ACA Final Exam 15.05.2021

Varduhi Poghosyan

1. What are the main Sections usually described in the Test Plan Document?

S scope (including test items, features to be tested and features not to be tested)

P people (including responsibilities, staff and training and approvals)

A approach

C criteria (including item pass/fail criteria and suspension and resumption requirements)

E environment needs

D deliverables (test)

I identifier and introduction (test plan)

R risks and contingencies

T testing tasks and schedule

2. Describe what are entry and exit criteria described in Test Plan and how they are being defined?

Entry criteria are used to determine when a given test activity can start. This could include when to start executing.

Exit criteria are used to determine when a given test activity has been completed or when it should stop.

3. Mention and describe the different types of software testing (the most important once)

Unite testing - this testing is done by the developers and they check the code level components

Integration testing- is done mostly by the developers and they integrate components and check the performance after integration

Load testing- performed to determine a system's behavior under both normal and anticipated peak load conditions.

System testing - General system performance

Stress testing - Checking the systems performance in the case of high number of user access

Usability testing- Check and verify that the system is user friendly

4. What's the difference between re-testing and regression testing?

Retesting is when after fixing a bug the tester checks whether the given bug is fixed or not. The regression process of checking after fixing the given bug in the other parts of the software did not harm.

5. What non-functional testing types exist?

Performance Testing
Load Testing
Stress Testing
Security Testing
Compatibility Testing
Install Testing
Recovery Testing
Reliability Testing
Usability Testing

6. What is a Load Test?

Load testing is performed to determine a system's behavior under both normal and anticipated peak load conditions.

7. How would you understand that application is ready for release to live?

When all requirements are accomplished and tested and there are no bugs according to the function requirements. Also, all major requirements work properly.

8. What is a bug/defect in the application ?

A software bug is an error, flaw or fault in a computer program or system that causes it to produce an incorrect or unexpected result

9.What is a bug priority?

Priority is associated with scheduling, priority signifies the importance or urgency of fixing a defect.

10.What is the severity of the bug?

It indicates the level of threat that a bug can affect the system. “severity” is associated with standards.

11.Give an example of a bug with High priority but low severity, bring another example of vice versa.

High Priority, Low Severity bug:- If the company name is misspelled on the homepage of the website, then the priority is high and the severity is low to fix it.

Low Priority, High severity:- An error which occurs on the functionality of the application and will not allow the user to use the system but on click of link which is rarely used by the end user

12.Please, do the following:

a. Write down the Test Cases (or high-level Test Checklists) which will cover the most Test scenarios to test the Elevator.

b. Mention which of the Test Cases are the most Prior ones for Test.

c. Choose one of the Test Cases you have written down and describe the full steps for this Test Case.

Functional Requirements:

1. FR010 - Elevator should go up and down from 0 - 10 floors.

2. FR020 - Elevator should have the capacity to carry 3–4 person or up to 250 kg load in one time.

3. FR030 - Elevator should have self-open and closing doors.

4. FR040 - There are UP and DOWN buttons outside the elevator on each floor.

5. FR050 - There is only UP button on the bottom floor and only DOWN button on the Top floor.

Test cases:

1. Verify the functionally of both UP and Down buttons. /High Priority
2. Verify that the elevator goes all up all floors . /High Priority
3. Verify signal from the elevator in the case of 5 person or 250kg load. /High Priority
4. Verify elevator's doors self-open and closing functionality /High Priority
5. Verify that there are UP and Down Button in [1-9] floors /High Priority
6. Verify that there is only Up button on the bottom floor 0 /Medium Priority
7. Verify that there is only a Down button on the Top floor./Medium Priority
8. Verify the performance of the elevator in the case of pressing two buttons simultaneously from different floors /High Priority
9. Verify the the performance of the elevator in the case of pressing two buttons simultaneously on the same floor/High Priority
10. Verify the performance of the elevator in the case of electricity loss . /High Priority

Most Prior once

10. Verify the performance of the elevator in the case of electricity loss . /High Priority

3. Verify signal from the elevator in the case of 5 person or 250kg load. /High Priority

Full steps for this Test Case 9

. Verify the functionally of both UP and Down buttons. /High Priority

Title	Verify the functionality of the UP button
Pre-Condition	The user should be in the floor in any floor(besides The Top floor)
Description/Steps	1. The user should press on the UP Button 2. Enter the elevator 3. Press any floor 4. Go out of the elevator
Expected Result	The elevator should successfully goes UP

Priority	High
N/P test cas	Positive test case

13. Describe a Bug Life Cycle by mentioning all States and Transitions (feel free to use graphical representation).

Defect Life Cycle States:

New - Potential defect that is raised and yet to be validated.

Assigned - Assigned against a development team to address it but not yet resolved.

Active - The Defect is being addressed by the developer and investigation is under progress. At this stage there are two possible outcomes; Deferred or Rejected.

Test - The Defect is fixed and ready for testing.

