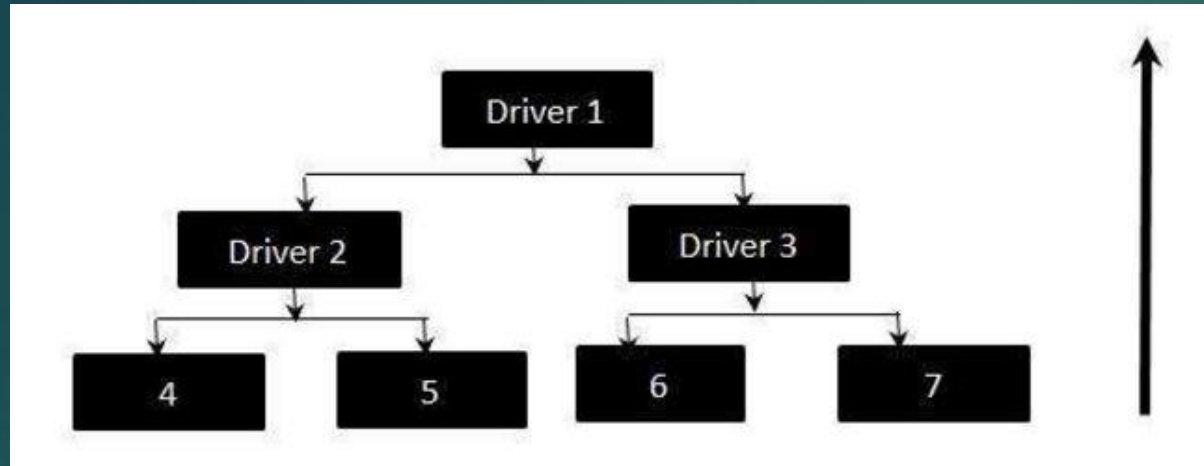# LAB 7

DRIVERS, STUBS AND MOCKS

LAKSHYA TANDON

Test Driver

- Drivers are the modules that act as temporary replacement for calling a module to give same output as the actual product.

- Used during bottom up testing in order to simulate the behaviour for upper level modules that are not yet integrated.

- They are also used when the software needs to interact with an external system.

- They are usually complex than stubs.
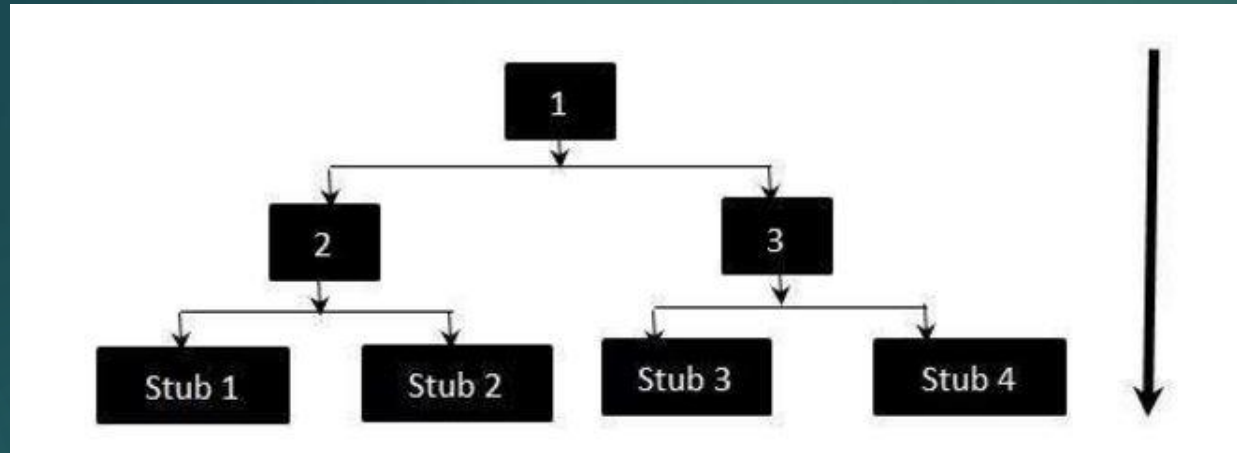
Driver – Flow Diagram

