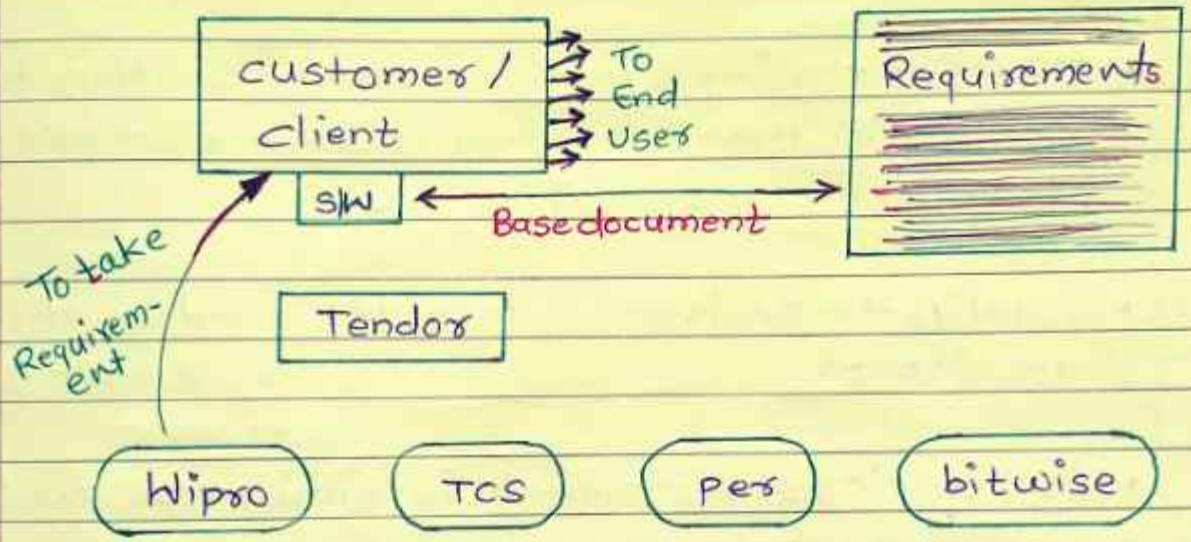
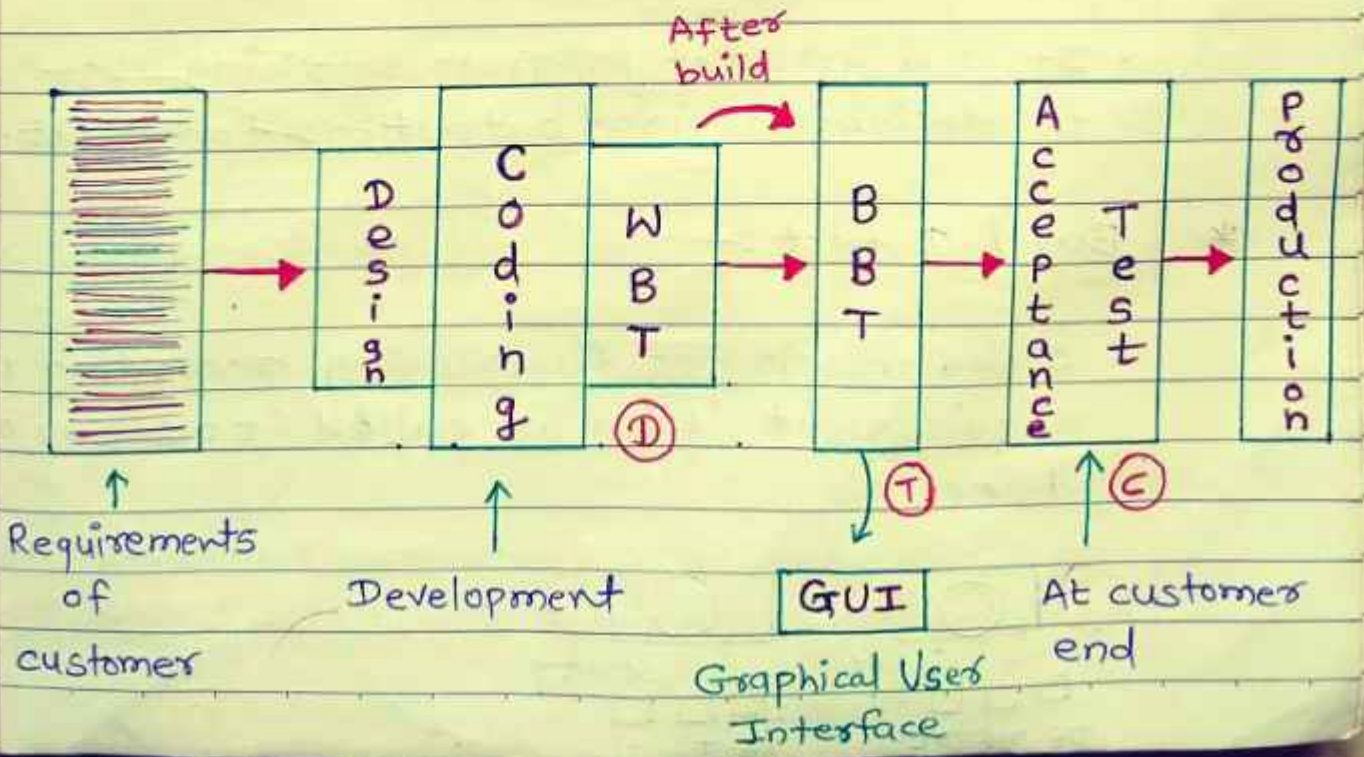
* Introduction *

* Main points in Manual Testing :-

1) Black box testing (BBT)
2) Defect life cycle. (DLC) (Defect Track DT)
3) Software test life cycle. (STLC) (Process)
4) White box testing (WBT)
5) Tools



* Requirement is the base document for the development and testing.



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* Environment :-

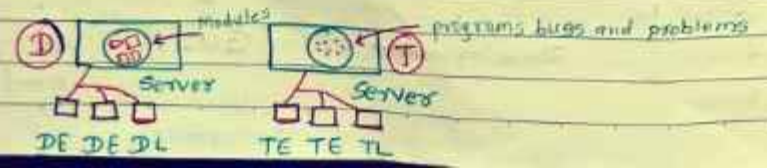
- It is the combination of hardware, software and network.
- If we are using environment for building the software, then we called it as "development environment".
- If we are using environment for testing the software, then we called it as "test env., or test bed or test harness."
- Usually, the environment is designed by the architect.
- Our testing environment is similar to production environment (customer environment).

* Software :-

- It is a group of program, working together to deliver desired output based on input.

* Bug / Defect :-

- A feature is not functioning according to the requirement, then we called it as "bug or defect".



* Software Testing :-

- It is the process of finding the bugs in the given Software.
- It is an execution of programs with an intension to find bugs, is called "software testing".

* Types of software testing :-

A) **White box testing** or unit testing or structural testing or Mutation testing or Open box testing or Glass box testing or Transparent testing.

B) **Black box testing** or closed box testing or Behavioral testing or Functionality testing.

* Automation testing :- Selenium, QTP, cyprus, Jinjer, etc.

* Extract transfer load :- CRUD operation.

* Performance testing :- Jmiter, Load runer.

* Quick testing :-

* Application Program Interface :- Postman

* Mobile Automation testing :- APM, cloud testing

* cloud testing :-

(Role) ↓ Future

* **SDET** :- Software Development Engineer in Test.

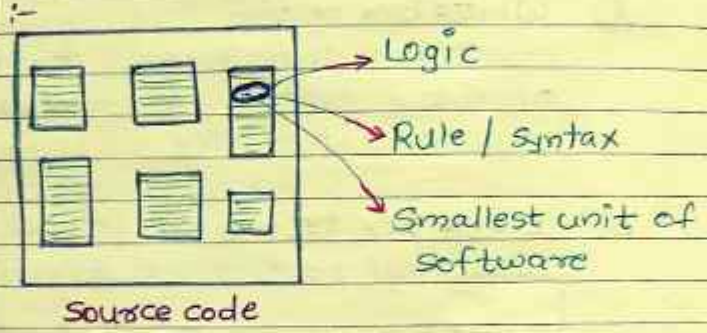
* Security Testing :-

* White box testing tool :- Junit , Test NG

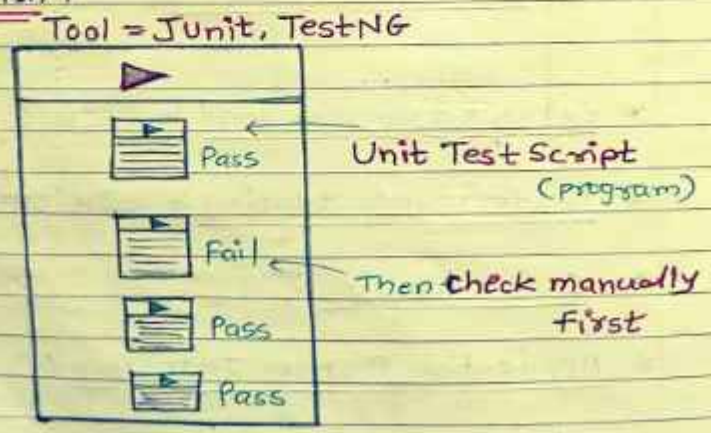
* White Box Testing (WBT) :-

- Testing the each and every line of ~~source~~ source code, is called as "White box testing (WBT)".

* A) Manual :-



* B) Automation :-



- Whenever, we receive a fail result in Automation testing, we should first check the source code manually to find problem.

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- If problem found, then make changes in the source code to resolved it.

- If there is no problem found in source code, then there must be problem in Unit test script. So make changes in unit test script and re-run it, until the process where test result is passed.

* Black Box Testing (BBT) :-

- Verification of an application against requirement specification.

- A) manual :-

- B) Automation :-

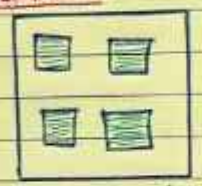
- Whenever, we receive a fail result in Automation testing, we should first check the source code manually to find problem.

- If there is bug found, then reporting to the developer team.

• If there is no bugs found in source code, then there will be error in Test script. So make changes in Test script and re-run it, until the result getting passed.

* * Test scripts are written by Tester.

* A) Manual :-



• WBT

Source code

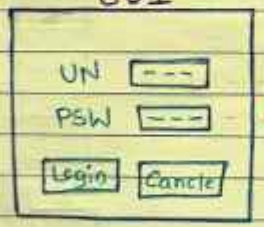
• Java → Java
• .Net → .Net
• C → C
• C# → C#

Tool :- JUnit, TestNG

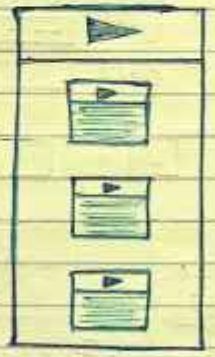
UNIT Test Script

* B) Automation :-

GUI



• BBT



Tool :- Se

Test Script

• Java
• .Net
• C
• C#

→ Java

* Black box testing :-

• Verification of an application against requirement specification.

• There are many types like :-

1) Functionality testing.
2) Integration testing
3) System testing.
4) Acceptance testing.
5) Smoke testing.
6) Adhoc testing.
7) Compatibility testing.
8) Exploratory testing.
9) Globalization testing.
10) Localization testing.
11) Performance testing.
12) Usability testing.
13) Recovery testing.
14) etc.

* 1) Functionality Testing OR Component Testing OR Field Level Testing :-

• Testing each & every component truely against requirement specification, is called as "functionality testing".

* Examples of components :-

1) Text field. Name [----]

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2) Radio button — Gender : ⊙ Male ○ Female

3) check box — ☑ I agree

4) Link — www.abcd.com

5) Menu

6) Drop down — ---- ▽ YOP

7) Search box

8) Buttons — Login | cancle

* Truely :- All possible Scenarios.

* Requirement :-

Bank – SRS

1) Login
⋮
30) Loans
30.1) Apply loan
30.1.1) First Name = Text field
30.1.1.1) should accept 10 to 15 character
⋮

* Need of software testing :-

- The softwares are used in business and if there is problem in software, then it will affect our customers business. So, we should find all the possible problems or defects.
- To improve the quality of software
- To check software Has built according to customers requirements or not.

* Difference betn WBT & BBT :- (Some points only)

- In black box, we do not need programming knowledge, as we are dealing with GUI (Graphical User Interface) only, but to perform white box testing, we need understand or knowledge on the program.
- To do black box testing, we need not understand the internal flow or design of source code, but for white box testing, we need understand flow or internal design of source code.

* Testing		* Tools
1) API	→	Postman
2) WBT	→	Junit, Test NG
3) BBT	→	Se
4) P.T.	→	Jmeter, Load runner
5) D.Tracting	→	JIRA, Bugzilla.
6) CI / CT	→	Jenkins

Date: 07/02/22

* SDET (Software Development Engineer In Test)

- CI/CD (Cont. Integration, Cont. Deployment)
- Testing
- API (FE, BE, Database)
- Program
- Dockers, etc
- cloud

*** Requirement :-**
1) +ve integers
2) Range 0 - 100

*** Software :-**

age [ ]

*** Testing :-**

18	✓	Ten	✗
0	✓	10 only	✗
100	✓	1□0	✗
-1	✗	[ ]	✗
99	✓	#$	✗
100□0	✗	Ten 10	✗

*** Testing Scenario :-**

1) Positive testing.
2) Negative testing.

	Component	Scenario	Expected Result
1)	Pincode [ ]	123456	✓
		678923	✓
		12345	✗
	→ 6 digit	00000	Ask customer
	→ +ve int	-123456	✗
		abcdef	✗
		#8*23	✗
		[ ]	✗
		8□2832	✗
		12CH23	✗
		012345	Ask cust.
		923SYE	✗
		#ab*2	✗
		□23342	✗
		ab□2*1	✗
2)	[ ][ ][ ][ ][ ]	1,2,3,4,5	✓
		-5,-2,-3,4,2	✓
	→ int array	a,b,-2,3,4,5	✗
	→ 5 digits	0,0,0,0,0	✓ Ask customer
		1,8,-1,-2	✓ Ask cust.
		@,2,-1,1,0	✗
		10,1,8,2,52	✓ Ask customer
		18,21,-2,4,2,5	✗
		9,@,*,2,4	✗
		*,#,2,8,1	✗
		3,3,9,9,9	✓
		x,y,#,2,8	✗
		4,*,□,1,2	✗
		[ ]	✗

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Component	Scenario	Expe. Result
Whatsapp	Siddhant	Contact, chat, Doc.
Search	Yes @	chats
Text field	[ ]	×
	Video	chats, file
	Audio	chat, files
	?	×
	Link	chats
	#123	contact, chat
	@ sid	contact, chat
	*	×
	4560	chats
	₹	chats
	$	×
	आभार	chats, file
	♡	chats
	+	×
	()	×
	GIF	chats
	link	chats
	/	×
	Δ	chats
	!	×
	®	✓ chats
	45%	contacts
	,	×
	=	×
	190 ₹	chats
	3.5	contacts

Component	Scenario	Expe. Result
Mob. Text field	1020304050	✓
Mob. Number	10203040	✓
→ [ ]	100bcdef23	
→ 10 digit	@12345	
	#@252128	
	abcdefghiz	
	0000000000	✓
	□28□2300	×
	[ ]	×
	-2823468901	×
	258.525.1545	×
	a45@28832	×
	%234552	×
	9999955555	✓
	2345	✓
	010@*2#	✓
	10 20 30 4050	✓
Email [ ]	sid	✓
	123	×
xyz @ abc.com	#abc	×
	SID	✓ Ask customer
char @ abc.com	[ ]	×
→ Only char.	S□d	×
→ Range 2-5	aaa	✓
	%ab	×
	आभार	×
	♡12	×
	Abc	✓
	-2abc	×
	0.bc	×

Assignment

Q) Write all possible scenerios for following :-

1) Amazon Text Field (search text field)
2) Whatsapp text status
3) Instagram User Name
4) Password text field → 8-15 char, allow alphnumeric also.
5) Folder name (Renaming) in diff operating system like windows, linux, IOS, android
6) Credit card text field in amazon.

