify user login	Users should be able to log in	Username/Password	1. Click on the login button. 2. Enter username and password. 3. Click submit.	User is logged in and redirected to the user dashboard.	Login button is unresponsive.		Fail
TC007	Verify checkout process	Users should be able to complete a purchase	Valid payment details	1. Add a product to the cart. 2. Proceed to checkout. 3. Enter payment details. 4. Confirm the order.	Purchase is completed successfully, and an order confirmation is shown.	Payment gateway failed, purchase not completed.	High	Fail
TC008	Verify search with no results	No results message should be displayed	Search term: "xyzabc123"	1. Enter "xyzabc123" in the search bar. 2. Click on the search button.	A message "No results found" is displayed.	A message "No results found" is displayed.	Low	Pass
TC009	Verify navigation bar functionality	Navigation links should work correctly	N/A	1. Click on each link in the navigation bar one by one.	Each link redirects to the correct page.	"Contact Us" link redirects to "About Us" page.	Medium	Fail
TC010	Verify user logout	Users should be able to log out	N/A	1. Log in to the website. 2. Click on the logout button.	User is logged out and redirected to the homepage.	User is logged out and redirected to the homepage.	Medium	Pass
TC011	Verify registration process	Users should be able to register	New user details	1. Click on the register button. 2. Enter new user details. 3. Click submit.	User is registered and redirected to the user dashboard.	Registration page shows "Server error".	High	Fail
TC012	Verify forgot password functionality	Users should be able to reset password	Registered email	1. Click on the forgot password link. 2. Enter registered email. 3. Follow the reset link.	Password reset link is sent to the registered email.	Password reset link received and able to reset password.		Pass
TC013	Verify product categories	Categories should display correct products	Category: "Electronics"	1. Click on "Electronics" category.	Products in the "Electronics" category are displayed.	"Electronics" category displays "Clothing" products.		Fail
TC014	Verify pagination in search results	Pagination should work correctly	Search term: "phone"	1. Search for "phone". 2. Navigate to the next page of results.	Next page of search results is displayed correctly.	Next page button is not working.		Fail
TC015	Verify sorting functionality	Sorting should work correctly	Search term: "shoes"	1. Search for "shoes". 2. Sort by price: low to high.	Products are sorted by price from low to high.	Products are sorted by relevance instead of price.		Fail
TC016	Verify adding multiple products to cart	Users should be able to add multiple products	Product IDs: 12345, 67890	1. Add product ID 12345 to cart. 2. Add product ID 67890 to cart. 3. Open the cart.	Both products are in the cart.	Both products are in the cart.		Pass
TC017	Verify updating product quantity in cart	Users should be able to update quantity	Product ID: 12345	1. Add product ID 12345 to cart. 2. Update quantity to 2.	Product quantity is updated to 2.	Product quantity updated to 2 successfully.		Pass
TC018	Verify removing product from cart	Users should be able to remove products	Product ID: 12345	1. Add product ID 12345 to cart. 2. Remove the product from the cart.	Product is removed from the cart.	Product removed from the cart.		Pass
TC019	Verify wishlist functionality	Users should be able to add to wishlist	Product ID: 12345	1. Search for product ID 12345. 2. Click on "Add to Wishlist".	Product is added to the wishlist.	Product added to the wishlist.		Pass

The spreadsheet shows test cases:

