

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 5 - TEST AUTOMATION

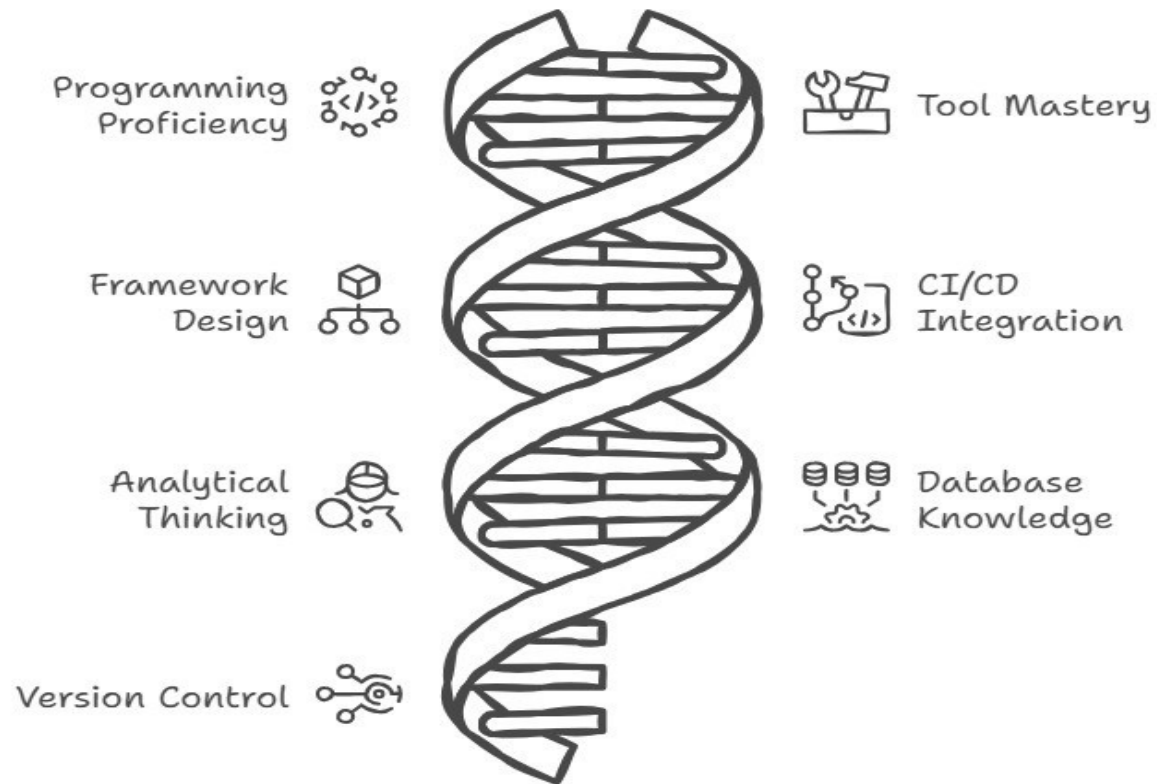
**Topic : Software Test Automation and Skills Needed for Automation ,
Scope of Automation**