→

Component	Scenario	Expected Result
* 1) Amazon Search Text Field	ABCDE	✓ shows related
	Shirt	✓
	T-shirt	✓
	98287	✓
	@287	✓
	#	✓
	*	✗
	@	✓
	Shop	✓
	-2.592	✓
	00000	✓
	@abc	✓
	===	✗ No result
	///	No result
	>=	No result
	Emojies	No result
	..*	✓
	[ ] space only	✗ (same page)
	2□931	✓
	microphone	✓

Component	Scenario	Expected Result
• Amazon Search Text Field	# ABC	✓
	# abc	✓
	①②③④	✓
	..23..	✓
	--abc	✓
	-- ABC	✓
	Dress	✓
	Offer	✓
	#*23	✓
	$	✓
	₹	✓
	-0000	✓
	a.....m	✓
	b@123	✓
	~~Profit~~	✓ serched Related
	Rohit	✓
	Suggestion	✓
	Search	✓
	Navigation	✓
	CL	✓
	ABC245	✓
	abc992	✓
	abc_28	✓
	ABC_92	✓
	>	No result
	<	No result
	!	✓
	,	✓
	.	✓
	XXL	✓
	XL	✓

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Component	Scenario	Expected Result
• Amazon Search Text Field	4XL	✓
	L	✓
	M	✓
	S	✓
	□23 □AB	✓
	AB□234	✓
	$ $	✓
	mm-24	✓
	AB-00	✓
	p@shirt	✓
	# New	✓
	# Sale	✓
	* upcoming	✓
	Brands	✓
	- Team	✓
	Phone @123	✓
	paste	✓
	abcdefghijklmnop	No result
	12345678901234 5292	No result
	*@# * # $ ₹ * @@	No result
	¥	No Result
	()	✓
	+	blank page
	–	✓
	?	✓
	®	No result
	©	No result
	✓	No result
	×	No result
	:	No result
	Scan by camera	✓

Component	Scenario	Expected Result
* 2) Whatsapp Text Status	ABCD	✓
	abcd	✓
	1234	✓
	Abcd	✓
	aBCD	✓
	□	✓ Accept but did'nt placement
	Emojis	✓
	GIF	✓
	Stickers	Not allowed / support
	मराठी	✓
	Other Languages	✓
	COPY Paste	✓ } Allowed only 700 chars.
	abcdefg*#123 ...	✓
	Ab□BC	✓
	@# * #	✓
	* AbC *	Text become bold
	~ AbC ~	~~Abc~~ (middle line on text)
	# AbC #	✓ As it is
	@ AbC @	✓
	~ AbC ~ #	~~Abc~~ #
	~□ AbC ~	✓ As it is (No change)
	* □ AbC *	✓ As it is (No change)
	Cursor	✓
	Chat + Emoji	✓
	– text –	Font change
	– text □ –	No font change
	" text "	Font change
	"□ text"	No fond change
	Max. Duration	15 seconds
	Valid For duration	24 Hr

Component	Scenario	Expected Result
• Whatsapp text status	• Font button for change font	✓
	• Background colour change	✓
	• Text colour change	✗
	• Text size change	Auto as per text
	• Customization	✓
	• Delete	✓
	• Edit after placing	✗
	• Sending	✓
	• Copy	✗
	• Hold the screen	Increasing View time
	• How many seen	✓
	• Who they are	✓
	• Limit on status No.	✗ (No any)
	• www.abcd.com	✓
	• Links	✓
	1/2 2/3 4/6 3/8 2/8	✓
	3.5 4.5 9.5 10.5	✓
	$\sqrt{4}$	✓
	2^2 4^2 6^2	Not support
	12/08/2010	✓
	Images	✗
	videos	✗
	docs	✗

Component	Scenario	Expected Result
* 3) Instagram User Name	ABC	✗
	abc	✓
	Abc	✗
	aBc	✗
	@*#	✗
	sid123	✓
	a□bc	a-bc displaying
	□	– displaying
	1234	✗ (only not allowe
	@	✗
	–	✓
	.	✓
	abcdefghijmnpq...	✓ (30 charecters)
	1238925abcj....	✓ (30 digits)
	मराठी	✗
	other languages	✗
	.abc	✗
	.....	✗
	–abc	✗
	4554sid	✓
	sid0437.	✗ (end should not be period)
	sid.0437	✓
	Given name is allready used, then	That name cant be accepted
	Renaming	✓ After 14 days
	delete	✗
	edit	✓
	suggestions	✓
	Cursor	✓
	Emojis	✗

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Component	Scenario	Expected Result
• Instagram Uses Name	GIF	✗
	IXVI	✗
	copy paste	✓
	+	✗
	?	✗
	#	✗
	*	✗
	sid_sx_043_23	✓
	aks.08.sid.07	✓
	aks_sid.0437	✓
	148.298.47	✓
	247_548_791	✓
	vish.083_	✗
	Vish_083.	✗
	www.abcd.com	✓
	1/2 3/2 4/2 abc	✗
	8.532.48 1/2 @	✗
	stickers	✗
	①②③ sid0437	✗
	ⓐⓑⓒ437@	✗
	√2	✗
	$2^2 8^2 4^2$	✗
	12/08/2021	✗
	sticker	✗
	image	✗
	file	✗

Component	Scenario	Expected Result
* 4> Password Text Field	abcdefghi	✓
	1234567890	✓
	ABCDEFGHIJ	✓
	AbcDKLMob	✓
→ 8-15 chars.	Abcda	✗
→ Allow Alpha-numerics.	AABBCD	✗
	sid@043735	✓
	sid475abc	✓
	#*sid**123	✓
	457@234#	✓
	**********	✓
	sid-234_abc	✓
	Emojis	✗
	GIF	✗
	Copy paste	✗
	+-#@	✗
	मराठी	✗
	sid □123□*	✗
	□	✗
	.....	✓
	①②③sid④**	✗
	ⓐⓑⓒ123.sid	✗
	1/2 3/2 4/2 3/2 abcd	✗
	3.5 4.5 8.5 4.5	✓
	IXVIIXIIX	✗
	Suggestions	✓ (when creating)
	Cursor	
	Suggestions	✗ (while login)
	stickers	✗
	abc.123.xyz	✓
	12/07/2015	✗

Component	Scenario	Expected Result
* 5) Folder Renaming	ABCD	✓
	abCD	✓
	a	✓
a) (For windows)	A	✓
	abc □ ac	✓
	Abc 123	✓
	12345	✓
	?	✗
	*	✗
	Same name	✗ error popup msg
	Long name	250 char. max
	abc\01\xy	✗
	Keywords as name	✗
	मराठी	✓
	other language	✓
	Abc_abc	✗
	abc @ 123	✗
	&	✓
	<^>	✗
	@	✓
	single click mouse	should not open
	double click mouse	should open
	copy paste	✓
	/:|	✗
	()	✗
	%	✗
	Renaming	✓ allowed
	Reserved names	✗
	[ ]	✓
	½ 3½ 4½	✗
	emoji	✓

Component	Scenario	Expected Result
• Folder Renaming	abcd	✓
	ABCD	✓
	Abc	✓
b) (For Android)	CBA	✓
	1234	✓
	sid @ 123	✓
	मराठी	✓
	other langauge	✓
	?	✗ Invalid
	Abc □ 123	✓
	Same name	✗ error msg
	Long name	✓
	abc\ bd	✗
	*	✗
	#	✓
	Abc &	✓
	&	✓
	@	✓
	IXIVVI	✗
	⅓ 3/2	✓
	—	✓
	.	File gets hidden
	copy paste	✓
	© ®	✓
	① ② ③ ④ abc	✗
	Emoji	✓
	sticker	✗
	GIF	✗
	abc_xyz	✓
	√2	✓
	$2^2 4^2$	Not support

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Component	Scenario	Expected Result
* 6) Credit card Text Field in Amazon	a) Card Numbers	
	4571 6132 0243 1123	✓
	4571623202431123	✗
	45 7162 3202 4305	✗
a) (For VISA)	4571 abcd 3248 2435	✗
	4571 @*12 34#2 1234	✗
	4571 6132 0243 abcd	✗
	4571 *•?* 12#$ ••••	✗
	4571 □ □ □	✗
	3412 2142 1234 1234	✗ (Starting Not exp
	b) Expiry Date	
	MM YY	✓
	12 22	✓
	ab xy	✗
	*2 #1	✗
	21 12	✗
	AB CD	✗
	□ 29	✗
	□ □	✗
	c) CVV/security code	
	342	✓
	000	✓
	*12	✗
	1246	✗
	12	✗
	A10	✗
	0432	✗
	d) Card Holder Name	
	Siddhant shinde	✓
	Sid@0437	✗
	Sid0437.shinde	✗

Component	Scenario	Expected Result
• Credit card Text Field in Amazon	a) Card Number :-	•
	5254 4541 7221 0121	✓
	5254452172210121	✗
b)	5254 □ 7221 0121	✗
(For Mastercard)	5254 4521 7221	✗
	5254 abcd 7214 0128	✗
	5□54 4521 □721 0128	✗
	*524 #289 •284 •$12	✗
	0000 0000 0000 0000	✗
	b) Name on Card :-	
	Full name	✓
	Short name (nick)	✗
	Use of spell. characters	✗
	Use of numbers	✗
	Extra spaces	✗
	c) Expiry Date :-	
	MM YY	✓
	10 28	✓
	*2 #21	✗
	00 00	✗
	01 22	✓
	@1 •2	✗
	d) CVV / Sequrity code :-	
	Three Numbers	✓
	342	✓
	3□2□4	✗
	32	✗
	3*4	✗
	@34	✗
	a b 4	✗
	0 0 0	✗

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Component	Scenario	Expected Result
• Credit card Text field, in Amazon	a) Card Number	
	6069 4512 2318 0101	✓
	6069 4512 2318 0101	✗
	606 94325 2318 0101	✗
⇒ (For RuPay)	6069 abcd 0101 4512	✗
	6069 [ ] 0445 4502	✗
	*2#1 5210 0101 #!21	✗
	0000 0000 0000 0000	✗
	6269 52□2 48□4 2102	✗
	b) Name on Card :-	
	Full Name	✓
	Short Name (Nick)	✗
	special character	✗
	Numeric values	✗
	Extra spaces	✗
	c) Expiry date :-	
	MM YY	
	05 25	✓
	*2 25	✗
	#2 [ ]	✗
	A2 B4	✗
	√22 √44	Invalid
	d) CVV / Security Code :-	
	Three number	
	123	✓
	12	✗
	12 □	✗
	12 *	✗
	@ 12	✗
	12 A	✗
	000	✓

Component	Scenario	Expected Result
• Folder Renaming	ABCD	✓
	abcd	✓
	Abcd	✓
c) (For IOS)	a	✓
	A	✓
	12345	✓
	9	✗
	*	✗
	Same name	popup reg error
	Long name	As per range
	abc\01\ab	✗
	Reserved names	✗
	मराठी	
	AbC-xyz	✗
	abc @ 123	✗
	&	✓
	> ^ <	✗
	copy paste	✓
	()	✗
	%	✗
	.	✗
	[ ]	✓
	1/2 3½ 4/8	✗
	emoji	✗
	stickers	✗
	1.2.524	✓
	IX IVII	✗
	12/05/1995	✓
	①②ⓐⓑ	✗
	#abc	✓
	Multiple Renaming	✓

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03/02/22

Q) How to tell functionality Scenario's :-

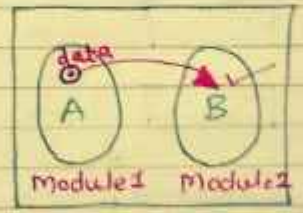
a) Test
b) check
c) Verify
d) Validate
e) Confirm

* Scenarios for Whatapp's mike Icon :-

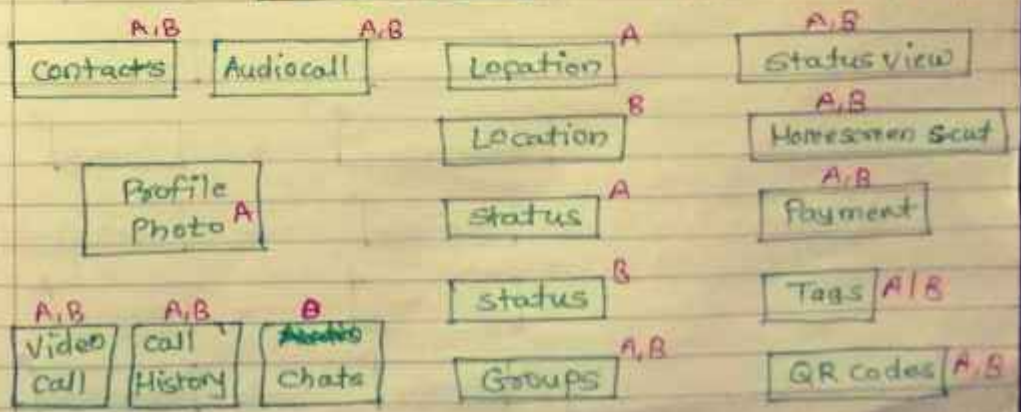
Component	Scenario	Expected Result
	1) Visible or Not	Green icon
	2) Tap Once	2.1) error msg shown
		2.2) Hold to record, record sending get realease it.
		2.3) Alerst sound on
	3) Tap & Hold	3.1) Icon be comes big
		3.2) Slide to cancle option showing
		3.3) Record start
		3.4) Lock icon should be unable
		3.5) Mike icon should be blinking
		3.6) Keybords should be disable
		3.7) Call icons (audio & video) disable
		3.8) Lock icon should be blinking
	3.9) Chat should be visible	
		3.10) Timer should be displayed.
		3.11) should vibrate
		3.12) Other person gets its notification / msg (∵ abc recording audio)
		3.13) Data usage may be applied.
		3.14) microphone should get input from surrounding

*2] Integration Testing :-

- Testing the data flow between two modules, is called "integration testing".



① * Ex.:- Inte. Scenario for WAPP Profile photo



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2) For food order place

Place order (A) → My order (A)

3) Amazon app

Product descript. Page (A) → Cart (A)

4) Banking transaction

Amount Transfer (A) → Alc balance (A or B also)

5) Gmail :-

compose (A) → Sent (A)

compose (A) → inbox (B)

inbox (A) → Trash (A)

Trash (A) → inbox (A)

inbox (A) → starred (A)

un starred (A) → inbox (A)

inbox (A) → Snoozed (A)

unSnoozed (A) → inbox (A)

in box (A) → important (A)

compose (A) → draft (A)

draft (A) → compose (A)

(A) compose → (B) spam

scheduled (A) → compose (A)

Outbox (A) → compose (A)

All mail (A) → inbox (A)

inbox (A) → spam (A)

spam (A) → inbox (A)

spam (A) → Compose (A)

inbox (A) → bin (A)

setting (A) → Setting field (A)

contacts (A) → App Search Google Play (A)

Calender (A) → App Search Google Play (A)

Compose (A) → Attach (A)

compose (A) → insert (A)

compose (A) → forward (A)

Meet (A) → New meeting (A)

Meet (A) → Join meeting with code (A)

New meeting (A) → options (A)

Join meeting with code (A) → options to join (A)

Profile (A) → Accounts (A)

Accounts (A) → Manage (A)

Accounts (A) → Remove (A)

Accounts (A) → Switch A/c (A)

Search (A) → Results (A)

Audio icon (A) → Results (A)

Search (A) → Search History (A)

Help (A) → options feedback (A)

Social (A) → Inbox (A)

Promotion (A) → Inbox (A)

Sent (A) → Notification (B)

sent (A) → Popup msg mail send (A)

inbox (A) → print (A)

inbox (A) → forward (A)

inbox (A) → Reply (A)

inbox (A) → Block (A)

inbix (A) → Reply all (A)

Profile → Privacy policy

Profile → Terms of service

Inbox → Mute

Inbox → move

Sent → delete

delete → bin

Setting → General setting

Setting → Add account

Add account → Profile

Compose
- → inbox
- → All mail
- → Primary → Promotion
- → Social
- → Important → Star, Snooze
- → scheduled
- → Spam
- → Trash

Assignment

* NOTE :-

- Consider one module and find all possible scenario around that module and then go to next module

Q] Write Integration Scenarios for :-
1) Amazon (50)
2) OLX

→ 1) Integration Scenarios for Amazon :- (Mobile App)

Products
- → categories
- → Filter → Department
- → cart
- → Buy
- → Ratings

Home (select)
- → Prime
- → Amazon Pay
- → Products list
- → Categories
- → Advertisements
- → Profile
- → cart
- → Options List
- → Delivery address
- → Search
- → Scan / click
- → Mike to [redacted] search
- → Deals of the day
- → Scrolling to varity
- → Speak to shop

Search (View select)
- → History
- → Recents
- → Suggestions
- → Mike
- → Scan
- → category
- → Filter
- → Results
- → prime
- → Address
- → Related
- → [redacted] searched
- → [redacted] products
- → Speak to shop

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Prime (select)
- prime plans
- Advertisement
- Prime offers
- Music
- Gaming
- Rewards
- Exclusive deals
- Fast delivery

Address (Edit)
- Add
- Change
- Choose
- Enter pincode
- Use current location
- Remove

Amazon Pay (select)
- Add banking A/c
- Amazon pay balance
  - Add money
  - Options
  - Advertisement
- Amo pay later
- Pay UPI
- A Pay ICICI card
- Scan & Pay
- send money
- Get payment
- Invite & earn
- Near me
- Payment list
- Transcations
- **Rewards**
  - cashback
  - coupons
  - Gift points
- Recharges
- Pay bills
- Tickets booking
- Gifts
- Donate
- Advertisement
- Account
- KYC
- Help
- offers
- cashback earned

Categories (select)
- Fresh
- Mobiles
- Fashion
- Mini TV
- Essentials
- Electronics
- Home
- Appliances
- Book
- Toys
- Health
- Personal care
- Furniture
- Gaming
- Funzone
- Payments
- Booking
- Automotive
- Gifting
- Groceries
- Beauty
- Personal care
- Amazon pay
- Your things

Scan
- suggestion
- search
- Flash light
- Help
- Amazon lens
- Bar code scanner
- Relevant products list
- Camera functions/mice

cart (select)
- Buy
- Total amount
- Lists of produc
- Delete
- Save for later
- Secure payment
- safe delivery
- saved items
- Related items
- Add gifts
- Delivery options
- Details
- offers
- Suggestions
- Exchange
- Add accessories
- Warranty
- Description
- Proceed to buy

Product (select & view)
- Related list
- Brands
- Price
- Sellers
- Delivery partner
- Warranty
- Description
- Advertisement
- Questions & Ans
- Comments
- Offers
- Payments
- Share

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Orders (View & Select)
- Search field
- Filter
- History
- Recharge & bills paids list
- Buy again
- Profile
- cart
- Proceed to buy

Placing order (Select)
- Address → Delivery Partner Also
- Quantity → Delivery Partner Also
- Price → Delivery Partner Also
- Payment → Delivery Partner Also
- Tracking → Delivery Partner Also
- Cost
- Buy
- Delivery option
- Delivery period
- Wishlist

Confirm order (Select)
- Text msg
- Notification (H) & (B)
- Gmail
- Your order
- Buy again
- Payment
- address
- Time period
- Cancle order
- options
  - Add more
  - Remove

Account or Profile (Select & edit & view)
- Orders
- Wishlist
- Manage Ac
- Address
- Live location
- Bank Ac details
- Payment details
- Edit
- Activity
- customize
- Notification arrived
- Privacy
- Security
- Help
- Login & password
- Liked items

Payment (Choose)
- Visa
- UPI
- Net banking
- Debit
- EMI
- COD
- Amazon Pay
- Cancle

Manage Account (Edit & select)
- Login
- Verification by OTP & Email
- Add address
- Payment method
- Business account
- Privacy
- Prime
- Security
- Seller account
- Review
- Sms alert

profile photo
- (your side) (A)
- Account
- ~~Check~~ A Pay
- All
- Order
- ~~Share / Orders Video (B)~~
- ~~A Pay~~
- ~~All~~
- ~~User ID~~
- Other User (B)
- Amazon Pay
- User ID

Personalization
- Wishlist
- Profile
- Reccommendations

- Order History & Reporting → DWNLD
- Download → File Manager
- Write Review → Customer Service

