

MANUAL PART - 2

1) Depth Part of Testing

1) Test policy

→ CEO

2) Test Strategy

} Project Manager

3) Test methodology

4) Test Plan

→ Test Team Lead

5) Test case scenario

6) Test case design

} → Test Engineer

7) Test case review

8) Test case Execution

9) Test summary report

10) Test Defect report

} → Team lead

11) Test closure report

1) Test policy

- 1) It is company level document.
- 2) It is work or CEO is involved (top most body of company)
- 3) In test policy they decide **objective of project**.
- 4) Objective of project
 - 1) How to earn revenue
 - 2) Domain of the project
 - ① Telecom
 - ② E-commerce
 - ③ Banking
 - ④ Insurance
 - ⑤ Health care

2) Test strategy

- 1) The object which were decided in test policy is forwarded to project manager.
- 2) Project manager then decide test strategies.
- 3) Test strategy is **approaches to achieve objective**.
- 4) Approaches are rules and regulation.
- 5) Example for strategies:- **whether to implement Automation**
K.T. processes
Risk management.

6) Test Approaches are:-

- (i) Scope & objective
- (ii) Business Issue.
- (iii) Test responsibility matrix
- (iv) Test deliverables
- (v) Roles and responsibilities
- (vi) Communication status reporting
- (vii) Defect tracking & reporting
- (viii) Implementation of Automation
- (ix) Test measurement
- (x) Risk and mitigation
- (xi) Training plan and training session

(i) Scope and objective

1) Project manager decide purpose & definition of project.

2) Definition means which type of testing should conduct.

3) Example:-

If paytm project is there then it has E-commerce domain, then in E-commerce domain P.M. select only those tests which are related to functionality of E-commerce.

(i) Business Issue

1) Business Issue is cost Analysis depend upon domain of the project & resources involved.

2) Resources involved are developer & testers.

3) If developer to tester ratio is 3:1 then

75% spent on developer

25% spent on tester.

(iii) TRM (Test Responsibility matrix)

1) Test responsibility matrix is mapping between test issue or factor & development stage.

2) Development stages are

Info gathering, Analysis, design, development, testing, maintainance.

3) Issues or factors are.

1) Authorization

2) Access control

3) Maintainance

TRM

	Info.Gathering	Analysis	Design	Code	Test	Maintainance
Traditional	✓	✓	✓	✓	✓	✗
off the shelf	✓	✓	✗	✗	✓	✗
Maintainance	✗	✗	✗	✗	✗	✓

Test factor

Testing

- 1) Authorization → security testing
- 2) Access control → security testing
- 3) Audit trial → database testing
- 4) correctness → functional testing
- 5) Continuity of processing → W.B.T (integration)
- 6) coupling → Non functional (inter-system)
- 7) Easy of use → Usability / Accessibility
- 8) Easy to operate → Installation testing
- 9) File integrity → Recovery or backup testing
- 10) File reliability → Recovery / Reliability testing
- 11) Performance → Performance Testing
- 12) Portability → compatibility testing
- 13) Service level → service level testing
- 14) maintenance
- 15) methodology.

* Audit Trial

- (i) Audit Trial means maintain metadata.
- (ii) metadata means data about data.
- (iii) Example:- If 100 records are there & we have to fetch only 10 records then those 10 records are metadata.

Real world Example :- mini statement.

Test Required : database Testing

* correctness

It is correctness and completeness of the functionality with respect to customer's requirement.

Test required :- Functional Testing

* continuity of processing

It is communication b/w two processes which is happen in XML, it is integration.

Test Required :- Integration Testing

* coupling

It is to share resources between two systems.

Test required :- Inter system testing

* Easy to operate

As per customer requirement installation should be proper.

Test Required :- Installation Testing

* File integrity

Creation of backup.

Test Required :- Recovering / Backup Testing

* Performance

speed of processing

Test required :- Performance testing.

* Portability

Application should run on diff diff user Expected platform.

Test required :- compatibility testing.

* Service level

Order of functionality.