Empathy

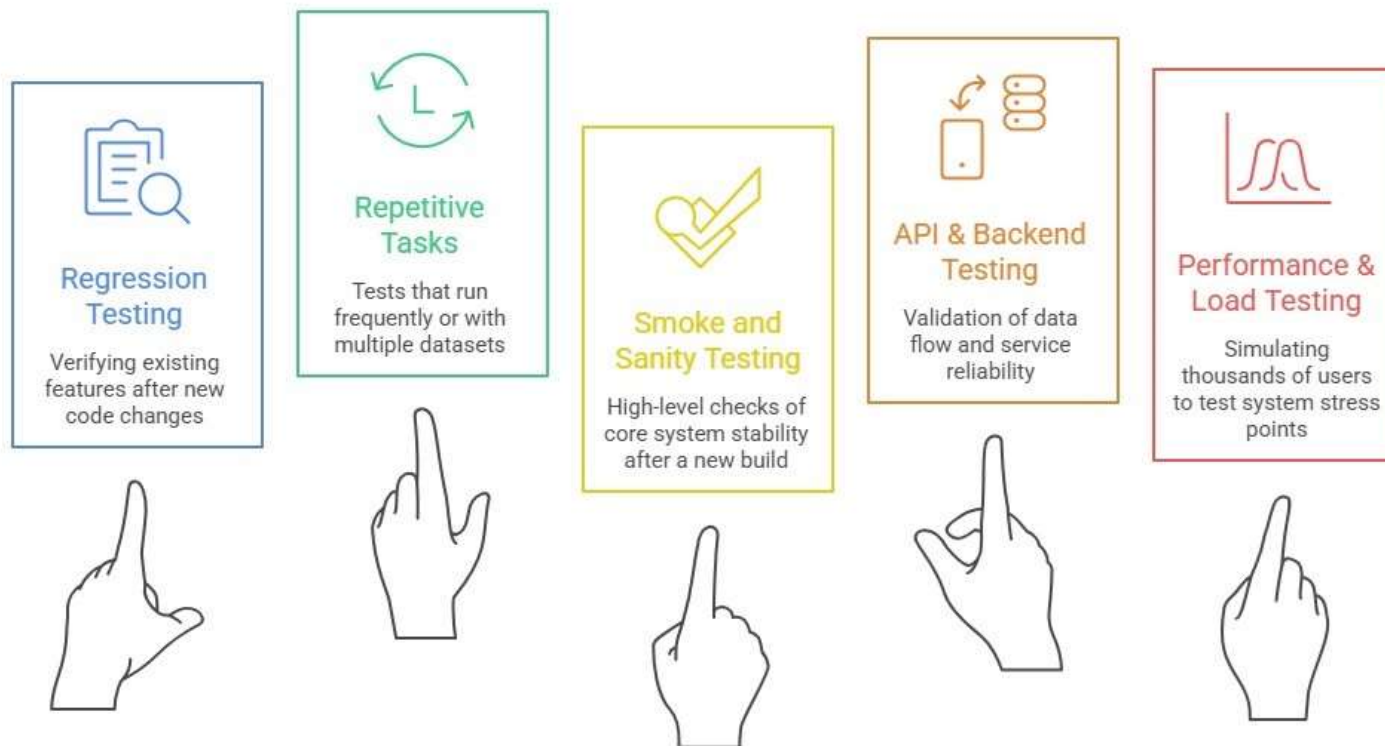
Software Test Automation



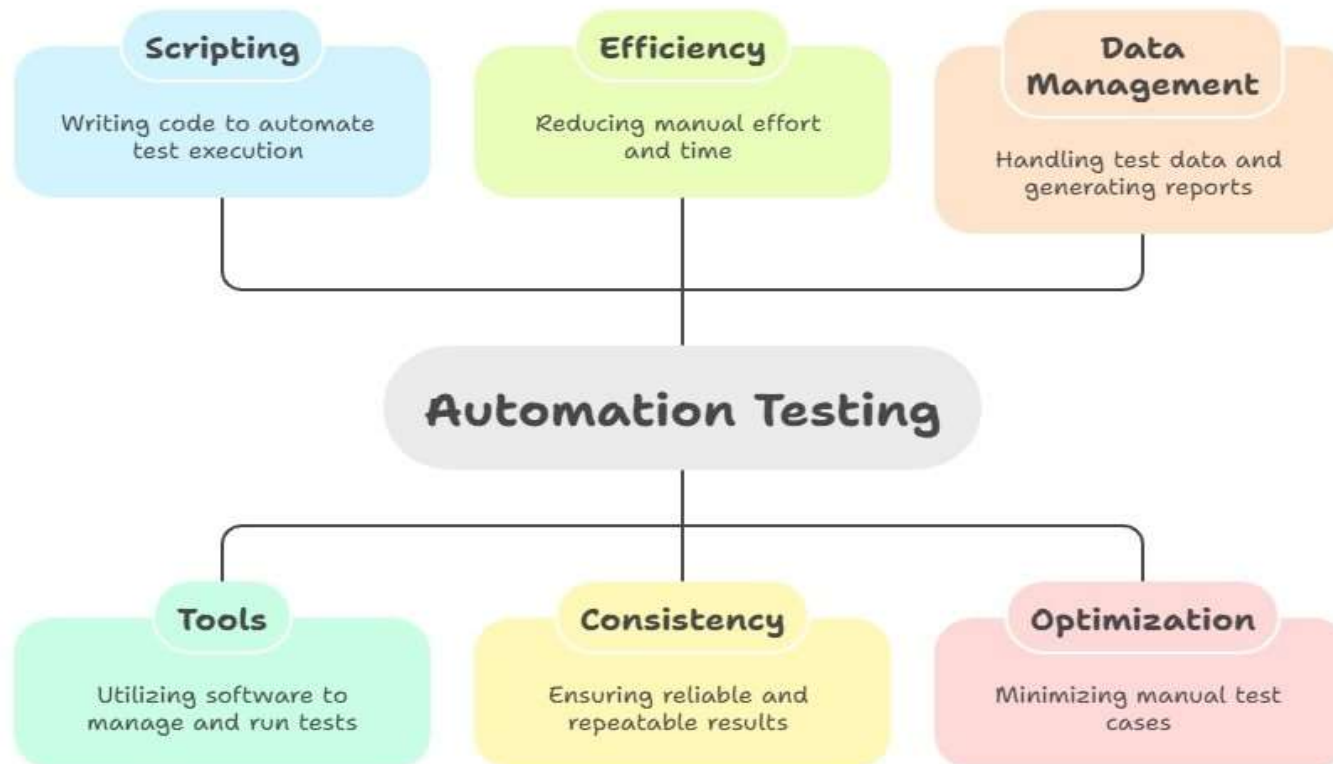
Essential Skills for Automation Engineers



