

**SUBJECT: SOFTWARE TESTING AND
QUALITY ASSURANCE**

**TOPIC : DECISION TABLE
TESTING**

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DECISION TABLE TESTING

- ⦿ This is a systematic approach where various input combinations and their respective system behavior are captured in a tabular form.
- ⦿ That's why it is also known as a cause-effect table.
- ⦿ This technique is used to pick the test cases in a systematic manner
- ⦿ it saves the testing time and gives good coverage to the testing area of the software application



- ◉ Decision table technique is appropriate for the functions that have a logical relationship between two and more than two inputs.
- ◉ This technique is related to the correct combination of inputs and determines the result of various combinations of input.
- ◉ To design the test cases by decision table technique, we need to consider conditions as input and actions as output.



LET'S UNDERSTAND IT BY AN EXAMPLE:

- ◉ Most of us use an email account, and when you want to use an email account, for this you need to enter the email and its associated password.
- ◉ If both email and password are correctly matched, the user will be directed to the email account's homepage
- ◉ otherwise, it will come back to the login page with an error message specified with "Incorrect Email" or "Incorrect Password."

Email (condition1)	T	T	F	F
Password (condition2)	T	F	T	F
Expected Result (Action)	Account Page	Incorrect password	Incorrect email	Incorrect email



- In the table, there are four conditions or test cases to test the login function.
- In the first condition if both email and password are correct, then the user should be directed to account's Homepage.



- ◉ In the second condition if the email is correct, but the password is incorrect then the function should display Incorrect Password.
- ◉ In the third condition if the email is incorrect, but the password is correct, then it should display Incorrect Email.
- ◉ Now, in fourth and last condition both email and password are incorrect then the function should display Incorrect Email.



- In this example, all possible conditions or test cases have been included, and in the same way, the testing team also includes all possible test cases so that upcoming bugs can be cured at testing level.



- In order to find the number of all possible conditions, tester uses 2^n formula where n denotes the number of inputs; in the example there is the number of inputs is 2 (one is true and second is false).



- ◉ While using the decision table technique, a tester determines the expected output, if the function produces expected output, then it is passed in testing, and if not then it is failed. Failed software is sent back to the development team to fix the defect.

