LOVELY PROFESSIONAL UNIVERSITY

CSE 376
Automated Testing

Lecture #0

The kick start session

Course details

- LTP – 0 0 4 [Two labs/week]
- **Text Books:**
  1. SOFTWARE TESTING by RON PATTON, Pearson Education India

  References:
  1. SELENIUM WEBDRIVER by RAJEEV GUPTA, Pearson Education India
  2. FOUNDATIONS OF SOFTWARE TESTING by ADITYA P MATHUR, Pearson Education India

Detail of Academic Tasks

- AT1: Online assignment 1
- AT2 : Online assignment 2
- AT3 : Online assignment 3

Course Objectives

- To provide deep knowledge of software testing and quality assurance techniques.
- To enhance knowledge of students in automated testing tools.
- To encourage students towards use of tools for unit testing, code coverage and website testing. in quality and testing models.

Course Contents

Before MTE

- **Automated Testing and Test Tools**
  • The Benefits of Automation and Tools • Test Tools • Software Test Automation
  • Random Testing • Realities of Using Test Tools and Automation
- **Bug Reporting**
  • Getting Your Bugs Fixed• Isolating and Reproducing Bugs • Not All Bugs Are Created Equal
  • A Bug's Life Cycle • Bug-Tracking Systems • Manual Bug Reporting and Tracking
  • Automated Bug Reporting and Tracking • Introduction to Bugzilla
  Test Administration
  • Goal of Test Planning • Test Planning Topics • Goals of Test Case Planning
  • Test Case Planning Overview • Test Case Organization and Tracking • Test case Design
  • Building Manual test cases • Building Automated test cases using Junit and other tools

- **Various Testing Frameworks Available in Java**
  Testing Tools Selection Criteria • Fundamentals of Jenkins, TestNg, Maven, JU
  Gherkin • Introduction to JUnit framework • Define a test in JUnit • JUnit n
  conventions • JUnit test suites • Example JUnit test • Junit code constructs - Eclipse
  support for Junit • Installation of Junit

After MTE

Structural testing using automated tool

• Structural testing • Data and Code Coverage • Statement Coverage
• Branch Coverage • Path Coverage • Other Coverages and Understanding Their Differences • Cyclomatic Complexity • Introduction to Code Coverage Tool Eclemma • Interpreting results of Eclemma

- **Introduction to Selenium**
  • Who developed Selenium? • Selenium Components • Selenium IDE • Installing Selenium IDE • Creating your First Selenium IDE script • How to use Locators in Selenium IDE • Creating and Running Tests
  • Introduction to WebDriver • Comparison with Selenium RC • Introduction to Katalon Studio • What is XPath ? • When to Use XPath ? • Creating your First Script in Katalon studio • Launching AUT and Inspecting properties of Elements • Launching AUT in FireFox and Chrome

