



BITS Pilani

Software Architecture

Module 5

Architecture & testing

Harvinder S Jabbal
SEZG651/SSZG653 Software Architectures

Architecture & testing



How does architecture help in testing activities?

Architecture & testing



- Arch helps prioritize test cases based on ASRs
- Architecture can help in creation of integration test plan
- Architecture needs to be designed to support testability requirements

Architecture & testing



- Arch helps prioritize test cases based on ASRs
- What work product of architecture design can we use to prioritize the test cases?

What work product of architecture design can we use to prioritize the test cases?

Utility tree can be used to identify high priority scenarios (high on business value and high on architectural impact) which will translate into high priority test cases

Architecture & testing



Architecture can help in creation of integration test plan

How?

Architecture & testing



Architecture can help in creation of integration test plan

How?

- Architecture tells us what modules interact with each other
- Architecture tells us which modules depend on which other modules.
- This helps us identify integration test cases and identify modules needed for integration testing

Architecture & testing



Architecture needs to be designed to support testability requirements
such as

- Ability to switch data sources (Test data & Production data)
- Roll back changes made by test cases (to restore system to original state, so that we can execute more test cases later)
- Ability to replace components (simulators of payment gateway, sensors, external systems such as Aadhar system)

Experience sharing



Can you describe how your architect helped the testing team?