Customer service (Select)
- Your orders
- FAQ's
- Return
- Refund
- Am Pay Transcations
- Account setting
- Help
- Search
- Chat with us (B)
- Talk to us (B)

} company side support (B)

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* 2) Integration Scenarios for OLX :- (Mobile App)

Home
- Search
- Address
- Products
- categories
- Add new
- Chats
- My adds
- Account
- Notification
- Sell car
- buy car
- Filter
- Advertisement

(select)

search
- Recent
- Recommanded
- Address
- Filters
- Suggestions
- categories
- Result
- Related item
- Nearby places
- Sell products
- Featured

(viewing & select)

(A) Yours side (A)

Buy car

(View)
- Budget
- Brand
- Year
- Recommanded
- search
- Address
- Products
- Details
- Description
- Location
- Share
- Chat
- Call
- Report

Sellers side (B)

(ADD)
- Nearby Search
- Description
- Price
- Notification (who liked)
- chat
- call
- Address
- Verified
- Ad ID
- Contacts

(A) Yours side (A)

Chats
- All
- Buying
- selling
- Filters
- Meeting
- Unread
- Important
- History
- Pop-up Noti
- Recent
- Delete
- Reply
- Questions
- Make offer
- Report user
- Block user

(B) customer/seller side

- All
- Buying
- selling
- Filter
- Meeting
- Unread
- Important
- History
- Pop-up Notification
- Recent
- Delete
- Reply
- Answers
- make counter offer
- Report msg, block notification

Yours side (A)

Sell car

(ADD)
- Auto fill
- Manually fill
- Details
- Description
- Price
- Location
- Year
- Chat
- Call
- Notification
- counter offer
- Name
- ADs

Buyer side (B)

(View)
- Search
- Brand
- Budget
- Recommanded
- Location
- Details
- share
- call
- chat
- make offer

- Liked item → My adds
- share → All possible apps and social medias & plat forms

- My Adds → Ads
- Ads → Post
- My adds → Favourites
- Favourite → Discover

Profile
- → Edit
- → Following
- → Followers
- → Share

- other also see

- Privacy → change password
- **change password**
  - → current password
  - → New password
  - → Confirm
  - → Save

  (Edit)

- **Notification**
  - → Recommandations
  - → Updates
  - → offers
  - → chats
  - → calls
  - → Reports

  (View)

Categories
- → cars
- → Properties
- → Mobiles
- → Jobs
- → Bikes
- → Electronics Appliances
- → spare parts
- → Furniture
- → Fashion
- → Sport
- → Pets
- → Services

(Select)

Privacy
- → Logout
- → Logout from all devices
- → Delete account
- → Save
- → Help

(Select)

My Orders
- → Active
- → Scheduled
- → Expired
- → Recommanded
- → Billing
- → Invoices

(Select)

- **Buy Packages**
  - → Select categories
  - → Select location

Profile photo
- (A) Yours side
  - → Account
  - → chat
  - → All
  - → Recent
- (B) Buyer/seller side
  - → chat
  - → User ID
  - → All
  - → Recent

Your side (A)

- All ←
- Meeting ←
- Unread ←
- Important ←
- History ←
- Recent ←

All chat
- **Buying chat**
- **Selling chat**

Buyer/seller side (B)

- → All
- → meeting
- → unread
- → Important
- → History
- → Recent

- Language → change Langauge
- Language → All possible changes according to selected langauge

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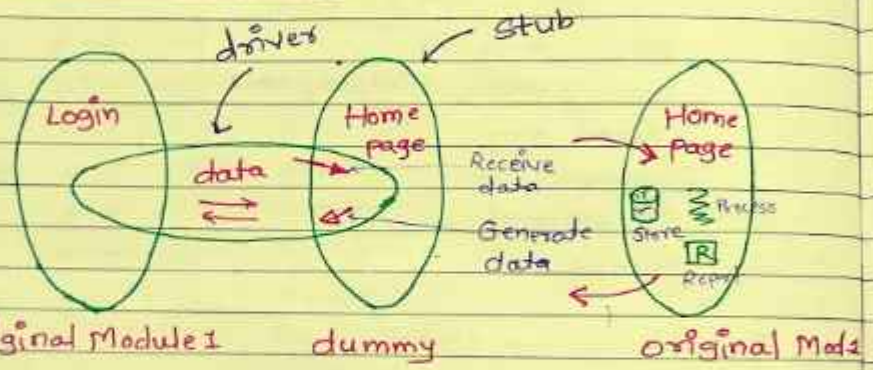
Date: 09/02/22

Q] What is System Integration?

→ When there is data flow between two different software systems (apps), then we called it as "system integration".

* e.g.:- OS system, Google map.

* Stubs and Drivers:-



a) Stub :-

- It is a dummy module which behaves like original module.
- It can generate data OR Receive the data.

b) Driver:-

- It is a software which sets up test environment between original module and stub.
- It does transcation of data between original module and stub

* Types of Integration Testing :-

1) Incremental Integration Testing
2) Non-incremental Integration Testing.

- If we incrementaly add a module and test the data flow between them, then we call it as "incremental integration testing" or "sandwich testing".

- If we are adding all modules at a short (one place/platform) and testing the data flow between them, then we call it as "Non-incremental Integration testing" OR "Bigbank Testing".

* A) Types of Incremental Integration Testing :-

1) Top down increment integration testing.
2) Bottom up incremental integration testing

- In this, if we are adding modules incrementaly where in added module is child of previous module, then we call it as "Top down incremental integration testing". (P) → (C) → (C1) →

- If we are adding modules incrementaly, such as added module is parent of previous module, then we call it as "Bottom up incremental integration testing". (C) → (P) → (P1)

Q.] Where do we use stub and driver?

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- We use stub in top down incremental integration instead of parent module.

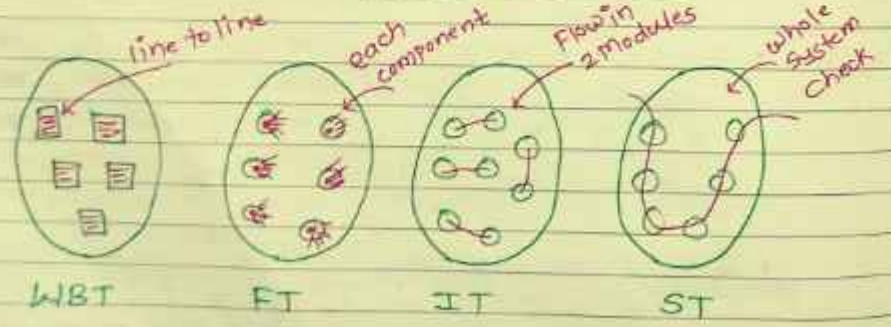
- We use driver in bottom up incremental integration testing instead of child module.

Q] How to tell integration scenario ?

Verify		Displaying	
Test	M_1	Reflecting	M_2
Check		showing	
Validate		visible	
Confirm			

* System Testing :-

- It is end to end testing where testing environment is similar to production environment.



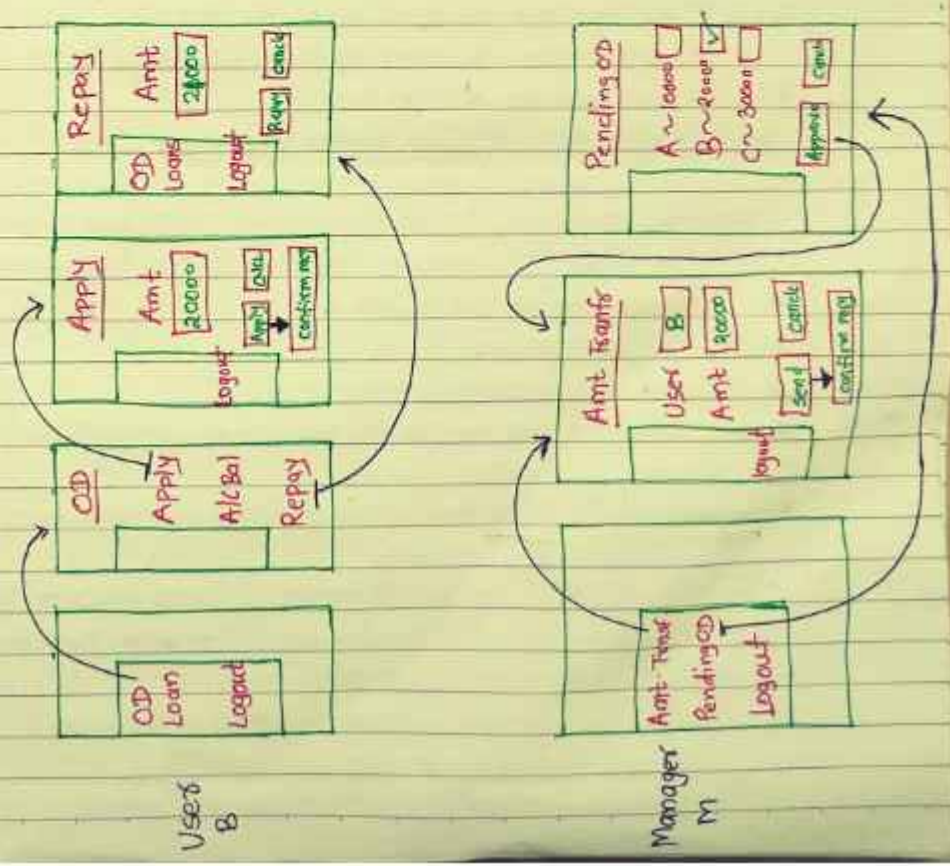
* end to end :-

- Consider a business scenario and check if software is capable of handling it or not.

- Navigate through all feature and check if end features are functioning or not.

* Requirements :-

1) After one month of O.D. charge 4% interest and 200 activation fees.
2) If O.D. is taken for second consecutive time, then 4% interest should only be charged.
3) If O.D is taken for third consecutive time, then (4% interest - 200 activation charge) should be charged.



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* Scenario 1 :-

1) Login as user B.
2) click on OD Link.
3) click on Apply link.
4) Enter 20,000 in amount text field and click on apply button.
5) Click on Logout link
6) Login as manager
7) click on Pending OD link.
8) Select user B's check box (requested)
9) click on Approve button.
10) Then in Amount transfer, enter B in user text field and enter 20,000 in amount text field.
11) Click on send button.
12) click on logout link.

• Here, for checking total Repay amount, we have to change date of server to next month ahead.

14) Login as user B.
15) click on OD link.
16) click on Repay link.
13) Change server date to next month ahead.

* Expected Result :-

• 21000 should be displayed. (20000 OD + 800 (4%) int. + 200 Act. fees)

* Scenario 2 :-

1) Login as user B.
2) click on OD Link
3) click on Apply Link.
4) Enter 20,000 in amount text field and click on apply button.
5) Click on logout link.
6) Login as manager
7) Pending OD link - click.
8) Select user B's check box
9) click on Approve button & click Amt transfer
10) Enter B in user text field and enter 21000 in amount text field
11) Click on send button.
12) click on logout link.

For Testing purpose extra 1000

13) Change server date to next month ahead
14) Login as user B & click on OD link
15) click on Repay link.
16) click on Repay button which displaying 21000
17) click on Logout button.

18) Now login as user B.
19) click on OD link.
20) click on apply link.
21) Enter 20000 in amount text field and click on apply button.
22) click on logout link.

23) Now, Login as manager.

24) click on pending OD link.
25) Select user B's checkbox.
26) Click on approve button.
27) Now, in Amount transfer, enter 20000 in Amount text field and user B in user text field.
28) Click on send button.
29) Click on logout link.

30) Now, change server date to next month
31) Login as user B.
32) Click on OD link.
33) Click on Repay link.

* Expected Result :-

• 20800 should be displayed. (OD 20000 + 800 4% Int)

* Scenario-3 :-

1) Login as user B.
2) Click on OD link.
3) Click on Apply link.
4) Enter 20000 in amount text field and click on apply button.
5) Click on Logout link.
6) Now, Login as manager.
7) Click on pending OD link.
8) Select user B's request check box.
9) Click on Approve button.
10) Now, click on amount transfer link.

Assignment

11) Enter "B" in user text field and enter 21,000 in amount text field.
Extra 1000 is for convenience in further Testing
12) click on send button.
13) click on Logout link.

14) Now change server date to next month ahead.
15) Login as user B and click on OD link.
16) Click on Repay link.
17) (Displaying 21000) click on Repay button.
18) click on Logout link.

19) Now, login as user B & click on OD link.
20) Click on apply link
21) Enter 20000 in amount text field and click on apply button.
22) Click on logout button (link)
23) Now login as manager.
24) Click on Pending OD link.
25) Select user B's request check box and click on approve button.
26) Click on amount transfer link and Enter 20800 in amount text field and 'B' in user text field.
Extra 800 for further testing convinience
27) Click on send button.
28) Click on Logout link.

29) Now, change server date to next month.
30) Login as user B. & click on OD link.
31) Click on Repay link.
32) (Displaying 20800) click on Repay button.
33) click on Logout link

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34) Now, Login as user B and click on OD link.
35) Click on Apply link.
36) Enter 20000 in amount text field and click on Apply button.
37) Click on logout link.
38) Now, Login as manager.
39) Click on Pending OD link.
40) Select user B's request check box and click on approve button.
41) Click on Amount transfer link.
42) Enter 20,000 in amount text field and "B" in user text field.
43) Click on Send button.
44) Click on Logout link.

45) Now, change server date to next month.
46) Login as user B and click on OD link.
47) Now, click on Repay Link.

* Expected Result :-

- 20600 should be displayed.
  (OD20000 + 4% interest − 200 Activation Fees)

Q) Tell some system scenario for following :-
1) Amazon 2) OLA 3) Swiggy 4) YouTube
5) Instagram, etc.

Amazon- 1) User is able to buy a product or not.
OLA- 2) User is able to book a ride or not.
Swiggy- 3) User is able to place an order by applying coupon or not.

Youtube- 4) User is able to block a channel or not.
User is able to subscribe a channel or not.
User is able to add video in playlist or not.
Insta- 5) User is able to create an account or not.

* Acceptance Testing :-

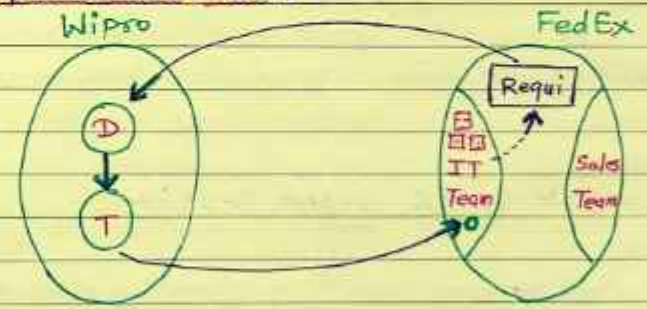
- It is a type of testing done by customers before moving the product to production.

- Across industry, there are many ways of executing acceptance testing.

- There are many approaches like :-

* Approach No :- 1 :-

1)



- It is end to end testing done by IT engineers of customer, where they check if software is capable of handling real time business scenarios or not.

Approach No:- 2 OR End User testing

2) UAT (User Acceptance testing) OR Beta Testing :-

- It is end to end testing done by end users.

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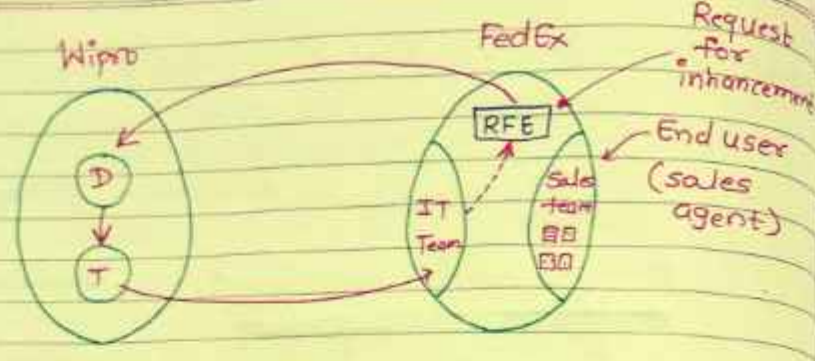


Wherein, they use the application for particular period of time and check if software is capable of handling real time business scenarios or not.

* 3) Approach No. 3 :-

- It is end to end testing, where our own test engineers seat at customers place and check capable of handling (software) real time business scenario or not.

* 4) Approach No. 4 OR Alpha Testing :-

- It is end to end testing done by our own test engineers seating at our own location and check whether software is capable of handling real time business scenarios or not.

Q] → 1) What is accepting testing ?

* Answer :- Define & tell all approaches.

2) What are types of acceptance testing ?
→ Alpha & Beta & define them.

* Smoke Testing :-

* Consider following applications for smoke testing

* 1) Camera :-

Features to be Tested	Features to not tested.
photo capture	Night mode
Focus	Short video
Video recording	slow motion
~~Pro facility~~	Panaroma
Zoom in	Time lapse
Zoom out	Filters, Pro facility
Explosure	various modes
Flashlight	movie frame
Captured pics	Settings
captured video	gridline
Google lens scanner	Pro colour
Flip camera Front/Back	Macro
Lanching	Tilt shift
icon display	Beautify
	HDR
	Edit options
	Location
	Help

* 2) Gmail :-

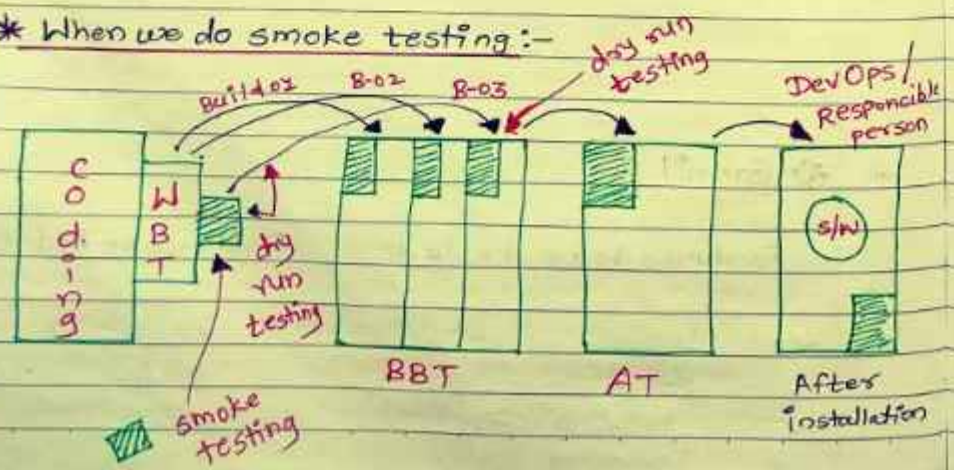
Features to be tested	Features to not be tested
Login	Profile photo
Compose	Profile info edit
drafts	Snoozed
Lanching	

* Features to be tested	* Feature not to be tested
Attachments	Important
[redacted]	Scheduled
Forward	Calender
[redacted] Search	Contacts
Inbox	Settings
Send	Help
All mail	feedback
Bin	Add account
Spam	Remove account
Logout	Terms
Meet	privacy
Sign up	Data & privacy
	security

* * Smoke Testing :-

- Testing basic and critical features of an application, before doing through testing, is called "smoke testing" OR "Dry-run testing".

