SNS COLLEGE OF TECHNOLOGY

Kurumbapalayam (Po), Coimbatore – 641 035

An Autonomous Institution

Accredited by NAAC – UGC with 'A++' Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

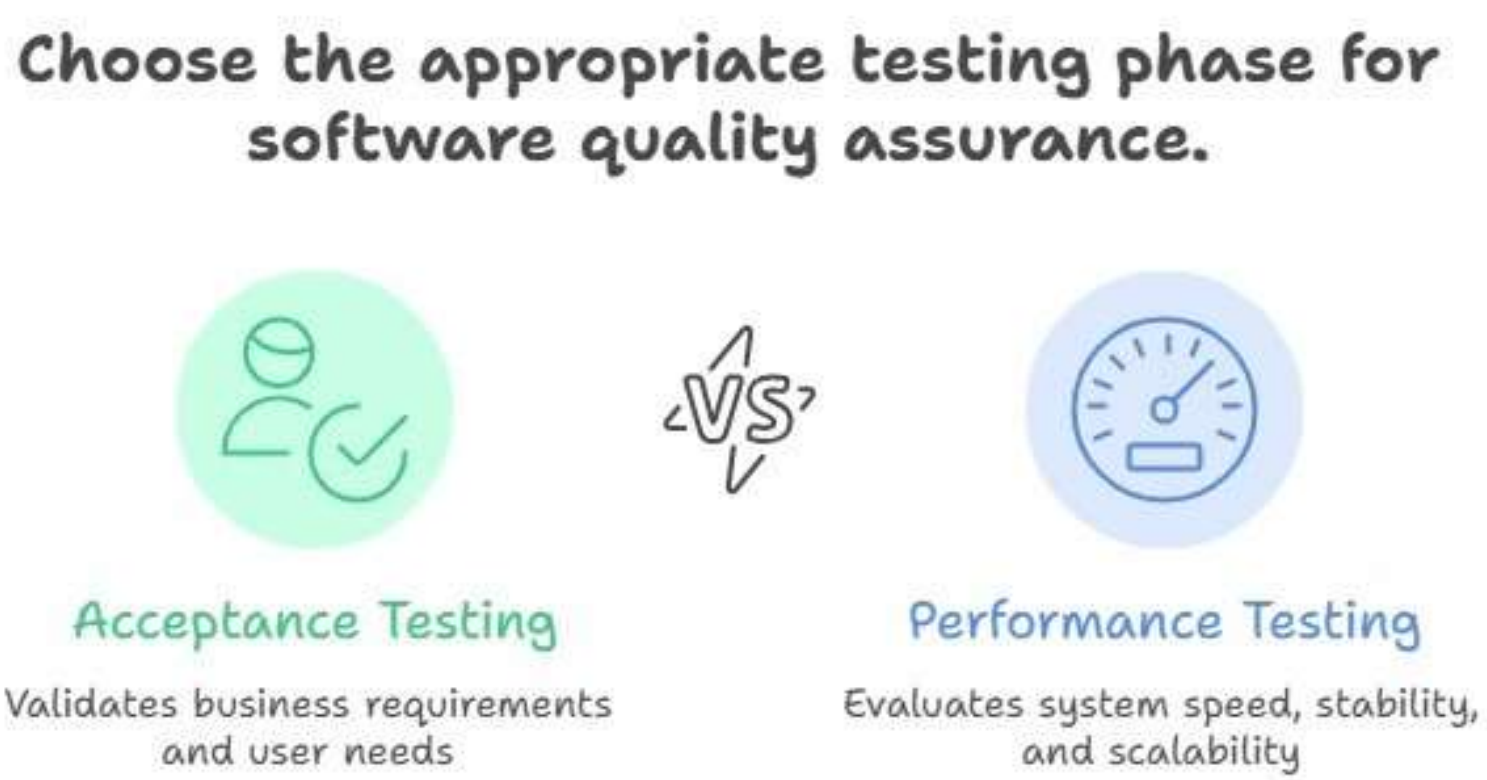
COURSE NAME: 23ITO201- Software Testing (OPEN ELECTIVE)