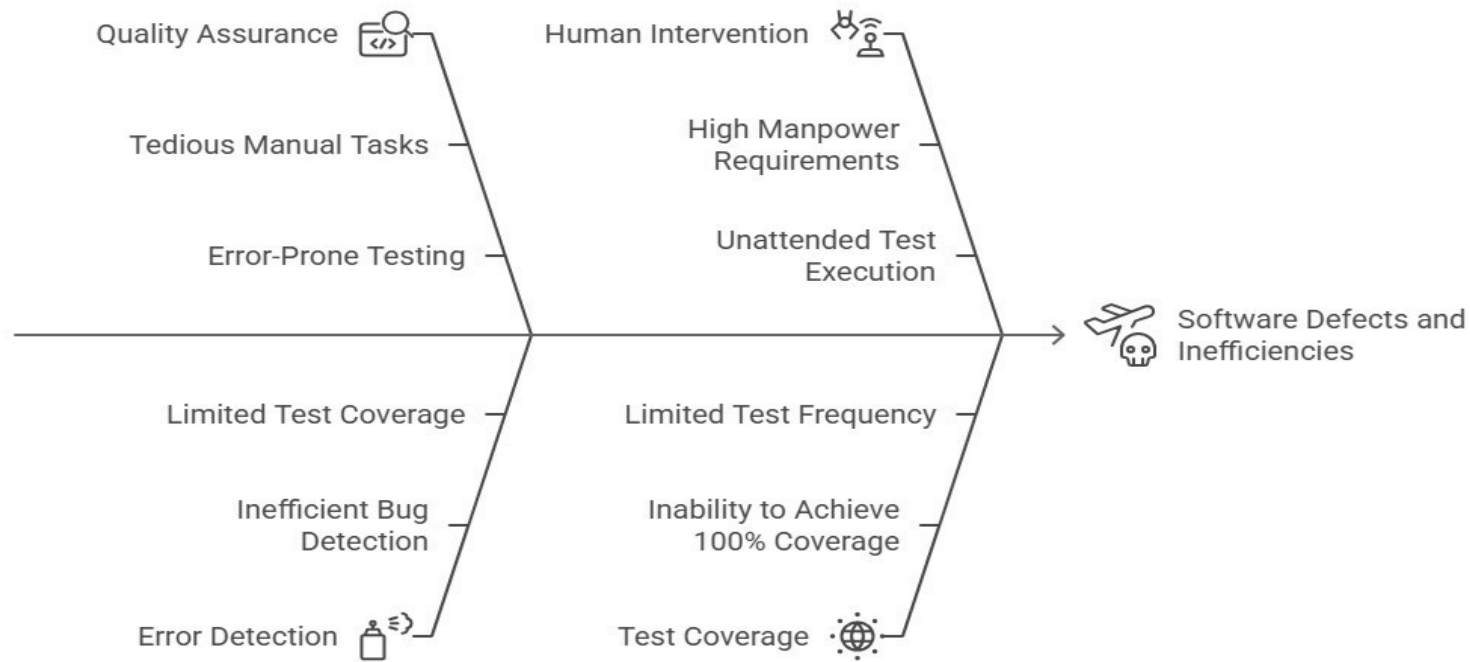
Which areas are best suited for automation to ensure a high ROI?



