SYNTAX
TECHNOLOGIES

Manual Testing

Class 1

Agenda

Goal of Manual Testing

What is STLC

Test Case Development

Why we test ?

- Eliminate the bugs
- Reduce the risk of error
- Continuously improve the functionalities of software and its quality so that the product works as expected before it reaches to the customers.
- Main Goal is make sure that the end-user is as comfortable as possible.

Software Testing is necessary because we all make mistakes. Some of those mistakes are unimportant, but some of them are expensive or dangerous. We need to check everything and anything we produce because things can always go wrong – humans make mistakes all the time.

What is Quality?

Dictionary Definition - “The standard of something as measured against other things of a similar kind”.

Quality is Perception - Good quality for you may not be good quality for me, so it differs from person to person.

Our main goal - as a tester is to make better products by trying to know what makes end user more excited and what will make them come back to our product.

Links to check out -

https://www.youtube.com/watch?v=ZwZTmkqQOFM

What is software testing ?

Software testing - is a process of executing a program or application with the intent of finding the software bugs.

Process of validating and verifying that a software program or application or product:

- Meets the business and technical requirements that guided it's design and development
- Works as expected
- Make sure 100% customer and end-user satisfaction

What is the Goal of Testing or why testing is important?

Main goal of testing is to make sure that the application under test is defect free and software application is working as per the requirement specification document or as expected.

Some costly bugs/defect in the history: https://en.wikipedia.org/wiki/List_of_software_bugs

3 Types of Application We Test

- Web Application
- Desktop Application
- Mobile Application

Web applications

Web application - is a software program which the user accesses over a network with a web browser.

Web applications - require only a web browser enabling the users to access the application from almost any computer. Popular web browsers: Internet Explorer, Chrome, Firefox, Safari.

Desktop Application

Desktop application - runs on personal computers and workstations, so when you test the desktop application you are focusing on a specific environment. You will test complete application broadly in categories like GUI, functionality, Load, and backend .They are standalone applications and does not depend on internet connectivity.

Mobile applications

Mobile application - most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a smartphone or tablet computer.

Mobile applications - frequently serve to provide users with similar services to those accessed on PCs.

What is Manual Testing?

- a process of finding out the defects or bugs in a software program by manually executing test cases.
- a process in which testers play role as end users to compare the behavior of a developed piece of code (software, module, feature, etc.) against expected behavior (Requirement)
- preliminary testing that must be carried out prior to start automating the test cases. If manual test case fail we cannot automate until it pass, so **Manual Testing is important.**

What is Automation Testing?

Automation testing uses automation tools to write and execute test cases, no manual involvement is required while executing an automated test suite.

Usually, testers write test scripts and test cases using the automation tool and then group into test suites.

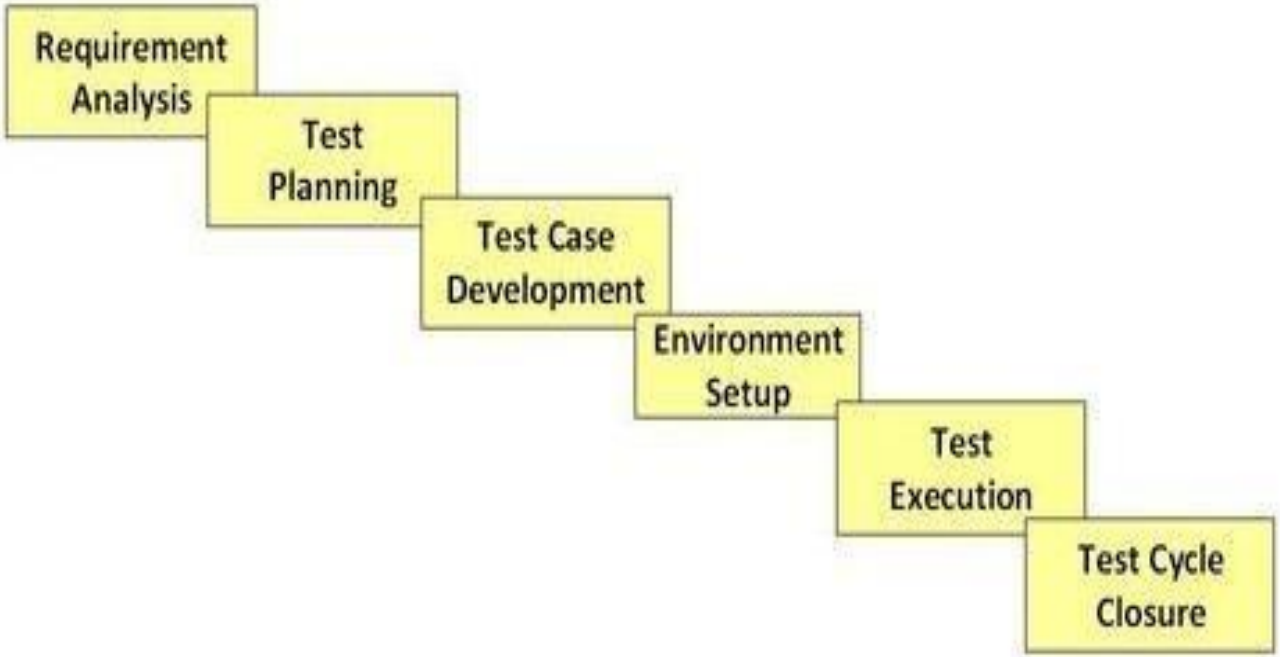
Test automation is used to automate repetitive tasks and other testing tasks which are difficult to perform manually.