III YEAR / VI SEMESTER

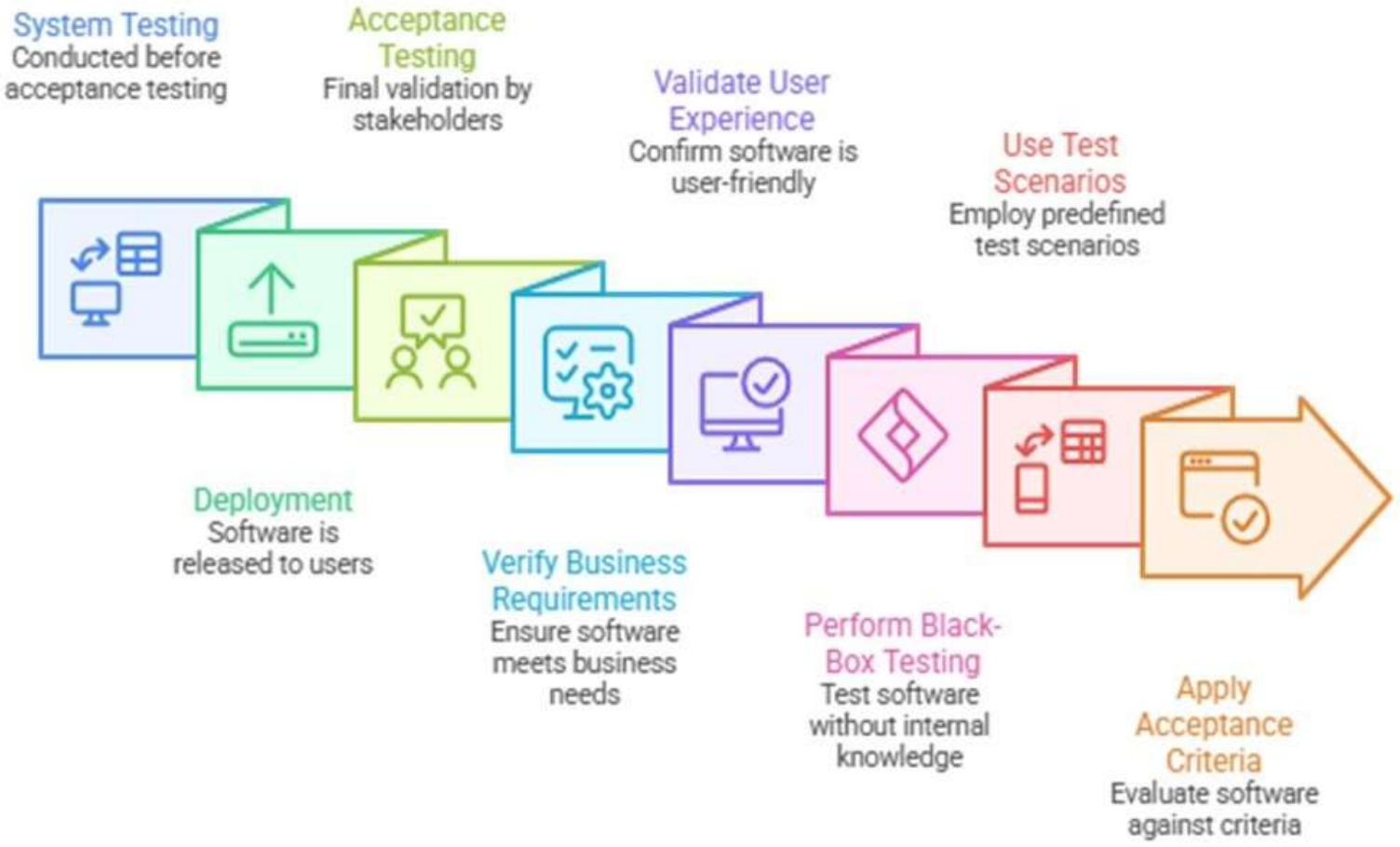
Unit 3 - LEVELS OF TESTING

Topic : Acceptance testing and Performance testing

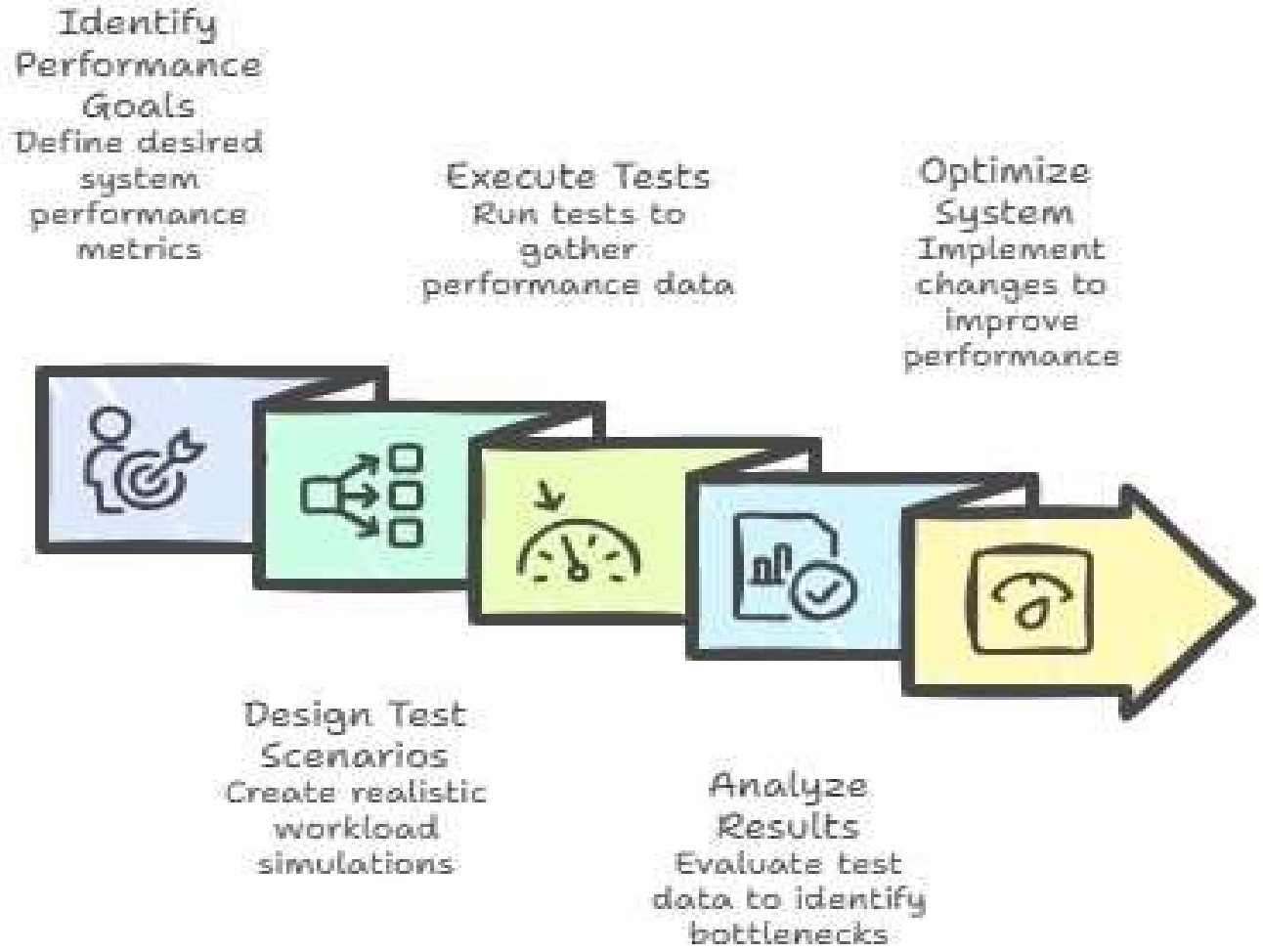
Empathy


Choose the appropriate testing phase for software quality assurance.
VS
Acceptance Testing
Validates business requirements and user needs
Performance Testing
Evaluates system speed, stability, and scalability

