

## Power Apps Automation Testing

Power Apps offers automation testing functionalities specifically designed for its low-code environment. Here's a breakdown of the key aspects:

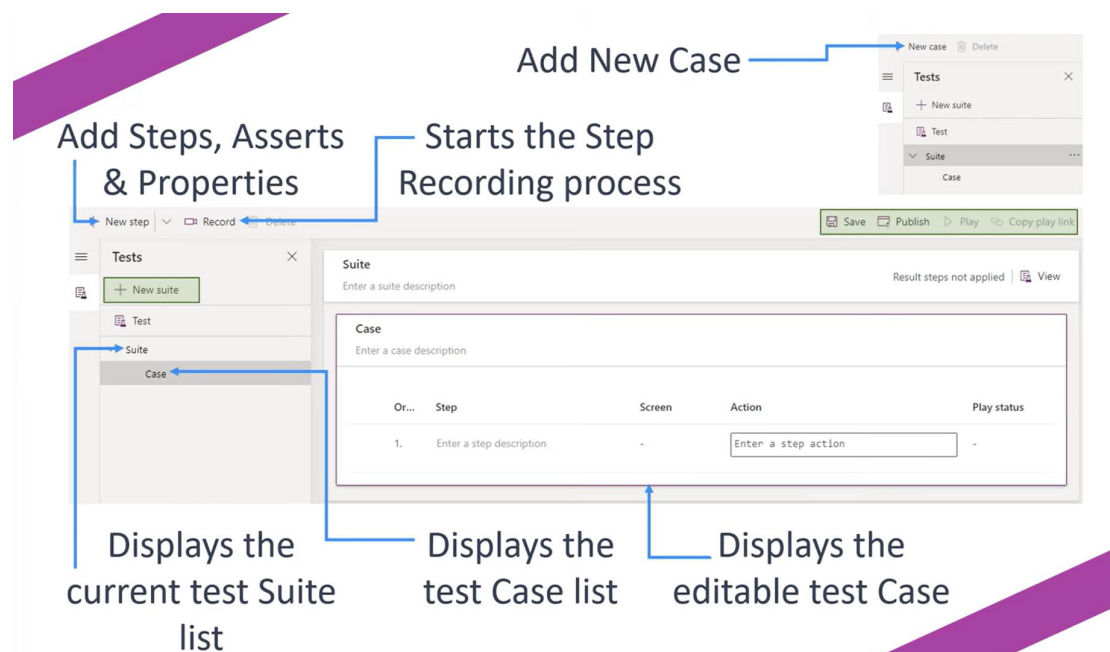
### Why Automate Testing in Power Apps?

- **Reduced Effort and Time:** Automated tests can streamline the testing process, saving time and resources compared to manual testing.
- **Improved Stability:** Automation helps catch regressions early in the development cycle, ensuring a more stable app.
- **Increased Trust:** Regular automated testing fosters confidence in the app's functionality for both developers and end-users.

### Tool: Power Apps Test Studio

Test Studio is a built-in, low-code solution for creating and managing automated tests for canvas apps. It provides two primary functionalities:

1. **Recording Tests:** Test Studio allows you to record your interactions with the app as test steps. This simplifies creating basic test cases that mimic real user scenarios.
2. **Test Authoring:** You can further refine the recorded tests or create new ones manually. Test Studio uses Power Fx expressions, the familiar formula language within Power Apps, for defining test steps and assertions (expected results).



### Benefits of Test Studio:

- **Ease of Use:** The low-code approach makes test creation accessible even for users without extensive coding experience.