* When we do smoke testing :-



* NOTE :-

* 1) We only do positive testing in smoke testing.
* 2) We are performing FT, IT and ST in smoke testing.

[redacted]

- Test engineer should learn how to install software in testing environment.

* Adhoc Testing :- (Monkey Testing) (Gorilla Testing)

- It is testing where we do not refer to any formal documents, suchas, requirements or test cases or test scenarios and test the application randomly.

Q] Write 10 Adhoc scenarios for any applications :-

→ * Examples of some Adhoc Scenarios :-

1) · Change the profile photo (DP) on whatsapp from selecting photo from Gallery.
   · Now, delete that photo from gallery.
   · Now check if that photo still displaying on whatsapp or not.

2) · During login to whatsapp, Fill incorrect verification code for so many time & request for new one.
   · Check how many times the verification code is send from whatsapp to user.

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Assignment

3) • Whats app of same number is installed in one mobile and one PC.
• When message is send by another user to you, check where that message is received first, i.e. on mobile first or PC first.

4) • In GooglePay, Sender A sends money of 100Rs to B, but at same time user B sends Rs 200 to user B.
• Then, check what will be happening first.

5) • In calling application, user A and user B tries to call user C at a time.
• Check whose call will receive on user C's mobile.

6) • An AC remote (A) and mobile remote application user (B) tries to increase the temperature of AC at a same time.
• Check, which users signals can accepted by the AC firstly.

7) • You adding an video to playlist on Youtube and at a same time, the creator or uploader of that video deletes that video from Youtube.
• Check what will be happens? Either video is added to playlist or not?

8) • An offer on zomato for ordering pizza with 50% off is live upto 12PM.
• Now, you ordered pizza at sharp 12PM.
• Check, if it is gives 50% off or not.

9) • Trying to login on facebook with two different mobiles at the same time.
• Check what will be the result, who gets first logged in?

10) • You are unlocking the mobile using Fingerprint and Face ID at a same time.
• Check, which one gets accepted first?

11) • You are seeing your friends status on whatsapp status.
• At same time, your friend deleted that status from his whatsapp status.
• Check, is it still showing his status or not?

12) • You are withdrawing a cash from ATM machine, you select all the options & pins regarding withdrawal process and after your final confirmation of amount of withdrawal, machine start the pickup cash process.
• At same time, Bank manager blocks your ATM card for some reasons.
• So, check is that machine counting the cash and receives by you or suddenly stops the machine?
(i.e. is it machine working in that process or not?)

13) • In Tirupati Darshan Portal, there is only 1 ticket is available.
• Two persons trying to book that tickets at same time.
• Check, whose ticket is gets booked? or not?

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14) In carracing game, instead of going forward on track, you going backward on the track.
- Check what will be the results?

15) • User A watching User B's posts on instagram.
- At same time, user B blocks the User A.
- check, is user A seeing that post at that time or not?

16) • Two persons standing in front of an lift at 2nd and 4th floor respectively.
- They both click on ground floor button at same time.
- check, which once responce can be accepted by lift first? or no once?

17) • Two mobile users tries to connect an wireless blutooth at same time.
- Check who's device (mobile) is get connect to that blutooth headfone firstly? or not?

18) User A and User B tries to make an video call from whatsapp and duo app respectively, to same user C, at a time.
- Check whos call gets connects to user C or not?

* NOTE :-

1) Smoke testing is done, when new build is given.
2) Adhoc testing is done, when software is stable.
3) Smoke testing reffers requirement.
4) Adhoc testing does not reffer any requirement.

Date: 15/02/22

5) Smoke testing is done for checking to do or not do to whole testing of given software.
6) Adhoc testing is done to checking in all condition is that given software still stable or not.
7) Smoke testing uses positive scenarios only.
8) Adhoc testing uses mostly negative scenarios.

* Generic Adhoc testing examples :-

1) Same user trying to perform same activity on multiple plat forms, at the same point of time.
- Activity = changing password, posting images, blocking and messaging, changing privacy settings, etc.

2) Trying to buy single product or service by multiple users at the same point of time.

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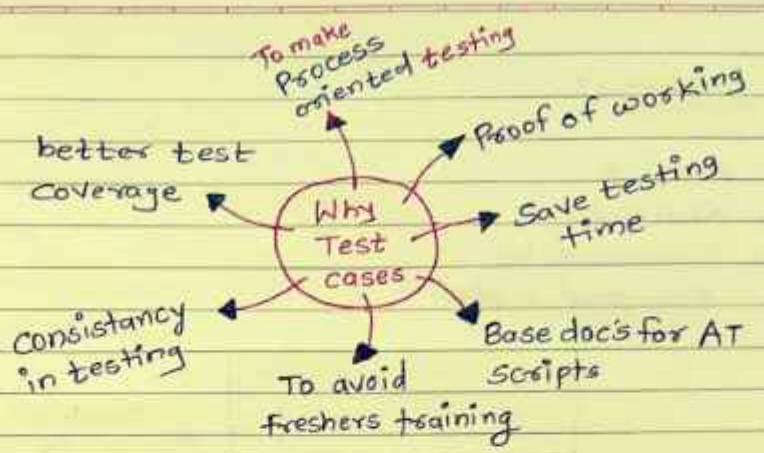
Date 15/02/22

* Test Cases :-

- It is a document which contains all possible scenarios.
- It has different columns like step number, discription, input, expected result, actual result, status and comments.

* Why Test cases are neccessary :-

1) To make testing process oriented, not person oriented.
2) It acts as a proof to customers management and developers that we are working.
3) To save test execution time.
4) It acts as a base document for automation test scripts.
5) To avoid trainings of freshers.
6) To make sure testing is done consistantly.
7) To have better test coverage.



* Format of Test cases :-

* Header :-

1) Test case name or ID (Unique)
2) Requirement name or number (Requ. document)
3) Feature or module name.
4) Severity.
5) Pre condition.
6) Test data.
7) Brief discription.

* Body :-

1) Step number.
2) Discription.
3) Input.
4) Expected result.
5) Actual result.
6) Status
7) Comments.

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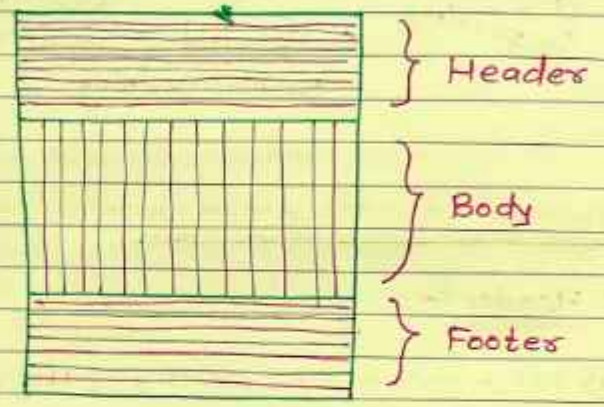
* Footer :-

1) Author.
2) Reviewer.
3) Approved by
4) Approved date



* Examples of Test cases :-

* I) Header :-

1) Test case name :- Project Name_ Modul Name_ Feature name_ Testing type _ No.

① Insta_Login_Usernome_FTC_001
② FB_Login_Usernome_FTC_002

2) Requirement name :- No. & Main heading
① 21.1.1. Groupchat.
② 32.1.1. Call.

3) Severity :- High OR Medium OR Low
• It depends on loss in customers business

Date 16/02/22

** 4) * Pre-condition :-

• The steps or actions to be taken before executing first step in body of test case.

* eg :- ① For getting order placing in Amazon, following steps is required :-
1) Amazon open
2) Search
3) Buy now
4) Payment.

• Here, pre-conditions are (imaginary steps) :-
1) Product is available
2) Account created
3) ₹ is available to buy product
4) Installed / Browser.

* 5) Test data :-

• The data that should be available to test engineers before executing first step in body of the test case.

* eg :-
1) Login credentials
2) Credit / debit card numbers.
3) Payment credentials.
4) License Keys
5) Activation Keys.

* 7) Brief discription :- Scenario OR Explaination for test case.

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*II) Body :-

Step No.	Discription	Input	Expected Result	Actual Result	status	comments
1. 2. ⋮	Actions to be performed	Keyboard	As per Requi. Recommended	Actions Result	Pass/ Fail	Any advice or note

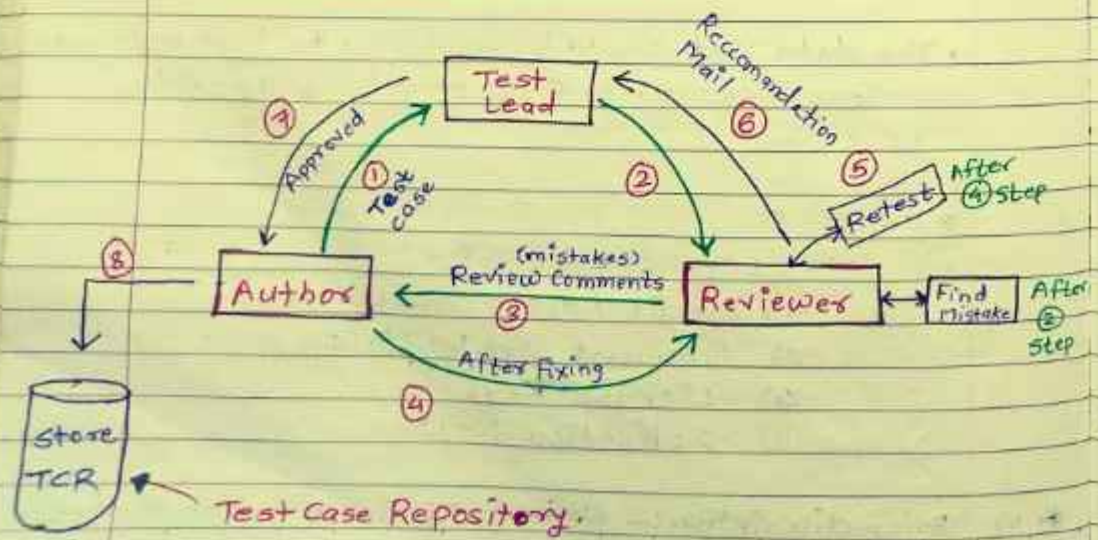
*III) Footer :-

1) Author :- Person who written test case.

2) Reviewer :- Person who find mistakes in test case.

3) Approved by :- Person who agreed to that test case (i.e. Test lead OR Test manager)

* Test case Review Process :-



Q] How to find **Reviewer** ?

1) Find a individual who is highly responcible.
2) Find the Test engineer (TE) who is working on similar module.
3) Find the engineer who has worked on same module in previous project.
4) Find an experienced engineer in the same project.

* **Baby-Shark** is the technique used in IT industry, to create some fear of senior person, in the mind of other employees.

* Test Case Design Techniques :-

1) Error Guessing
2) Equivalence Partitioning (E.P.) (EVP)
OR
3) Boundary Value Analysis (BVA)

* 1) Error Guessing :-

- Here we guess all possible error or bugs or problems.
- We guess errors on based on experience and intuition.
- It is ~~Noting~~ nothing but an type of functional testing.

* e.g. :- ① Age text field — 0 - 18 integer
② pincode text field — 6 digit integer

• 3) Age text field [ ] ⟹ 0-18 integers.

a) 18 ✓ f) AB ✗
b) 2 ✓ g) *# ✗
c) 10.5 ✗ h) .. ✗
d) -1.5 ✗ i) 10 ✓
e) 20 ✗ j) 0.2 ✗

* 2) Equivalance Partitioning (According to PressMan)

* a) Input is range of values :-

• Here, design test case for 1 valid and 2 Invalid scenarios.

* b) If input is set of values :-

• Then, design test case for 1 valid & 2 invalid scenarios.

* c) If input is Boolean value :-

• Then, design test case for both true & False values.

* Examples :- • a) Range of values = age [ ] 0-18

• b) Set of values = coupons [ ] a 10% b 20% c 5%

• c) Boolean :- Gender ○ Male ○ Female

* 3) Boundary Value Analysis :- (BVA)

• If input is an range of values from A → B, then design test case for A, A-1, A+1 and B, B-1, B+1 scenarios or values.

• i.e. check & design for boundary conditions as per I/P.

* * Procedure to write Test Case :-

* 1) System Study :- study of customers requirements completely, as per Dev. & testing.

* 2) Identify all possible scenarios :-

• a) Brain Storming Session :-

i) Improves product knowledge.
ii) Improves test coverage, by adding missing scenarios, by pointing out wrong and repeated scenarios.

• b) Priorities identified scenarios.

* 3) Write test case.

* 4) Review test case.

* 5) Fix Review comments.

* 6) Verify Fix
a) Test lead approval.

* 7) Store in Test Case Repository (TCR)

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* Brain storming Session :-

- In this meeting, entire testing team gets together and discuss about requirements and the scenarios found for assigned requirements.

- By doing this activity, product knowledge of the entire team improves, and there is improvement in test coverage.

* STLC :- Software Testing Life Cycle :-

- It is a process which is used for testing the software.

- It is a part of SDLC (Soft Development life cycle).

- It includes many stages like :-
  1) System study
  2) Prepare test plan.
  3) Prepare test cases.
  * 4) Prepare RTM / TM / CRM
  5) Test case execution.
  6) Defect tracking (DT)
  7) Test execution report
  8) Retrospect meeting

* Traceability Matrix OR Require. Traceability Matrix OR Cross Reference Matrix :-
(TM / RTM OR CRM)

- It is an document which is used to confirm, if every requirement has got atleast one test case or not.

- By writting this document, there is sense of the confidence that all features are tested atleast once.

- If customer asks for any changes in the requirement, we get to know what test case have to be changed.

- 1) System study :-

- In this, we read requirements and understand the features in the software.
- If you have any doubts, contact customer or business analyst.

- 2) Prepare test plan :-

- It is a document which drives all future testing activities.
- It usually involves information on roles and responcibilities of engineers, types of testing to be conducted, features to be tested, etc.

- 3) Prepare test case :-

- It is the procedure to write test case.

- 4) Prepare TM :- As discussed earlier. !!!!

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- 5) Test case execution:-

- This is the phase, where we executes all our test cases.
- This is the phase, we test engineers are productive for organization.
- This is where we catch lot of bugs.

- 6) Defect tracking (DT) :-

- Keeping track of all the bugs found during STLC, is called "Defect tracking".

- 7) Test execution report :-

- At the end of every test cycle, we prepare a summary report called "test execution report".
- This report usually includes :-

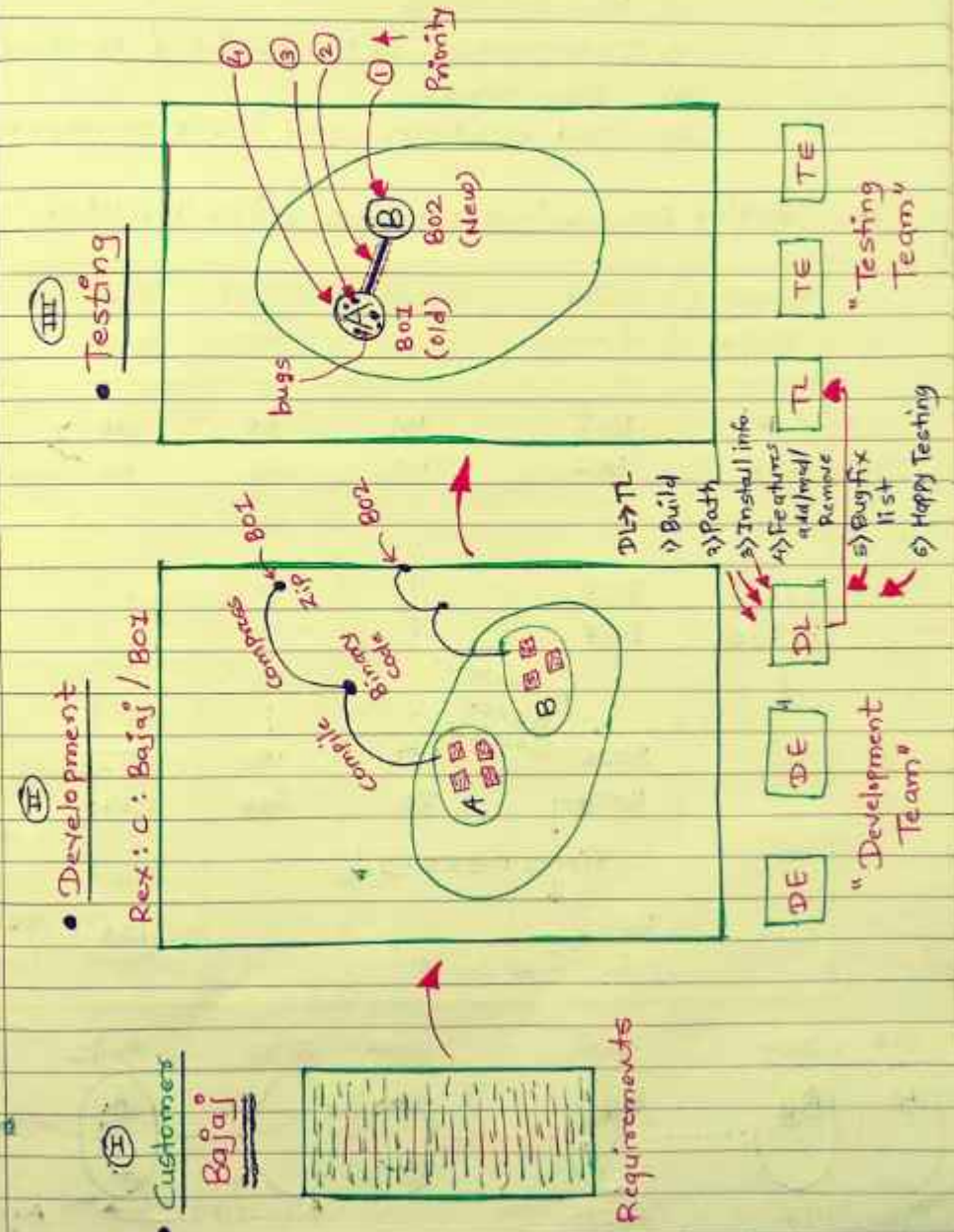
a) Total test cases.
b) Test case executed
c) Passed test cases.
d) Failed test cases.
e) Pass percentage %
f) Fail percentage %, etc

- 8) Retrospect meeting :-

- At end of STLC, entire testing team gets together and discuss about achievements and mistakes during testing or test life cycle.

