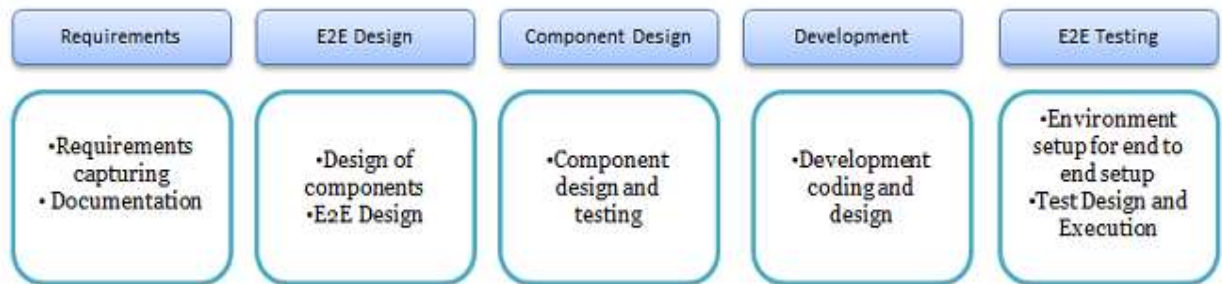


1. Develop an end-to-end test plan to cover all integration points and layers

End To End Testing verifies complete system flow and increases confidence by detecting issues and increasing test coverage of subsystems.



- Study of an end to end testing requirements
- Test Environment setup and hardware/software requirements
- Describe all the systems and its subsystems processes.
- Description of roles and responsibilities for all the systems
- Testing methodology and standards
- End to end requirements tracking and designing of test cases
- Input and output data for each system

End to End Testing Design framework consists of three parts

1. Build user functions
2. Build Conditions
3. Build Test Cases

Let's look at them in detail: –

Build User Functions

Following activities should be done as a part of build user functions:

- List down the features of the system and their interconnected components
- List the input data, action and the output data for each feature or function
- Identify the relationships between the functions
- Determine whether the function can be reusable or independent

For example -Consider a scenario where you login into your bank account and transfer some money to another account from some other bank (3rdparty sub-system)

1. Login into the banking system
2. Check for the balance amount in the account
3. Transfer some amount from your account to some other bank account (3rdparty sub-system)
4. Check your latest account balance
5. Logout of the application

Build Conditions based on User Function

Following activities are performed as a part of build conditions:

- Building a set of conditions for each user function defined
- Conditions include sequence, timing and data conditions

For example -Checking of more conditions like

Login Page

- Invalid User Name and Password
- Checking with valid username and password
- Password strength checking
- Checking of error messages

Balance Amount

- Check the current balance after 24 hours. (If the transfer is sent to a different bank)
- Check for the error message if the transfer amount is greater than the current balance amount

Build a Test Scenario

Building the test scenario for the user function defined

In this case,

- Login into the system
- Check of bank balance amount
- Transfer the bank balance amount

Build Multiple Test cases

Build one or more test cases for each scenario defined. Test cases may include each condition as a single test case.

Detail test toolset plan

The comparison and review of the most popular test management platforms available in the market:

1. Zephyr Scale
2. PractiTest
3. Zephyr Squad
4. TestCollab
5. Requirements and Test Management for Jira (RTM)
6. XQual
7. Xray – Cutting Edge Test Management

8. TestRail
9. Kualitee
10. TestFLO for JIRA
11. SPIRATEST by Inflectra
12. Qase
13. Testpad
14. JunoOne
15. TestMonitor
16. Klaros-Testmanagement
17. QACoverage
18. JIRA

For each integration point, take one use case as an example to walkthrough end-to-end about testing strategy, steps, test data and report.

Steps for End to End Testing

The steps below are required to initiate and complete any E2E test.

1. Analyze requirements. Have a clear idea of how the app is supposed to work in every aspect
2. Set up a test environment in alignment with all the requirements
3. Analyze software and hardware requirements
4. List down how every system needs to respond
5. List down testing methods required to test these responses. Include clear descriptions of standards (language, tools, etc.) to be followed in each test.
6. Design test cases
7. Run tests, study and save results

End to End Testing Example

Let's say testers have to verify the functioning of a Gmail account. The following features have to be tested:

1. Type URL into the address bar to launch the Gmail login page.
2. Log into account with valid credentials.
3. Access Inbox. Open Read and Unread emails.
4. Compose a new email.
5. Reply to and forward an existing email.
6. Open Sent items folder. Check emails there.
7. Open Spam folder. Check emails there.

8. Log out of Gmail by clicking 'logout'.