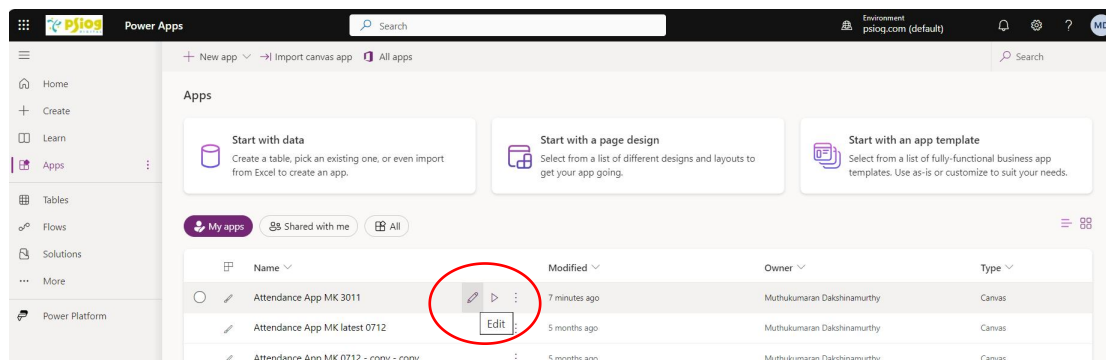
- **Reduced Maintenance:** Tests written in Power Fx are easier to maintain as the app evolves.
- **Integration with Development Process:** Tests can be integrated with your deployment pipeline for automated execution during the development cycle.

## Terminology

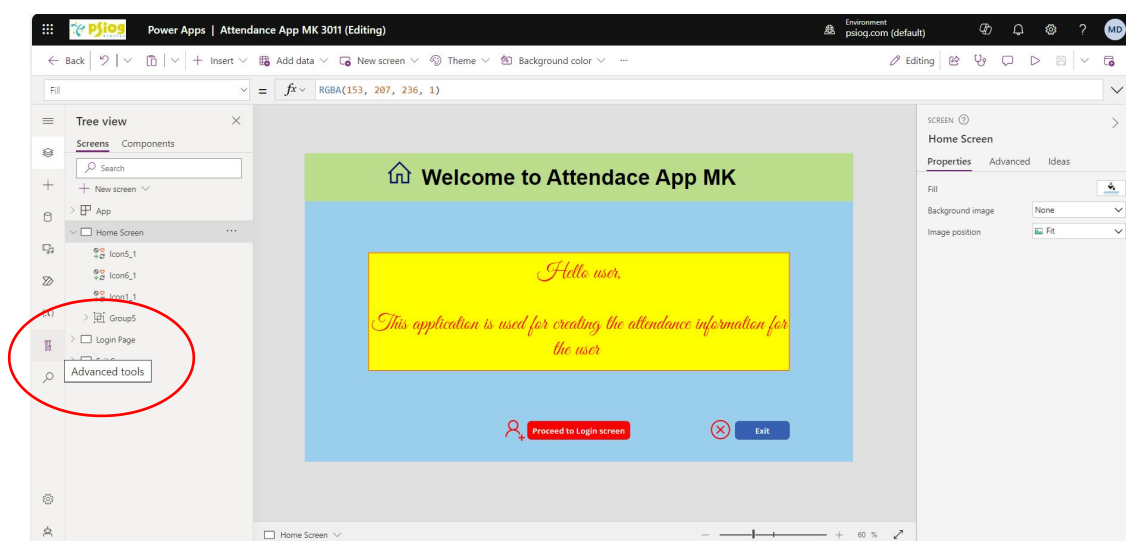
Term	Description
Test Steps	Individual steps created to mimic a user or data input
Test Cases	Contains Test Steps to create a single test for validating
Test Suites	Used to organize multiple Test Cases together (grouping)
Assertions (Asserts)	Validates an expected result as a true or false value