- All the mistakes and achievements are documented which is called, "Retrospect backlog".

* Testing Process according to Build :-



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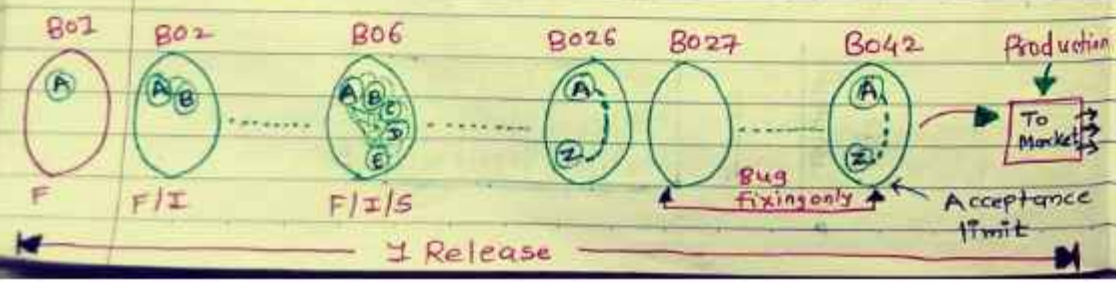
* Priority of Testing :-

1) New features
2) Integration betn new & old features
3) Bug fixes.
4) old features. and their connections.

* Testing process in accordance with build :-

Testing Type	Build Number	Bugs Found	Fixed Bugs	Pending Bugs
F	B01	100	60	40
I/F	B02	100	40	60 (Total Pend. (60+40=100))
⋮	⋮	⋮	⋮	⋮
S/I/F	B06			
F/I/S	B07			
↓	⋮ (All features added (Last is 26))			
⋮	B026	150	105	2550
	B027	20	200	2370
	⋮ fixing bugs only ↓			⋮
	B042 ← Final build			128 ← Acceptance limit



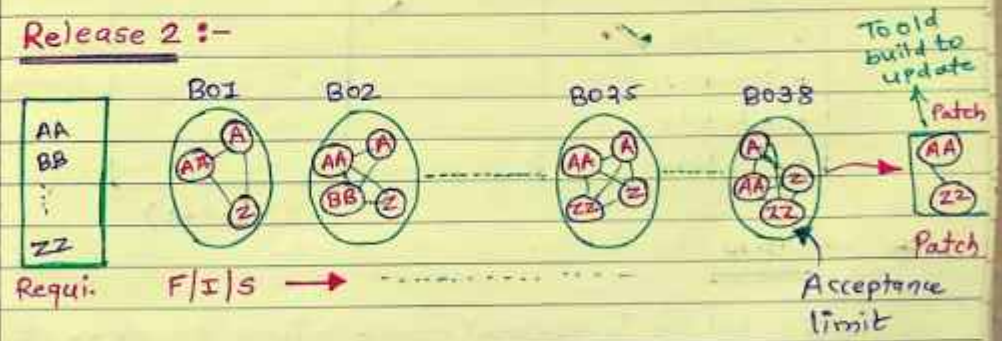
- [redacted] I software's complete time = 1 to 1.5 years.
- [redacted] Release cycles in one completed software = 40-60 cycles.

(1) Final build (B042) is too good and Development team gives that build to customer.

(2) For updating purpose, the release I should be upgraded to release 2 and for this realease 2, build is given by development team or development team uses old build for R-2.

- i.e.:- (1) For production $\xrightarrow{\text{Take}}$ Build from developer.
  (2) For release 2 $\xrightarrow{\text{Take}}$ Build from developer.

* Release 2 :-



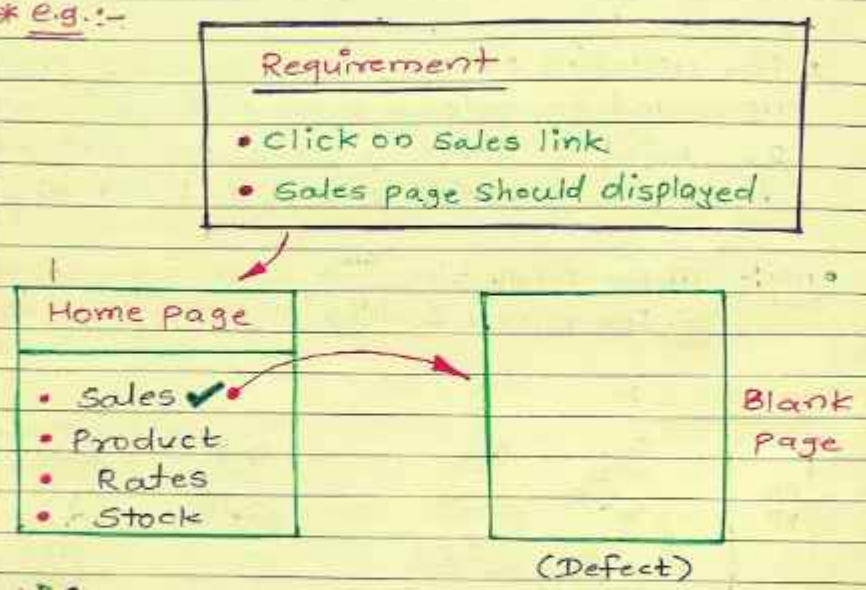
* NOTE :-

- "Patch" is nothing but a updated version of previous software or build, which is getting from the release-2.
- The software or application can be upgraded with the help of "Patch" i.e. updated build of previous release.

** Defect :-

- If any feature is not working or behaviouring according to requirements, then called it as "defect".

* e.g.:-



** Bug :-

- It is an informal name given to defect.

* Reason behind bugs & defects :-

1) Because of extra implementation / coding.

2) Because of wrong implementation / coding.

3) Because of missing implementation / coding

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** Error :-

- Error is mistakes done in the program.

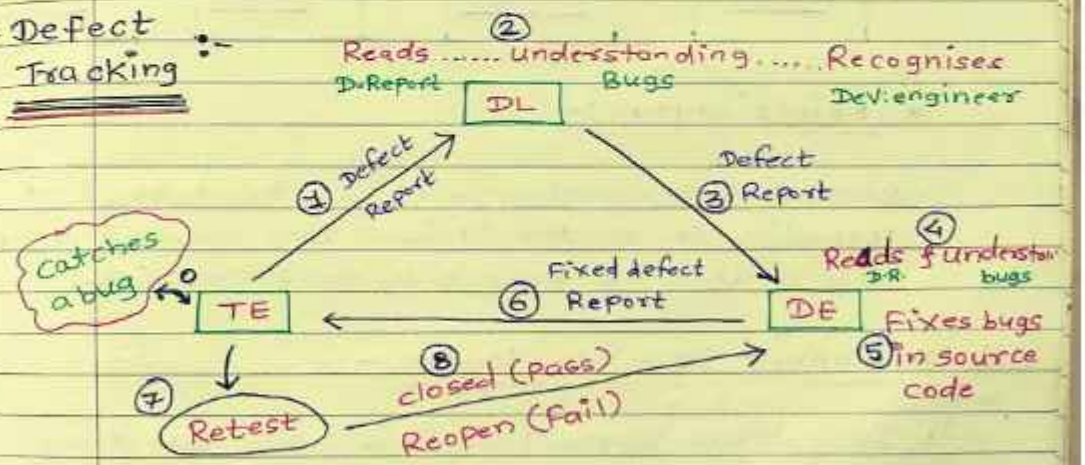
1) Compile time error :-

- Due to mistake in syntax.

2) Run time error :-

- Due to mistake in logic.

* Defect Tracking :-



* ~~Bug life cycle / Defect life cycle~~

** Failure :-

- If any bug is missed by a test engineer and found by a end user, then it is called as "failure".

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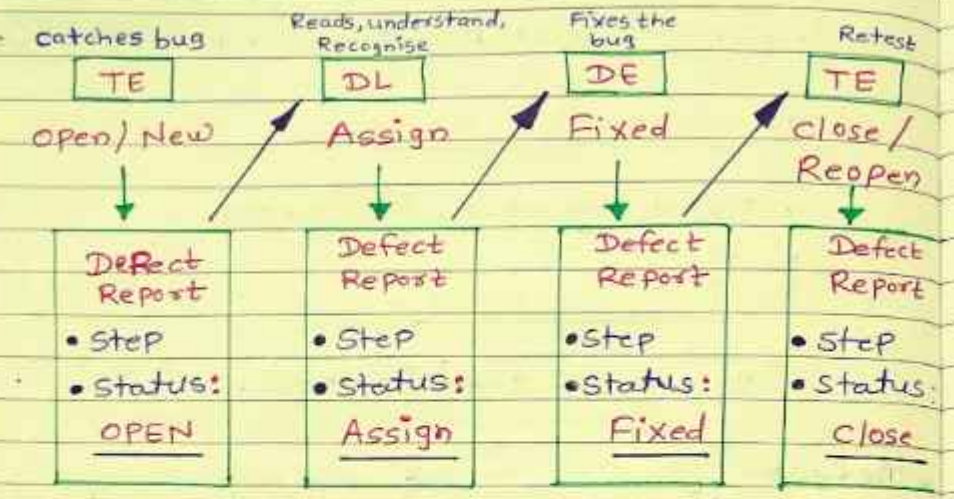
* Defect life cycle / Bug life cycle :-



1) * "Reject" status :-

- According to developers it is a feature, but according to tester it is a bug, then change the status as "Reject" by developer. (DL)

2) * "Cannot be Fixed" status :-

- Developers agree that it is a bug, but they say they cannot fix it, then change status as "cannot be fixed" by DL or DE.

3) * Postpon status :-

- Developer agree that it is a bug, but they say we need some time, then change status as "postpon". or "Differed".

4) * Duplicate status :-

- If same bug is reported once again, then developers give a status called "duplicate".

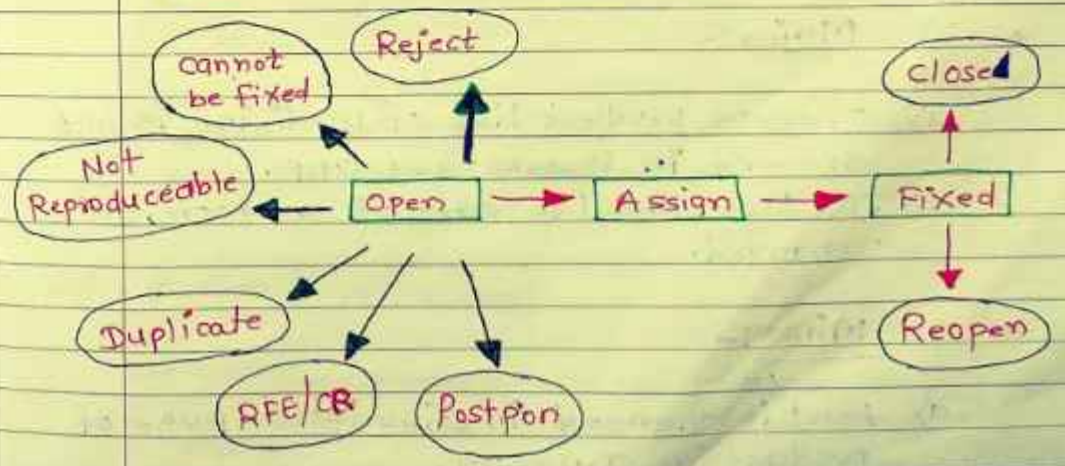
5) * Not Reproduceble status :-

- If test engineer is able to see the bug and developer is unable to see or get the bug, then they change status as "not reproduceble".

6) * RFE / CR status :-

- Request for Enhancement / change Request.
- If there is a problem and that problem is not a part of requirement, then we change state as "RFE or CR" by developer.

* Complete Defect Life Cycle :-



* Severity :-

- It is a status given to bug based on how damaging the bug is to customers business.
- We give status like blocker, critical, major, minor. or high, medium, low.

* 1) Blocker :-

a) User unable to login into instagram.
b) User is unable to book a ride in OLA.

* 2) Critical :-

a) Credit card payment is not accepting by flipcart payment gateway.
b) Google map is unable to give an accurate destination location, it gives other location.

* 3) Major :-

a) Ordered product list of medicine is get changed in Pharm Easy app.
b) Product added in cart of amazon, get changed.

* 4) Minor :-

a) Font size is changed in discription page of product in amazon.
b) Spelling mistake in system msg of Whatsapp

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* * Example for Low Severity & High Priority :-

1) Spelling mistake in welcome message.
2) Grammer mistake in Tagline.

* Example for High Severity & Low Priority :-

- Critical or blocker but not soo important.

1) Unable to login due to diff. platforms.
2) Due to users system's issue.

* I) Low Severity and High Priority Examples :-

1)
- App :- Flipkart
- Module / feature :- Add to cart.
- Bug discription :- Here, a spelling mistake is done which shows "Add to card" [redacted] option.

2)
- App :- Google Pay
- Module / feature :- Add bank account
- Bug discription :- Here, for choosing bank, the option showing is "bank select you" without showing "select your bank".

3)
- App :- Amazon
- Module / feature :- Product discription page.
- Bug discription :- Here, the font size of information about product, showing very low ie. 5pt, but it has to show about 12 pt. font size.

Assignment

4) • App / Portal :- Amazon India.
• Module / feature :- Tagline.
• Bug discription :- Here, mistake is done in tagline as it has to show "Sapno ki Apni Dukaan", but it showing "Sapno ki Apna Dukaan".

5) • App / Portal :- D-Mart
• Module / feature :- Tagline
• Bug discription :- Here, mistake is done, it shows "Mehnat Apki, Bachat Hamari", instead of showing "Mehnat Hamari, Bachat Apki".

6) • App / Portal :- Adidas
• Module / feature :- Home page.
• Bug discription :- Here, a spelling mistake is done in companies name as "Abibas" instead of "Adidas".

II * High Severity & Low Priority Examples :-

1) • App :- Whatsapp.
• Module / Feature :- Installing new version.
• Bug discription :- User is unable to install new version of Whatsapp, because user uses old android version of mobile.

2) • App / Portal :- Parivahan Sarthi Portal.
• Module / Feature :- Home page.
• Bug discription :- Here, cant get home page of this portal, because, user disabled Javascript option.

3) • App / Portal :- Google Map
• Module / Feature :- current location
• Bug discription :- It cant shows users location, due to some problem in users location tracker system of mobile.

4) • App / Portal :- Flipkart
• Module / Feature :- Payment Gateway.
• Bug discription :- Here, payment gateway is not opening due to user uses Opera browser, but for payment it is mandatory to use Chrome or Firefox browser only.

5) • App / Portal :- IRCTC
• Module / feature :- Home page.
• Bug discription :- Here, the logo, various option buttons and advertisement gets overlapped with each other, because user uses mobile browser instead of desktop site or version.

6) • App / Portal :- Internshala
• Module / Feature :- Login.
• Bug discription :- User is unable to login in internshala, because they uses old browser as "Opera" instead of chrome, Firefox or microsoft edge, etc.

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* High Severity & Low Priority (Generic Scenarios)

- If any business critical feature is not functioning, because of using the application on old platform.

  * Platform = ope. system, browser, old devices mob & laptop.

* Example :-

1) • App :- Wipro
   • Feature / Module :- Exam portal - Login
   • Bug discription :- Candidate unable to login into exam portal due to user uses "opera" browser instead of chrome or Firefox browser.

* • Features to be used such as login, payment gateway, business feature like buy now, book ride, proceed, etc.
* • Platform like very old version of internet explorer, very old version of windows like XP, 98, very old hardware devices.

LS HP	≡	HP LS
HS LP	≡	LP HS

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* Defect tracking : tool ≡ JIRA, Bugzilla

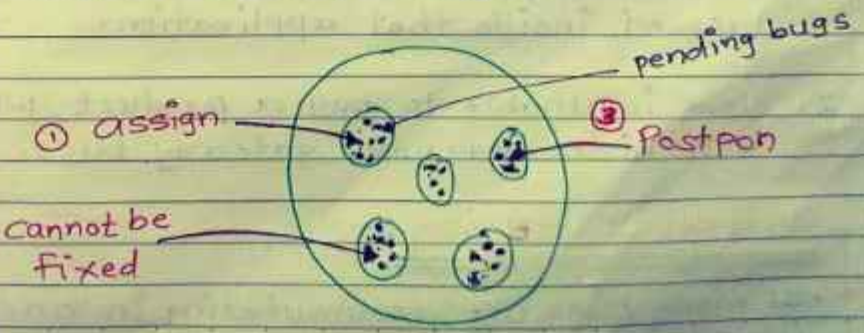
Types of application
- Standalone (Music Player)
- Client / Server (Whatsapp)
- Web application. (www.nmcoe.com)

* Layers of software :- 1) Presentation layer.
  2) Business layer.
  3) Data base.

* Defect Triage :-

- When deadline is very near and the pending bug count is huge, then we grouped the bugs into different categories depending on the impact of the bug on customers business.