Test required :- service level testing

* Methodology

Agile, V, waterfall.

iv) Test deliverables

we can not go to 2nd stage without completing 1st stage.

v) Roles and responsibilities

In organization DIT, SIT, UAT, Regression test teams are there:-

If there are 3 testers then team lead divide responsibilities between them like 1 for SIT, 1 for UAT & 1 for regression.

vi) communication status reporting

communication betw two consecutive job.

vii) Defect tracking & Reporting

i) For show stopper defect

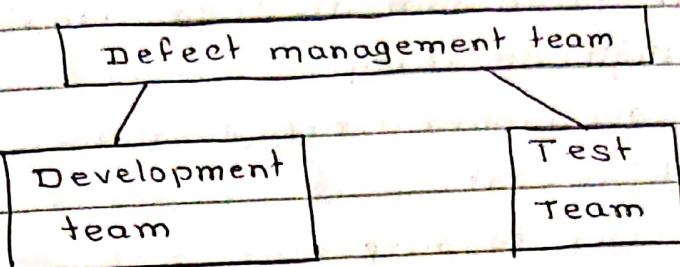
→ when we got show stopper defect we can not move to next stage

→ Then we do retesting on it to confirm defect & avoid bad defect situation.

→ Then we write mail to developer & team lead about defect.

→ To track defect whether it is open or close there is team of defect management team.

→ In defect management team there is daily triage call which includes.



→ Daily triage call happen daily 4 to 5 pm or 5 to 6 pm.

Example

Defect ID	Status	Allocated Person
1234	Open	Developer manish
5678	Open	Taral
9125	Rejected	Gaurav

- 1) This list is carried by defect management team.
- 2) This list is presented in triage call.
- 3) This triage call happen in Q messenger.
- 4) Then defect management team can ask to developer what is status of defect fixation.
- 5) Then responsible person have to do reply to defect management team.
- 6) In same way defect man. team can ask to developer whether this defect is real defect or not.
- 7) Then developer can maintain defect or cancel it.
- 8) we can move to next stage when all open defect get solve & bucket should 0.
- 9) When dev solve defect then we retest it & close it.
- 10) When dev reject any defect then it does not mean that it is bad defect, then we do retesting & ask dev to solve.

viii) Implementation of Automation

- 1) Decide whether to implement Automation or not.
- 2) If want to implement then benefits are:
 - High Accuracy
 - Low human error
 - Less cost
 - Less resources
 - less time.

ix) Test measurement

To measure test we use defect removal efficiency.

$$DRE = \frac{A}{A+B} \times 100$$

$$A + B$$

at the end, 2000 defect found } so 90% test
 1800 get solved } measurement so
 200 get cancel } testing is good.

x) Risk & mitigation

1) Risk is problem.

2) mitigation is its solution.

xi) Training Plan & Training Session

- 1) Give KT to new member.
- 2) who give KT is assign to particular team.
- 3) one team allocated unit test to KT.
- 4) one team allocated with regression test.
- 5) one team allocated with SIT test.

3) Test methodology

- 1) It is project level document in which project manager is involved.
- 2) He decide which type of test or factor we use in our project base on project type & requirement.
- 3) Project manager use test strategies to finalize test methodologies.
- 4) Suppose there is team of 15 people who do diff testing from that 10 to 12 get selected as per test methodology.
- 5) Project manager focus on diff diff factors like:-

① Acquire test strategy document.

② Determine project type

↳ Traditional project

↳ off the shelf project

↳ maintenance project.

	RG	A	D	C	T	m
Traditn	✓	✓	✓	✓	✓	✗
off the shelf	✓	✓	✗	✗	✓	✗
maintainance	✗	✗	✗	✗	✗	✓

6) Determine project requirement

↳ Requirement are domain of project.

① Banking domain

② Telecom domain

③ E-commerce domain

④ Insurance domain.

↳ According to project requirement project manager decide team of 10 to 12 tester & 20 to 22 developer.

4) Identify scope of application

- ↳ suppose project is of banking domain.
- ↳ Bank has diff diff department.
- ↳ Then those test are selected which are related to functionality of application.
- ↳ In project req. if we select 14 test strategies but we reduce 2 strategies in scope so 12 remain.

5) Risk in project.

- ↳ Risk are like:
 - ↳ If dont have knowledge about appln then Exploratory test we do.
 - ↳ If less person are involve then they have work overload.
 - ↳ If new person comes then KT required.

6) TRM

TRM is mapping betn test issue or factor & test SDLC.

→ Software Testing Life Cycle

It is the process of entire start to end testing.

