

Lesson 07 Demo 01

Comparing Traditional and Generative AI-based Test Case Creation

Objective: To evaluate the effectiveness of traditional manual versus Generative AI-based test case creation methods for the Facebook login functionality

Tools required: MS-Excel, Microsoft Copilot

Prerequisites: Basic knowledge and understanding of writing test case scenarios manually

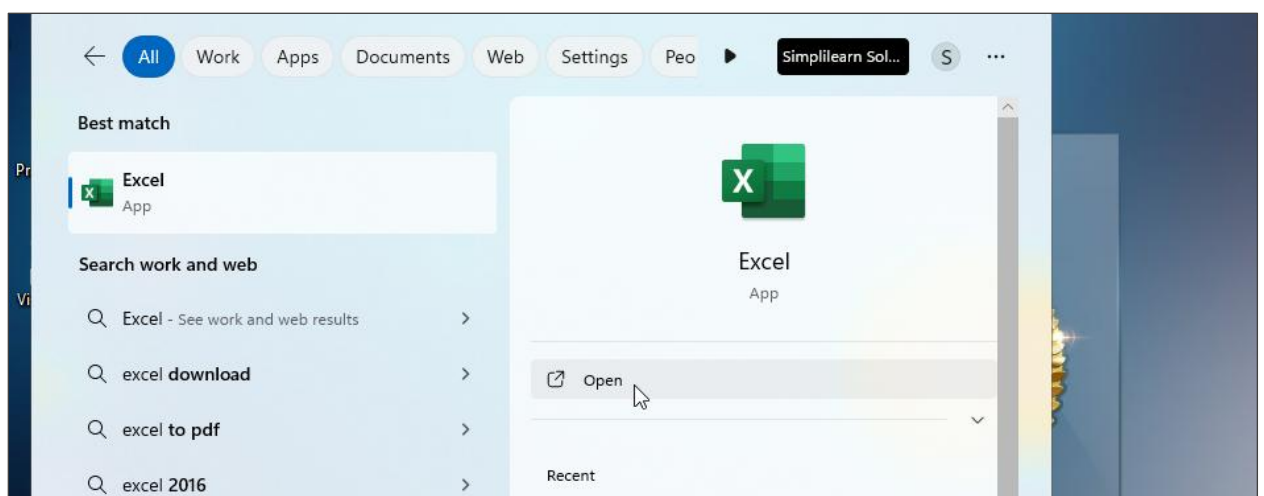
Steps to be followed:

1. Write test cases manually in MS Excel or Google Sheets
2. Generate the test cases using Microsoft Copilot

Note: Please be advised that the GenAI tools used in this demo may produce varied outputs even when presented with similar prompts.

Step 1: Write test cases manually in MS Excel or Google Sheets

1.1 Open MS Excel or Google Sheets



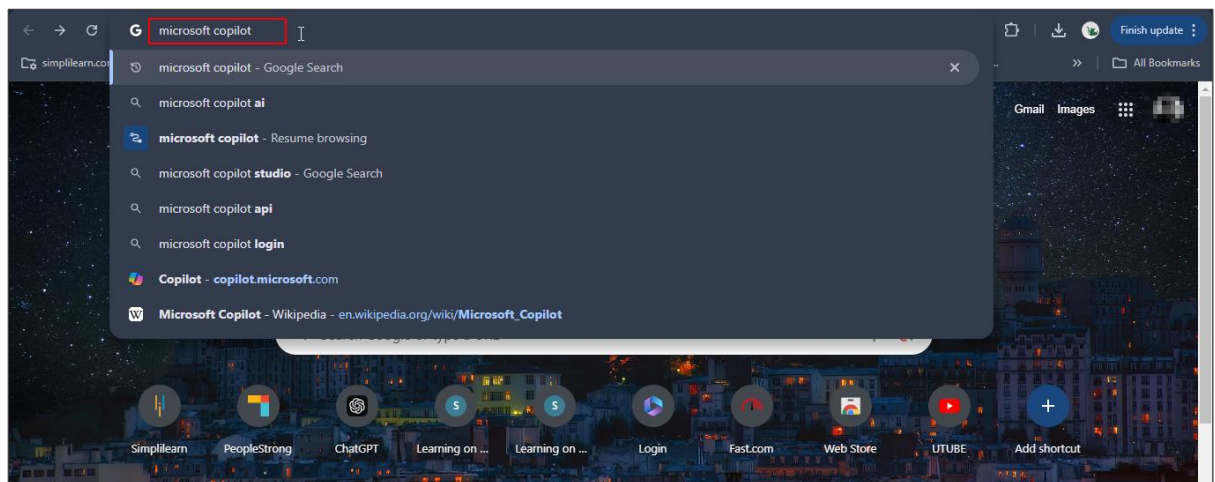
Note: You may use Google Sheets as an alternative for writing test cases.