The main goal of automation testing is to increase the test efficiency and develop software value.

How do we start Testing?

Software Testing Life Cycle

- **STLC** is a process of sequence activities conducted to perform Software Testing.
- In **STLC** process, different activities are carried out to improve the quality of the product.



Requirement Analysis

Test team studies the requirements from a testing point of view to identify the testable requirements.

We test requirements against SMART criteria

Test Documentation

Proper documentation makes testing more accurate in an organization and easy for the client to review the software process.

A project's documentation makes testing process easy and organized.

Proper documentation saves company money and time spent on that project. Not all documents are important.

Test Planning

Test plan is the project level document that is usually created by **QA Manager or Test Lead** (based on the company) and mostly used in waterfall projects.

Test plan outlines the strategy that will be used to test an application.

The resources that will be used.

The test environment in which testing will be performed, the limitations of the testing and the schedule of testing activities.

Test Plan

Test Plan answers to following questions:

- What to test?
- How to test?
- Why to test?
- Who will perform the testing?
- Where testing will be performed?
- When testing will take place?

Test Plan Content

- Introduction to the Test Plan document.
  - Add the purpose of the document you are creating.
- Test Plan overview
  - Provide few liner overview of your test plan
- Assumptions while testing the application.
  - Design and coding is done, Unit testing is performed, test team have access to test env.
- List of features to be tested, such as bellow:
  - Search feature, result feature, about feature
- Environmental Needs
  - Dev environment, Test Environment, ACPT...
- What sort of approach to use while testing
  - Do you focus on Functional tests, regression, progression testing.
- The resources allocated for testing the application
  - List the names of resources and their rules & responsibilities
- The testing tools will be used.
  - List the tools that will be used. Such as: JIRA, ALM, QC etc

Test Case Development

This phase involves creation, verification and rework of test cases & test scripts.

A test case is a document which has a set of actions/steps that needs to be executed to verify a feature or functionality of your software application.

Why do we need a test case?
Test cases makes the whole QA process more efficient. It can also show new colleagues how the app or site is supposed to work

Test Cases

A test case often contains:

- Test Case ID Or Test Case Name
- Pre-condition
- Steps Number
- Steps Detail / Description
- Expected Result
- Actual Result
- Comments

Test Case Example

Scenario ID	Test case ID	Test case	Test case Description	Test Step	Test step Description	Expected Result	Actual Result	Status	Comment
TS001	TC001	Validate Login Credentials	Test the login functionality of the e-commerce site to make sure that registered user is allowed to login into site using valid credentials.	Pre-Condition	1) Make sure that site under test is available and testable. 2) Make sure that required data for login is available.				
				Step 1	Launch the ecommerce application with the givn URL: <Test Site URL>	The e-commerce site launched properly.	Site launched successfully.	Pass	
				Step 2	Navigate to Login page	Login page is displayed to user with Username and Password fields are displayed on the page.	Login page loaded successfully.	Pass	
				Step 3	Enter valid Username in username field.	Username field should be editable and accept the username.	Usrename input accepted	Pass	
				Step 4	Enter valid Password in Password field.	Password field should be editable and accept the password and display as star or dot.	Password input displayed in dot and accepted	Pass	
				Step 5	Click on login button.	User should login into site and navigated to Home page.	User navigated Checkout page.	Fail	