### How to work in real time with an example:

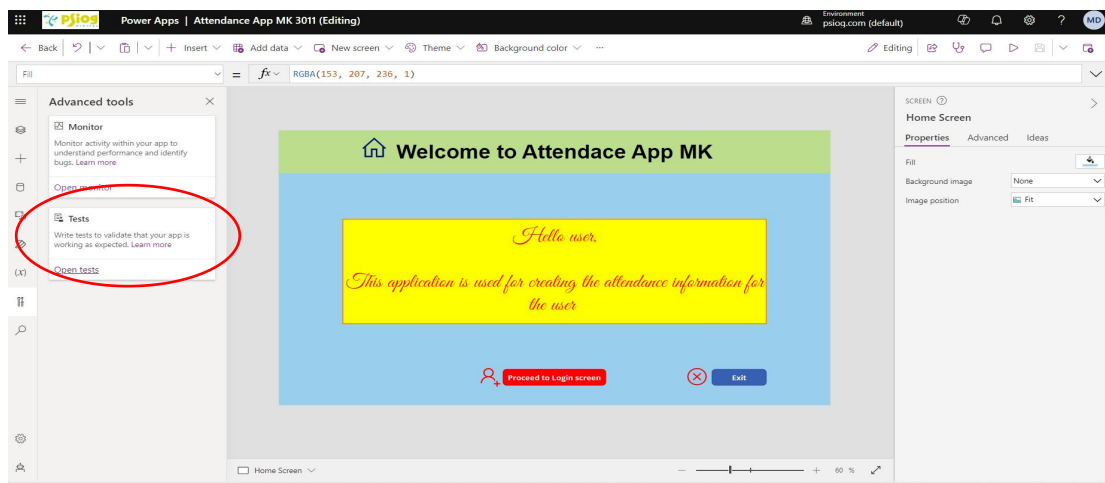
1, Ensure your Power App is open in edit mode. You can typically access edit mode by clicking a button labeled "Edit" or a similar option.



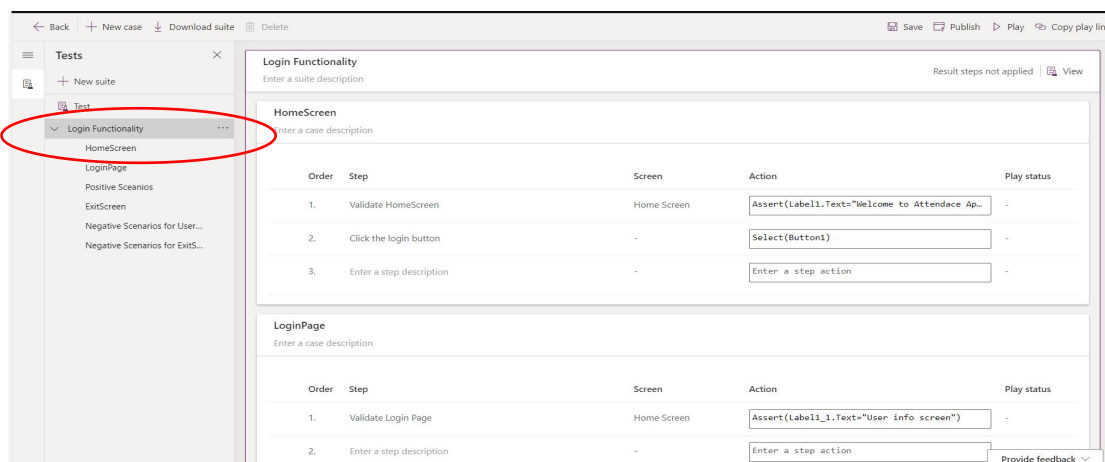
2, Select the Advanced tools option on the left side of the screen.