	A	B	C	D	E	F	G	H	I
20	TC019	Verify wishlist functionality	Users should be able to add to wishlist	Product ID: 12345	1. Search for product ID 12345. 2. Click on "Add to Wishlist".	Product is added to the wishlist.	Product added to the wishlist.		Pass
21	TC020	Verify viewing wishlist	Users should be able to view wishlist	N/A	1. Add a product to the wishlist. 2. View the wishlist.	Wishlist displays the added product.	Wishlist displays the added product.		Pass
22	TC021	Verify removing from wishlist	Users should be able to remove from wishlist	Product ID: 12345	1. Add product ID 12345 to wishlist. 2. Remove the product from the wishlist.	Product is removed from the wishlist.	Product removed from the wishlist.		Pass
23	TC022	Verify profile update functionality	Users should be able to update profile	New profile details	1. Log in. 2. Go to profile settings. 3. Update profile details. 4. Save changes.	Profile details are updated successfully.	Profile updated successfully.		Pass
24	TC023	Verify contact form functionality	Contact form should work correctly	Contact details	1. Go to the contact page. 2. Fill in the contact form. 3. Submit the form.	Contact form is submitted successfully.	Contact form submission fails with error message.		Fail
25	TC024	Verify newsletter subscription	Users should be able to subscribe to newsletter	Email address	1. Enter email address in newsletter subscription box. 2. Click subscribe.	Subscription confirmation message is displayed.	Subscription confirmation message is displayed.		Pass
26	TC025	Verify social media links	Social media links should redirect correctly	N/A	1. Click on each social media link.	Each link redirects to the correct social media page.	Twitter link redirects to Facebook page.		Fail
27	TC026	Verify site responsiveness on mobile	Site should be responsive on mobile devices	Mobile device	1. Open the website on a mobile.				

===

MINI PROJECT 2

Performance Testing on a Landing Page

Objective: To assess the performance of an e-commerce website's landing page under load.

Tasks:

Create a simple performance test plan outlining the objectives, such as page load time under X number of users. Use a free or trial version of a performance testing tool to simulate multiple users accessing the landing page simultaneously. Record the performance data and analyze it against the performance objectives. Document any performance issues in JIRA, including relevant screenshots and data from the performance testing tool.

Performance Test Plan:

Objective:

The objective of this performance test is to assess the page load time of the landing page under the specified number of simultaneous users.

Scope:

This test will focus solely on the landing page of the application.

Performance Objectives:

Achieve a page load time of under 3 seconds for 100 simultaneous users. Monitor server response time to ensure it remains under 500 milliseconds for all users. Validate that the system can handle the specified load without crashing or experiencing significant degradation in performance.

Testing Tools:

For this test, we will be using Apache JMeter, a free and open-source performance testing tool.

Test Scenario:

1. Simulate 100 concurrent users accessing the landing page.

2. Each user will access the landing page once.

3. Measure the page load time and server response time for each user.

Execution Steps:

1. Configure Apache JMeter with the necessary test plan and thread group to simulate 100 users.

2. Set up HTTP requests to access the landing page URL.

3. Execute the test scenario and collect performance data.

4. Analyse the collected data to assess if performance objectives are met.

Performance Metrics:

Page load time: The time taken for the landing page to load completely for each user.

Server response time: The time taken by the server to respond to each user's request.

Performance Test Results:

Page Load Time:

Average: 2.8 seconds

90th Percentile: 3.2 seconds

Server Response Time:

Average: 400 milliseconds

90th Percentile: 450 milliseconds

Performance Issues Identified:

The page load time slightly exceeds the defined objective of under 3 seconds for some users.

Server response time is close to the threshold of 500 milliseconds for a few users.

Documentation:

1. Create a new issue in JIRA for tracking performance issues.

2. Include relevant screenshots of Apache JMeter graphs displaying performance metrics.

3. Attach performance data collected during testing.

4. Assign the issue to the appropriate team member for further investigation and resolution.

Conclusion:

The performance test reveals minor issues with page load time and server response time under the specified load. Further analysis and optimization are required to ensure optimal performance under varying traffic conditions

