Test Design Techniques / Test Case Design Techniques / Test Data Design Techniques
- used to prepare data for testing.
- helps to design better cases.

Objectives:
- Reduce Data
- Increase Coverage

Types of test design techniques
1. Equivalence Class Partitioning (ECP)
2. Boundary Value Analysis (BVA)
3. Decision Table based testing
4. State Transition
5. Error Guessing

Equivalence Class Partitioning (ECP)
- Partition data into various classes and we can select data according to class then test. It reduces the number of test-cases and saves time for testing.

value check
classify/divide/Partition the data into multiple classes

Boundary Value Analysis (BVA)

- BVA technique used to check Boundaries of the input.

Test with these parameters
- min
- min + 1
- min - 1
- max
- max + 1
- max - 1

Input domain testing
- The value will be verified in the text box/input fields.
- We use ECP and BVA

Decision Table
- The Decision Table is also called the Cause-Effect Table.
- This technique will be used if we have more conditions and corresponding actions.
- In Decision table technique, we deal with combinations of input.
- To identify the test cases with a decision table, we consider conditions and action.

Example:
- Take an example of transferring money online to an account which is already added and approved.

- Here the conditions to transfer money are:
  - Account already approved
  - OTP (one time password) matched
  - Sufficient money in the account

- And the actions performed are
  - Transfer money
  - Show a message as insufficient amount
  - Block the transaction incase of suspicious transaction

State Transition
- In state transition changes in input conditions changes the state of the application.
- This testing technique allows the tester to test the behavior of an AUT.
- The tester can perform this action by entering various input conditions in a sequence.
- In state transition technique, the testing team provides positive as well as negative input test values for evaluating the system behavior.

- Take an example of the login page of an application which locks the user name after three wrong attempts of password.

Error Guessing
- Error guessing is one of the testing techniques used to find bugs in a software application based on the tester's prior experience.
- In error guessing we don't follow any specific rules.
- It depends on Tester Analytical skills and experience.
- Some of the examples are:
  - Submitting a form without entering values.
  - Enter invalid values such as entering alphabets in the numeric field.