Functionality : Core behaviour of Application

Client / Customee : Gives Business Requirement / client Requirement / Customee Requirement.

* In maintainance Project the change is called as Change Request or RFC (Request for change)

* SCratch : Application development from zero level.

* Business Analyst : Person who collects requirement from client & he is non-Technical person.

Client → BA → BRS / BRD → SRS → Technical Team

* BRS / BRD : Business Requirement specification / document.

- This document describes customee requirements to be developed.
- It's a bridge between technical people and client.
- It consist High level Business language.
- This document is prepared By BA.

SRS / FRS / FRD : Software Requirement Specification
Functional Requirement Specification
Functional Requirement Document

- This document is prepared By BA
- It consists Functional Requirement to be developed and System Requirements to be used.

*What SRS consist of ?

1). Functional Requirements
2) Functional Flow Diagrams
3) Use cases
4) Snap Shots
5) System Requirements.

Use Cases : Defines Functionality in terms of Input, output & process.

eg. login : I/P : UName Process : Click login
O/P : login succeos / unsucceos.

SRS Format : .doc or .pdf

eg.

BRS	SRS
What to develop.	How to Develop.
Addition of two Numbers.	FRS: Functional Req Specif. * 2 inputs * + operator * 1 output
	NFRS: Non-Functional RS. *Blue color in screen * Run on Windows & Linux * Addition within 0.5 sec.

SDLC : Software Development lifecycle.

LCD [lifecycle Development] LCT [Lifecycle Testing]

Team Size : $\frac{\text{LCD [No. of Developers]}}{\text{LCT [No. of Testers]}}$

Normal Project Ratio : $\frac{3}{1}$ $\frac{\text{Dev}}{T}$

No. of Testers : Manual Testers : 5 {
Total : 7 Automation Testers : 2

Total Team Size : No. of Testers x 3 No. of Dev.
: $7 \times 3 = 21 + 1\,BA = 22-24$. Around.
$8 \times 3 = 24$

How to solve the issue or to whom you will interact or Have you ever interacted with client ?

As a Testee., I am going to Follow hierachy
- Test Team Members
- Test Team head
- Development Team
- Business Analyst
- lastly, if query is still not solved then with the permission of project Manager, I am going to interact with the customer or with client.

Duration / Release / Sprint :

1) Waterfall : 3 Months.

2) V-Model : 3 Months.

3) Agile Methodology : 1 Months / 15 days.

Productivity of T.E :

Test case Design : 15-20 (per day)
Test case execution : 20-25 (per day).

Which Model to choose For Softwaee development ?
Who is going to decide which Model to Follow ?

1. When the client is new or having no knowledge of process model then organization can decide which model to be used.

2. When client is having its own technical team then organization & client will mutually decide which model to refer.

There are 3 Factors using that organization is going to decide how many requirements we need for specific release / sprint:

1) Complexity of Requirements [More complex requirement then less will be taken]

2) Knowledge : [Previous expeeience of same domain or new domain regeaech]

3) EFForts : Time duration for Dev + Test.

This process is called estimation process.

Who is involved in estimation Process?
3 peesons : Business Analyst [BA]
Development Lead
Testing Lead

* One Model will be followed throughout development of One Project.

* Actors In the Agile

Developers + Testers Team = Scrum Team

V Model	Agile Model
Client	Stakeholders
BA	Product Owner
Project Manager	Scrum Master
Release	Sprint
SRS	User Stories
Release Duration : 3 Months	1 Release : 1 Month Sprint 1 + Sprint 2 [15 Days] [15 Days]

JIRA : Automation tool for project Management and defect tracking.

Backlog : Requirements.

Sprint : Predefined interval or time frame in which the work has to be completed and make it ready for review or ready for production deployment.

2 Weeks : 1 Week Development + 1 Week Testing

* Architecture of Agile : Working of Agile.

Client → Stakeholder : Tell the Requirement

↓

BA → Product Owner : Collect the Requirement

↓

Overall Require. of whole Project → Product Backlog

Estimation ---→ ↓

Sprintwise Requir. Specific Require. → Sprint Backlog

↓

Detail Description of requirement → User Stories

↓

Prepared By PO (JIRA is used) After this, PO will give it to tester and Developers.

Test Case Design

↓

Test Case execution

Estimation :- Converting Product Backlog into Sprint Backlog.
- Product Owner, Testing & Development head are involved in this Meeting.

User Stories :- Consists of detailed description of each and every requirement which is being mentioned in Sprint Backlog.

User Stories Analysis : Tester and Developer.