Test initiation Testing

↓
Test Plan

↓
Test case scenario

↓
Test Case design

↓
Test case execution

↓
Regression Testing

↓
Test summary report

↓
Test closure report

1) Test initiation Testing

⇒ Test initiation testing includes:-

Requirement of project	Scope of project	Risk involve in the project
------------------------	------------------	-----------------------------

→ Requirement of project

① Requirement of project means domain of the project

② It include :- Banking Domain

Telecom Domain

E-commerce domain

Healthcare domain

Insurance domain.

→ Scope of project

- ① Scope of project means selection of test strategies to test functionality of modules included in the project.
- ② Ex:- Suppose Amazon project is there then those scenarios are get select which are related to the functionality of the project.

→ Risk involve in the project

- ① Risk occur at in project are:-

- 1) Less resources :- If there are less number of people involve in the project then each person should would get extra work to do.
- 2) Less test data :- If there is less or no test data then we have to do Exploratory testing.
- 3) Lack of knowledge :- If new person is involved in team then knowledge transfer is required for him.

2) Test plan

i) Test plan include

Resource allocation	Job allocation	Estimation

① Job allocation

- In scope of project scenario get selected.
- base upon scope of project jobs are get allocated
- jobs means which test we will use are get selected.

② Resource allocation

- Resources are the people.
- in job allocation tests are get selected.
- Then in resource allocation who will do test is get decided.

③ Estimation

- Estimation means start and end date of project.

3) Test case scenario → possible roots

4) Test case design → direction to test.

→ Test Engineer is involved in the test case scenario & test case design.

→ Base on SRS document or requirement test case scenario & design are created. i.e., scenario and design are mapped

→ when we write scenario we only write positive scenario & at time of test we test positive & -ve scenario.

5) Test case execution

- 1) After scenario & design we execute them.
- 2) While executing we found defects.
- 3) Then we assign it to developer.
- 4) After solving these defects developer send us corrected system.

6) Regression testing

- 1) When we get corrected system then we do regression to check whether failed test cases.
- 2) Also we check newly added scenario.
- 3) We do retesting using high priority test cases & if time permit then we do execution of low priority test case or medium priority test case.

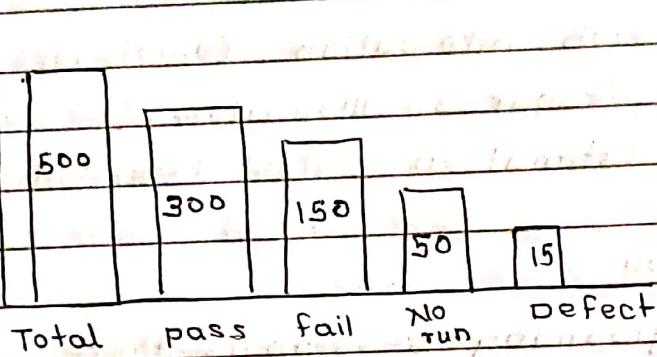
7) Test summary report

- 1) We test Engineers are responsible to create test summary report.
- 2) We send this report to team leader.
- 3) Example:- Suppose in paytm, company developed a train project module.

	Total test cases	Pass	Fail	No run	Defect
Daily	50	35	15	0	7
monthly	500	300	150	50	15

8) Test closure report

- 1) Team lead is responsible to make test closure report.
- 2) In test closure report he check whether all processes are correct or not.
- 3) To make test closure report team lead use dash board tool.
- 4) This report is in form of graphs.
- 5) Team lead then send it to project manager.



4. Test plan

- 1) It is project level document.
- 2) There are two type of project plan.

V model test plan	Agile method test plan
Team lead	Test Engineer

3) It is the work of team lead.

4) Test plan include:-

- 1) Job Allocation (what type of job)
- 2) Resource Allocation (who will test)
- 3) Estimation. (start date and end date)

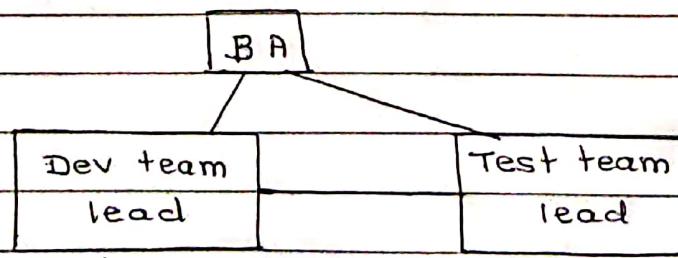
+ Estimation

↳ First grooming session is there.

↳ In grooming session B.A. give project to test team lead and dev team lead.