Acceptance Testing Process



Performance Testing Process

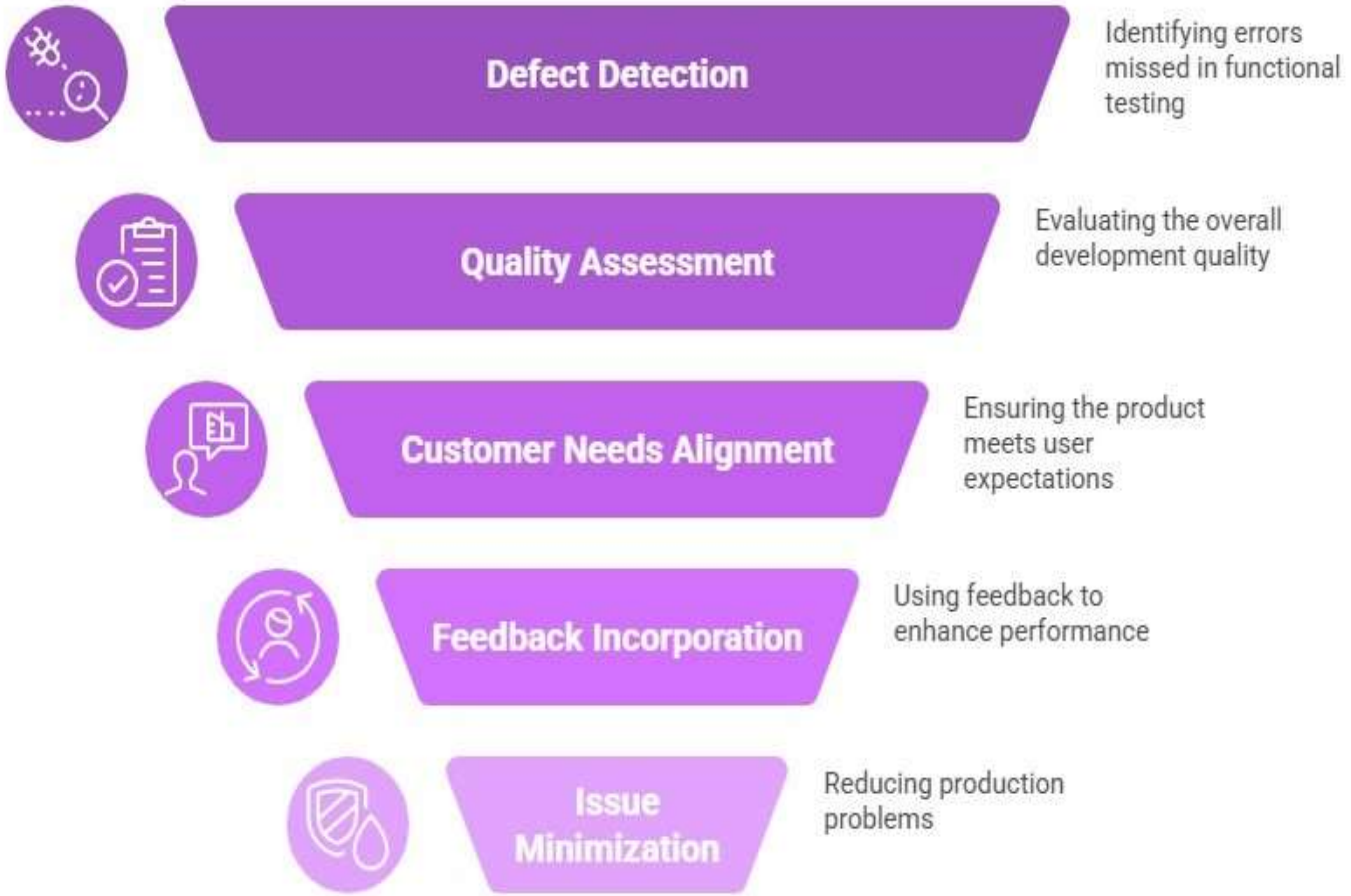


Acceptance Testing vs. Performance Testing

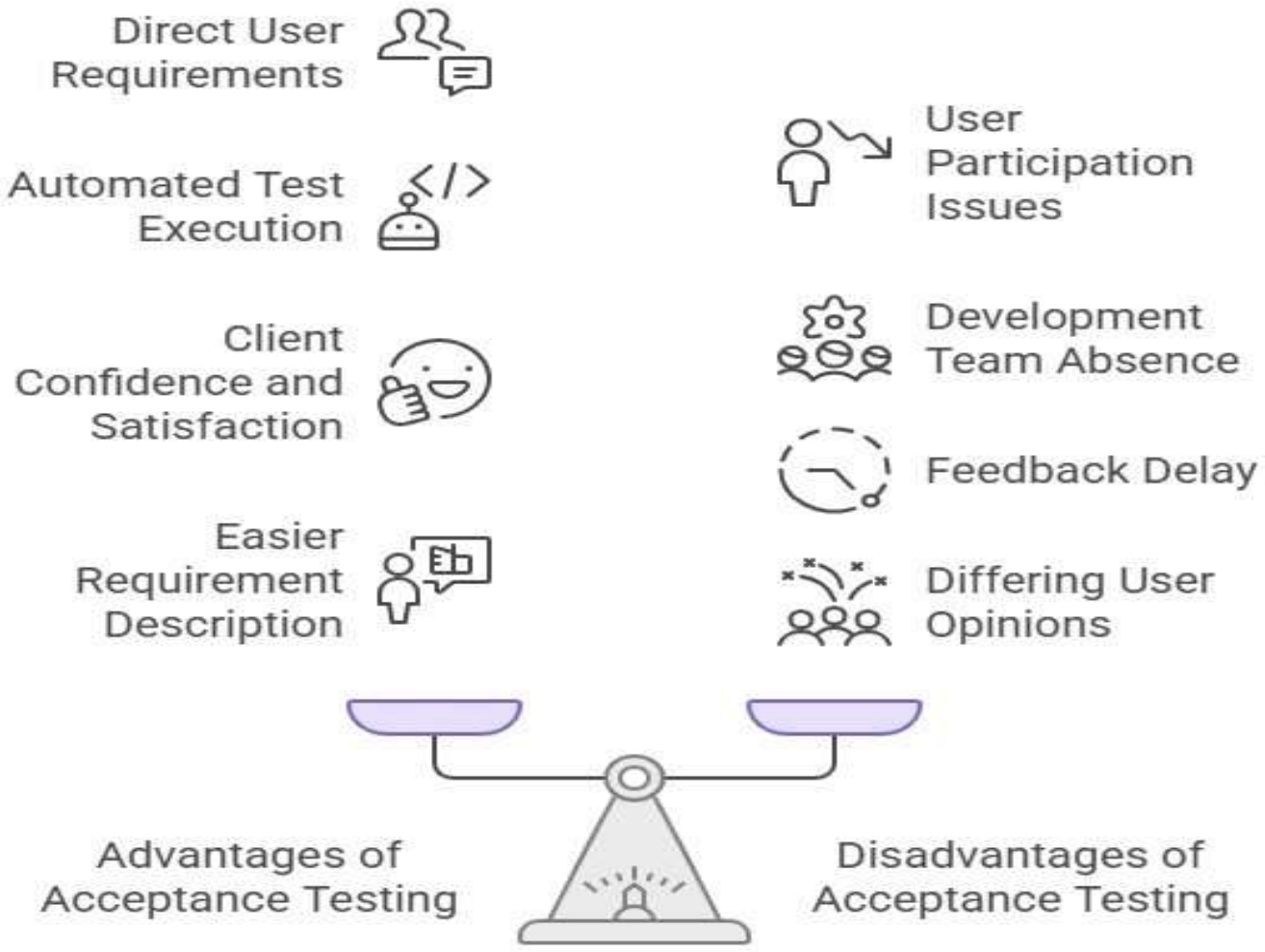
Aspect	Acceptance Testing	Performance Testing
Primary Goal	Verify business and user requirements	Evaluate speed, stability, and scalability
Focus	Business processes, user needs, functionality, usability	Technical metrics like response time, throughput, resource use
Performed By	End-users, customers, business stakeholders	QA engineers, performance testers, development teams
Type of Testing	Primarily functional, black-box testing	Non-functional testing
Timing	Final phase before deployment	Throughout SDLC, after functional testing, before releases
Environment	Production-like environment	Test environment simulating production