1.2 Write the test cases for verifying the functionality of the Facebook login page as shown in the screenshot below:

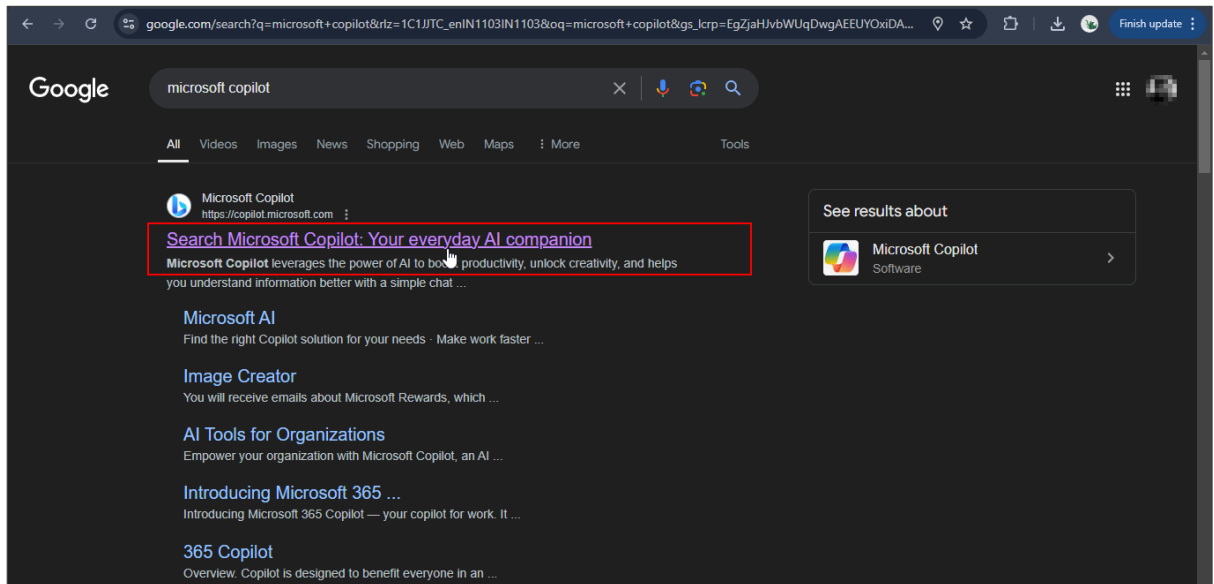
Test Scenario	Test Case ID	Test Case Description	Test Steps	Preconditions	Test Data	Postconditions	Expected Result	Actual Result	Status	Executed By	Executed Date	Comments
Verify the login functionality of Facebook login page	TC_FB_Login_001	Enter a valid username and valid password	1. Open Facebook login page 2. Enter valid email/phone and password	Valid URL Test Data	username: facebook@gmail.com password: P@ssw0rd	User should be able to see the home page	Successful login		Pass	Tester_TID_001	MM-DD-YYYY	No comments
Verify the login functionality of Facebook login page	TC_FB_Login_002	Enter a valid username and invalid password	1. Open Facebook login page 2. Enter valid email/phone and password 3. Click on "Log In" button	Valid URL Test Data	username: facebook@gmail.com password: xxxxxxxx	error message "The email address or mobile number you entered isn't connected to an account."	A pop up message to show an error "The email address or mobile number you entered isn't connected to an account."		Fail	Tester_TID_002	MM-DD-YYYY	No comments
Verify the login functionality of Facebook login page	TC_FB_Login_003	Enter an invalid username and valid password	1. Open Facebook login page 2. Enter valid email/phone and password 3. Click on "Log In" button	Valid URL Test Data	username: xxxxxxxx@gmail.com password: P@ssw0rd	error message "invalid username or password"	A pop up message to show an error "The email address or mobile number you entered isn't"		Fail	Tester_TID_003	MM-DD-YYYY	No comments
Verify the login functionality of Facebook login page	TC_FB_Login_004	Enter an invalid username and invalid password	1. Open Facebook login page 2. Enter valid email/phone and password 3. Click on "Log In" button	Valid URL Test Data	username: xxxxxxxx@gmail.com password: xxxxxxxx	error message "invalid username or password"	A pop up message to show an error "The email address or mobile number you entered isn't"		Fail	Tester_TID_004	MM-DD-YYYY	No comments