Test Case Example

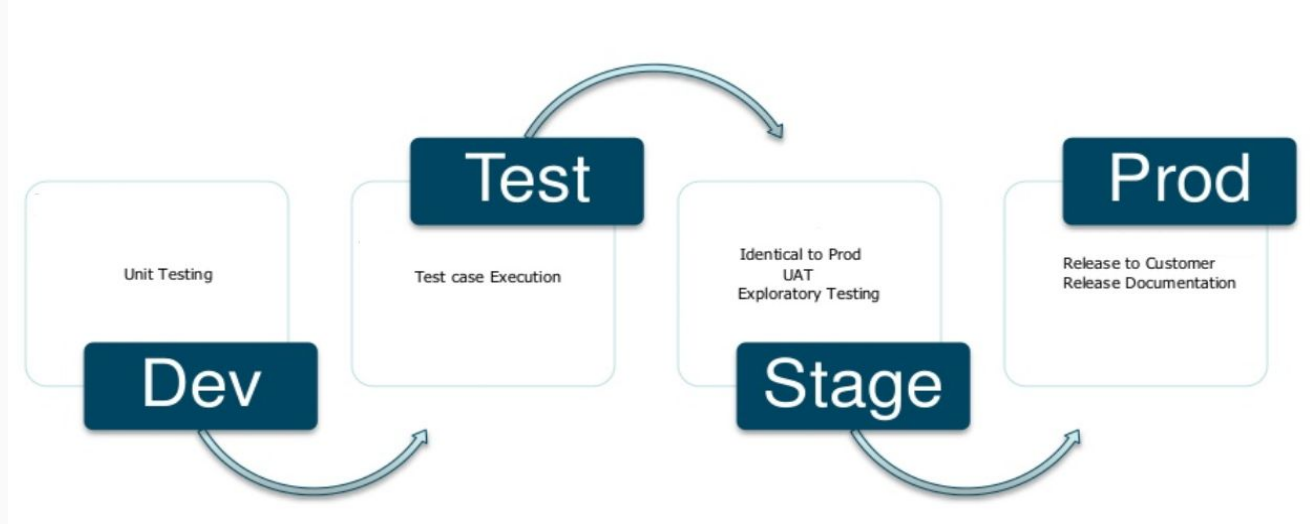
	A	B	C	D	E	F	G	H	I	J	K
1	**Test Case ID**		BU_001	**Test Case Description**		Test the Login Functionality in Banking					
2	**Created By**		Mark	**Reviewed By**		Bill		**Version**		2.1	
3											
4	**QA Tester's Log**		Review comments from Bill incorprate in version 2.1								
5											
6	**Tester's Name**		Mark	**Date Tested**		1-Jan-2017		**Test Case (Pass/Fail/Not**		Pass	
7											
8	**S #**	**Prerequisites:**				**S #**	**Test Data**				
9	1	Access to Chrome Browser				1	Userid = mg12345				
10	2					2	Pass = df12@434c				
11	3					3					
12	4					4					
13											
14	**Test Scenario**	Verify on entering valid userid and password, the customer can login									
15											
16	**Step #**	**Step Details**		**Expected Results**		**Actual Results**			**Pass / Fail / Not executed / Suspended**		
17											
18	1	Navigate to http://demo.guru99.com		Site should open		As Expected			Pass		
19	2	Enter Userid & Password		Credential can be entered		As Expected			Pass		
20	3	Click Submit		Cutomer is logged in		As Expected			Pass		
21	4										

Test Case 1 | Test Case 2 | Test Case 3

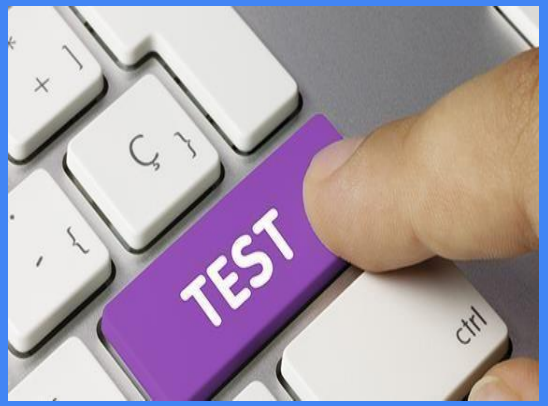
Test Environment Set Up

Testing Team is **not involved** in setting up the environment; however,team should prepare the smoke test cases to check the readiness of the test-environment setup.

DEV Environment - where developers make code
TEST Environment - where testers do test
PROD Environment - live application that is available for all real users/end user/customers where we usually don't have access as testers or only have read-only access.



Test Execution



Testing team start executing test cases that was developed.

Bugs will be reported back to the development team for correction and retesting will be performed.

Test Cycle Closure

Testing team will meet , discuss and analyze testing artifacts to identify strategies that have to be implemented in future, taking lessons from the current test cycle.

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