Types of Acceptance Testing

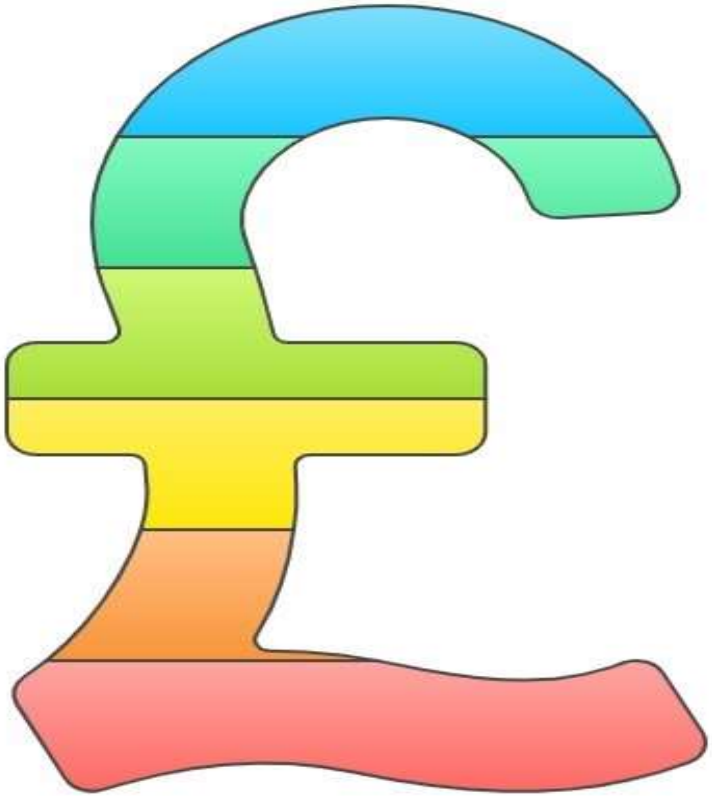
Acceptance Testing Process



Balancing Acceptance Testing Benefits and Drawbacks



Comprehensive Performance Testing Overview



System Speed

Measures how quickly the application responds

Responsiveness

Assesses how well the application reacts to user input

Stability

Ensures the application remains operational under stress

Scalability

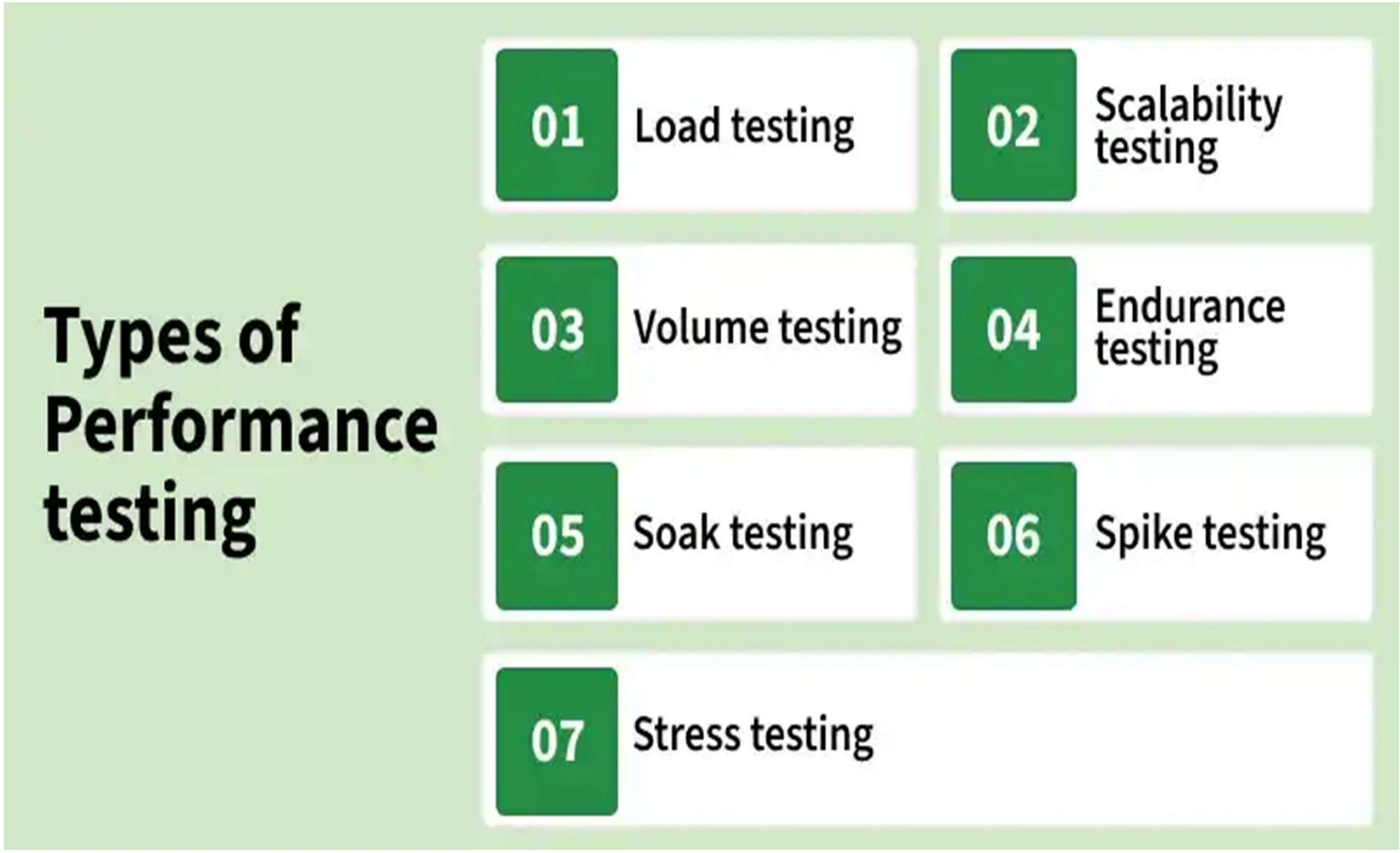
Evaluates the application's ability to handle increasing user loads