↳ Suppose there is 3 months of project:-

- 1) 1.5 month for completion of development
- 2) 1 month for test
- 3) 5 to 10 days for UAT
- 4) In last 5 days they do production or decide



↓

1.5 month
of development

↓

1 month of
testing

5 to 10 days UAT

5 days for release.

5) Upon the release date customer decide his release of product.

- i.e., customer processes are depend on release date.

Example

Amazon declare that for particular day they do offers then in 5 days of release date regression tester give code for production & it get deploy within 5 days but code is disabled & on that offer day they enable code & offer starts.

so in this way customer processes are depend upon release date.

Test plan for v model

When project manager finalize TRM & SRS (dev.doc.) then he send it to team lead.

Input from project manager	Process	Output
Finalized TRM	1> Team formation	
Development document [SRS]	2> Risk involve in the project 3> prepare test plan	System output test plan.
	4> Review of test plan	

→ 1) Team Formation.

- 1) In this team lead make team formation depend on TRM & development document.
- 2) First they consider which type of jobs present i.e., Job Allocation.
- 3) Then they consider how many resources require for jobs i.e., resource allocation.
- 4) Then they focus on availability of test environment.
 - ↳ They check particular application or particular SW is present or not.
 - ↳ They check after build upgradation, test environment present or not.
 - ↳ They check platforms like O.S., browser or HW are present or not.

→ 2) Risk involve in the project

- 1) Less test data.
- 2) Lack of resources
- 3) Lack of knowledge
- 4) Lack of development process Rigour
- 5) Lack of communication betw dev. team & test team
- 6) Delay in delivery.

1) Less test data

When we don't have no test data then base on our previous experience we have to do ad-hoc testing.

2) Lack of knowledge

If any new person come to team then for new person knowledge transfer is required.

3) Lack of resources

Resources are person involve in the project, if there are less availability of people in the project then extra work get assigned to them.

4) Lack of development process Rigour

This is the rude behaviour or unprofessional behaviour of development team member with testing team member in that case with the permission of team leader we can contact to project manager.

5) Lack of communication between dev team & testing team

when dev. team complete their work then that time they should have to contact to testing team for proceeding to next stages, if there is lack of communication then delay in processes may occur.

6) Delay in delivery

When there are problem arises due to internal issues or because of change in requirement of customer then delay in delivery occurs.

→ 3) Prepare test plan

Team lead is responsible to create test plan.

1) Test plan ID

1) Test plan ID is created in Excel sheet.

2) Suppose we have to release project in 8th month of 2019. then first is

1908

3) we have our project name paytm then

1908 - paytm

4) Inside paytm project our module is of Entertainment department then,

1908 - paytm - Entertainment

5) In Entertainment company develop a movie module project then movie is departmental project name,

1908 - paytm - Entertainment - Movie

1908 - paytm - Entertainment - movie

Release month	Project Name	Department Name	Module to be developed

2) Iteration (module)

Upto here team lead selected Release month, project Name, department Name, departmental project Name

Now team lead select iterations (modules)

Like in movie iterations are Hollywood, Bollywood, Tollywood

3) Test items

1) Test items are those objects on which we have to do testing to check their functionalities.

2) Those objects are mentioned in test items.

Example:- if in movie confirm ticket page is there.
then objects to check are:-

1) Seat Selection

2) Show time selection

3) payment method selection tab.

4) payment information tab.

4) Feature to test

1) Feature means working of those submodules as per customer requirement.

2) Also features which are not to be tested also mentioned.

Example

1) seat selection → Reflect seat numbers on which user make selection.

2) show time selection → show availability of seats at that show.

3) payment method selection → show payment options.

4) payment info tab → accept inputs from user & confirm validity of card.

5) Finalized TRM

- 1) Project manager already send finalized TRM to the test team lead.
- 2) This TRM is mapping of test issue/factors with software development life cycle.

6) Test pass/Fail Criteria

- 1) The test is consider as pass when all test scenarios get pass.
- 2) Test is consider as fail when ~~any one of all criteria~~ ^{Scenario} one get fail.
- 3) Test scenario is consist of multiple test cases.
- 4) We check test case one by one.
- 5) If test case get fail then we mark scenario as fail.
- 6) To give proof of test pass / failure of test case execution we take screenshot of that.

7) Test Environments

- 1) Test Environments means required H/w & S/w to conduct a test.
- 2) Hardwares are :- desktop, mobile, tablet, earphones,
- 3) S/w are :- browser, O.S., VMware, Aras tool, Rally tool, ltpalm.