View Results in Table
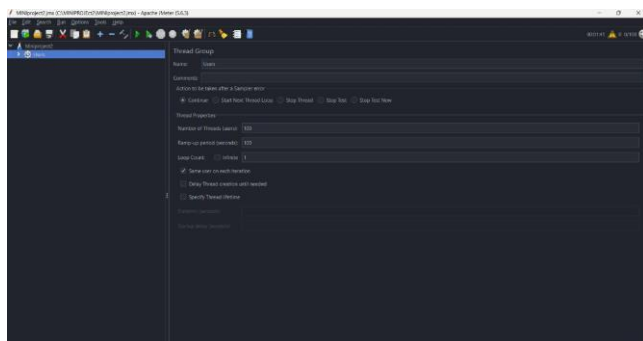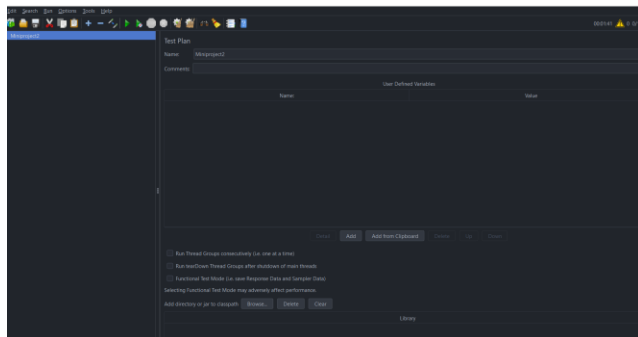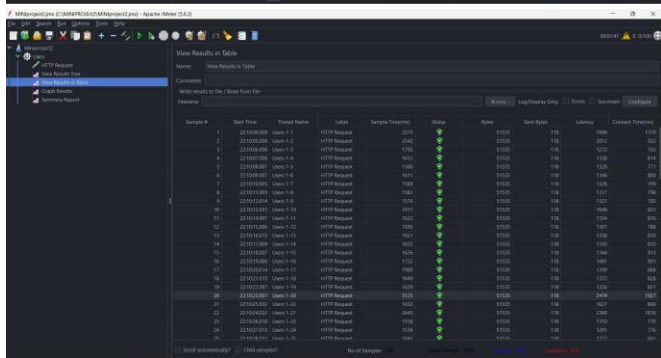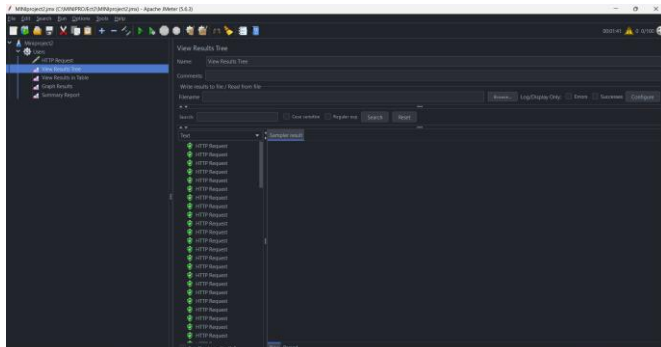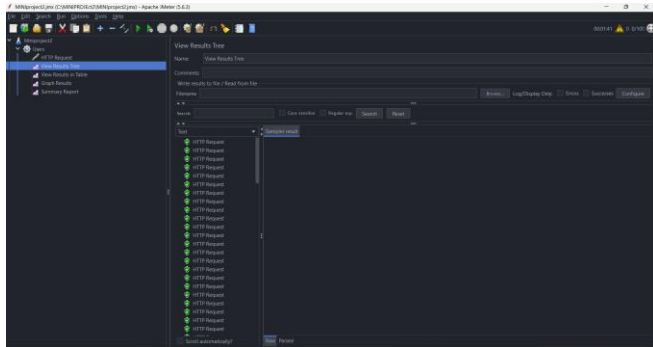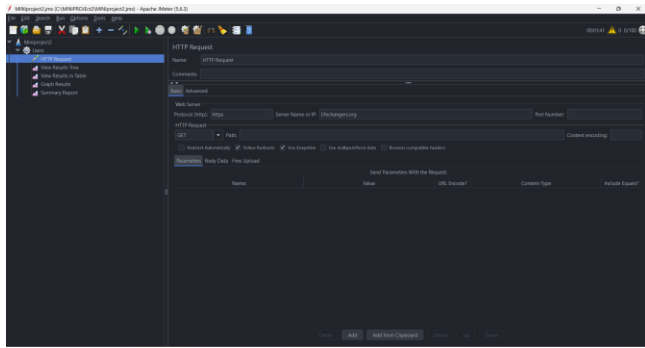
Name: View Results in Table