Bottleneck Identification

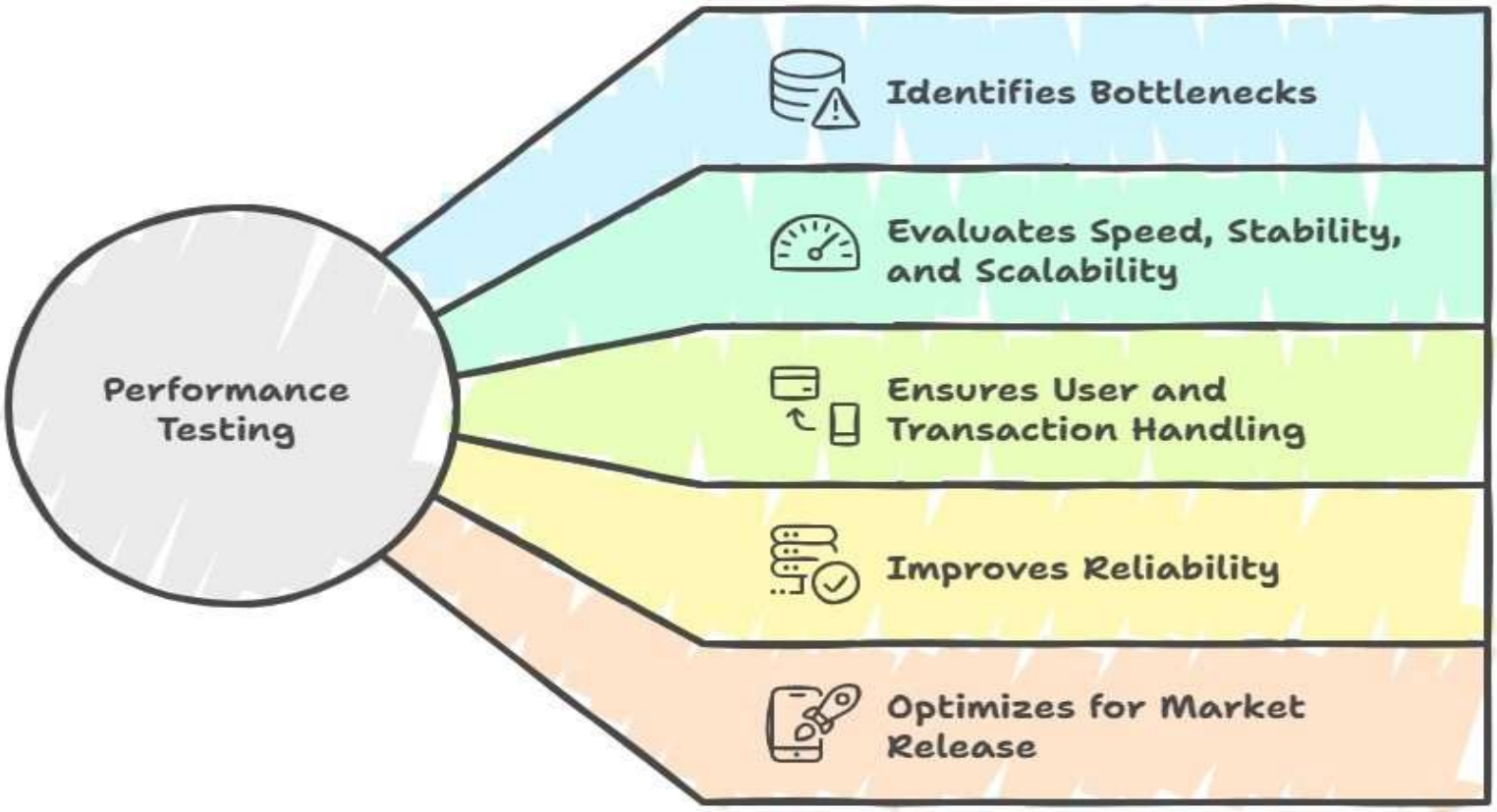
Pinpoints areas where performance is hindered