8) Suspension Criteria

↳ Suspension Criteria means possible abnormal situation comes in the testing.

Example:- Suppose build run is going on & maintenance also going on. The maintenance means updating, backup & when maintenance phase going on no work can be proceed. Then this maintenance work is possible abnormal situation.

9) Test Deliverable

↳ Test deliverable means without completing one phase we can not proceed to next phase.

Example :- 1) without test case design → we can not proceed for test case review.

2) without test case review → we can not proceed for test case execution.

3) without test case execution → we can not proceed for test case summary.

4) Without test case summary → we can not proceed to test closure report.

10) Testing Tasks

↳ Task is work assign to a person. without completing that work, person do not get allotment of other work.

2) The allotment is diff for diff situations if there are shortage of resources then at that time each team member get allotment of more than one task.

11) Staff and Training needs

- 1) when any new person comes to organization then he should get knowledge transfer.

Staff Name	Type of	assigned person
Prasad	K.T.	Taral
manish	UAT Regression	Gaurav

12) Responsibility

Each member in the team get his job allotment then to complete his task is his responsibility.

13) Schedule

- 1) Schedule is start & end date of each task.
2) It is detailing of Estimation.

Task	start	End
1) Test case design	1	15
2) Test case execution	16	20
3) UAT	21	25
4) Deployment	25	30

14) Risk & mitigation

- 1) If we get any blocker defect or showstopper defect then we do retesting to avoid bad defect situation
2) Then we log defect & send mail to all authorities.

15) Signature and approval

- 1) Team lead is responsible to create test plan.
- 2) Then to verify it team lead go to project manager.
- 3) Then project manager review it i.e., check whether the test plan is according to project document (SRS)
- 4) Finalize TRM.

→ 4) Test plan review

- 1) Project manager is responsible to do test plan review.
- 2) After creation of test plan team lead send mail to project manager.
- 3) Then project manager focus on 3 factors:-

→ BRS base coverage

- 1) Check if test plan is as per dev-doc & TRM.

→ TRM base coverage

- 1) Check if which is mention in test plan is as per TRM or not

→ Risk base coverage

- 1) Risk and their solution occur in project.

After that project manager give permission to make finalize test plan.

1) Agile Test Plan

- 1) Agile test plan is get created by test engineer.
- 2) In Agile methodology 1 sprint is of 1 month.
- 3) So agile test plan is of 1 month.

WEEK 1

JAN 1 to JAN 5

1) Sprint 1 plan

- 1) Business Analyst, tester and developer arrange a grooming session.
- 2) In grooming session all doubts about development and testing are get clear.
- 3) Then test plan get created by us.

※

2) STORY ANALYSIS (similar to SRS analysis)

- 1) Review user stories & ask doubt to project owner.
- 2) Doubt is like requirement related problem.
- 3) communication happen through messenger.

3) Test case design

JAN 6 to 7 WEEKEND

WEEK 2

JAN 8 to JAN 12

1) Iteration test case review

2) Regression test case design

Test cases for newly added scenarios.

3) Regression test case review

JAN 13-14 WEEKEND

WEEK-3

JAN 15 to JAN 19

1) Sanity testing

→ If found any defect then we mark as show stopper defect & get solve on same day.

