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Unit-4
Model based testing

MBT (UML)

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Five steps of MBT

1. Analyze an existing behavioral model for the software or create one.
2. Traverse the behavioral model and specify the inputs that will force the software to make the transition from state to state
3. Review the behavioral model and note the expected outputs as the software makes the transition from state to state
4. Execute the test cases
5. Compare actual and expected results and take corrective action as required

1.Analyze an existing behavioral Model

- Recall that external events or stimuli
- 1. evaluate all use cases to fully understand the sequence of interaction within the system
- 2. Identify events that drive the interaction and understand how these events relate to specific objects
- 3.create a sequence for each use case
- 4. build UML state diagram for the system
- 5. Review behavioral model to verify accuracy and consistency

2. Traverse the model

- The input will trigger the events that will cause the transition to occur.

- For example: wrong password input stop the flow, right password input lead to the next scenario.

3. Review the behavioral model

- Recall that each transition is triggered by an event and that as a consequence of the transition, some function is invoked and outputs are created. Specify the expected outputs as they are characterized in the behavioral model.

4. Execute the test cases

- Tests can be executed manually or a test script can be created and executed using a testing tool.

5. Compare actual and expected results

- MBT helps to uncover errors in software behavior, and as a consequence extremely useful when testing event-driven applications

THANK YOU