Enhancing Software Testing with Automation



Reasons for Transforming from Manual to Automated Testing

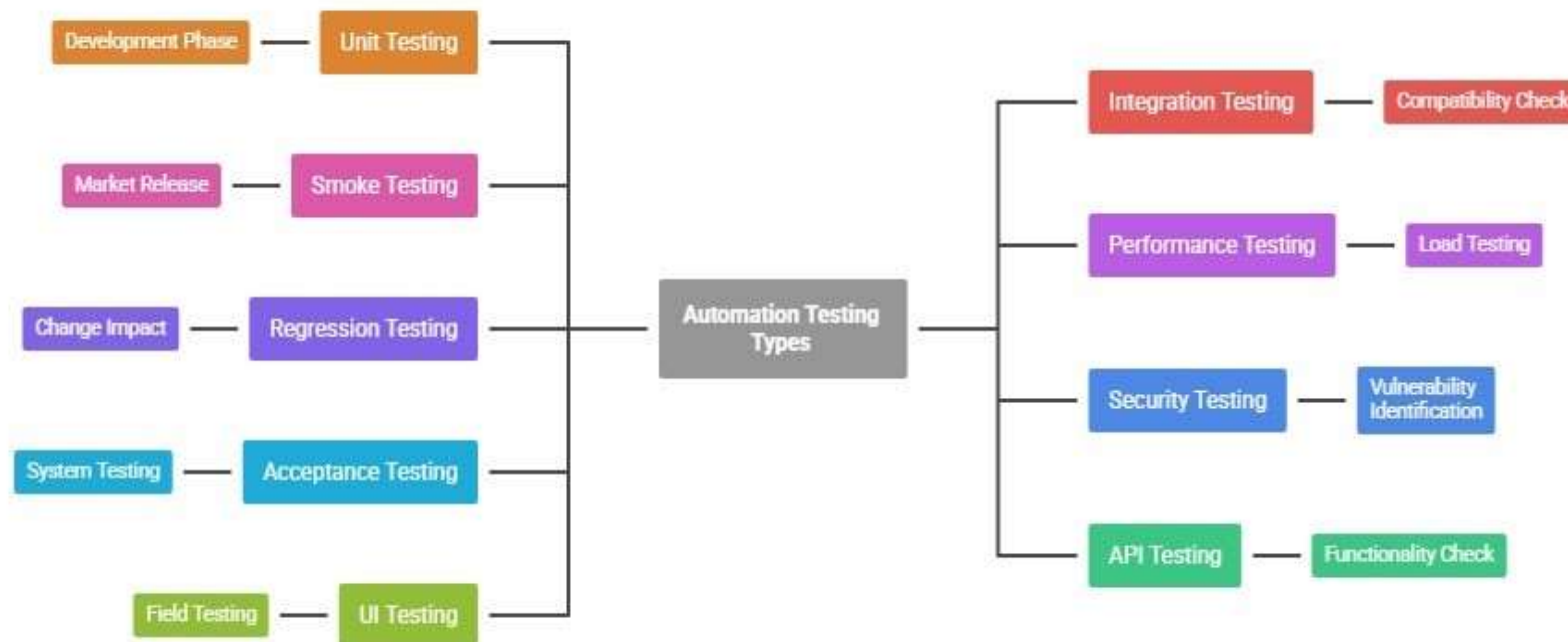


Difference Between Manual Testing vs Automated Testing

Below are some of the differences between manual testing and automated testing:

Parameters	Manual Testing	Automated Testing
Reliability	Manual testing is not accurate at all times due to human error, thus it is less reliable.	Since it is performed by third-party tools and/or scripts, therefore it is more reliable.
Investment	Heavy investment in human resources.	Investment in tools rather than human resources.
Time efficiency	Manual testing is time-consuming due to human intervention where test cases are generated manually.	Automation testing is time-saving as due to the use of the tools the execution is faster in comparison to manual testing.
Programming knowledge	There is no need to have programming knowledge to write the test cases.	It is important to have programming knowledge to write test cases.
Regression testing	There is a possibility that the test cases executed the first time will not be able to catch the regression bugs due to the frequently changing requirements.	When there are changes in the code, regression testing is done to catch the bugs due to changes in the code.