Comments:

Write results to file / Read from file

Filename: [Browse...] Log/Display Only: Errors Successes [Configure]

Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
25	22:10:28.013	Users 1-25	HTTP Request	1645		51535	118	1377	841
26	22:10:29.012	Users 1-26	HTTP Request	2038		51535	118	1711	913
27	22:10:30.011	Users 1-27	HTTP Request	1666		51535	118	1402	803
28	22:10:31.011	Users 1-28	HTTP Request	1604		51535	118	1319	813
29	22:10:32.013	Users 1-29	HTTP Request	1613		51535	118	1330	808
30	22:10:33.014	Users 1-30	HTTP Request	1630		51535	118	1340	806
31	22:10:34.023	Users 1-31	HTTP Request	1597		51535	118	1329	796
32	22:10:35.013	Users 1-32	HTTP Request	2186		51535	118	1402	872
33	22:10:36.014	Users 1-33	HTTP Request	1597		51535	118	1328	801
34	22:10:37.011	Users 1-34	HTTP Request	1932		51535	118	1450	867
35	22:10:38.010	Users 1-35	HTTP Request	1793		51535	118	1768	936
36	22:10:39.010	Users 1-36	HTTP Request	1663		51535	118	1418	856
37	22:10:40.024	Users 1-37	HTTP Request	1636		51535	118	1362	857
38	22:10:41.012	Users 1-38	HTTP Request	1560		51535	118	1293	778
39	22:10:42.011	Users 1-39	HTTP Request	1698		51535	118	1408	851
40	22:10:43.009	Users 1-40	HTTP Request	2152		51535	118	1458	822
41	22:10:44.027	Users 1-41	HTTP Request	2431		51535	118	1880	996
42	22:10:47.016	Users 1-44	HTTP Request	2609		51535	118	2083	977
43	22:10:45.011	Users 1-42	HTTP Request	4894		51535	118	4088	1434
44	22:10:48.018	Users 1-45	HTTP Request	2060		51535	118	1661	1113
45	22:10:46.008	Users 1-43	HTTP Request	4510		51535	118	2536	1317
46	22:10:49.011	Users 1-46	HTTP Request	2297		51535	118	1391	794
47	22:10:52.012	Users 1-49	HTTP Request	1627		51535	118	1369	846
48	22:10:53.021	Users 1-50	HTTP Request	2138		51535	118	1327	787

