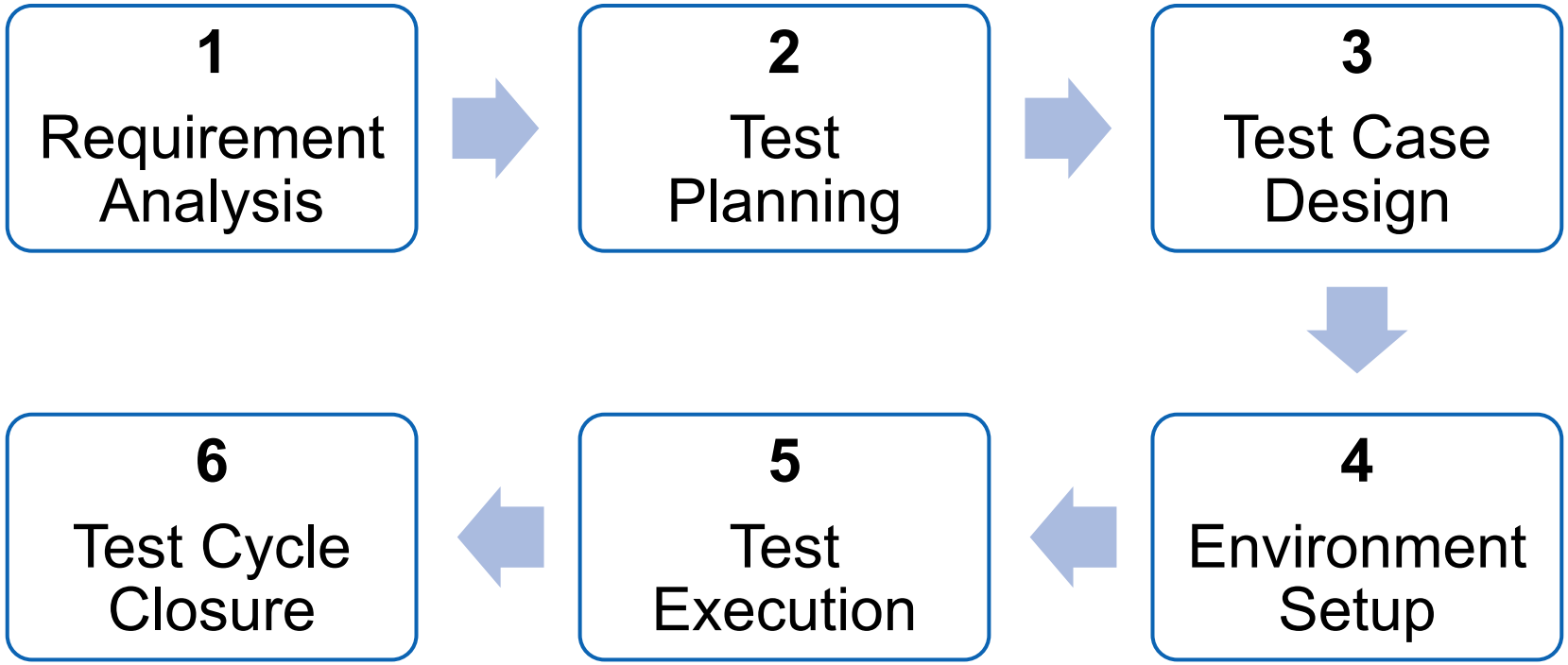
fit@hcmus

Software Testing

CSC13003

Requirement Analysis

Software testing life cycle



Requirement analysis

- Test team
  - studies the requirements
  - from a testing point of view
  - identify testable requirements
- Interact with stakeholder
  - to better understand
- Requirements
  - functional
  - non-functional

Requirement analysis

- Activities
  - Identify types of tests to be performed.
  - Gather details about testing priorities and focus
  - Prepare Requirement Traceability Matrix
  - Identify test environment details
  - Automation feasibility analysis (if required)

Requirement analysis

- Deliverables
  - Requirement Traceability Matrix
  - Automation Feasibility Report

Requirements Traceability Matrix

- Map and trace user requirement with test cases
- Ensure that all requirements are tested (via test cases)
- Parameters
  - Requirement ID
  - Requirement description
  - Test case ID
  - Test case status

Requirements Traceability Matrix

An example of RTM

Req. ID	Req. description	Test case ID	Status
BR01	Login	TC01, TC02	TC01 – Passed TC02 – Passed
BR02	Search product	TC03, TC04, TC05	TC03 – Passed TC04 – Passed TC05 – Failed
BR03	Place an order	TC06, TC07, T08, TC09	TC06 – Passed TC07 – Passed TC08 – Failed TC09 – No run
…	…	…	…

Traceability Test Matrix

- Types of Traceability Test Matrix
  - Forward traceability
    - Map requirements to test cases
    - Make sure each requirement is tested
  - Backward or reverse traceability
    - Maps test cases to requirements
    - Make sure the scope is not expanded
  - Bi-directional traceability

Automation Feasibility Report

- Automation feasibility analysis
  - Can the application be automated or not?
  - What type of tool/ test automation framework can be used?
  - How much automation is possible?
  - In spite of high efforts, what's the value add in automating?
- Automation feasibility checklist


Q
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