Automation Testing Types



Activity

Activity: Software Test Automation & Skills Needed

Objective

To help students understand **test automation concepts, required skills, and its scope** through practical thinking and group interaction.

Activity 1: Identify Automation Opportunities

Task:

Divide students into groups and give them a sample application (e.g., login page, e-commerce site).

Instructions:

1. Identify **manual test cases**.
2. Convert them into **automation candidates**.

Example:

- Manual: Enter username & password → click login
- Automation: Script using Selenium to perform login

Outcome:

Students learn **where automation is applicable**.

MCQs: Software Test Automation

1. What is Software Test Automation?

- A. Manual execution of test cases
- B. Using tools/scripts to execute tests automatically
- C. Writing only test cases
- D. Debugging code manually

Answer: B

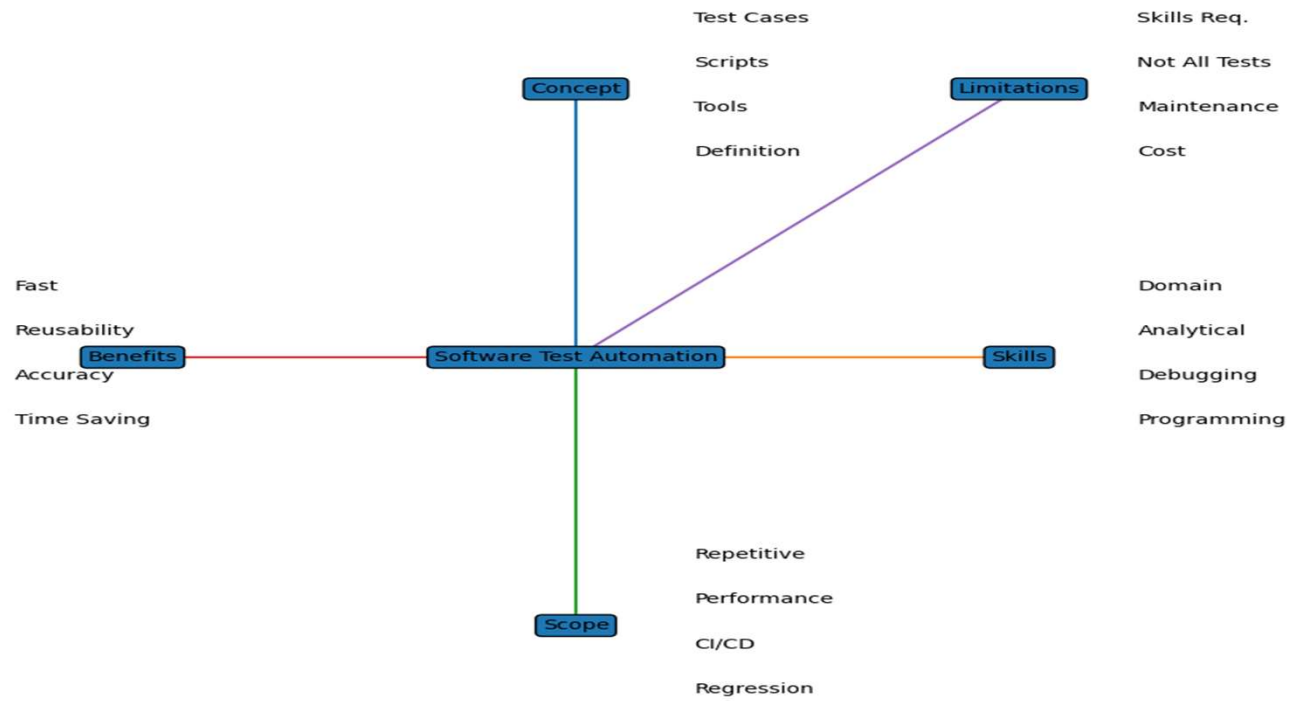
2. Which tool is widely used for web automation?

- A. MS Word
- B. Selenium
- C. Photoshop
- D. Excel

Answer: B

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MINDMAP



TEXT BOOKS	
1.	Srinivasan Desikan and Gopaldaswamy 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.
5.	https://www.geeksforgeeks.org/software-testing/automation-testing-software-testing/

THANK YOU!

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