* Meetings in the Agile : Ceremonies in Agile.
Events in Agile.

1) Sprint planning Meeting
2) Scrum Meeting / Daily Status Meeting / Stand-up
3) Sprint Review Meeting
4) Retrospective Meeting

① Sprint Planning Meeting

- During this meeting, planning of sprint is done.
- First meeting of the sprint which will happen on the first day of Sprint.

Purpose : Discussion and plan of requirement and completion, Test and development lead will do resource and Job allocation. Product Owner (PO) will explain user stories.

Involvement : Testing team + Development team + Scrum Master + Product Owner.

Frequency : Once per sprint

Time : 2-4 hours. (Day 1)

Day 2 : User stories analysis by Developers & testers [1-2 Days]

- After this testers will start identifying test scenarios and start test case design.

2 Week Sprint : 1 Week - User Stories Analysis, Test scenarios identification, Test case Design & Revie
2Week - Start executing test cases on Build.

② Scrum Meeting / Daily Status Meeting / Stand-up Meeting

purpose - Every day testing team & development team will update to Scrum Master. about :

1) What did the team members do yesterday?
2) What ~~the~~ did the team members plan to do today?
3) Any roadblock.

1) Todays action plan
2) Whatever we've performed yesterday.
3) What are problems we are facing in requirements / Test case & scenarios.

Frequency - Everyday / Daily.
Duration - 30 - 45 minutes.
Time - 9:30 am - 10:15 am. [Regular shift]
Involvement - Testing team + Development team + Scrum Master + Product Owner.

Scrum Master -- The person who is going to keep track of the schedule & plan of sprint.

- Scrum Master is the chair Person for this particular meeting.

③ Sprint Review Meeting

- In this particular meeting, the task we have completed in this sprint that will be reviewed by stakeholder.
- Frequency - Once per sprint
  Duration - 2 - 4 hours.
  Involvement - Testing team + Development team + Scrum Master + Stakeholder.

④ Retrospective Meeting / Improvement Meeting

- At the end of the sprint (Happens after the review meeting)

Purpose : To discuss openly, what went well and what didn't during the sprint, so that the team can togetherly find better ways to meet the project's goals. Here the team can discuss internal processes as well.

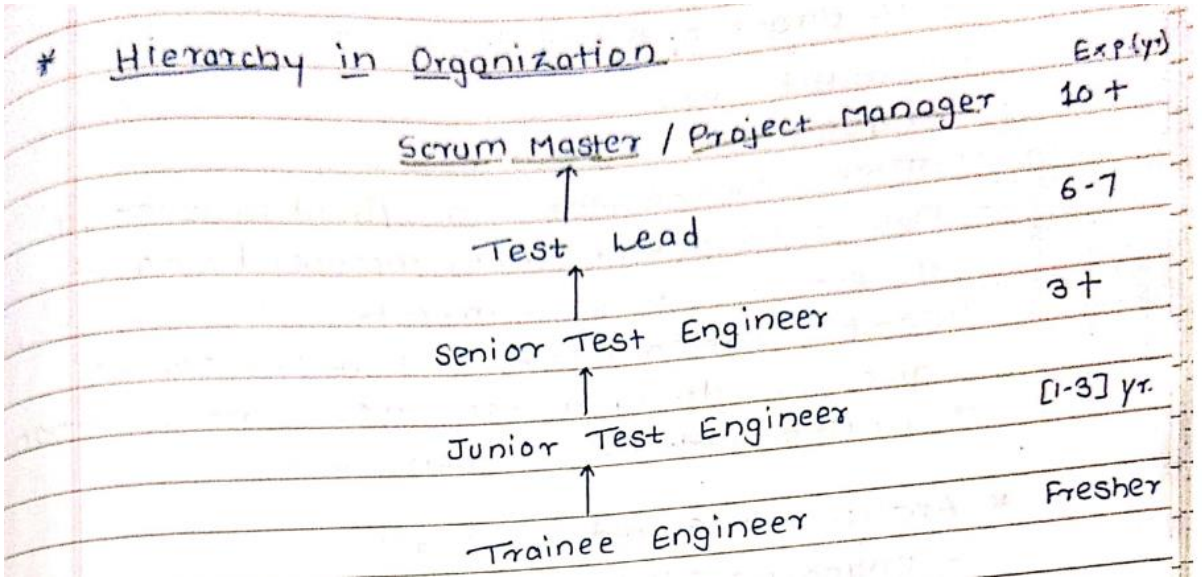
- What went well during the sprint
- What did not go well in the sprint?
- Lessons learned
- Action items

Frequency : Once per sprint

Duration : 2-4 hours.