2) Iteration test case execution

→ System and functionality testing

3) Regression test case execution

4) Defect Log | Fix

JAN 20-21 WEEKEND

WEEK-4

JAN 22 to JAN 27

1) UAT

2) Defect report

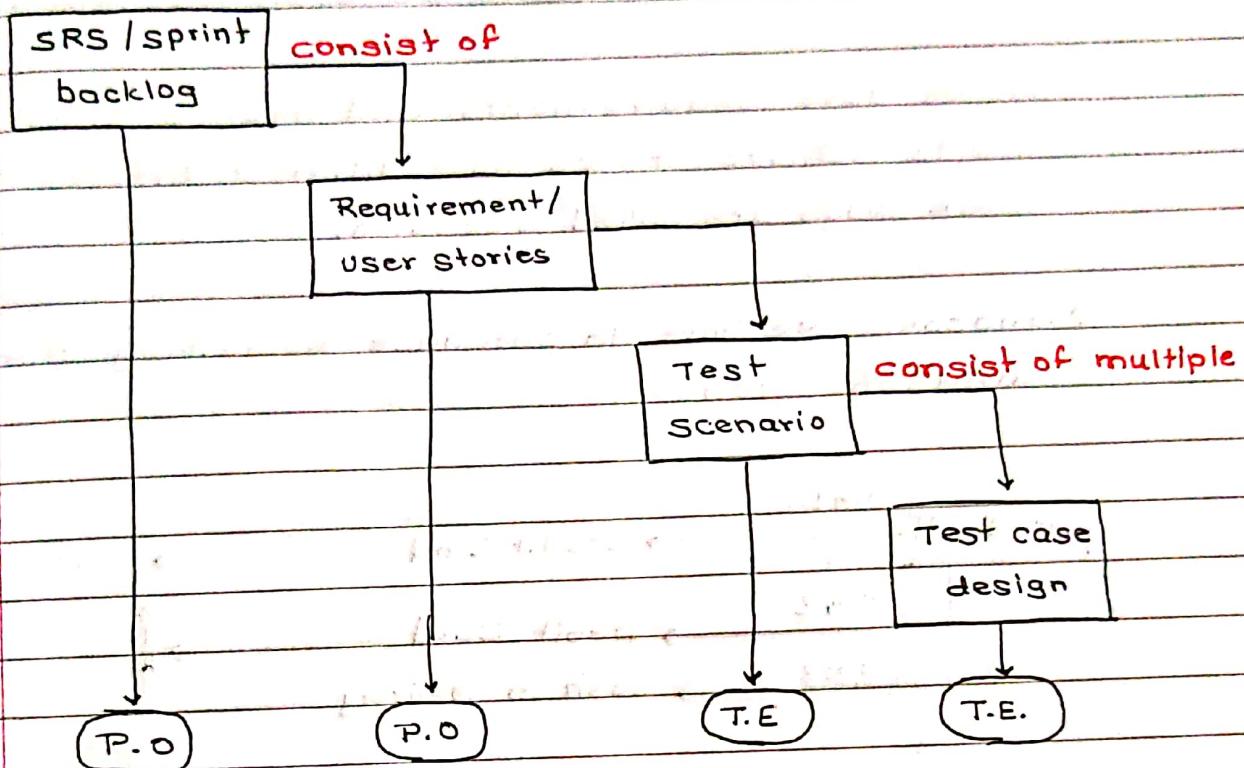
3) Test summary report

4) Test closure report

5) Next task (Sprint 2)

JAN 28 to 29 - Weekend

2) Test case design & scenario



1) Test case scenario <What to test>

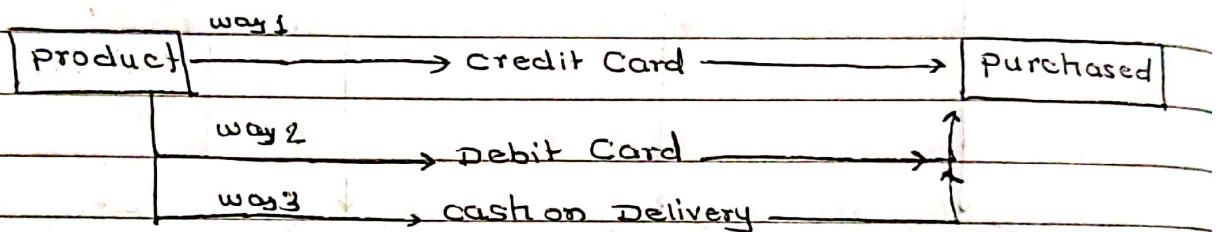
- 1) It is functionality
- 2) one scenario consist of multiple test cases
 - ↳ For SignUp
 - ↳ check Name field
 - check mob field

2) Test Case design <How to test>

- 1) condition to be applied?
- 2) Navigational statement to define functionality?
- 3) design is how to test?

1) Scenario

- 1) Scenario means ways to achieve requirements.
- 2) If we have requirements and desired output then how to achieve it, we have different different ways those ways are called scenario.
- 3) Suppose we have to purchase something from amazon then :-



4) Requirements :- Product & Purchase

Scenarios :- way 1, way 2, way 3

Functionality cover in scenario:- 1) credit card

2) debit card

3) cash on delivery

Checking of these functionality is test case.

→ WE ONLY WRITE POSITIVE TEST SCENARIO BUT WHILE CHECKING WE ALSO CHECK -ve SCENARIO.

2) Test cases

IMPQ :- How your test case be like?