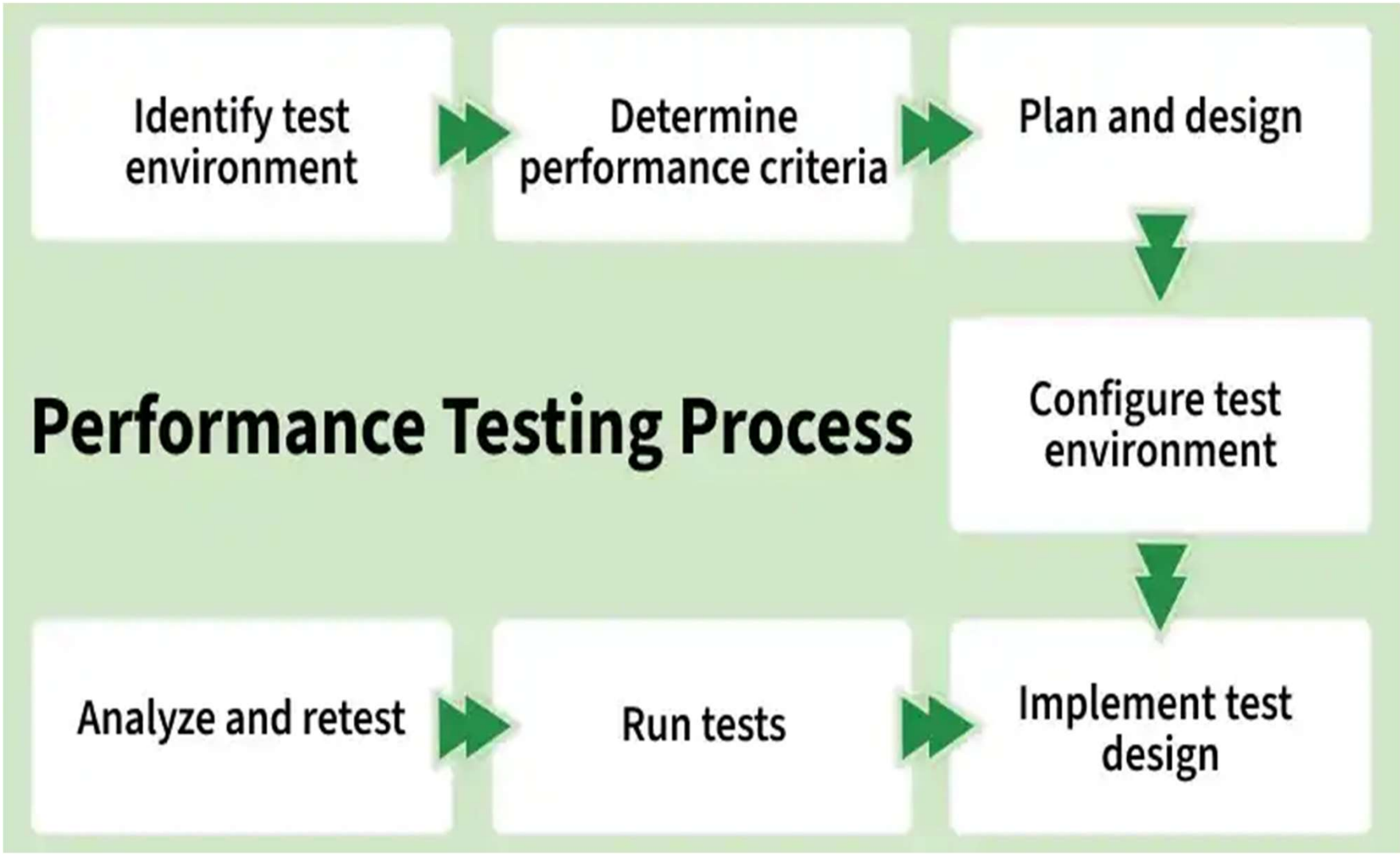
User Traffic Handling

Verifies the application's efficiency with multiple users

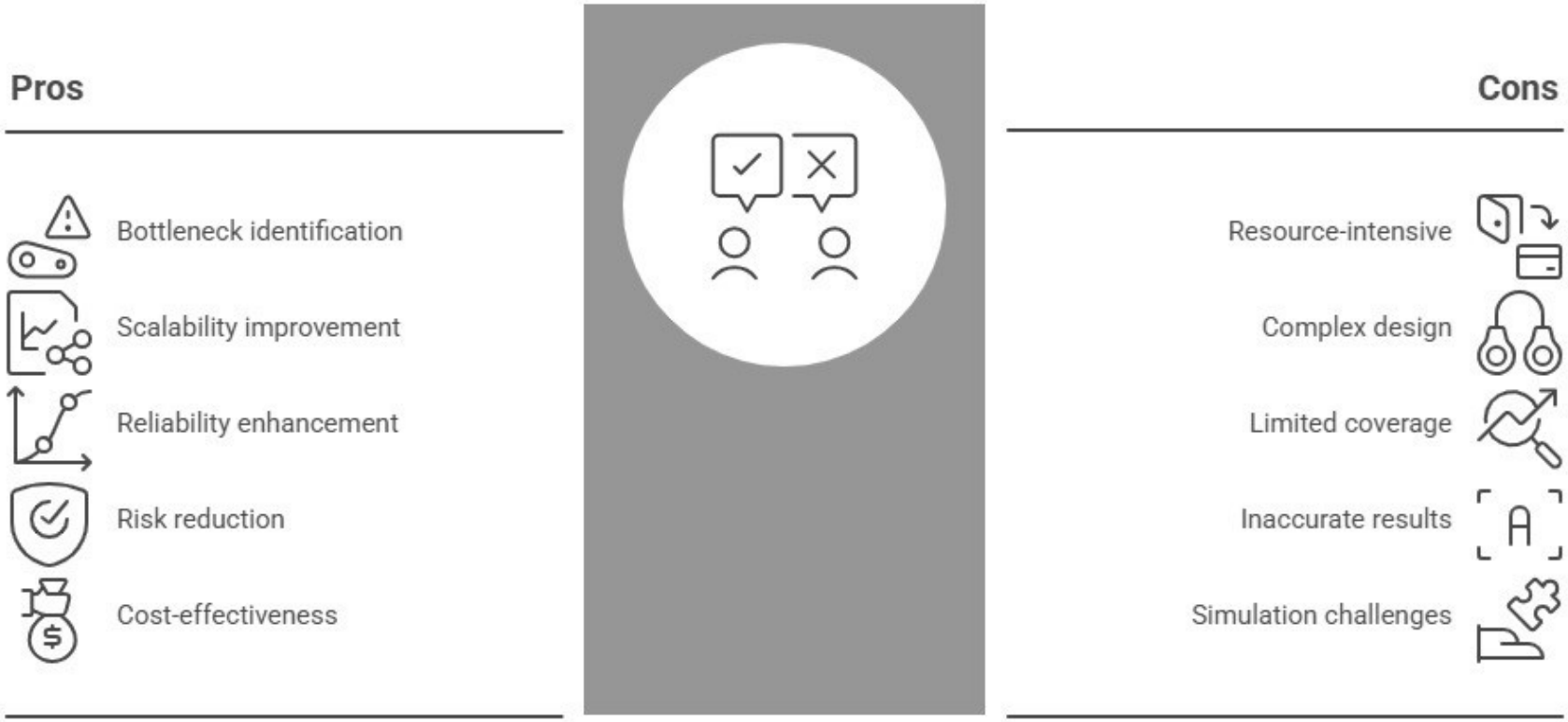

Types of Performance testing
01 Load testing
02 Scalability testing
03 Volume testing
04 Endurance testing
05 Soak testing
06 Spike testing
07 Stress testing

Unveiling the Multifaceted Benefits of Performance Testing




Identify test environment
Determine performance criteria
Plan and design
Performance Testing Process
Configure test environment
Analyze and retest
Run tests
Implement test design

Performance Testing



Activity

Activity – Acceptance Testing
Activity Title
Validating Software with User Requirements
Scenario
A team has developed a **College Library Management System**. Before releasing it, the **end users (librarian and students)** must check whether the system meets their requirements.
Activity Task
Students will perform **Acceptance Testing** by acting as users and validating the system functions.
Steps
1.Divide students into **two groups**
   1. Group 1: **Developers**
   2. Group 2: **Users (Librarians/Students)**
2.Developers explain the system features:
   1. Search books
   2. Borrow books
   3. Return books
   4. View book availability
3.Users test the system based on their requirements.
4.Users verify whether the system satisfies their needs

Step	User Action	Expected Result
1	Search book title	Book details displayed
2	Borrow book	Book issued successfully
3	Return book	Book returned successfully
4	Check availability	Correct status displayed

Learning Outcome
Students understand how **users validate software before final deployment**.

