



ADITYA ENGINEERING COLLEGE (A)

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Department of Information Technology

Software Engineering

Name of the Faculty: Dr.M.V.Rajesh, Professor, Department of IT

Subject: Software Engineering

Year & Semester: IV - I

Topic: Case Study: Design the test cases for E-Commerce application

Conventional Methods: Chalk & Talk

Teaching Methodology: Seminar & Role play

In Software Engineering, Designing the test cases for E-Commerce application is an important concept. Many have taught the topic using chalk and talk. Dr.M.V.Rajesh has taught the principles of Public Key Cryptography by using Seminar & Role play, where students can confidently express their thoughts in front of several students. Role play lets students act out a scenario or character in designing test cases for e-commerce application. Individuals or groups may play these roles. With this type of innovative method, students can be able to understand and analyse each test case systematically.

References:

1. <https://www.youtube.com/watch?v=xZ0peWR9gMA>
2. <https://www.browserstack.com/guide/test-cases-for-ecommerce-website>

Design the test cases for E-Commerce application:

General Test Cases for Ecommerce Application:

1. Verify that the company logo and name are clearly visible.
2. Verify that the user is able to navigate through all the products across different categories.
3. Verify that all the links and banners are redirecting to the correct product/category pages and none of the links are broken.
4. Verify that all the information displayed – product name, category name, price, and product description is clearly visible.
5. Verify that all the images – product and banner are clearly visible.
6. Verify that category pages have a relevant product listed, specific to the category.
7. Verify that the correct count of total products is displayed on the category pages.
8. Search – Verify that on searching, all the products satisfying the search criteria are visible on the search result page.
9. Search – Verify that on searching, products get displayed on the basis of their relevancy.
10. Search – Verify that count of products is correctly displayed on the search result page for a particular search term.
11. Filtering – Verify that filtering functionality correctly filters products based on the filter applied.
12. Filtering – Verify that filtering works correctly on category pages.
13. Filtering – Verify that filtering works correctly on the search result page.
14. Filtering – Verify that the correct count of total products is displayed after a filter is applied.
15. Filtering – Verify that the correct count and products get displayed on applying multiple filters.
16. Sorting – Verify that all the sort options work correctly. On sorting the products based on the sort option chosen.
17. Sorting – Verify that sorting works correctly on the category pages.
18. Sorting – Verify that sorting works correctly on the search result page.
19. Sorting – Verify that sorting works correctly on the pages containing the filtered result, after applying filters.
20. Sorting – Verify that the product count remains the same irrespective of the sorting option applied.

Product Buy Flow – Test cases for Ecommerce Website:

1. Verify that on the product page, the user can select the desired attribute of the product e.g. size, color, etc.
2. Verify that the user can add to the cart one or more products.
3. Verify that users can add products to the wishlist.
4. Verify that the user can see the previously added products on the cart page, after signing in to the application.
5. Verify that the user can successfully buy more than one products that were added to his/her cart.
6. Verify that the user cannot add more than the available inventory of the product.

7. Verify that the limit to the number of products a user can buy is working correctly. Also, an error message gets displayed, preventing the user from buying more than the limit.
8. Verify that the delivery can be declined during checkout for the places where shipping is not available.
9. Verify that the Cash on Delivery option of payment is working fine.
10. Verify that the different prepaid methods of payments are working fine.
11. Verify that product return functionality works correctly.

User Registration Test cases:

1. Verify that all the required fields – username, email, password, confirm password, etc are present on the registration page.
2. Verify that on passing valid values, a user should get registered and the same should be allowed to login to the application.
3. Verify that if a user tries to register an existing username then an error message should get displayed.
4. Verify that the required/mandatory fields are marked with the ‘*’ symbol.
5. Verify that for a better user interface – dropdowns, radio buttons, checkboxes, etc fields are displayed wherever possible instead of just text boxes.
6. Verify the page has both submit and cancel/reset buttons at the end.
7. Verify that clicking submits button after entering all the required fields, submits the data to the server.
8. Verify that clicking the cancel/reset button after entering all the required fields, cancels the submit request, and reset all the fields.
9. Verify that if no value is passed to the mandatory fields and submit button is clicked then it leads to a validation error.
10. Verify that the user can leave the optional fields blank and on clicking the submit button no validation error appears.
11. Verify that whenever possible validation should take place on the client side. For example, if a user presses submit button without entering a username, and password then this validation should take place on the client side instead of sending blank entries to the server.
12. Check the upper limit of the different textbox fields.
13. Verify validation on the date and email fields. Only valid dates and valid email Ids should be allowed.
14. Check validation on numeric fields by entering alphabets and special characters.
15. Check that leading and trailing spaces are trimmed i.e. in case, the user appends space before and after a field, then the same should get trimmed before getting stored on the server.

Product Creation Test cases (For seller):

1. Verify that only authorized sellers get access to product creation panels specific to the authorized categories.
2. Verify that the product creation panel is working fine for single product creation.
3. Verify that the product creation panel is working fine for multiple product creations.
4. Verify that the maximum product creation limit for the seller is working fine, limiting the seller to create more than the desired number of products.
5. Verify panel validation for checking mandatory fields.
6. Verify that duplicate product creation is restricted through the panel.
7. Verify that seller can update the information and price of existing products.
8. Verify that products created by sellers get visible on the website after a certain period of time.
9. Verify that updates made by the seller get visible on the website after a certain period of time.

Design the test cases for E-Commerce application using role play:

The role play method of explaining the topic of design the test cases for E-Commerce application creates a chance for students to play different roles like user and seller with responsibilities like verify, search, filter, sorting etc. With this method, each student understands their roles clearly for designing test cases for e-commerce application.