Step 2: Generate the test cases using Microsoft Copilot

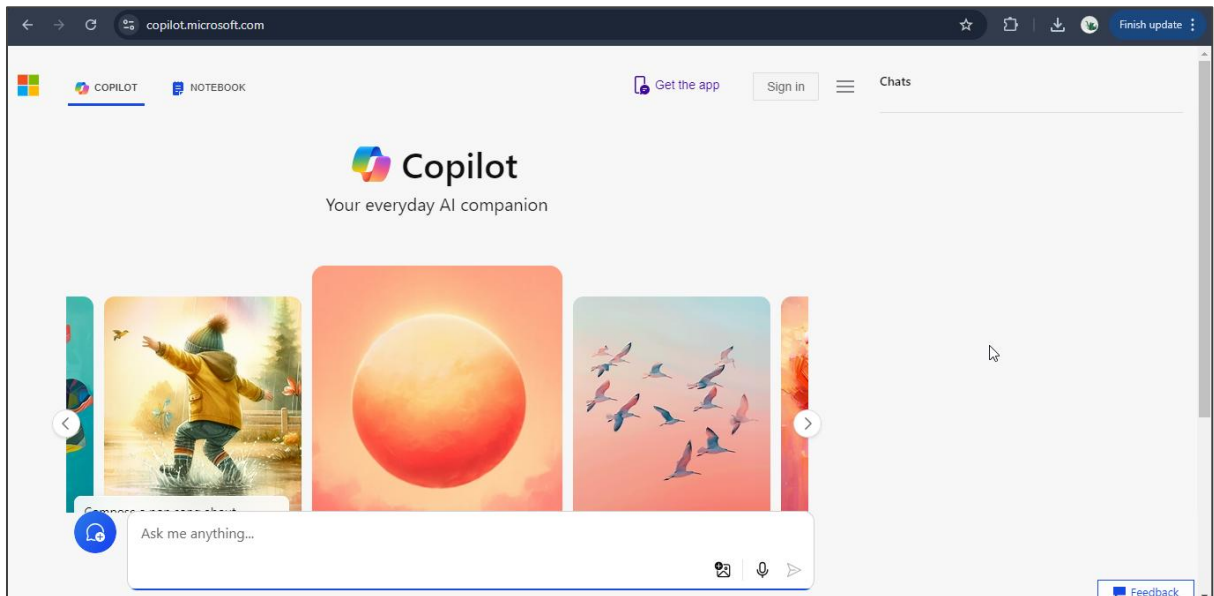
2.1 Open Google Chrome, enter **microsoft copilot** in the URL box, and click Enter



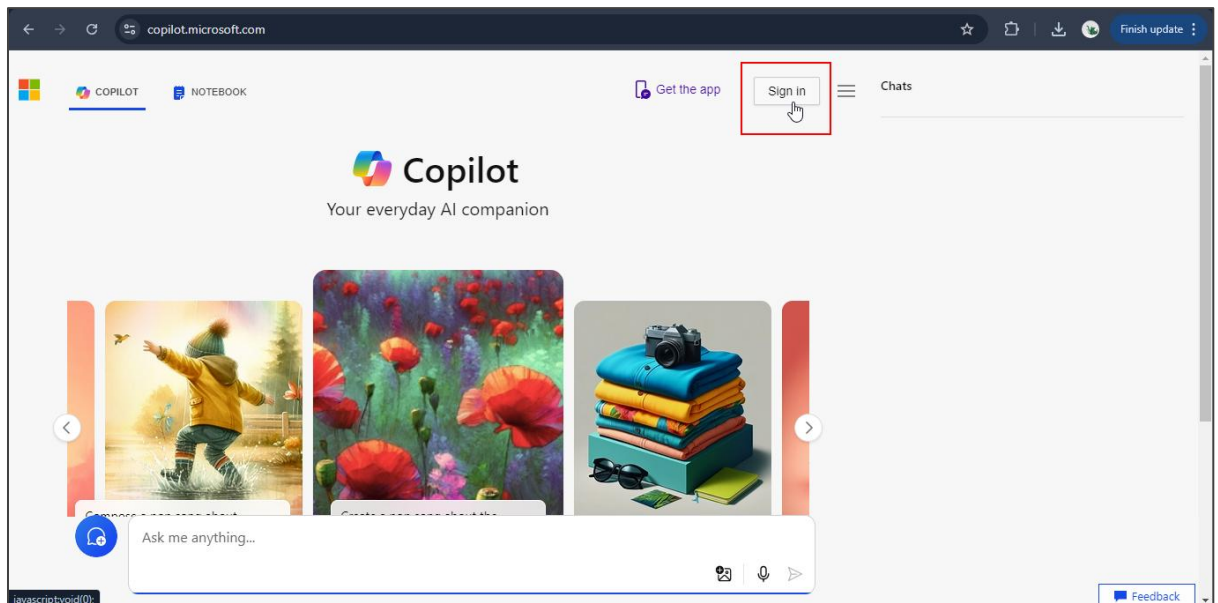
2.2 Click on the first link as shown in the screenshot below:



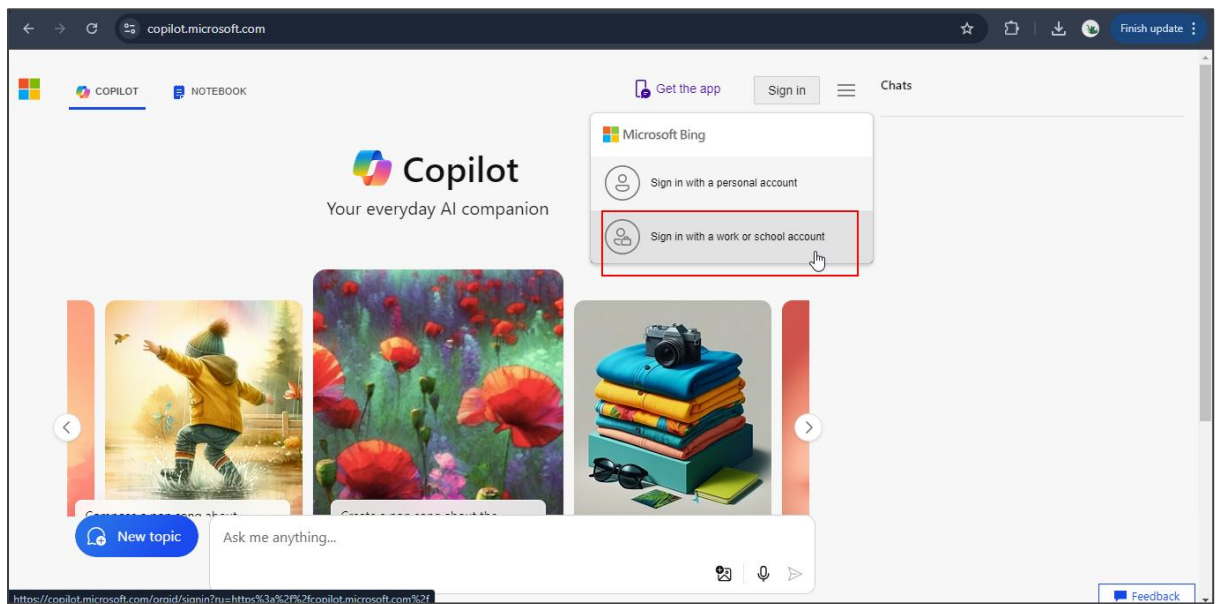
The Microsoft Copilot homepage opens as shown below:



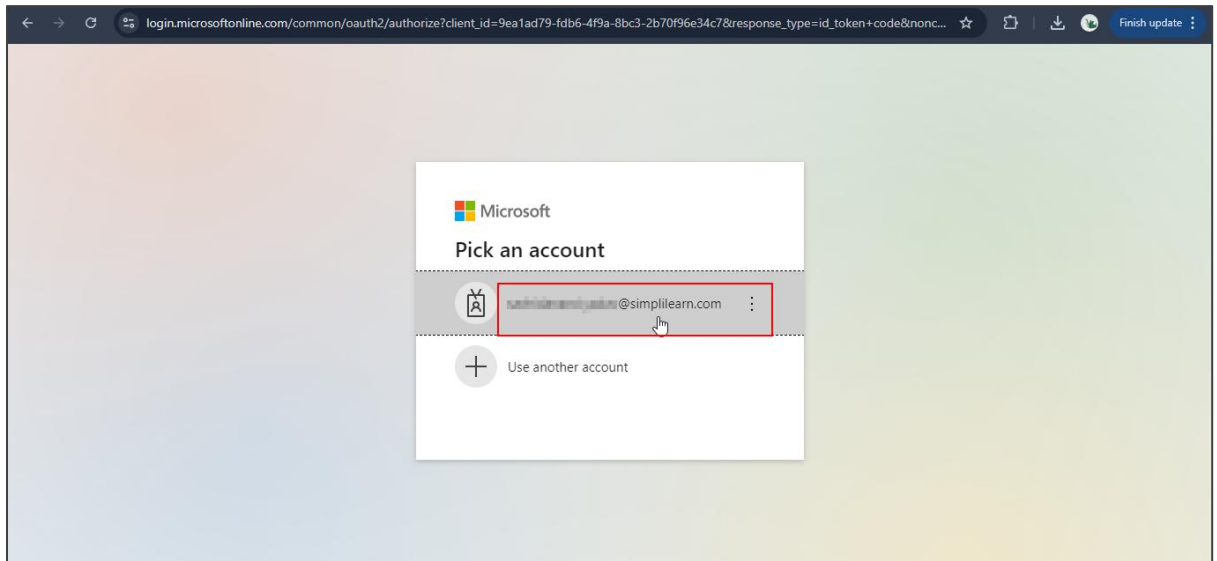
2.3 Click on the **Sign in** button



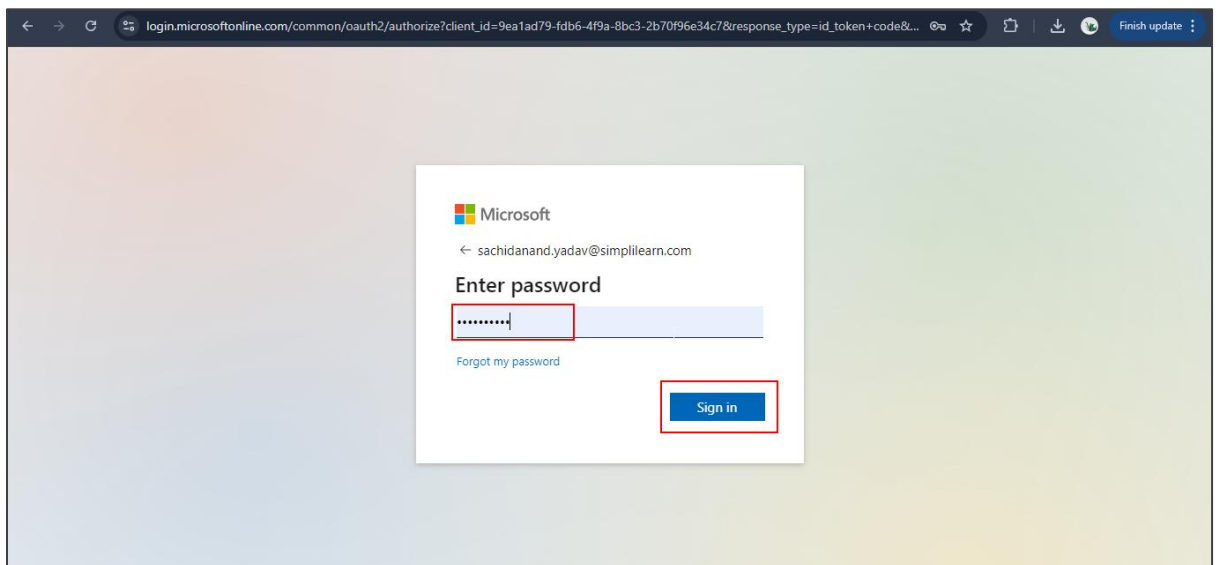
2.4 Select **Sign in with a work or school account**