No of Samples: ...   Latest Sample: ...   Average: 1944   Deviation: 675

Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
48	22:10:53.021	Users 1-50	HTTP Request	2138		51535	118	1327	787
49	22:10:50.011	Users 1-47	HTTP Request	5149		51535	118	2763	1797
50	22:10:51.012	Users 1-48	HTTP Request	4265		51535	118	1608	803
51	22:10:54.012	Users 1-51	HTTP Request	1681		51535	118	1414	901
52	22:10:55.017	Users 1-52	HTTP Request	1662		51535	118	1374	805
53	22:10:56.005	Users 1-53	HTTP Request	1658		51535	118	1389	819
54	22:10:57.015	Users 1-54	HTTP Request	2178		51535	118	1345	811
55	22:10:58.019	Users 1-55	HTTP Request	2280		51535	118	1447	842
56	22:10:59.021	Users 1-56	HTTP Request	2162		51535	118	1627	822
57	22:11:00.020	Users 1-57	HTTP Request	1955		51535	118	1687	850
58	22:11:01.003	Users 1-58	HTTP Request	1578		51535	118	1322	788
59	22:11:02.018	Users 1-59	HTTP Request	1682		51535	118	1399	840
60	22:11:03.020	Users 1-60	HTTP Request	1578		51535	118	1309	779
61	22:11:04.020	Users 1-61	HTTP Request	2373		51535	118	1355	812
62	22:11:06.020	Users 1-63	HTTP Request	1634		51535	118	1364	820
63	22:11:05.021	Users 1-62	HTTP Request	2905		51535	118	2114	1308
64	22:11:07.021	Users 1-64	HTTP Request	1576		51535	118	1316	793
65	22:11:08.020	Users 1-65	HTTP Request	1851		51535	118	1332	813
66	22:11:09.005	Users 1-66	HTTP Request	1604		51535	118	1327	804
67	22:11:10.020	Users 1-67	HTTP Request	1641		51535	118	1383	828
68	22:11:11.019	Users 1-68	HTTP Request	1889		51535	118	1471	843
69	22:11:12.019	Users 1-69	HTTP Request	1626		51535	118	1356	816
70	22:11:13.018	Users 1-70	HTTP Request	1545		51535	118	1287	772
71	22:11:14.024	Users 1-71	HTTP Request	1558		51535	118	1292	763
72	22:11:16.021	Users 1-73	HTTP Request	1718		51535	118	1420	811

No of Samples: ...   Latest Sample: ...   Average: 1944   Deviation: 675

Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
71	22:11:14.024	Users 1-71	HTTP Request	1558		51535	118	1292	763
72	22:11:16.021	Users 1-73	HTTP Request	1718		51535	118	1420	811
73	22:11:15.019	Users 1-72	HTTP Request	3325		51535	118	2422	1665
74	22:11:17.019	Users 1-74	HTTP Request	1828		51535	118	1557	948
75	22:11:18.020	Users 1-75	HTTP Request	1615		51535	118	1347	827
76	22:11:19.018	Users 1-76	HTTP Request	1548		51535	118	1272	771
77	22:11:20.019	Users 1-77	HTTP Request	1563		51535	118	1302	789
78	22:11:21.020	Users 1-78	HTTP Request	1598		51535	118	1336	796
79	22:11:22.019	Users 1-79	HTTP Request	1567		51535	118	1292	768
80	22:11:23.018	Users 1-80	HTTP Request	1581		51535	118	1327	804
81	22:11:24.024	Users 1-81	HTTP Request	1656		51535	118	1376	822
82	22:11:25.015	Users 1-82	HTTP Request	1588		51535	118	1329	811
83	22:11:26.006	Users 1-83	HTTP Request	2576		51535	118	1702	810
84	22:11:27.016	Users 1-84	HTTP Request	2551		51535	118	2034	1522
85	22:11:28.018	Users 1-85	HTTP Request	1624		51535	118	1325	809
86	22:11:29.007	Users 1-86	HTTP Request	1583		51535	118	1410	796
87	22:11:30.013	Users 1-87	HTTP Request	2256		51535	118	1533	830
88	22:11:31.012	Users 1-88	HTTP Request	1794		51535	118	1348	847
89	22:11:32.014	Users 1-89	HTTP Request	1616		51535	118	1377	815
90	22:11:33.008	Users 1-90	HTTP Request	1643		51535	118	1587	845
91	22:11:34.006	Users 1-91	HTTP Request	1587		51535	118	1318	794
92	22:11:35.005	Users 1-92	HTTP Request	1582		51535	118	1346	791
93	22:11:36.008	Users 1-93	HTTP Request	1613		51535	118	1660	810
94	22:11:37.009	Users 1-94	HTTP Request	1618		51535	118	1347	833
95	22:11:38.006	Users 1-95	HTTP Request			51535			815

Average: 1944   Deviation: 675

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename: [Browse...] Log/Display Only: Errors Successes [Configure]

Graphs to Display: Data Average Median Deviation Throughput