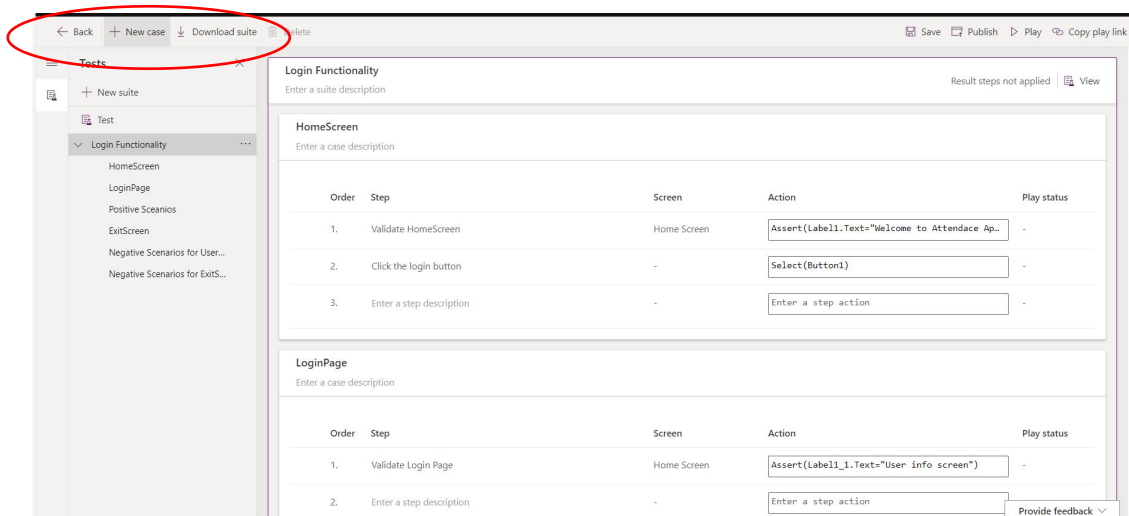
3, Click **"Open tests"** to launch Test Studio.



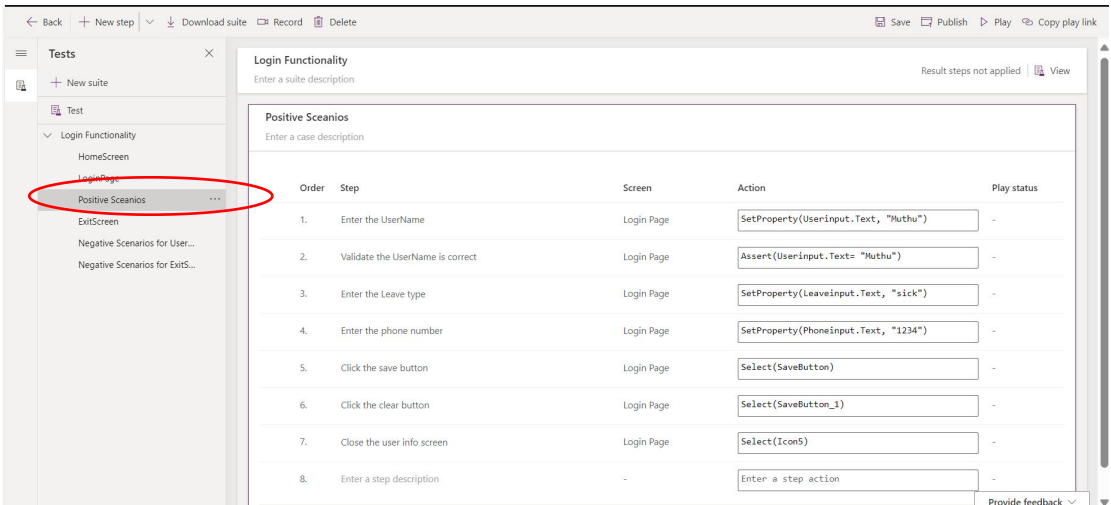
4, **Create a New Test Suite:** Click "New suite" and provide a name (e.g., "Login Functionality").



