

Soal Prioritas1

1. Apakah proses testing secara manual perlu dilakukan meskipun tools yang memanfaatkan artificial intelligence sudah dikembangkan? Jelaskan alasannya!

Jawab :

Kekuatan Konteks

Pengujian manual memberikan kemampuan untuk mengevaluasi aplikasi dalam konteks yang lebih alami. Penguji manusia dapat memahami alur kerja pengguna dan mempertimbangkan faktor lingkungan yang mungkin tidak dapat diprediksi oleh AI. Hal ini penting untuk memahami bagaimana aplikasi berinteraksi dengan pengguna dalam situasi dunia nyata.

Pengujian Pengalaman Pengguna (User Experience Testing)

Meskipun AI dapat mengidentifikasi pola dan masalah umum, pengujian manual memberikan pandangan yang lebih mendalam terhadap pengalaman pengguna. Penguji manual bisa merasakan bagaimana pengguna sebenarnya berinteraksi dengan aplikasi, mengidentifikasi nuansa, dan mengevaluasi elemen-elemen seperti antarmuka pengguna, interaksi, dan respons emosional, yang tidak selalu bisa ditangkap oleh AI.

Pengujian Fungsionalitas

Pengujian manual efektif untuk mengidentifikasi kasus penggunaan yang sangat spesifik atau kondisi tepi yang mungkin dilewatkan oleh AI. Manusia memiliki kemampuan untuk mengeksplorasi aplikasi secara kreatif, menguji skenario yang jarang terjadi, dan mengevaluasi respons aplikasi terhadap berbagai tindakan pengguna.

Penilaian Akurasi Hasil

Jika aplikasi yang diuji memiliki fitur AI atau algoritma kompleks, pengujian manual diperlukan untuk mengevaluasi akurasi dan efektivitas hasil yang dihasilkan oleh AI. Penguji manusia dapat menilai kualitas hasil, memastikan konsistensi, dan memverifikasi bahwa aplikasi bekerja sesuai dengan harapan.

Pengujian Kinerja dan Kinerja Eksternal

Pengujian manual memungkinkan penilaian kinerja aplikasi dalam kondisi nyata dengan berbagai macam variabel eksternal. Faktor-faktor seperti kondisi jaringan, perangkat keras, suhu, dan interaksi pengguna dapat sangat mempengaruhi kinerja aplikasi. Pengujian manual dapat menangkap variabilitas ini dan memberikan umpan balik yang lebih komprehensif.

Keunggulan dalam Pengujian Manual

- **Empati dan Intuisi:** Penguji manusia dapat menggunakan empati dan intuisi mereka untuk memahami bagaimana pengguna akan merasakan aplikasi.
- **Penilaian Subjektif:** Pengujian manual memungkinkan penilaian subjektif yang penting untuk memastikan aplikasi memenuhi kebutuhan dan harapan pengguna.
- **Kemampuan Adaptasi:** Penguji manual dapat beradaptasi dengan cepat terhadap perubahan dan kondisi yang tidak terduga, memberikan fleksibilitas yang lebih besar dalam proses pengujian.

MANUAL TEST CASE AND SCENARIO

SignUp

1. **User Sign Up Using Valid Credential ("username" and "password")** As a user i can sign up my account So That i can access application feature

Scenario :

- User fill form with valid credentials to sign up account
- Given i can access sign up page
- When i fill "username" form using valid username
- And i fill "password" form using my password And i click "sign up" button
- Then i have account

2. **User Sign Up Using Invalid Username**

Scenario :

- User fill form with invalid character on "username" form
- Given i can access sign up page
- When i fill "username" form using invalid character (!,@,#,\$,%) And i click "sign up" button
- Then i receive error message

3. **User Sign Up With Empty Inputs**

Scenario :

- User doesn't fill form
- Given i can access sign up page
- When i click "sign up" button without "username" and "password" form
- Then i receive error message

Purchase

Scenario 1: Buy and Checkout

Scenario:

- User successfully buys items and checks out
- Given the user is on the www.demoblaze.com homepage
- When the user clicks on a product to view its details
- And the user clicks the "Add to Cart" button
- And the item is added to the cart
- And the user goes to the cart (not redirected automatically)
- And the user clicks "Place order"
- And the user fills out the confirmation form with valid details: | Name | City | Country | Credit Card Number | Month | Year | | John Doe | New York | USA | 1234 5678 9012 3456 | 12 | 2024 | And the user clicks "Purchase"
- Then the user should receive a confirmation message

Scenario 2: Missing Credit Card Information

Scenario:

- User tries to checkout without providing credit card information
- Given the user is on the www.demoblaze.com homepage
- When the user clicks on a product to view its details
- And the user clicks the "Add to Cart" button
- And the item is added to the cart
- And the user goes to the cart (not redirected automatically)
- And the user clicks "Place Order"
- And the user fills out the confirmation form with valid details except for the credit card information: | Name | City | Country | Credit Card Number | Month | Year | | John Doe | New York | USA | | |
- And the user clicks "Purchase"
- Then the user should see an error message indicating missing credit card information
- And the user should be redirected back to the confirmation form page

Scenario 3: Invalid Credit Card Number

Scenario:

- User tries to checkout with an invalid credit card information
- Given the user is on the www.demoblaze.com homepage
- When the user clicks on a product to view its details
- And the user clicks the "Add to Cart" button
- And the item is added to the cart
- And the user goes to the cart
- And the user clicks "Place Order"
- And the user fills out the confirmation form with invalid credit card information: | Name | City | Country | Credit Card Number | Month | Year | | John Doe | New York | USA | XXX123YYYYYAAAAA | 14 | 1892 |
- And the user clicks "Purchase"
- Then the user should see an error message indicating an invalid credit card information
- And the user should be redirected back to the confirmation form page

Scenario 3: Invalid User Information

Scenario:

- User tries to checkout with an invalid credit card information
- Given the user is on the www.demoblaze.com homepage
- When the user clicks on a product to view its details
- And the user clicks the "Add to Cart" button
- And the item is added to the cart
- And the user goes to the cart
- And the user clicks "Place Order"
- And the user fills out the confirmation form with invalid user information: | Name | City | Country | Credit Card Number | Month | Year | | #####121 | JKT48202 | IDK | 1234 5678 9012 3456 | 12 | 2024 |

- And the user clicks "Purchase"
- Then the user should see an error message indicating an invalid user information And the user should be redirected back to the confirmation form page

AI TEST CASE AND SCENARIO

Sign-Up Test Scenarios

1. Valid Sign-Up:

- **Description:** User signs up with valid details (username, email, password).
- **Expected Result:** Sign-up is successful, user is redirected to the welcome page or receives a confirmation email.

2. Sign-Up with Missing Fields:

- **Description:** User tries to sign up without filling in all required fields.
- **Expected Result:** Sign-up fails with an error message indicating the missing fields.

3. Invalid Email Format:

- **Description:** User signs up with an incorrectly formatted email address.
- **Expected Result:** Sign-up fails with an error message indicating invalid email format.

4. Password Mismatch:

- **Description:** User enters a password and confirmation password that do not match.
- **Expected Result:** Sign-up fails with an error message indicating password mismatch.

5. Duplicate Username:

- **Description:** User signs up with a username that is already taken.
- **Expected Result:** Sign-up fails with an error message indicating the username is already in use.

6. Short Password:

- **Description:** User enters a password shorter than the required minimum length.
- **Expected Result:** Sign-up fails with an error message indicating the password is too short.

7. Username with Special Characters:

- **Description:** User signs up with a username containing special characters not allowed by the application.
- **Expected Result:** Sign-up fails with an error message indicating invalid characters in the username.

Purchase Test Scenarios

1. Valid Purchase:

- **Description:** User adds an item to the cart and completes a purchase with valid payment information.
- **Expected Result:** Purchase is successful, user receives an order confirmation, and inventory is updated.

2. **Purchase with Invalid Payment Information:**

- **Description:** User attempts to complete a purchase with invalid payment information (e.g., incorrect credit card number).
- **Expected Result:** Purchase fails with an error message indicating invalid payment information.

3. **Out-of-Stock Item:**

- **Description:** User tries to purchase an item that is out of stock.
- **Expected Result:** Purchase fails with an error message indicating the item is out of stock.

4. **Insufficient Funds:**

- **Description:** User attempts to complete a purchase, but the payment method has insufficient funds.
- **Expected Result:** Purchase fails with an error message indicating insufficient funds.

5. **Purchase with Missing Information:**

- **Description:** User tries to complete a purchase without providing all required information (e.g., billing address).
- **Expected Result:** Purchase fails with an error message indicating missing information.

6. **Cart Updates During Purchase:**

- **Description:** User adds items to the cart, then removes or changes quantities before completing the purchase.
- **Expected Result:** Cart updates correctly, and the purchase reflects the changes made.

7. **Security Validation:**

- **Description:** Test for SQL injection or cross-site scripting during the purchase process.
- **Expected Result:** The application properly sanitizes input to prevent security vulnerabilities.

PERBEDAAN PEMBUATAN TEST CASE DAN SCENARIO OLEH AI DAN MANUAL

Manual : bergantung pada pemahaman dan kreatifitas manusia, memakan waktu dan dapat rentan terhadap kesalahan manusia

Menggunakan AI tools : cepat, efisien, dapat diulang dengan mudah, dan cenderung memiliki akurasi yang tinggi Ketika dikonfigurasi dengan tepat