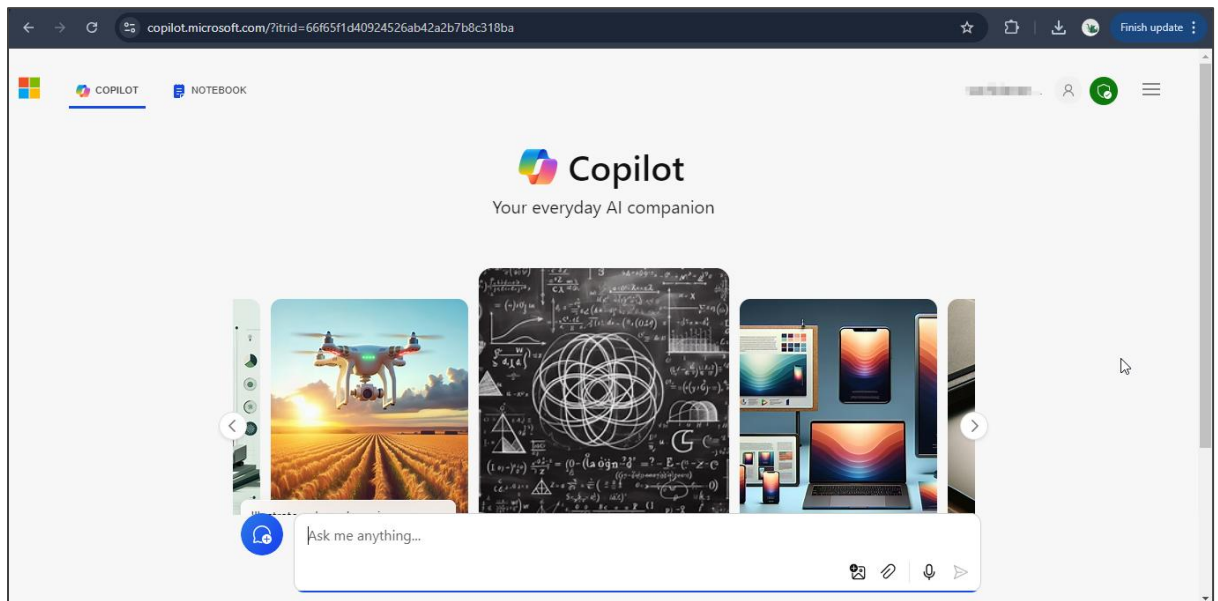
2.5 Select the desired account



2.6 Enter the password and click on the **Sign in** button

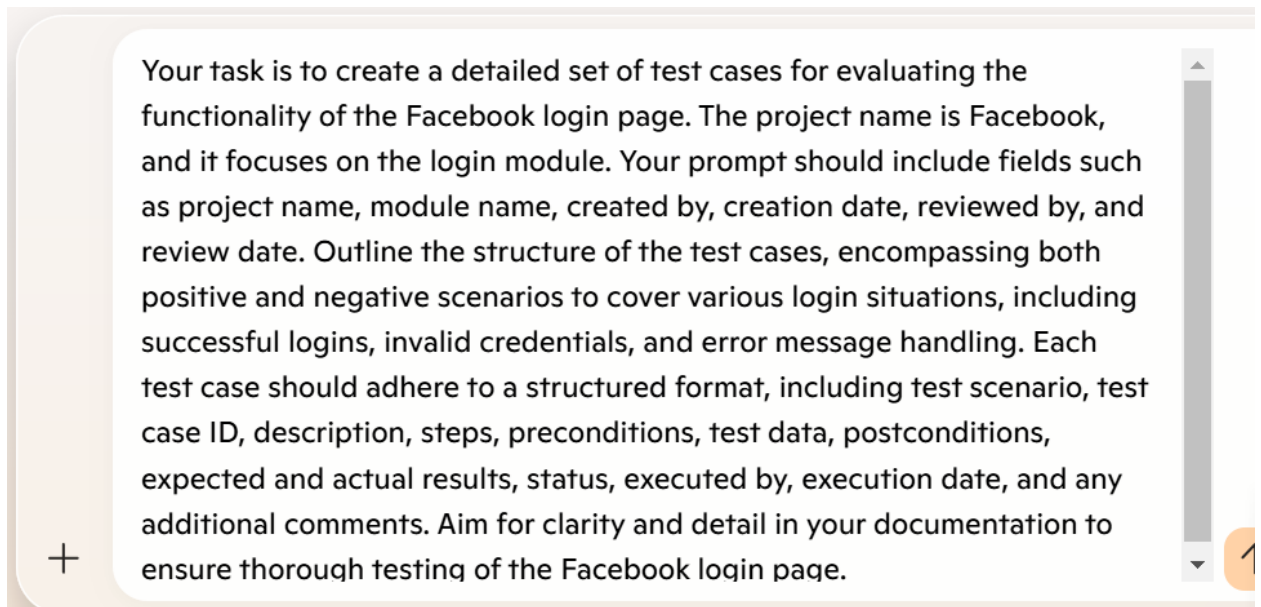


You are successfully signed in to the Microsoft Copilot as shown below:

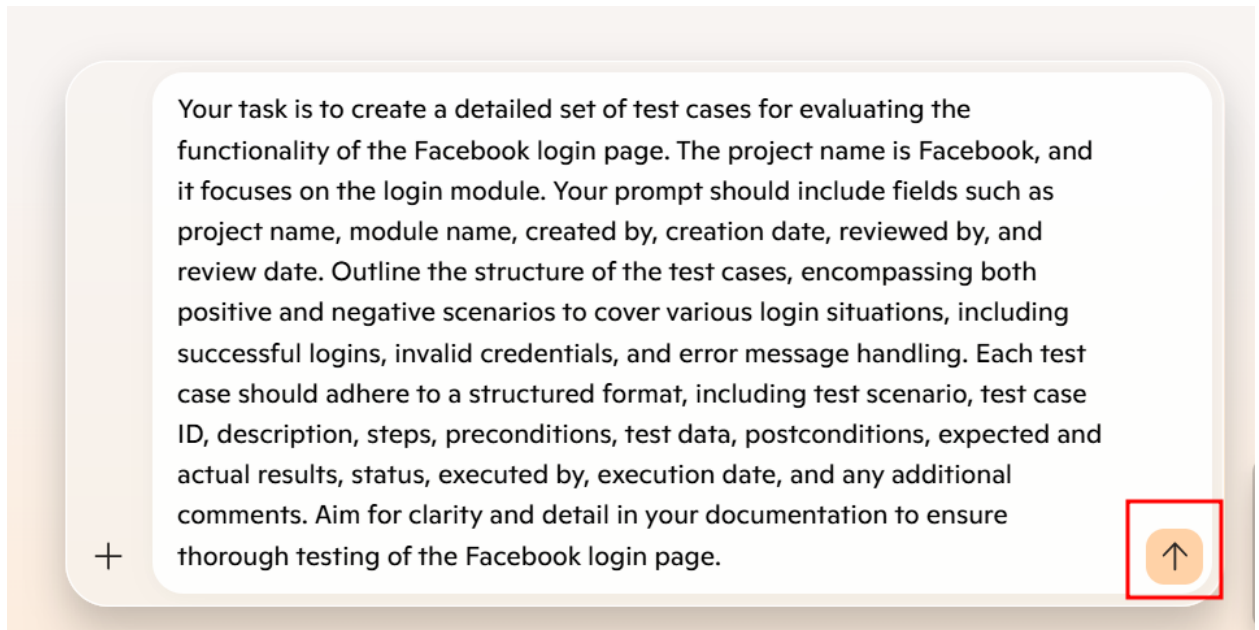


2.7 Add the following prompt in the **Ask me anything...** box as shown in the screenshot below:

Your task is to create a detailed set of test cases for evaluating the functionality of the Facebook login page. The project name is Facebook, and it focuses on the login module. Your prompt should include fields such as project name, module name, created by, creation date, reviewed by, and review date. Outline the structure of the test cases, encompassing both positive and negative scenarios to cover various login situations, including successful logins, invalid credentials, and error message handling. Each test case should adhere to a structured format, including test scenario, test case ID, description, steps, preconditions, test data, postconditions, expected and actual results, status, executed by, execution date, and any additional comments. Aim for clarity and detail in your documentation to ensure thorough testing of the Facebook login page.



2.8 Click on the **Submit** button



Microsoft Copilot starts generating the test case based on the prompt given.

Sure, I can help with that. Here's a detailed set of test cases for evaluating the functionality of the Facebook login page:

Project Details

- **Project Name:** Facebook
- **Module Name:** Login
- **Created by:** [Your Name]
- **Creation Date:** 26-Feb-2025
- **Reviewed by:** [Reviewer's Name]
- **Review Date:** [Date]

Test Cases

1. Successful Login with Valid Credentials

- **Test Case ID:** TC01
- **Description:** Verify that a user can successfully log in with valid credentials.