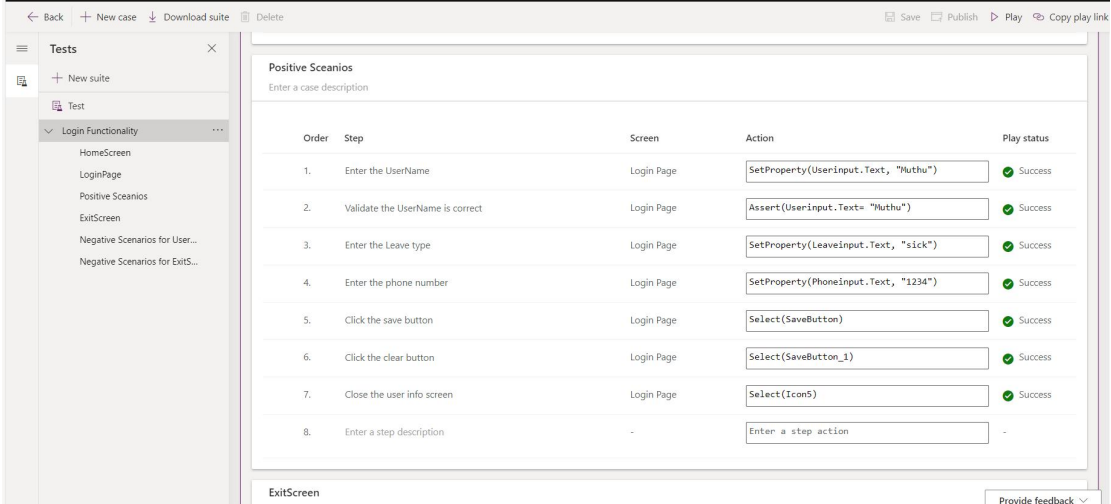
5, **Create a New Test Case:** Within the suite, click "New case" and give it a descriptive name (e.g., "Valid Login").



**6, Define Test Steps:** In the test case editor, record or manually create steps that simulate user interactions (e.g., entering username and password).

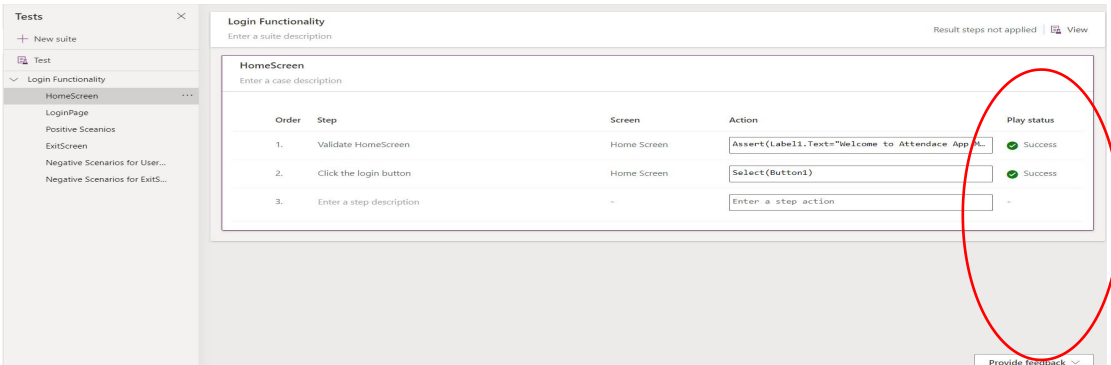


**Result After Running:**



**7, Add Assertions:** Use assertions to verify expected results after each step (e.g., successful login message appears).

- If the actual value matches the expected value, the test case passes.



- If they don't match, the test case fails.

Negative Scenarios for UserName

Enter a case description

Order	Step	Screen	Action	Play status
1.	Click the login button	Home Screen	Select(Button1)	Success
2.	Enter the UserName	Login Page	SetProperty(Userinput.Text, "Muthu")	Success
3.	Validate the UserName is In-correct	Login Page	Assert(Userinput.Text= "Ram")	Assert failed
4.	Enter the Leave type	Login Page	SetProperty(Leaveinput.Text, "sick")	-
5.	Enter the phone number	Login Page	SetProperty(Phoneinput.Text, "1234")	-
6.	Click the save button	Login Page	Select(SaveButton)	-
7.	Click the clear button	Login Page	Select(SaveButton_1)	-
8.	Close the user info screen	Login Page	Select(Icon5)	-
9.	From exit screen to user info screen	Exit Screen	Select(Icon2)	-
10.	Close the user info screen	Login Page	Select(Icon5)	-

Provide feedback

**8, Save the Test Case:** Click the "Save" button in the top right corner.

Power Apps | Test Studio - Attendance App MK 3011

Save Publish Play Copy play link

Tests

- New suite
- Test
  - Login Functionality
    - HomeScreen
    - LoginPage
    - Positive Scenarios
    - ExitScreen
    - Negative Scenarios for User...
    - Negative Scenarios for ExitS...