MCQ

Acceptance Testing

1. What is the main purpose of Acceptance Testing?

A) To test the internal code of the program

B) To verify whether the system meets user requirements

C) To test individual modules

D) To test system performance

Answer: B) To verify whether the system meets user requirements

2. Acceptance Testing is usually performed by:

A) Developers

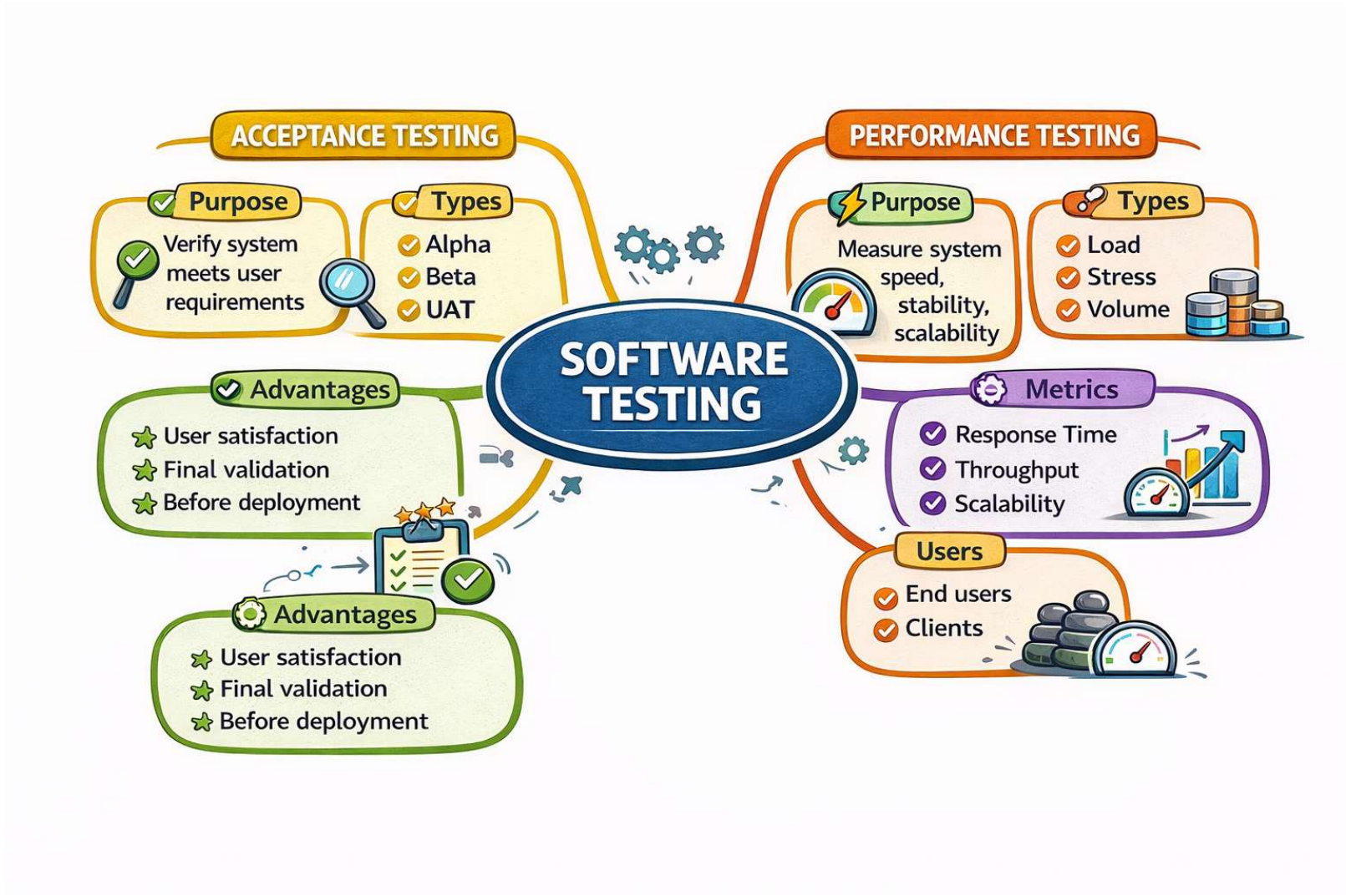
B) Testers

C) End users or clients

D) Programmers

Answer: C) End users or clients

Mind Map


SOFTWARE TESTING
ACCEPTANCE TESTING
Purpose
Verify system meets user requirements
Types
Alpha
Beta
UAT
Advantages
User satisfaction
Final validation
Before deployment
PERFORMANCE TESTING
Purpose
Measure system speed, stability, scalability
Types
Load
Stress
Volume
Metrics
Response Time
Throughput
Scalability
Users
End users
Clients
Advantages
User satisfaction
Final validation
Before deployment

TEXT BOOKS	
1.	Srinivasan Desikan and Gopalaswamy Ramesh, ―Software Testing – Principles and Practices, Pearson Education, 2006.
REFERENCES	
1.	Ilene Burnstein, ―Practical Software Testing, Springer International Edition, 2003
2.	Edward Kit, Software Testing in the Real World – Improving the Process‖, Pearson Education, 1995
3.	Boris Beizer, Software Testing Techniques – 2nd Edition, Van Nostrand Reinhold, New York, 1990.
4.	Aditya P. Mathur, ―Foundations of Software Testing _ Fundamental Algorithms and Techniques, Dorling Kindersley (India) Pvt. Ltd., Pearson Education, 2008.

Thank You