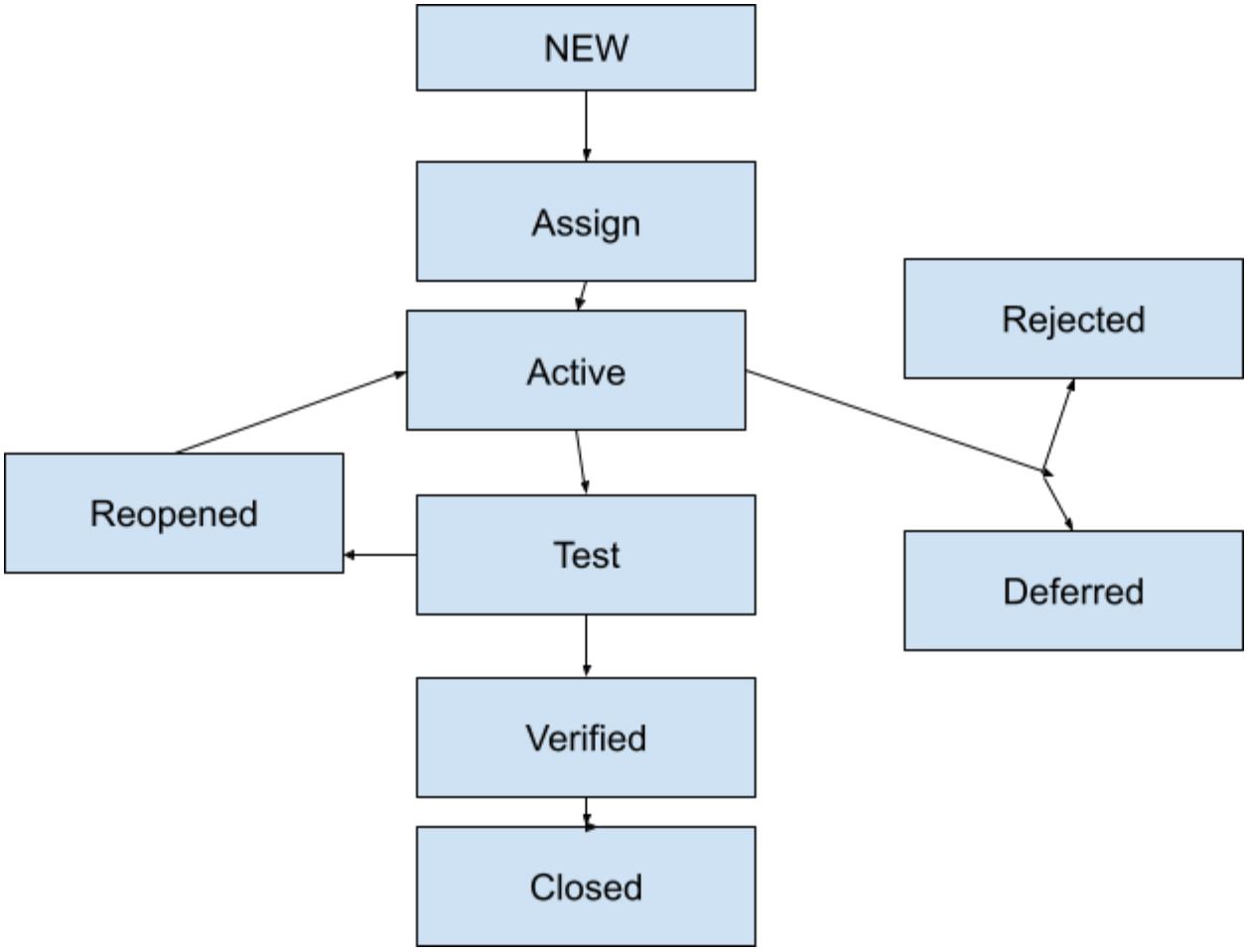
Verified - The Defect that is retested and the test has been verified by QA.

Closed - The final state of the defect that can be closed after the QA retesting or can be closed if the defect is duplicate or considered as NOT a defect.

Reopened - When the defect is NOT fixed, QA reopens/reactivates the defect.

Deferred - When a defect cannot be addressed in that particular cycle it is deferred to future release.

Rejected - A defect can be rejected for any of the 3 reasons; viz - duplicate defect, NOT a Defect, Non Reproducible



14.Please describe phases of Software Development Life Cycle (SDLC)

Requirement Analysis-In this stage the team is analyzing the requirements of the applications.

Planning -In this stage the cost and resources required for implementing the analyzed requirement is determined.

Architectural Design-In this stage the best architecture for the product to be developed Software Development-In this stage of SDLC the actual development starts and the application is built.

Testing-In this stage product defects are reported, tracked, fixed and tested.

Deployment-Once the product is tested and ready to be deployed it is released formally in the market

Maintenance-Once the system is deployed and customers start using it, it is important to make sure that the system continues to perform as per the specification mentioned in the documentation. Also it will be possible to make changes in the systems.

15.Please name activities that being done within and after sprint, while working in agile environment

In every spring each SDLC activity accurces for every feature. After the sprint,tThe sprint retrospective occurs where all the processes are inspected and if they need some improvements the improvements are implemented for further sprints

16.How would you know that it's time to stop testing, and consider the application tested and ready for release?

When all requirements are accomplished and tested and there are no bugs according to the function requirements. Also, all major requirements work properly.

17.Manager or QA lead tells you that you have 10 minutes to test your application, how would you handle testing in 10 minutes?

In this case, when there is no time to read the requirements(or there is no requirements documentation) also there is severe time pressure I you should apply Experienced-Based Techniques such as error guessing or exploratory testing

18. What is Negative testing? How is it different from Positive testing?

Negative test case is, when you give invalid input to the system and try to understand what happens to the system.(For example: entering invalid Email, system should bring an error message).It checks whether on such unexpected conditions what will be the behavior of the software.

Positive test case is when you give a valid input and try to understand the system's behaviour.(For example, entering the valid credentials systems should be Logged in)

19. What is meant by Verification and Validation?

Verification is a process to check and understand that everything is done according to the requirements (Whether we are doing everything according to the requirements?)

Validation is when checking that everything is done as the user wanted*(example: the user mentioned in the requirement that he wants registration option in his system, but he did not mentioned any example for it)* the appearance of the systems should be according to the user

20. What do you mean by table and field in SQL?

Table contains rows and columns, where the rows are known as records and a field is an element in which one piece of information is stored

21. What are joins in SQL?

JOINs is used to combine rows from two or more tables, based on a related column between them.