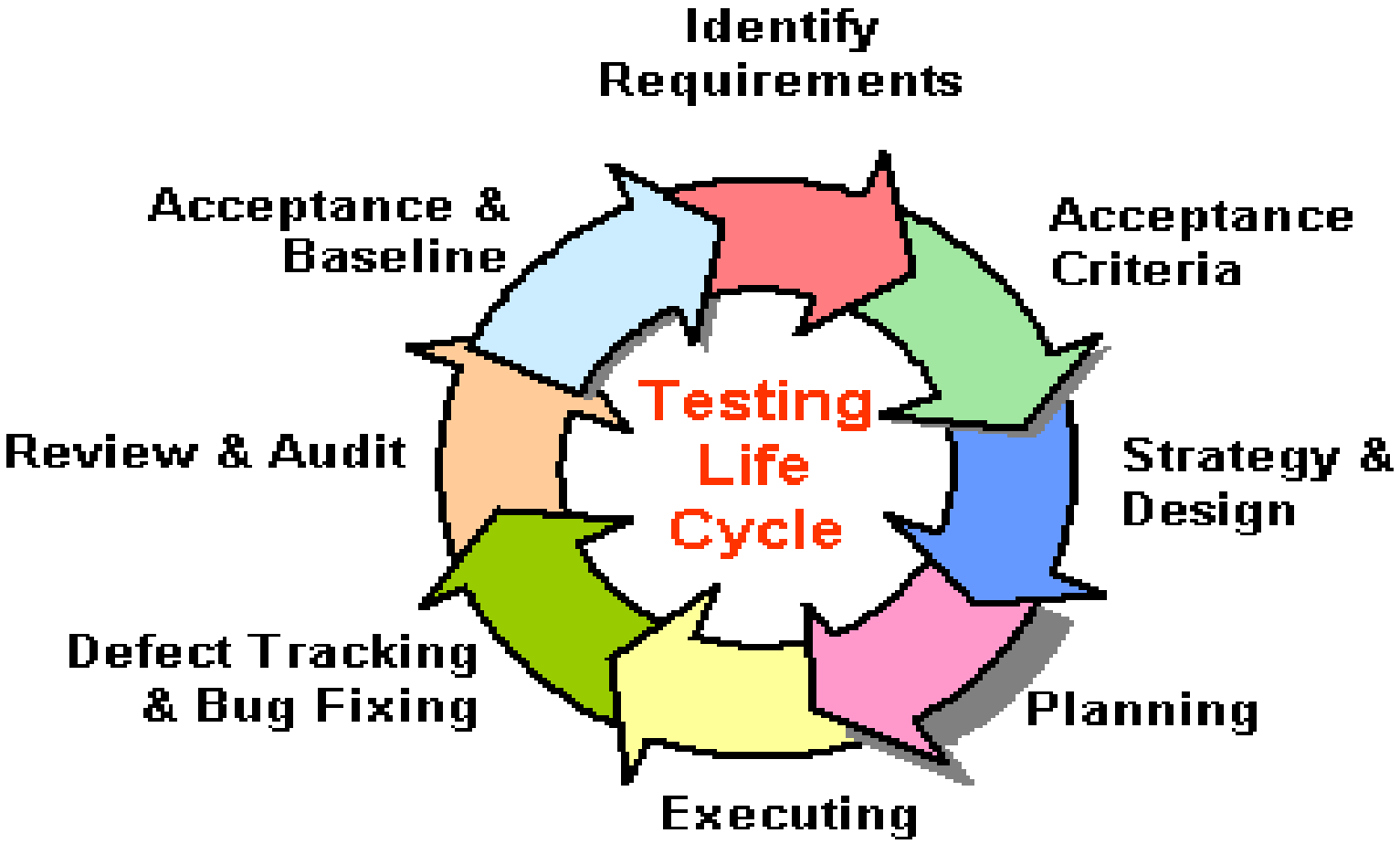
The hitch…

The three BURNING questions in mind…

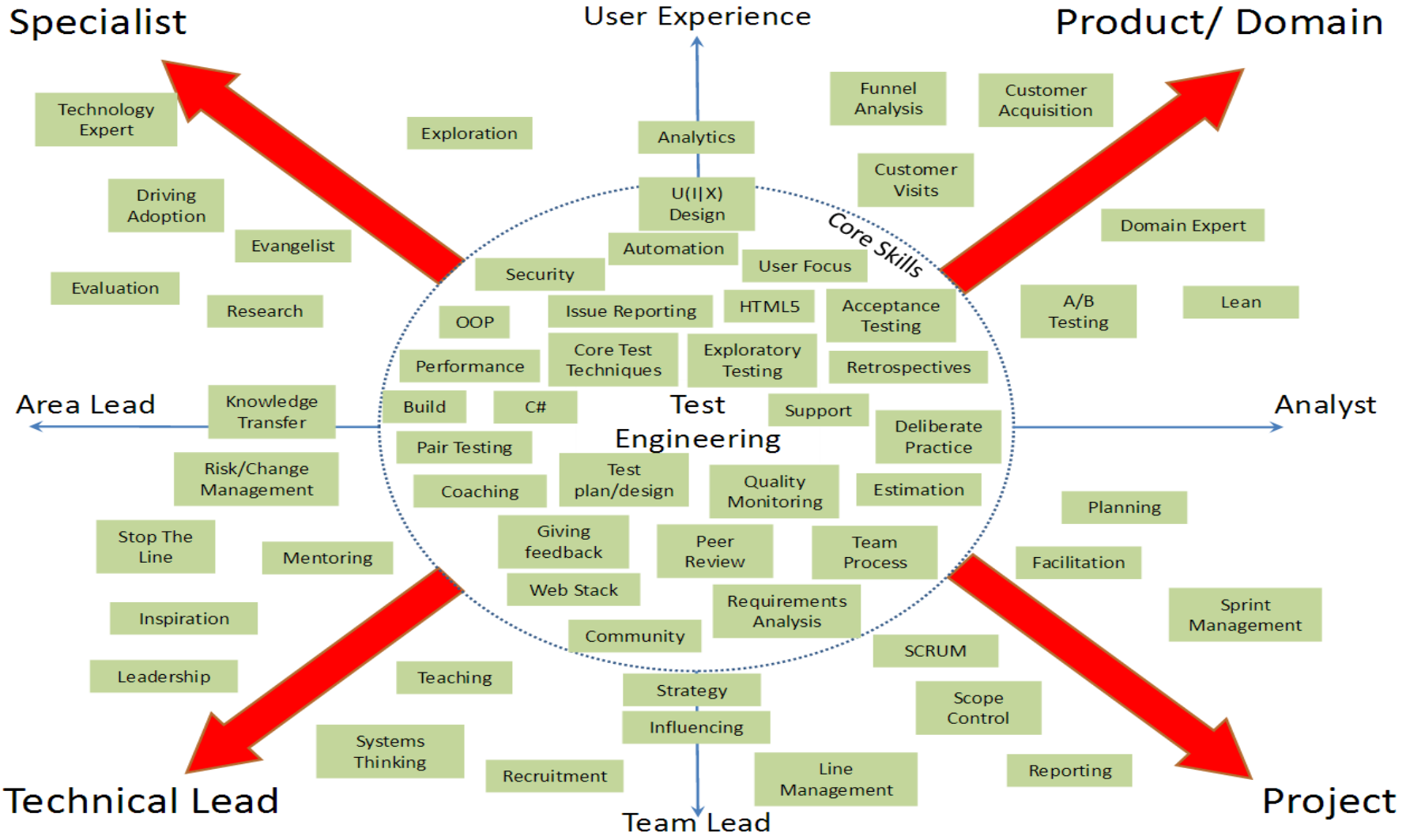
- **Why are we learning Automated testing?**
- **What would we do with it?**
- **What will be the course outcome?**