Test Cases

1. Successful Login with Valid Credentials

- **Test Case ID:** TC01
- **Description:** Verify that a user can successfully log in with valid credentials.
- **Steps:**
 1. Navigate to the Facebook login page.
 2. Enter a valid email address.
 3. Enter a valid password.
 4. Click the "Log In" button.
- **Preconditions:** User must have a valid Facebook account.
- **Test Data:**
 - Email: validuser@example.com
 - Password: validpassword123
- **Postconditions:** User is successfully logged in and redirected to the homepage.
- **Expected Result:** User is logged in and redirected to the homepage.
- **Actual Result:** [To be filled after execution]

2. Unsuccessful Login with Invalid Email

- **Test Case ID:** TC02
- **Description:** Verify that a user cannot log in with an invalid email address.
- **Steps:**
 1. Navigate to the Facebook login page.
 2. Enter an invalid email address.
 3. Enter a valid password.
 4. Click the "Log In" button.
- **Preconditions:** N/A
- **Test Data:**
 - Email: invaliduser@example.com
 - Password: validpassword123
- **Postconditions:** User is not logged in and an error message is displayed.
- **Expected Result:** Error message "The email you entered isn't connected to an account." is displayed.
- **Actual Result:** [To be filled after execution]
- **Status:** [To be filled after execution]

3. Unsuccessful Login with Invalid Password

- **Test Case ID:** TC03
- **Description:** Verify that a user cannot log in with an invalid password.
- **Steps:**
 1. Navigate to the Facebook login page.
 2. Enter a valid email address.
 3. Enter an invalid password.
 4. Click the "Log In" button.
- **Preconditions:** User must have a valid Facebook account.
- **Test Data:**
 - Email: validuser@example.com
 - Password: invalidpassword123
- **Postconditions:** User is not logged in and an error message is displayed.
- **Expected Result:** Error message "The password you've entered is incorrect." is displayed.
- **Actual Result:** [To be filled after execution]
- **Status:** [To be filled after execution]

4. Login with Empty Credentials

- **Test Case ID:** TC04
- **Description:** Verify that a user cannot log in with empty email and password fields.
- **Steps:**
 1. Navigate to the Facebook login page.
 2. Leave the email and password fields empty.
 3. Click the "Log In" button.
- **Preconditions:** N/A
- **Test Data:** N/A
- **Postconditions:** User is not logged in and error messages are displayed.
- **Expected Result:** Error messages "The email address or mobile number you entered isn't connected to an account." and "The password you've entered is incorrect." are displayed.
- **Actual Result:** [To be filled after execution]
- **Status:** [To be filled after execution]
- **Executed by:** [Your Name]
- **Execution Date:** [Date]

2.9 Add the following prompt to change the representation format to CSV:
Add the above response in CSV format

• **Comments:** N/A

I hope these test cases are helpful. If you need more scenarios or any specific requirements, feel free to let me know!

What additional test scenarios should I consider?

How can I improve my test case documentation?

Should I include automated tests for the login module?

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Add the above response in CSV format



Add the above response in CSV format

Sure! Here is the test case information in CSV format:

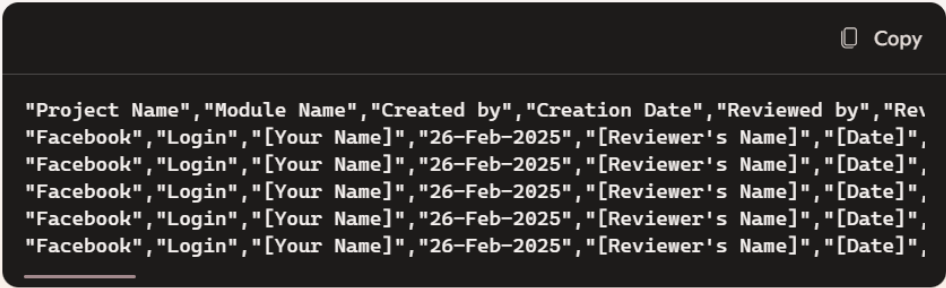
 Copy

```
"Project Name","Module Name","Created by","Creation Date","Reviewed by","Rev
"Facebook","Login","[Your Name]","26-Feb-2025","[Reviewer's Name]","[Date]"
```

Microsoft Copilot generates the response as shown below:



Sure! Here is the test case information in CSV format:



By following these steps, you have successfully evaluated the effectiveness of traditional manual methods versus Generative AI-based test case creation for the Facebook login functionality, enhancing software testing efficiency.