- This activity of grouping pending bugs, is called "Defect Triage".



• asign :- Bugs which are highly affective to customers business.

• Cannot be fixed :- Bugs which are not affects customers business.

• Postpon :- Bugs which may get affect the customers business in future.

* Defect seeding :-

• Intensionly introducing bugs in the software, to check efficiency of test engineer, it is called "Defect seeding".

* Defect Masking :-

• If one bug is hiding another bugs, then it is called as "defect masking".

* e.g.:-

1) User unable to get login into instagram application, which hides another bugs present inside that application.

2) User is unable to buy a product, which will hides payment gateway bugs.

* * Defect Clustering :-

• If many bugs are accumulating in one or few modules, then we called it as "defect clustering".

• Here, defects are connected with each other.

* * Pesticide Paradox :-

• If we are using same test cases in different test cycles or releases, then bug missed once will be missed forever, this is called "pesticide Paradox".

* * Exhaustive Testing :-

• Testing with all possible scenarios to find all possible bugs, to make the software bug free, is called "exhaustive testing".

* Debug :-

• It is process of understanding and fixing the bug.

• It is done by developers.

* CICD :-

• Continuous Integration & Conti-deployment.

• e.g. :- Jenkins.

• It is done by DevOps or Senior developer.

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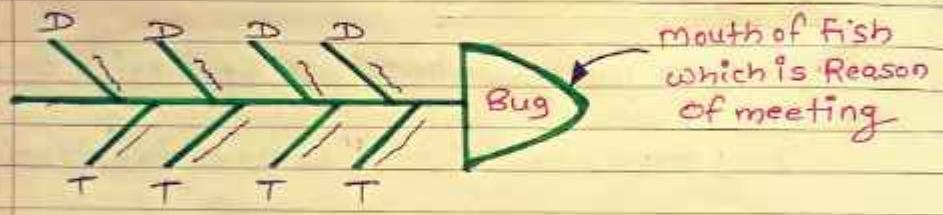
** Regression Testing :-

* Short term Release / Incident Management OR Hot fix :-

- Imediate fixing of a bug found in production environment, is called "short term release".

* Fishbone Analysis / Root cause Analysis (RCA) :-
OR Ishikawa Technique :-
OR Why? Why? Technique :-



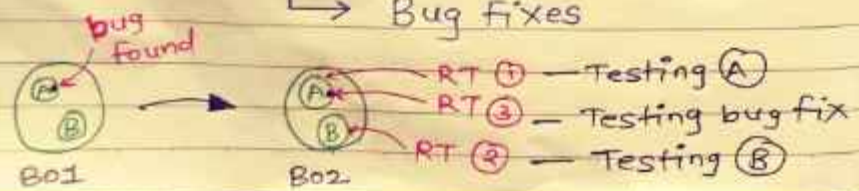
* Regression Testing :-

- Testing of unchanged features once again to confirm, they are not impacted because of changes, is called "Regression Testing".

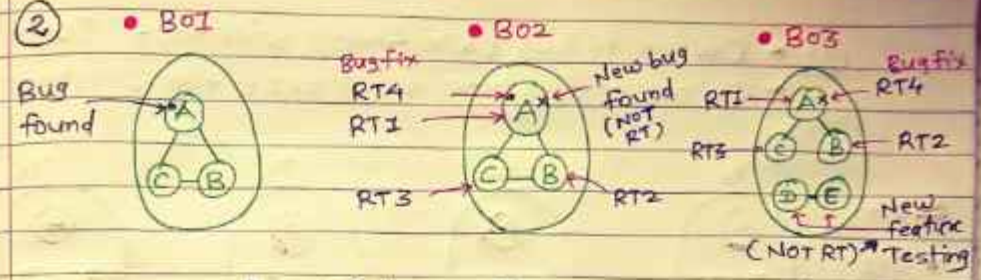
- changes can be
  - → Addition
  - → Modification
  - → Removal
  - → Bug fixes

  } of features.

*(1)

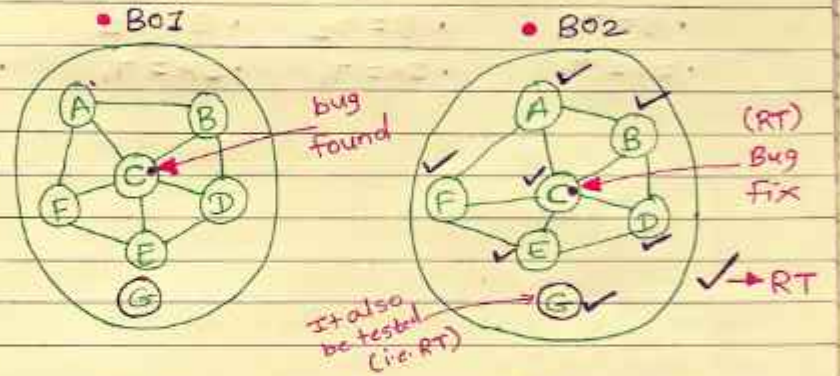


*(2)



- If there is no integration or no any data flow, then there will be no impact area.

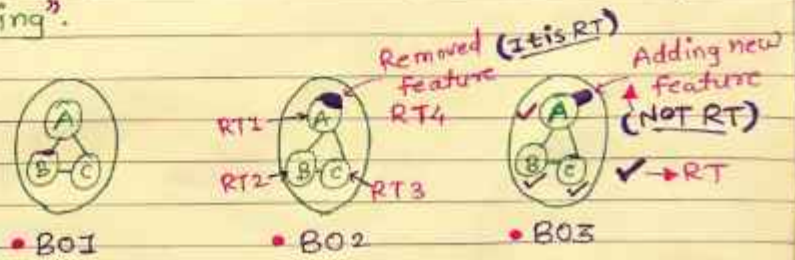
*(3)



- When there is problem in core feature, then check all features including independant features.

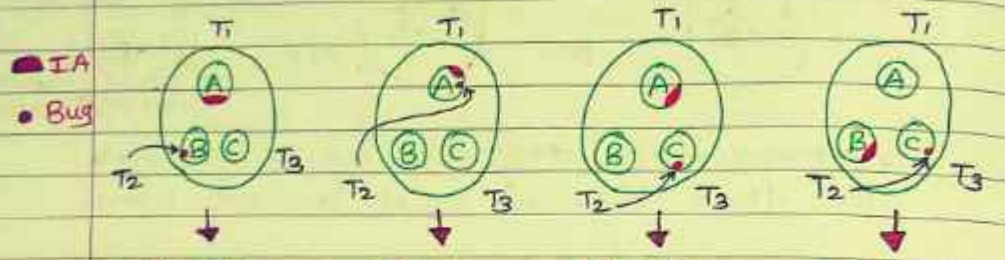
* "Executing same test cases in different builds or test cycles or releases, is called "Regression testing".

*(4)



- checking Removed features in A → It is RT.
- checking added feature in A → It is not RT.

⑤ * Owner of bug (who finds) will test Bug
* Owner of feature will test the Impact area.



• B = T2	• B = T2	• B = T2	• B = T2
• IA = T1	• IA = T1	• IA = T1	• IA = T2

* How to find Impact Area (IA) :-

- 1) By Guessing the impact area based on system study and also based on experience.
- 2) By preparing **Impact Matrix** :-

• Features →

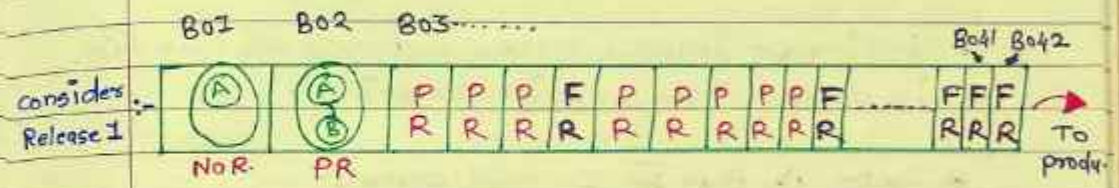
• Changes ↓

	SignUp	Signout	Compose	Inbox	Help...
SignUp	✓	×	✓	✓	×
SignOut	×	✓	×	×	×
Compose...	×	×	✓	✓	✓

- It is a matrix of all the features Vs changes in the features. It gives best coverage on IA.

- 3) Based on impact analysis meeting, by a testing team.
- 4) Test lead should collect impact areas from development team, Business Development (BD) team, testing team and combine them all to get a better coverage.

* When to do regression testing :-



- Here, for Release 1, for B01 → No any RT
- In Release 2, for B01 → RT is done.

* NOTE :-

1) To save time, test the builds based on the partial regression (PR).

2) Do partial regression for 3/4/5 builds, after that do Full Regression (FR) testing, and repeat this process.

3) At the end of testing the builds, check or test the last 3/4 builds as Full regression testing only. It gives lower chances of bug missing and failure.

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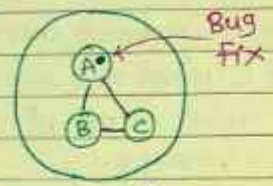
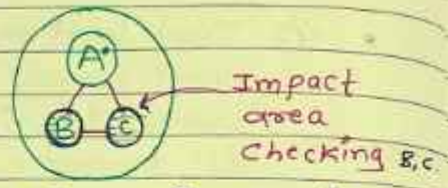
* Difference betn Regression testing & Retesting:-



• Retesting



• Regression testing

* • Testing of fixed bugs is called "Retesting".

* • Testing of impact areas because of bug fix, is called "Regression testing".

*** Ex:- 1) Bug & Impact area :-**

- App :- Instagram
- Feature :- User name
- Bug :- User does not get its proper user name.

- Retesting :- checking this bug is fixed
- Regression :- checking other modules like login, profile, chat, call, etc.

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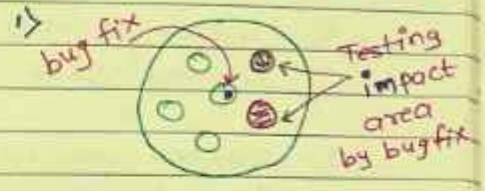
* Difference betn Smoke and Sanity testing:-

• Smoke Testing	• Sanity Testing
1)	1) 
2) Testing of basic & critical features of application, before doing through testing, is called "smoke testing".	2) Testing impact areas because of bug fix, is called "sanity testing"
3) It only involves positive testing.	3) It involves both +ve and -ve testing.
4) It is wide & shallow type of testing.	4) It is narrow and deep type of testing.
5) We have test scripts or documents to do smoke testing.	5) We dont have any test script or test documents.
6) It is an type of the acceptance testing.	6) It is an type of the regression testing.
7) Smoke testing is done by tester, developer, also customer & person responcible for installing the software	7) Sanity testing is only done by tester.

* Qualities of Good Tester :-

1) Tester should have test to break attitude.

2) Tester should update himself with latest technologies.

3) Tester should work aquiring domain knowledge.

4) Tester should come up with creative ideas to break the software / code / application.

5) Tester should able to see the product from developers point of view, customers point of view, end users point of view.

* Need of testers :- (When we have Developers)

1) Developer will spend more time on developing software than testing it.

2) They (D) have always soft corner towards their product.

3) There is probability of hiding the bugs, as it is their own product.

4) They (D) dont see the product in negative point of view.

* How Automation testing is better than manual testing :-

1) Turnaround time is less or reduced in automation testing.

2) Test cycles duration is reduced or sometimes can be fixed in automation testing.

3) We need lesser skilled engineers.

4) Regression testing becomes easier in automation testing, as it is a tedious job in manual testing.

5) There is no drop in the quality of testing, as it is not depending on the mood of the engineer.

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Date: 05/03/22

** Why & When we do Adhoc testing :-

•When:-

1) When the product is functionally stable, we plan for adhoc testing.

2) When we are done testing the product according to requirements, we plan for the adhoc testing.

3) • While doing FT / IT OR ST, if we find any creative scenario, we stop our regular testing and execute that adhoc scenario.

• If we are getting to many creative scenarios, then note them somewhere else and execute them in free time.

•Why:-

*1) Because when we launch the application in market, our end user are going to use the application randomly, so test the application in adhoc fashion to find all possible bugs and defects.

2) To somehow break (finding bugs) build.

3) To somehow improve the coverage.

4) To verify, if implicite requirements are present in the software or not.

• NOTE:- • If any basic feature is missing (like logout) that has to be added in the software, eventhough it is not mentioned in the requirements. (i.e. Implicite requirements)

** Why & when we do Smoke testing :-

•Why:-

1) To confirm whether to perform through testing or not.

2) To validate, if we have received a broken build.

3) It is kind of regular health check.

4) To confirm, if the application is installed properly in production environment or not.

•When:-

1) Whenever we receive a new build from developers, we start testing by doing smoke testing.

2) Customers starts accepting testing by doing smoke testing.

3) The person responcible for installing the application in production environment, should perform smoke testing after installation. (i.e. DevOps)

4) Developers sometimes perform smoke testing to confirm that, they are not giving a broken build.

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* Compatibility Testing :-

- Testing functionality of an application in different hardware and software platforms is called "compatibility testing".

- * Hardware platforms :-

- Mobile, laptop, desktop, smart watch and their types, etc.

- * Software platforms :-

- Operating systems (O.S), browsers and their varieties and types, etc.
  - (windows, mac, linux, etc.)
  - (chrome, intenet explorer, mozzila, etc).

* Examples :-

A) Compatibility testing using Mobile Browsers.
- Web application :- ebay.com
- Mobile browsers :- Chrome, Opera, UC.

* Module/Feature/ Input	• Chrome	• Opera	• UC
1) Opening the homepage	Displaying Homepage	Displaying diff. Homepage	Displaying Homepage
2) Home Page Font type	Font (A)	Font (A)	Font (B)
3) Homepage Font colour	Dark	Light/ Faint	Dark
4) ship to option	Not Showing	NOT showing	Showing
5) Page Allignment or height	Long	Long	Short.
6) Click on (≡) more option button	Showing options	showing options	No change on screen
7) Searched for "dress" in text field	Showing Results in sigle line format	Showing Results in single line format	Showing Res. in double line format.
8) Discription Page	Similar items showing at middle	similar items showing at middle.	Similar item showing at the last.
9) Click on "Buy it now" link	displaying order page	displaying Verifi" window	displaying order page
10) Homepage	Showing Notification for App.	Notshowing App Notification.	Showing App Notifi.
11) Register or sign in	Showing suggestion Message.	Showing browser update message	Showing sugge-msg

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*	Module/Feature/ Input	• Chrome	• Opera	• UC
12)	Sell a item Page	No any overlapping	Overlapping on image	Overlaping on symbols
13)	Homepage (At end)	Showing App dwnld option.	Showing App dwnld option	Not showing app dwnld option.
14)	Homepage (At end)	Showing proper content	Showing extra content	showing proper content.
15)	Desktop site Homepage	showing	Not showing	Not showing
16)	classic site Homepage	showing	showing	Not showing.
17)	click on categories option	showing list (A)	showing list (B)	Not showing.
18)	click on Filter option	Item location option present	Item location opt. not present	Item location opt. present.
19)	Discription Page (Make Offer" opt.)	Present	Not present	Present.
20)	Discription Page ("Sell one like this" option)	Not Showing	Showing	Not Showing.

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* B] Compatibility testing on Laptop Browser :-

- Web application :- Thomas Cook.in
- Laptop Browsers :- Chrome, Internet Explorer, UC.

*	Module/Feature/ Input	• Chrome	• Internet Explorer	• UC
1)	Homepage (customer Ratings Message)	Showing	Not showing	Showing
2)	Homepage (Travel Guide-line Message)	Showing	Not showing	Showing
3)	Homepage (Font size)	As per required	As per required	showing too small.
4)	Homepage (Cookies Message)	Not showing	Showing	Not Showing
5)	Homepage (Forex data showing strip)	Runs slow	Runs slow	Runs too fast.
6)	Homepage (Page allignment)	Wide (long)	Slightly wide	Narrow (small)
7)	click on Hotel link	Not opening, shows error	Shows error 404	Shows error 404
8)	Travel Guideline Popup message	Not showing on every page	Not showing on every page	Showing on every page

* Module (Feature) Input	• Chrome	• Internet Explorer	• UC
9) Search Box (Suggestion Text)	Light in colour	Dark in colour.	Some dark, Some light.
10) Click on "Book now" link	Showing booking page	It wants location first.	Showing booking page.
11) Book now page	Showing video gallery	Showing video gallery	Not showing video gallery.
12) Click on "store" link	Showing location popup message	Showing location popup message	Not showing Location popup.
13) Store page (at last)	Showing map	Not showing map, blank page displaying	Showing map.
14) Login page (Password check box)	Becomes Blue in colour	Becomes Black in colour	Becomes Black in colour.
15) Tour Package Page (Popup Message for Audio/video contact info)	Showing	Not showing	Showing.

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Date 03/03/22

* Virtualization:-

VMWare

- VMWare = Virtual Machine Ware.
- It is a tool which sets up dummy environments and can be accessed at the same time.

** Device Matrix OR Mobile Matrix:-

Models \ Operating System	2020 A10	2018 Pie	2016 Kitkat	2014 lollipop	2012 Jellybean
S1	○ (Mob)	○ (Installed app)	○	○	○
S2	○	○	○	○	×
S3	○	○	○	×	×
A1	○	○	×	×	×
A2	○	×	×	×	×

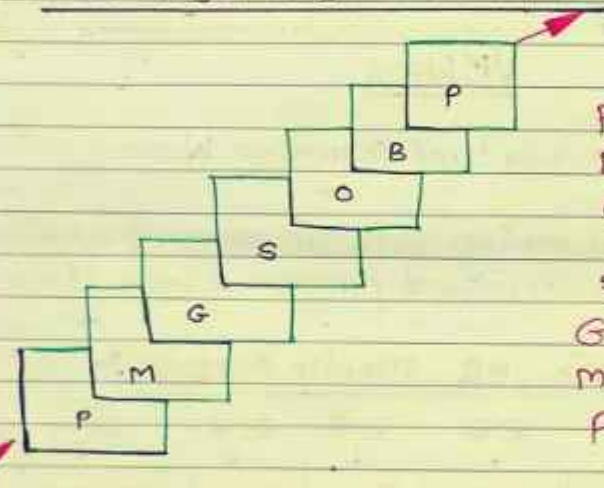
SAMSUNG

○ = Cal.apk

* How to do Mobile Compatibility Testing :-

1) Own a lab.
2) Rent a lab.
3) Make use of emulators.
4) Crowd testing.