Login Functionality

Enter a suite description

Result steps not applied View

HomeScreen

Enter a case description

Order	Step	Screen	Action	Play status
1.	Validate HomeScreen	Home Screen	Assert(Label1.Text="Welcome to Attendance Ap...	-
2.	Click the login button	-	Select(Button1)	-
3.	Enter a step description	-	Enter a step action	-

LoginPage

Enter a case description

Order	Step	Screen	Action	Play status
1.	Validate Login Page	Home Screen	Assert(Label1_1.Text="User info screen")	-
2.	Enter a step description	-	Enter a step action	-

Provide feedback

**9, Publish the Test Suite:** Click the "Publish" button to make the tests available for execution. (Once published, the "Publish" button becomes disabled, and the "Play" button becomes enabled.)

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Save Publish Play Copy play link

Tests

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Login Functionality

Enter a suite description

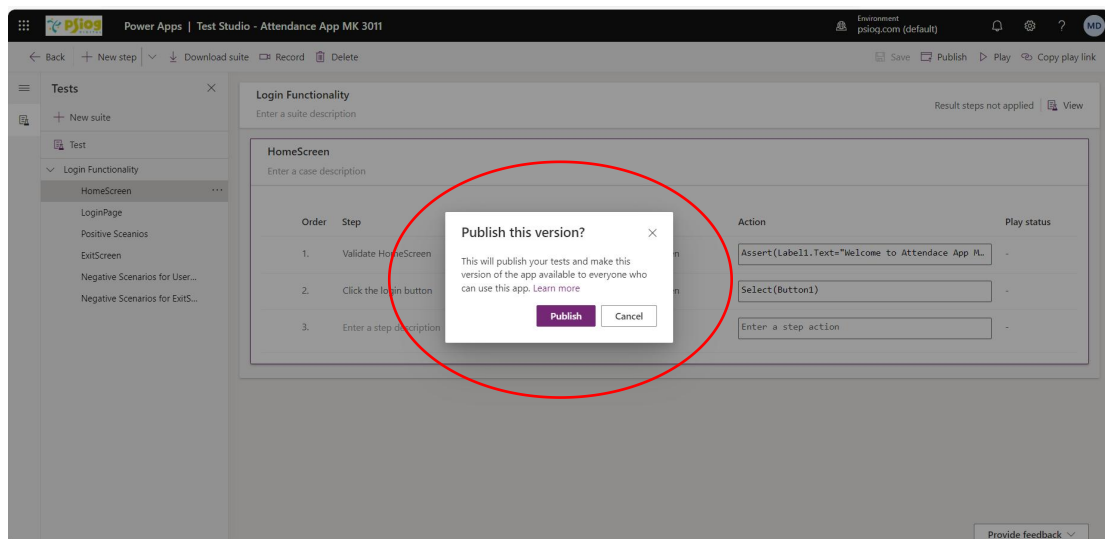
Result steps not applied View

HomeScreen

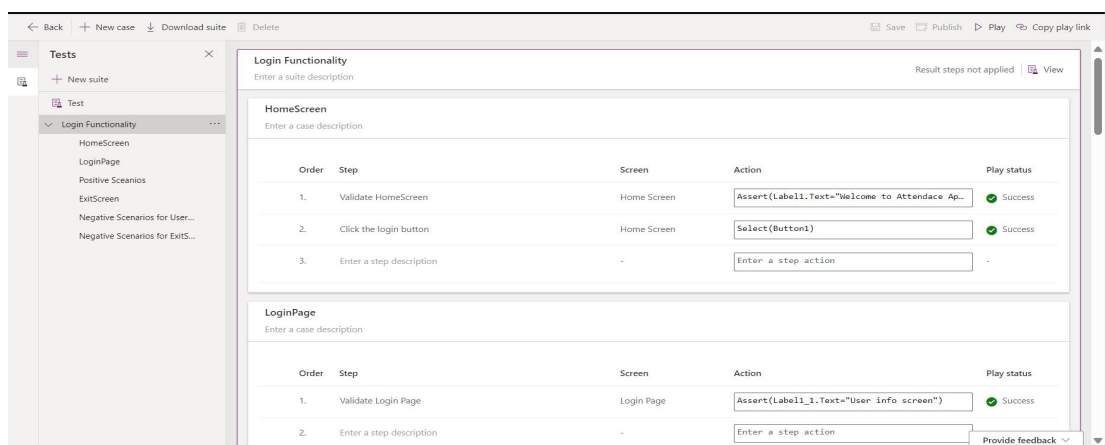
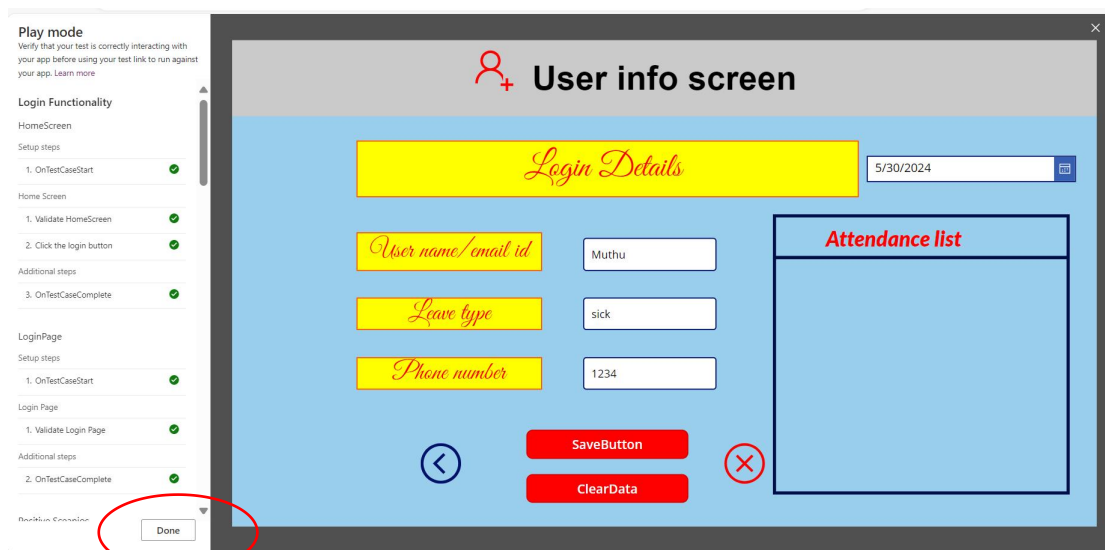
Enter a case description

Order	Step	Screen	Action	Play status
1.	Validate HomeScreen	Home Screen	Assert(Label1.Text="Welcome to Attendance App AL...	-
2.	Click the login button	Home Screen	Select(Button1)	-
3.	Enter a step description	-	Enter a step action	-