Involvement : Scrum Master + Test team + Dev. Team

* Hierarchy in Organization



* Roles and Responsibilities of Test Engineer :

1) SRS Analysis 2) Creating Test Scenarios
3) Designing Test Cases 4) Creation of Test Data
5) Execution of Test cases 6) Tracebility Matrix.
7) Defect logging & Reporting & tracking till closure.
8) client Interaction.

Defect log : Functionality / code issues are logged through tools : JIRA & HPLM.

Defect Report : Environment related issue through E-mail.

* What challenges and difficulties you have faced during 3 years of experience ?

As a tester, there are different challenges we face while working in organization :

* STLC process related challenges :

- Limited time available for testing, late engagement of testing team.
- Test environment issues / Build installation.
- Delays in defect fixing / improper fixing of defects resulting in impacts.
- Communication issues like unresolved queries, delay in response, communication hurdles with development team.

* Application related challenges :

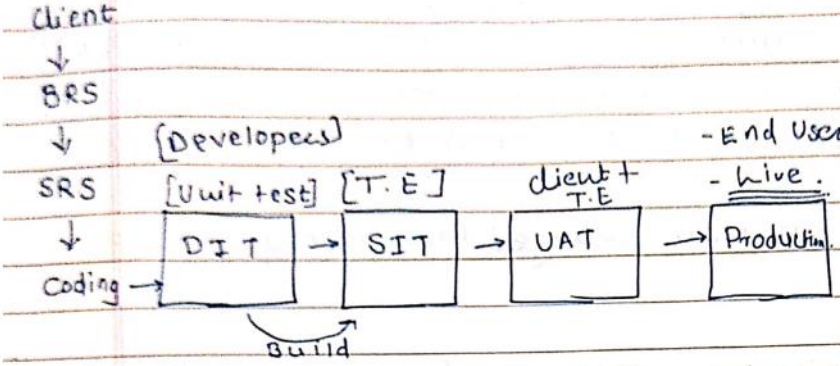
- Changing requirements.
- Non-availability of right set of test data.
- Build quality issues.

*	What will be your daily Routine ?
9:00	- Read emails for any important issue or announcement.
9:15	- Go through the allocated tasks by the team Lead on email or xls sheet or whatever tool used for communication.
9:30	- Scrum Meeting :
10:15	- Plan for test cases or test execution for the day

* When we can say testing is completed ?

- once all the designed test cases are executed.
- All the raised defects are fixed by developers & in retesting the defect is not occuring again then we "close" the defect & we can say application is stable.
- Tester will do "sign off" for closing testing.

* Different Environments In Testing



1) DIT : Development Independant Testing
2) SIT : System Integration Testing
3) UAT : User Acceptance Testing / Customer Accept. Testing
4) Prod : Production.

* SIT :

Initial Build :- Basic or First Build

1) Sanity Testing, Initial Build
2) Functional, CR Build Modified Build
3) Regression, Testing overall App for change

UAT -

- SIT & UAT Testing teams will be different
- In UAT, senior testers will be involved,
- Time will be less (3-4 hours) for UAT Testing & test team will be less in size.
- SIT test cases will be executed by UAT team.
- Focus on New Change / Functional testing

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error :- Mistakes in the code.. (WBT).
- Developees will find errors.
- DIT environment.

Defect :- SIT environment.
- Found by SIT testers.
- Defect Report - Mail (Environment)
- Defect log - Tool through. (Functional Regression).
- Retest.

Bug :- If defect is accepted by developees then it is called as Bug

---

Defect leakage :- Defects missed by SIT & found by UAT team.
- UAT team will inform defects to developers/ Developers will fix it. Then UAT team retest it then it will go to production.
- These defects will be only inform to SIT but SIT will not be part of this defect fixing.

Production issue : The defects found at production environment. These defects are missed by DIT, SIT & UAT.

Missed defect :

Hot fix : Production issue fixing by developers & CCB.

- When any production issue occur then client is going to take penalty from organization.

Impact Analysis :

- When any production issue comes, there will be one team: CCB (change control Board).
CCB → BA, Development lead, Test lead.
- CCB Team will do first Impact Analysis
- Impact analysis is process of analysing product issue for Criticality, priority, severity etc & impact of issue on the client's Business.

Escalation : Kind of notice / Memo / Warning

* Do we write test cases for Sanity testing?
- No, We are going to executed test cases of previous release test cases.
- BCZ Basic functionalities are already deployed in previous releases.
-

* When you log the defect & till the time Dev. fix the bug, what T.E will do ?