* Why we get Bugs in compatibility testing :-



Program
Browser
OS
} Software compati.

Screen
Graphics Card
Mother Board
Processor
} Hardware compati.

* Software Compatibility testing :-

- If we are testing the application on different software components like programs, browsers and operating systems, etc, is called as "software compatibility testing".

* Hardware Compatibility testing :-

- If we are testing the application on Different hardware components like types of RAM, mother board, processors, screen / display, etc, is called "Hardware compatibility testing".

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* Pure Compatibility Testing :-

- All operating system
- For each version OS - All browsers
- For each OS - Each version of browser.

- All operating System → All versions of op system → All browsers → All versions of browsers.

* Globalization Testing :-

- Testing the functionality of an application in multiple languages, is called "globalization testing".

- Globalisation is also called "I18N testing".
  - I = internationalization testing. ≈ 18 letters bet I—N

* What to test :-

1) If right langauge contents are displayed or not.

2) If right contents are displayed in right place or not.

3) If functionality of features are breaking, when the langauge is changed.

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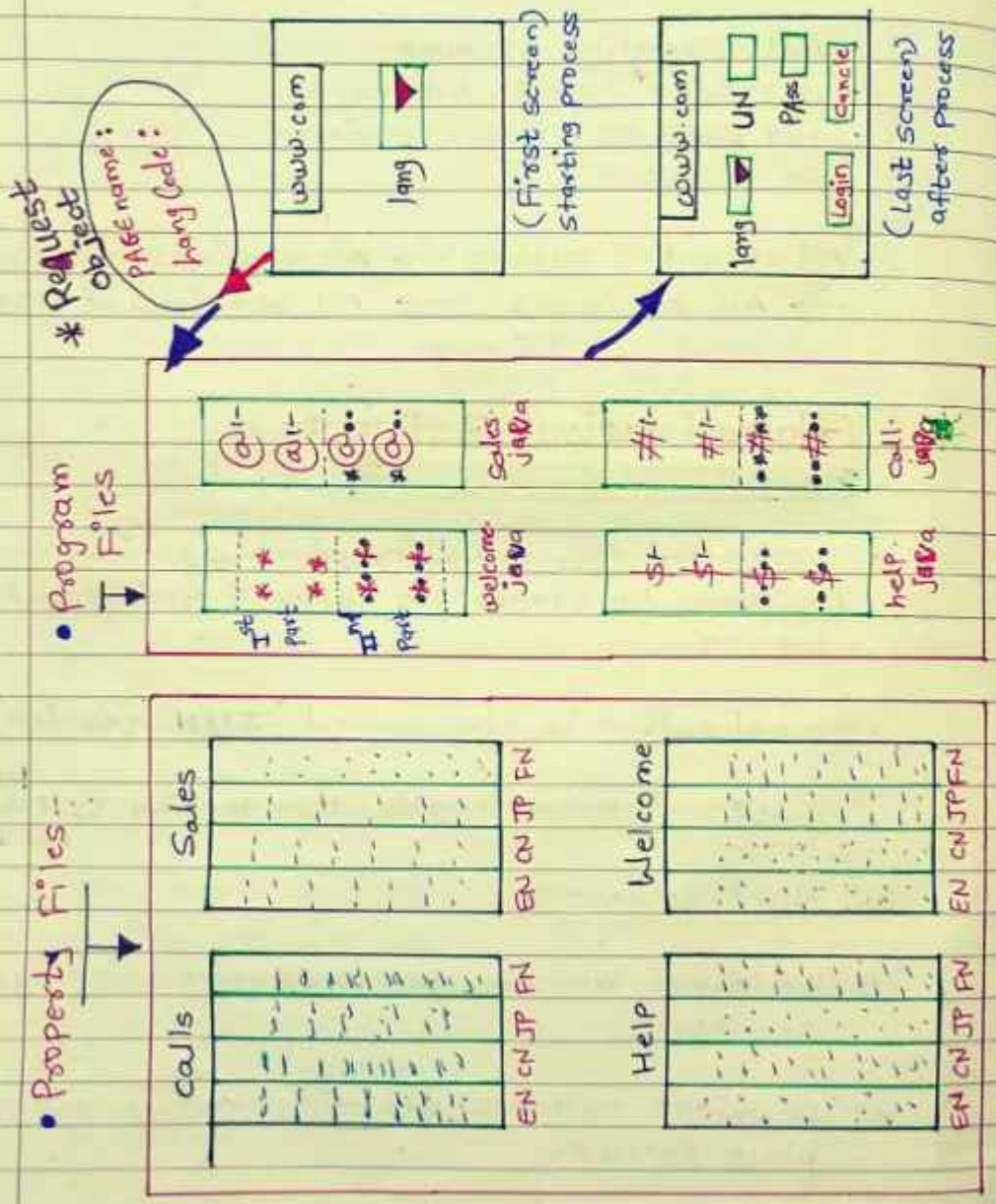
* Working process during Globalization Testing :-



1) Open the browser and enter the URL of the site to be tested.

2) Select language from language drop down i.e. english.

3) • Browser sends request to the server.
   • Request object has two parts :-
      a) Page Name
      b) Language code

   • In this example Page Name is Welcome and Language that user is expecting is English.

4) The server is waiting for request object.

5) As soon as server receives the request object, it gets inside the request object and understands Page Name, i.e. Welcome page.

6) Now, the server executes welcome program.

7) a) The program has two parts.
   • The first part of the program gets inside the request object and understands the language user is expecting. i.e. English.

   b) After understanding the language, the program will go to property files and establish link with Welcome English property file.

8) The second part of program follows the link & copies the content of english property file and paste it on browser.

Q) What is Globalization testing

→ Def^n + What we check + working of application for 2 lang. + pseudo translation

Date: 11/03/22

* Pseudo Translation :-

- It is a technique used to add prefix and suffix in property file to understand the language used and the meaning of the word, is called " pseudo transclation".

- Usually prefix added is "Language code" and suffix added is " meaning of the word".

- e.g.:- Prefix → suffix

1) J ZL UN [ ]
   J J& PS [ ]

2) M वांपरकलर UN [ ]
   M सांकेतांक PS [ ]

* How to check globalization testing is get passed :-

1) showing requested language, confirmed by prefix.

2) showing right content in right place, confirmed by suffix.

* NOTE :-

- We get more bugs if we understand the grammer of the language.

* Localization OR L10N :-

- In multilanguage or global applications, few futures should change as we change the country or region, like currency format, date, time format or zone, pincode format, phone number format, certifications, etc.

Q) What are types of internationalization testing?
→ ① Globalization testing.
② Localization testing.

Q) What is Pseudo translation?
→ Def^n & examples

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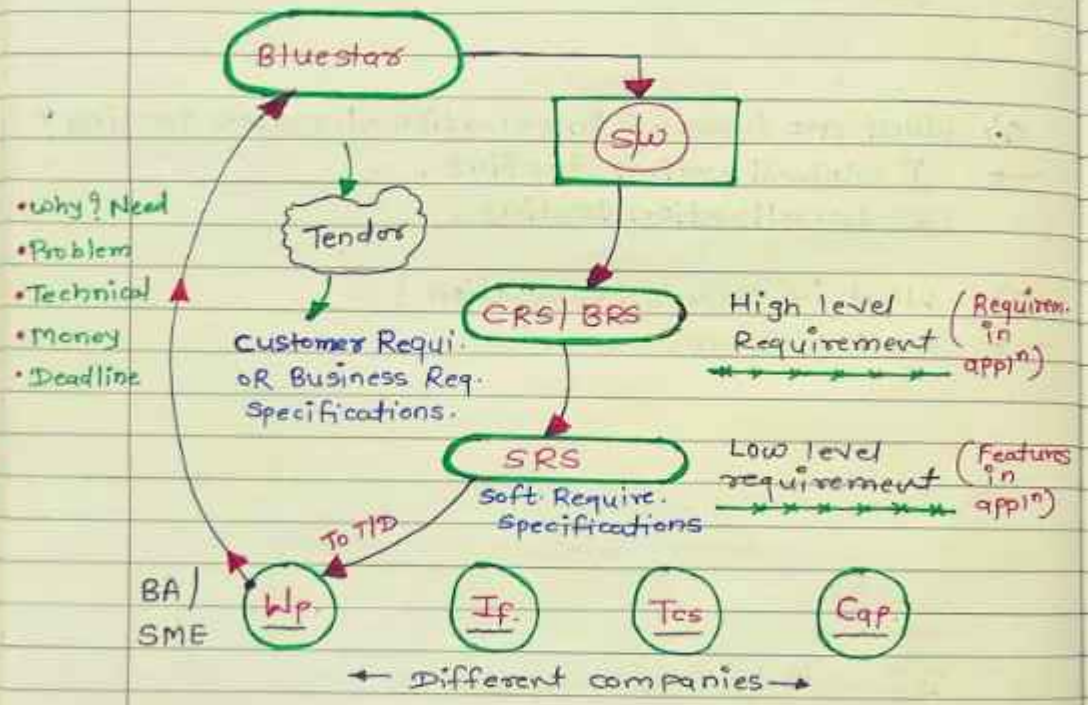
Date 14/03/22

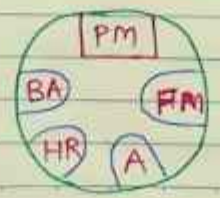
* SDLC :- [Soft. Development Life Cycle] :-

- It is a process or procedure to built and deliver product to customer.

* 1) * Requirement Collection OR Gathering :-



* 2) * Feasibility Analysis OR study :-



- PM - Project Manager
- BA - Busi. Analyst
- FM - Finance Mana.
- A - Architect.
- HR - Human Reso. Man.

- Finance manager explains whether the project is financially feasible or not.
- Architect talks about technological feasibility of that project or product.
- HR manager explains if the project is feasible from resource point of view or not.
- Business Analyst :- Everybodies query can be resolved by BA, from customers business point of view.
- Project Manager :- After listening to everyone in the meeting takes a final call, whether to take up the project or not.

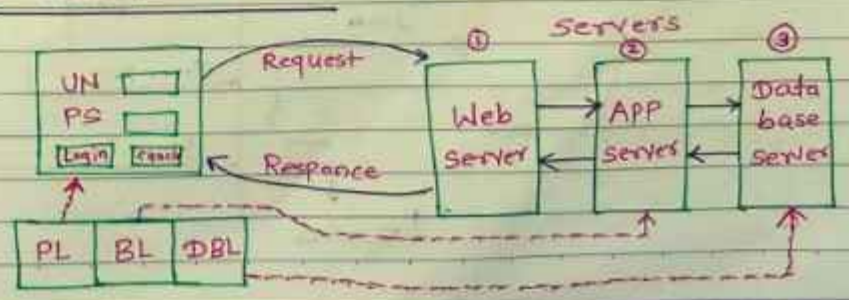
* NOTE :-

- If customer also agrees to do the project with company (soft. company), then they sign "MOU" i.e. Memorandum of Understanding.

3) * Design :-

* A) * (High level Design :- By Architect

* (a) * 3-Tier Architecture :-



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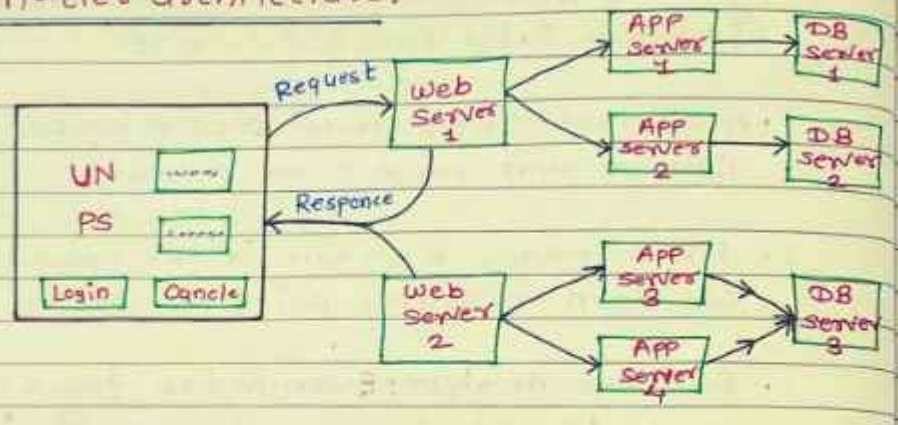
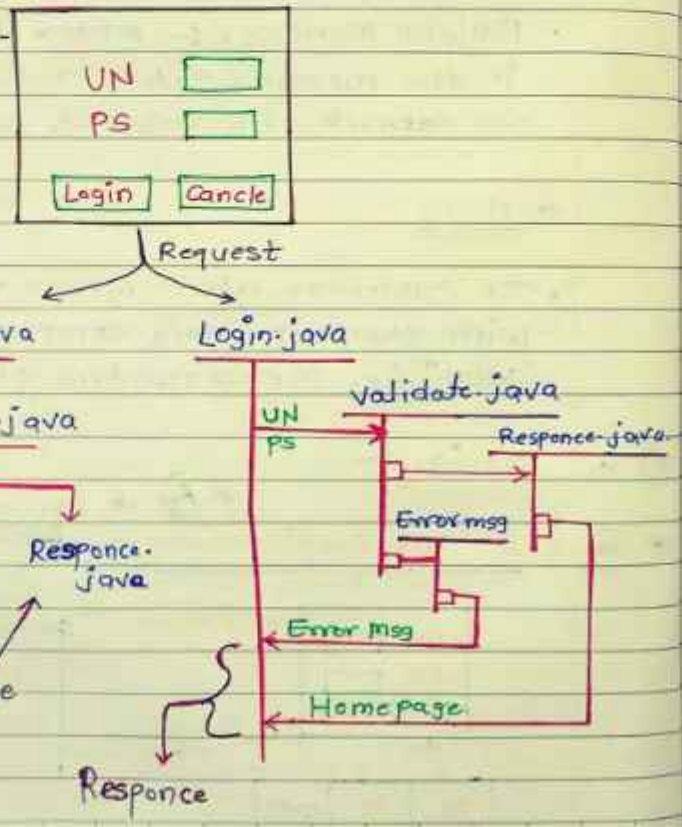
* (b) * n-tier architecture :-



* B) * Low Level Design :- (By Senior Developer)

OR Program Sequence :-

OR Detailed Design :-



4) * Coding :-

- In this, we convert low level design to the source code.
- Coding is done by "developer".

5) * Testing :-

- Testing is the process of finding bugs in the given software.
- It is done by test engineers.
- If there is no bug, it given to customer for acceptance and installation.
- If there is bugs, software build is given to back to developers for debugging.

6) * Installation :-

- Installation is usually done by senior engineers like developers and DevOps engineers.

7) * **Maintenance :-**

- In this phase, we take care of changes requested by customer.

- Changes can be :-
  - Addition
  - Modification
  - Removal
  - Bug fixes.

  } of features.

- Charges for changes depends upon "MOU" i.e. Memorandum of Understanding.

- Usually, the size of team is shrinks (reduced) in maintenance stage.

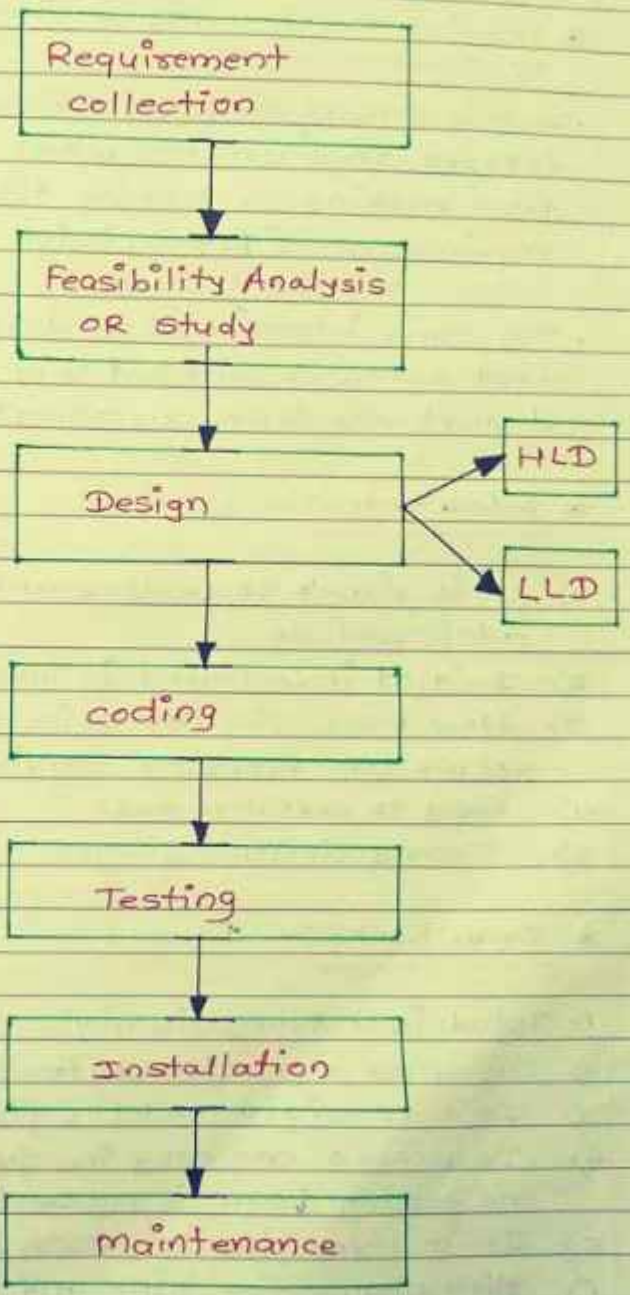
- For minor changes ⟶ Usually no charges.
- For major changes ⟶ charges applied.

* **Test base :-**

- It contains different documents which are help the testing.

- Such documents like test cases and scenarios, CRS, SRS, HLD, LLD, coding, etc.

* **Flow chart of SDLC :-**



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* Waterfall Model :-

* Freezing Requirements :-

- In this process of SDLC, software company freezes requirements which stops customers from making or asking for changes in the requirement. (Before design stage)
- The main intension is to design, develop and test software without any interuption or disturbance from customers for changes.