Software Testing Fundamentals

Testing Life Cycle



Testing Actors

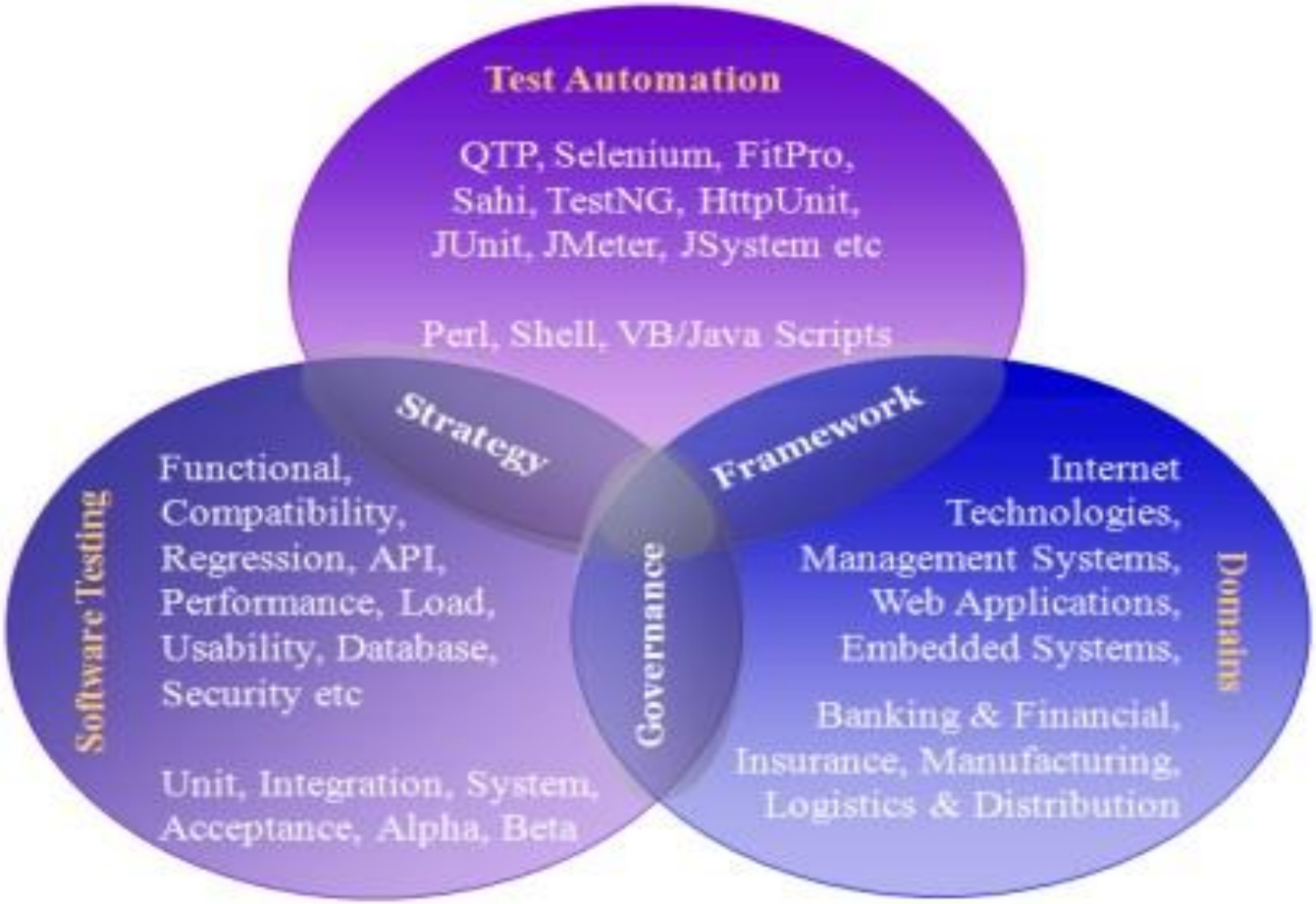


Bug Tracker

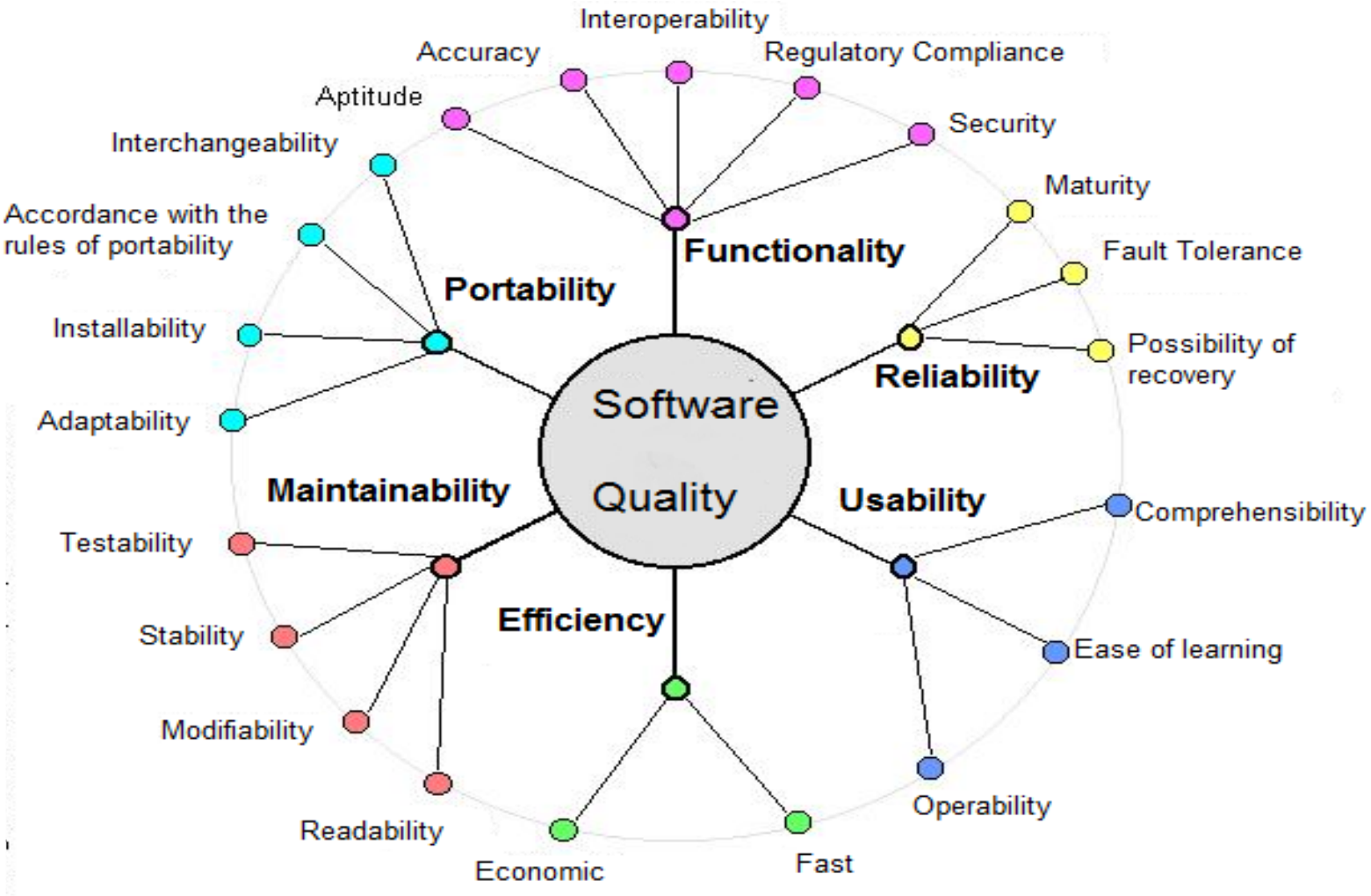

mantis
BUG TRACKER


Welcome to Bugzilla
File a Bug
Search
Open a New Account
Quick Search

Test Automation



Software Quality



Quality Assurance Process

Learning Outcome

Next Class

The Benefits of Automation and Tools