- 1) Test case should cover all the functionality.
- 2) Test case should be understandable
- 3) Test case should be simple & easy.

4) we write test case in two ways:-

with the help of HPAQM		with the help of Excell sheet
---------------------------	--	----------------------------------

HP application

life cycle management

Scenario

1) TEST CASES FOR PEN

- 1) Verify if you are able to hold pen comfortably.
- 2) Verify if pen writes smoothly.
- 3) Verify if pen can write on variety of paper i.e., rough, smooth, glossy.
- 4) Verify if line drawn by the pen is as per expectation.
- 5) Verify if ink does not get dry if pen is open for some time.
- 6) Verify the color of ink should be constant from start to end.
- 7) Verify quality of material from which pen is made.
- 8) Verify if ink & material of pen is non toxic.
- 9) Verify if name of company should be visible clearly or not.
- 10) Verify if name written on the pen should not get erased easily.
- 11) Verify waterproof ink.
- 12) Verify if other refills fits to pen or not.

Scenario

2) Test case for keypad mobile

- 1) Verify that mobile has 0-9 buttons are present or not.
- 2) Verify that by pressing those buttons we can enter number or not.
- 3) Verify that by hitting call button after dialing number we can make call or not.
- 4) Verify that whether we can type sms or not.
- 5) Verify that whether we can receive sms or not.
- 6) Verify that whether we can receive call when phone is unlocked.
- 7) Verify that whether we can receive call when phone is locked.
- 8) Verify that when user end call at that time when phone is locked, it should not unlock the phone.
- 9) Verify whether the phone get unlock by using password.
- 10) Verify whether the phone get unlocked without using password or not.
- 11) Verify the screen has enough brightness or not.
- 12) Verify whether the phone shows dialed number list or not.
- 13) Verify where the phone store sms or not.
- 14) Verify whether user can call person using phone book.
- 15) Verify whether phone has memory mention in the specification.
- 16) Verify whether the phone has exact same color mention in the specification.
- 17) Verify font & style of number & alphabet present on mobile.
- 18) Verify dimension of screen as per specification or not.

3) Scenario for login page

i) For Computer

- 1) Enter valid email address & click on next. Verify if user can get option to enter password.
- 2) Enter invalid email address & click whether system shows correct error message.
- 3) Enter Do not enter any email address, click on next button & verify whether it shows error message & leave highlight the email id box.
- 4) Enter valid email ID
- 5) Enter valid mobile number and check whether user can get option of enter password.
- 6) Enter invalid mobile number & check whether system shows correct error message.
- 7) Leave mobile number field empty & check whether system shows correct error message & highlight the box.
- 8) Verify if user can log in with valid email ID & valid password.
- 9) Verify if user can not log in with ~~invalid user name~~ Email ID & wrong password.
- 10) Verify if user can log in with valid mobile number & wrong password.
- 11) Verify forgot Email functionality.
- 12) Verify forgot password functionality.

2) Login page scenario for mobile

- 1) Verify that user can log in with valid username and password.
- 2) Verify that user can not log in with invalid username & valid password. & show correct error message
- 3) Verify that user can not log in with valid username & invalid password & show correct error message
- 4) Verify that keep me sign in button functionality i.e., after exiting the application user should not get logged out from account.
- 5) Verify that keep me sign in button is unchecked by default.
- 6) Verify forgot username functionality.
- 7) Verify forgot password functionality.
- 8) Verify facebook button functionality if user can log in with social media account credential.
- 9) Verify if login button fits to mobile screen or not.

4) scenarios for sign up page [email]

- 1) Verify that special characters and symbols, numbers are not allowed in first name.
- 2) Verify that First name should accept string having characters only.
- 3) Verify that on leaving first name blank, system should show correct error message.
- 4) Verify that special character, numbers & symbols are not allowed in last name.
- 5) Verify that last number field should accept string having characters only.
- 6) Verify that leaving last name field empty, system should show error message.
- 7) Verify that system should show email ID suggestions.
- 8) Verify that system should not show duplicate email ID suggestion.
- 9) Verify that system should show error message & highlight mandatory field if leave it blank.
- 10) Verify that password & confirm password field should have same string.
- 11) Verify if password & confirm password have diff strings then error message should get display.
- 12) Verify that system should show strong password suggestions.
- 13) Verify that mobile number field accept only numeric values.
- 14) Verify when clicking on signup button if mandatory fields are filled, then system should open OTP page.