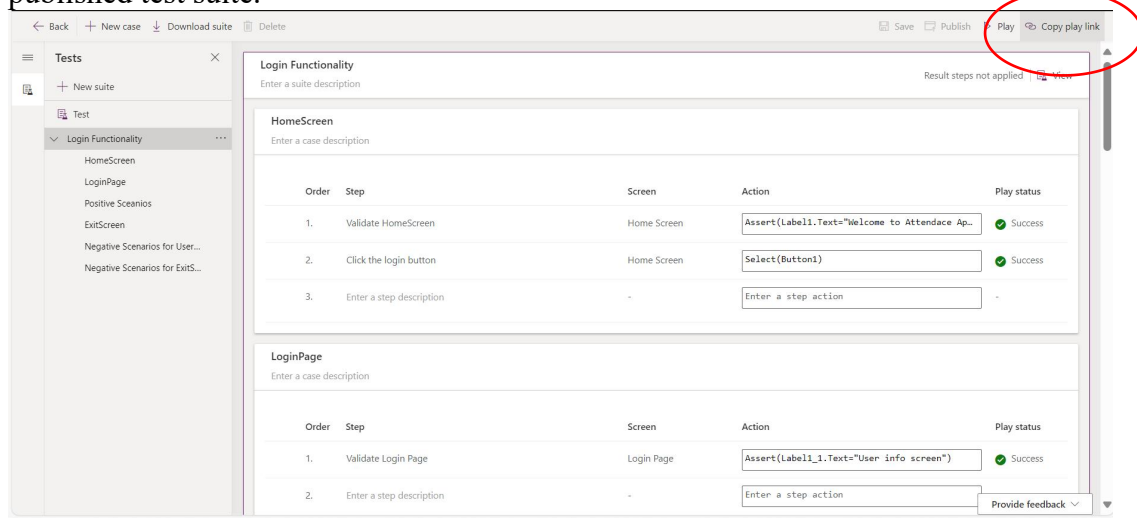
**10,Run the Tests:** Click the "Play" button to execute the test suite.



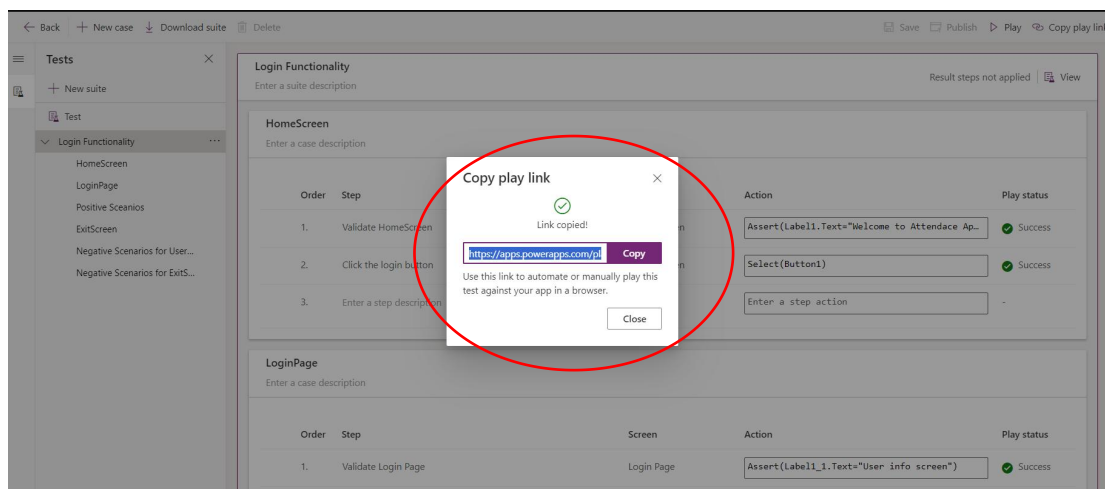
**11,Review Results:** After the test run is complete, click "Done" to see the results (pass/fail for each test case).



**12, Share Test Suite (Optional):** Click "Copy play link" to share a link to the published test suite.



URL- [https://apps.powerapps.com/play/9cd2f80a-f199-4203-bc16-adfaf0dd30f2?tenantId=8399c1c2-9c1b-4d0d-97fb-e0cfed231878&\\_PATestSuiteId=1395000c-50a2-42c6-bb83-10a44f398887&source=testStudioLink](https://apps.powerapps.com/play/9cd2f80a-f199-4203-bc16-adfaf0dd30f2?tenantId=8399c1c2-9c1b-4d0d-97fb-e0cfed231878&_PATestSuiteId=1395000c-50a2-42c6-bb83-10a44f398887&source=testStudioLink)



**13, Download Tests (Optional):** Click "Download Suite" to download the test suite definition for backup or migration purposes.