- Execute other independant test cases.

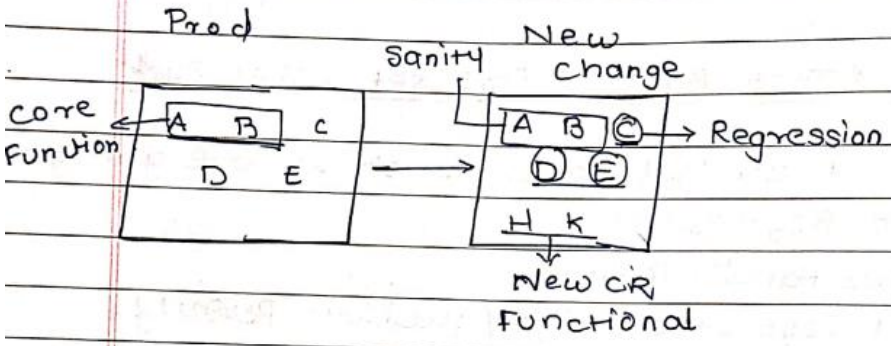
For Blocker defect / show stopper defect :
- we (T.E) can not do further testing.

* How many times we perform Regression Testing?
- In each testing life cycle
2: For every release / sprint: 1. On consolidated Build Times.
2. Master Build.

- During day by day on consolidated build.
- Before Build moves to UAT, on Master Build.

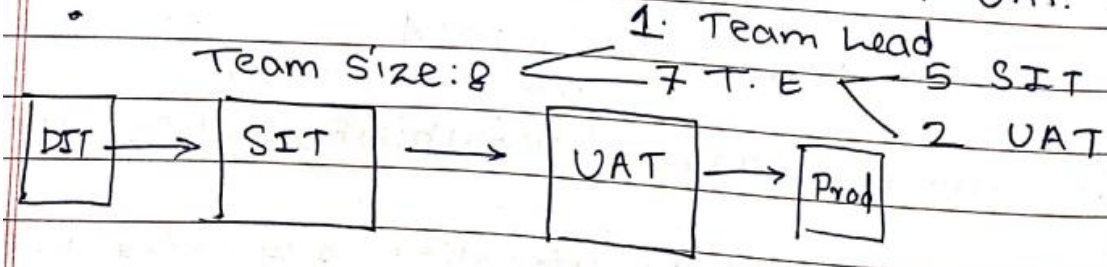
Which is peeform first: Regression or Re
- If Bug is fixed then Retest and the regression testing.
- Retest is performed only for Defect fixi
- Regression is performed when change is deployed in build and Bug is fixed

Example:



User Acceptance Testing [UAT]
Customer Acceptance Testing

- After Completion of SIT, Organization is going to follow UAT to receive feedback from client / customer.
- Customer / Client is involved in UAT.



2 Week Sprint : 1 week Testing.
5 days :- 4 days - SIT
1 day - UAT

- There are two types of UAT :

1. Alpha Testing (α)	2. Beta testing (β)
- Applicable for application. i.e Service Based company	- Applicable for Products. i.e. for product based comp.
- Performed within organization.	- Performed by End Users. at their own place or PC's.
- It is done with the presence of Dev. & testers.	- Without Dev. & testers.
- It is performed in controlled environment.	- It is performed in uncontrolled environment.
-	

✡ Showstopper / Blocker Defect

- ~~Due~~ Defect due to which we can't proceed Testing.
- Testing Halts.

eg. GMAIL login not working.

Test Case Review

- After Test case Design phase, there will be Review of test cases & then we will prepare Traceability Matrix.

Different types of Test Case Review:

1) Self Review
2) Peer Review
3) Internal Review
4) External Review

Reviewer will Review for:

1) whether all the requirements are covered or not.
2) Whatever scenarios we have written, Have we covered Test cases for it?
3) Spelling Mistakes ..:
4) If there are any steps missing in Test case.
5) Priority of the Test case.

✓ Which kind of Review happens/followed in your organization?

→ Internal type of Review is followed in my organization.

1) Self Review

Test engineer Himself/Herself is going to review his/her own Test cases.

2) Peer Review [Testing Team]

Testing Team members will review Test-cases.

3) Internal Review [Test team + Dev Team + BA]

- Done by Testing Team + Dev. Team + BA of same organization or it happens within organization.

4) External Review / Walkthrough [Client]

- Client will Review the Test case & Test team + Dev Team + BA will also be present.
- T.E is going to Present / give demo of Test cases whatever he have written to the Client.
- Client may pass Review comments.
- This is also called as "Walkthrough"