- 15) Verify that if any mandatory field leave as it is then system can not do sign in.
- 16) Verify that on Entering correct OTP, user should get loged in to the account.
- 17) verify that on entering incorrect OTP, user should not get to sign in to acc. & Error message should get display.
- 18) verify functionality of resend otp button.
- 19) verify on clicking on day, month, year in birthday section list of respected field get open.
- 20) Verify age calculation is mapped with birthdate or not.
- 21) Verify if radio buttons in front of male & female work properly or not.
- 22) Verify that system should show suggestions during on feeling of fields.

5) Test Scenarios for ATM machine

- 1) Verify that insertion of card by the user is as per specification.
- 2) Verify that machine do not accept expire card.
- 3) Verify that on insertion of correct card m/s do not show enter pin option directly.
- 4) Verify that on insertion of card m/s shows select language option.
- 5) Verify that touch of m/s screen panel should be soft & correct.
- 6) Verify that on selecting particular language next options should be in that language except numbers.
- 7) Verify that after selecting language m/s should show enter pin option.
- 8) Verify that on entering correct pin, system should show bank acc detail option like balance inquiry, withdraw.
- 9) Verify that on entering incorrect pin system should show error msg.
- 10) Verify that there should be limited number of attempts for entering password.
 - 11) Verify that after exidng limited attempts, there should be application of standard procedure like card blocking.
 - 12) Verify that pin entering procedure should be encrypted.
 - 13) Verify that after entering correct pin, select acc type option should be available for user.
 - 14) Verify that after selecting any option bank acc details options should be available for user.
 - 15) Verify that whenever user enter ammount it should be as per specification means min & max limit.

- 16) verify that user can not withdraw amount of money greater than the amount of money present in account.
- 17) verify that exactly same amount of money get withdraw which amount enter by user.
- 18) verify that user do not exceed maximum number of withdraw in per day.
- 19) verify that if ATM machine is out of cash then proper message should get display on screen & amount should not get deducted from user account.
- 20) Verify that if sudden electricity loss is there then amount should not get deducted from user's account.
- 21) Verify that user can do one transaction on insertion of card once.

6) Test Scenario for bike

- 1) Verify if the bike is electric start, kick start or both.
- 2) Verify if the bike start smoothly with all starter optn.
- 3) verify if ammount of pressure require for kick start.
- 4) Verify that bike run smoothly and attain desire speed as per specification.
- 5) verify pickup of bike.
- 6) verify down shifting of gear.
- 7) verify up shifting of gear.
- 8) verify if bike run in all wheather condition.
- 9) verify if bike can run on all types of road.
- 10) verify if bike can run on ramp or slope.
- 11) verify if bike both breaks working correctly.
- 12) verify sound of bike is under standerd decible limit.
- 13) verify pollution created by bike is within the limit.
- 14) verify clutch of bike work properly.
- 15) verify colour of bike is as per specification.
- 16) verify name of company on bike.
- 17) verify fuel capacity of bike.
- 18) verify type of fuel require for bike.
- 19) verify bike condition when air pressure in both tyres are same.
- 20) verify bike condition when air pressure in both tyres are not same.
- 21) verify indicator of bike is working or not.
- 22) verify indicator light of bike is working.
- 23) verify head lamp & tail lamp of bike is working.
- 24) verify whether bike has reserve oil.
- 25) verify bike has engine oil.
- 26) verify allignment of both wheels of bike

→ Test case scenario for calculator

- 1) Verify type of calculator whether it is scientific or normal calculator.
- 2) Verify calculator has all the buttons present.
- 3) Verify text written on the buttons should be readable.
- 4) Verify battery of calculator whether it has dry cells or on solar power.
- 5) Verify if calculator remains non-functional for some time then should get turn off automatically.
- 6) Verify screen/display of calculator whether they show input correctly.
- 7) Verify body material of calculator.
- 8) Verify ~~at~~ spacing between buttons, they should not be too close to each other.
- 9) Verify arithmetic operator working of calculator.
- 10) Verify pressure required to press buttons, it should not be more.
- 11) Verify memory functionality of calculator.
- 12) Verify navigation through previous operation result.
- 13) Verify that C button should cancel the operation.
- 14) Verify on off button functionality of calculator.
- 15) Verify limit of digit acceptance by calculator.
- 16) Verify ^{correctness} result of operation shown by the calculator.
- 17) Verify that user can delete digits by pressing backspace key.