- Module 1, 2 and 3 are unavailable at this point of time.
- We want to test modules 4, 5, 6 and 7.
- So we would integrate respective drivers with these modules.
- The order of integration would be:
  - 4,2
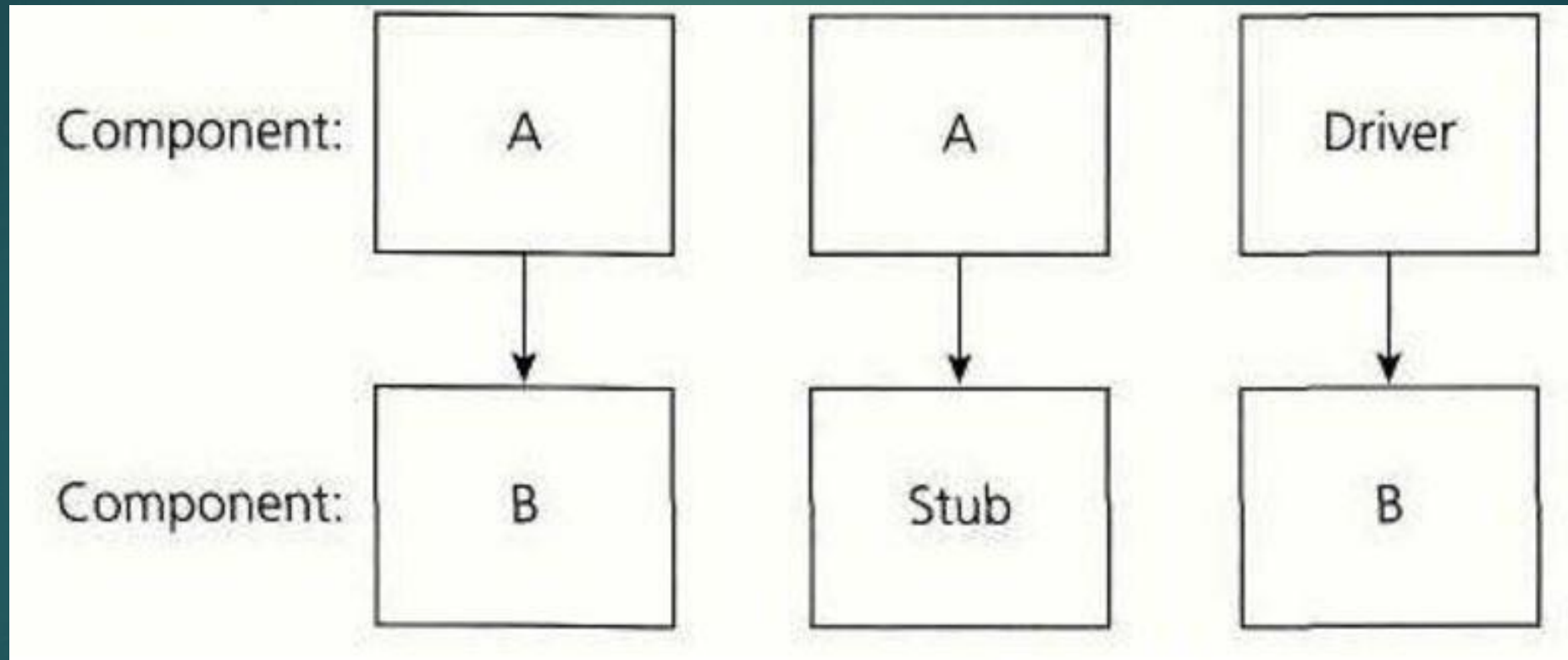 - 5,2
  - 6,3
  - 7,3
  - 3,1
  - 2,1

Stubs

- Stubs are used during Top down integration testing.

- They are used in order to simulate the behaviour of the lower-modules that are not yet integrated.

- Stubs are the modules that act as temporary replacement for a called module and give the same output as that of the actual product.

- Stubs are also used when the software needs to interact with an external system

Stub – Flow Diagram

- Modules 1, 2 and 3 are available for integration whereas the below modules are still not available
- Hence stubs are used to test the modules.
- The order of integration would be
  - 1, 2
  - 1, 3
  - 2, Stub 1
  - 2, Stub 2
  - 3, Stub 3
  - 3, Stub 4

Difference between Drivers and Stubs

Mocks

- Mock objects are simulated objects that mimic the behavior of real objects in controlled ways.
- A programmer typically creates a mock object to test the behavior of some other object.
- It is typically defined as a special kind of stub that records the sequence and numbers of method calls that are made to it.

Difference – Mocks and Stubs

- Stubs
  - Stubs can be thought of as *inputs to* the code under test.

- Mocks
  - Mocks can be thought of as *outputs from* the code under test.