* Advantages :-

1) It is simple to understand and easy to adopt and use.
2) Initial investment is less.
3) New bugs will not arise because of changes as we are freezing requirements.
4) Easy to arrange tasks.
5) Clearly defined stages.

* Drawbacks :-

1) Total investment is high.
2) Customer cannot ask for changes.
3) It is a rigid model. (fixed)
4) Developers are only involved in testing, i.e. no testing team is present.
5) It involves lot of rework and time required.
6) High chance for risk and uncertainty.

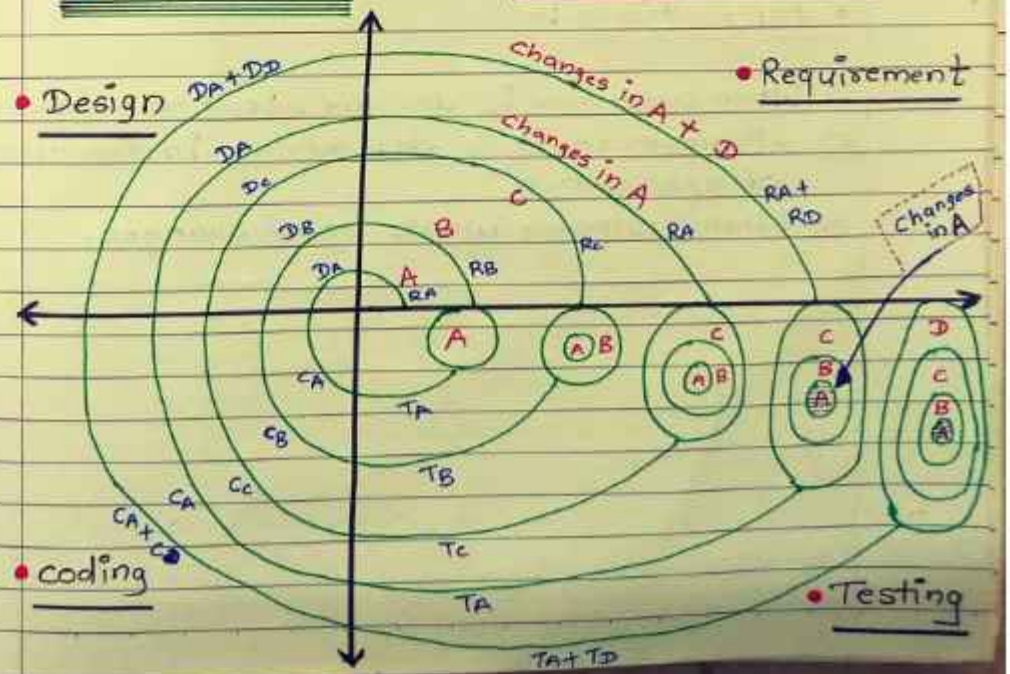
* Applications :-

1) When there is simple product is built.
2) When there is short term project.

Q] Explain SDLC.
→ Define and explain all stages in depth with example.

Q] Explain Waterfall model.
→ Define and explain all stages in depth with example, but at end, talk about freezing requirements, advantages, drawbacks and applications.

* Spiral Model :- (Incremental Model)



* Advantages :-

1) Initial investment is less.
2) Customer can ask for changes whenever customer wants.
3) We first design a module, code it, test it and then only add or change new module.

* Drawbacks :-

1) Total investment is high.
2) As it is an traditional model, testing is also done by developers. (Special Testing Team not present)
3) Even in this model, requirements are not tested, design is not tested and testing is done only after coding.

* Applications :-

1) When customer is unclear about requirements.
2) Whenever there is dependancy in features of application.
3) When customer wants lot of changes.

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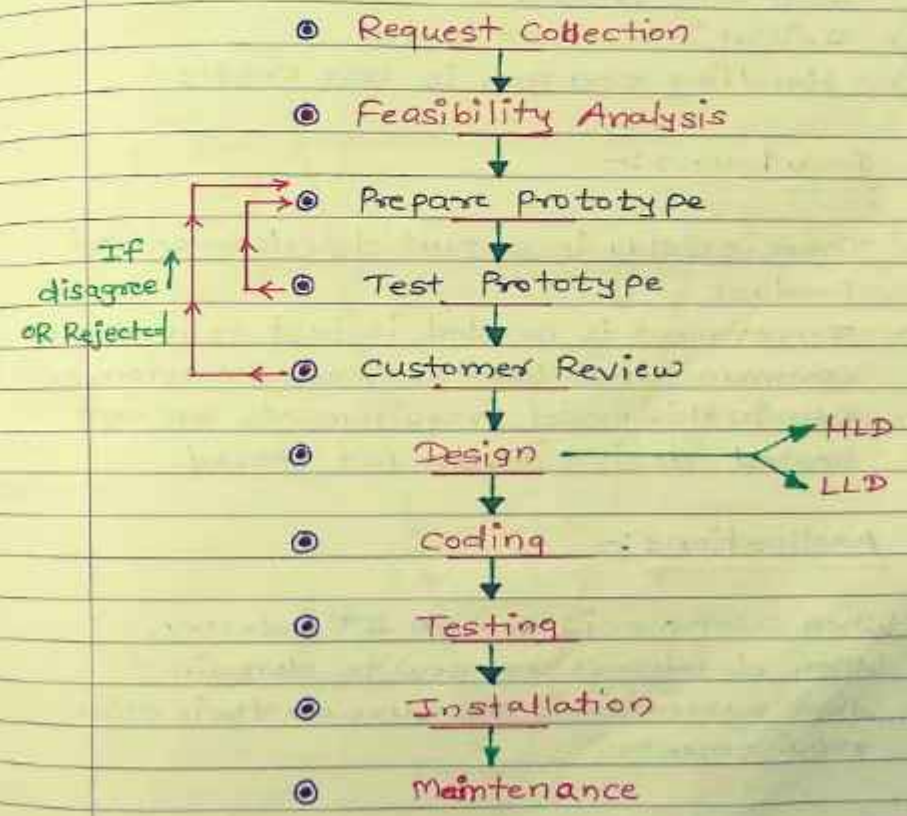
Date: 16/03/22

* Prototype Model :-

. In this our UIUX engineer (User Interface & U. Experience) prepares prototypes which are nothing but Mocks & Mock screens, which gives an idea to a customer or client on how the software will look and feel at the end of the project.

* Process Flow for Prototype model :-



* Mocks OR Mock Screen →

→ dummy of final product or an image.

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* Advantages :-

1) Customer gets to know what they will be getting at end of project.
2) Developers get to know what they have to build.
3) There is improved communication between customer and engineers.
4) Customer can ask for changes in the beginning itself.
5) Initial investment is less.
6) Handling changes is less costly.

* Drawbacks :-

1) There is delay in actual development of product.
2) Investment is needed is just to improve communication betn engineer & customer.
3) Even in this model, requirements are not tested, design is also not tested.

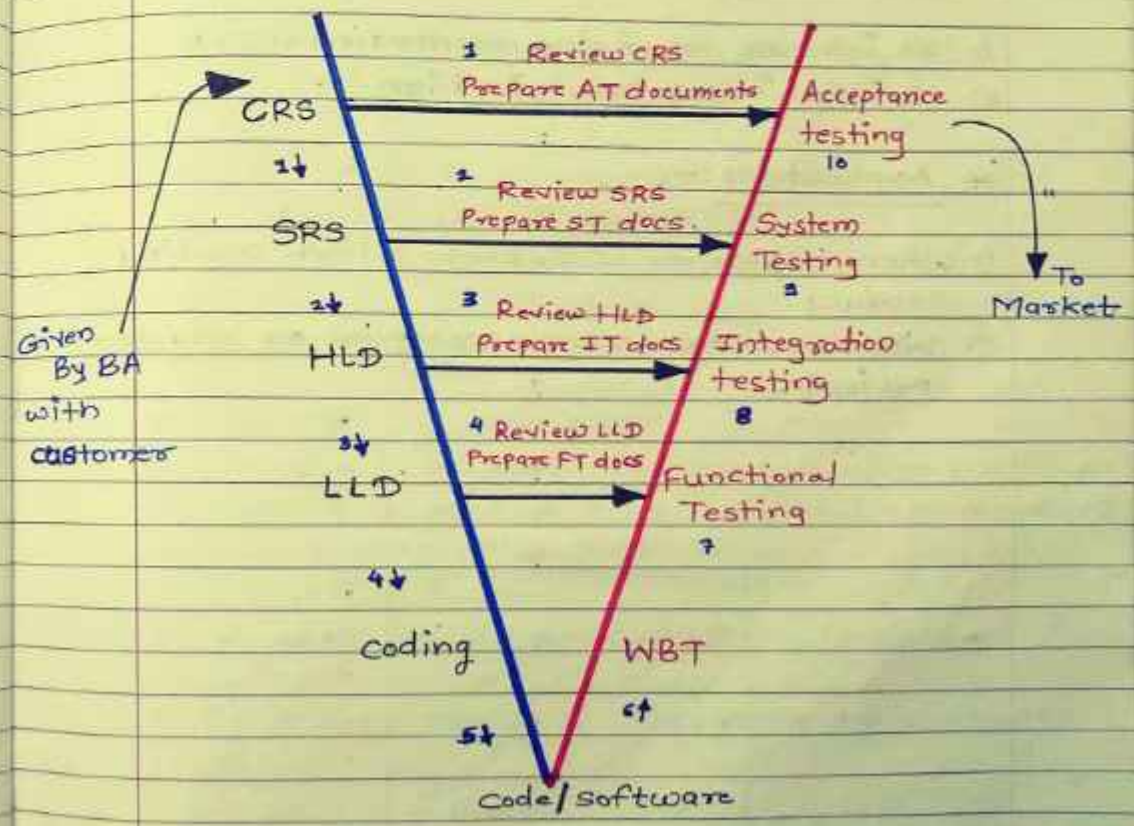
* Applications :-

1) When customer is new to IT industry.
2) When developers are new to domain.
3) When customer is not sure on their own requirements.

* V-Model OR V and V Model :-
OR Verification and Validation Model :-

- Request collection
- Design
- coding

→ Test it (All testing is done)



- Here, process is done with an sequencial manner of V-shape.

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* Advantages :-

1) Each and every stage of SDLC is tested.
2) The outputs or deriverable are given simultaneously or parrallely, because of which product gets built at a high speed.
3) Downward flow of defect are reduced.
4) Total investment is less.

* Drawbacks :-

1) It involves lot of documentation work.
2) Initial investment is high.

* Applications :-

1) When customer is expecting high quality product.
2) When customer wants complex or long term project.

Date: 23/03/22

** Agile Model :-

	• SDLC		• Agile
1)	Requirement	→	Stories / User stories / Usecases.
2)	Team	→	Scrum team
3)	Team lead	→	Scrum Master
4)	Documents / Pending Tasks	→	Backlog
5)	Release	→	Sprint
6)	Dummy Customer	→	Product Owner.

* Agile meaning :-

- Flexible.
- Flexible in terms of handling changes from customers, changes like addition, removal and modification of features.
- It is an incremental process model.
- It is very realastic approach to software development.
- It is useful in all the sectors, where flexibility of software development is more.

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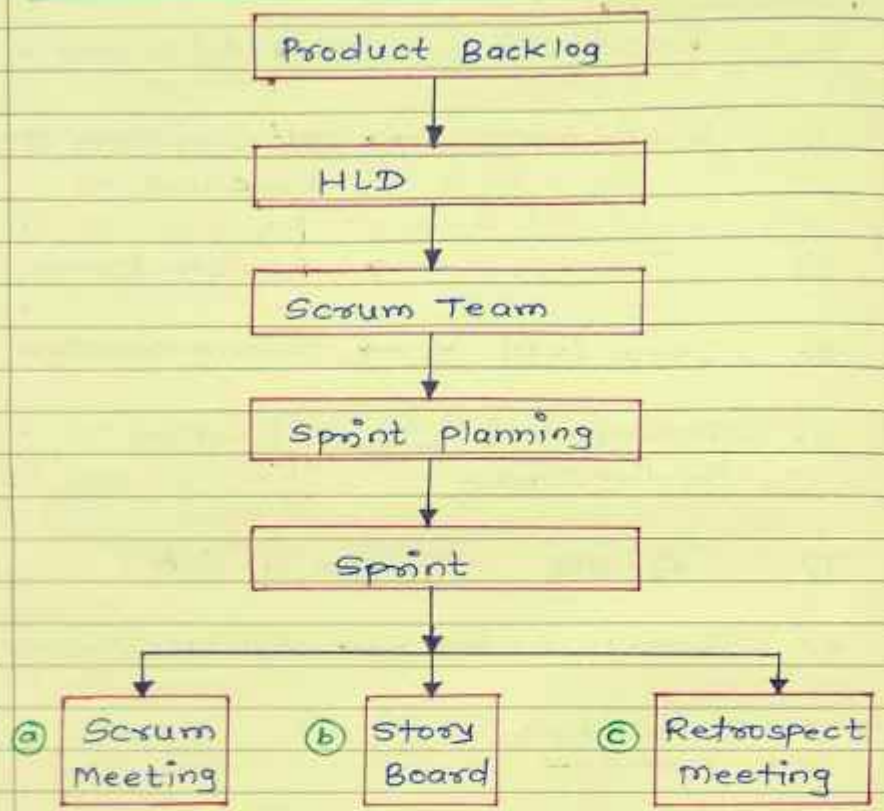
* Flow chart of Agile Model :-



1) * Product Backlog and HLD :-

- High level story

Creat A/c	Apply loan
Login	Apply OD
Logout	Apply check
Remove Ac	Apply DD
check Bal	Claim
Add Bal.	Repay
Withdrawl	Apply Insu
Settings	etc

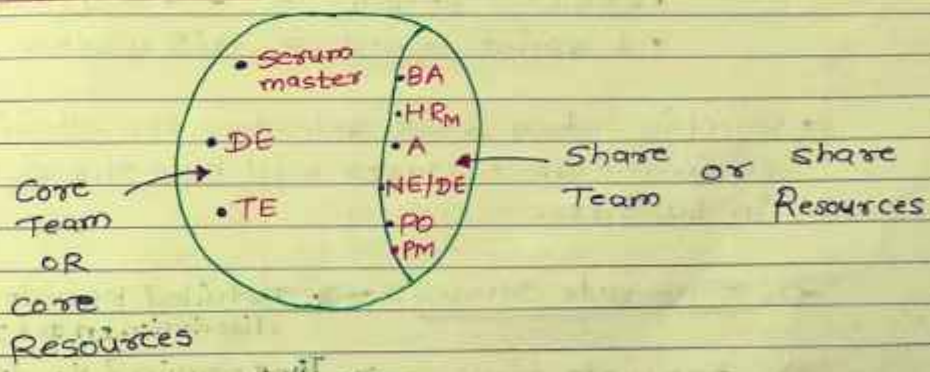
- Product Backlog

- By :- Project Manager OR Product Owner.

- It is a document which contains high level stories.
- This are usually prioritised list of stories.
- It is usually managed by Project manager or product owner.
- It is an high level story (document).

* **Stake holders:-** 1) Important peoples in project
  2) Imp. decision makers.
  3) e.g.:- PM, PO, BA, HRM, Architect, etc.

2) * Scrum Team :-



- A group of people come together to deliver committed increment or features, is "Scrum Team".

- Usually the team has two parts :-
  a) Core team → Scrum master, DE, TE.
  b) share team → PM, PO, BA, HRM, A, NE/DE (Network engineer OR Development Admin)

- The scrum team completes different tasks and responcibilities related to delivery of the product.
- Each members role is inter-related with each other.

3) * Sprint Planning :-

1) Prepare Sprint Backlog :-

- It is a document which contains high level stories taken from product backlog.
- We usually select stories which can be developed and tested within one sprint.
  - 1 Release period = 1-1.5 years.
  - 1 sprint period = 4/5 weeks.
- Care is taken while selecting the stories to confirm this features will help the customer in business.

2) Elaborate Stories. → Detailed knowledge and discription on D & T Stories.

3) Estimate time. → Time required to do that task and sprint preparation.

4) Assign stories. → Stories given to TE & DE. Assigning respective TE/DE.

5) Set acceptance criteria. → Acceptance limits set by PO.

- Sprint planning is generally done by the scrum team (i.e. scrum master, DE, TE) and product owner (PO).

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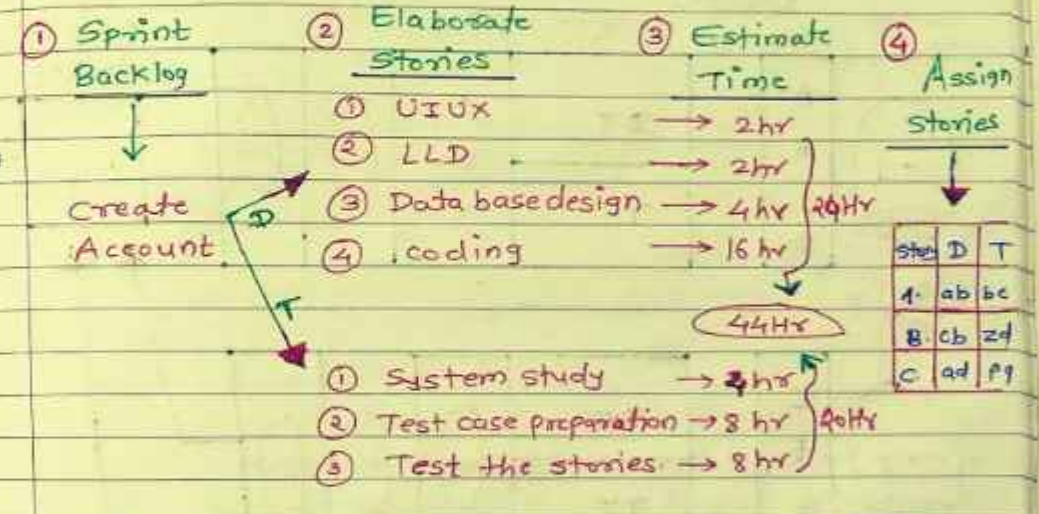
Date 24/3/22

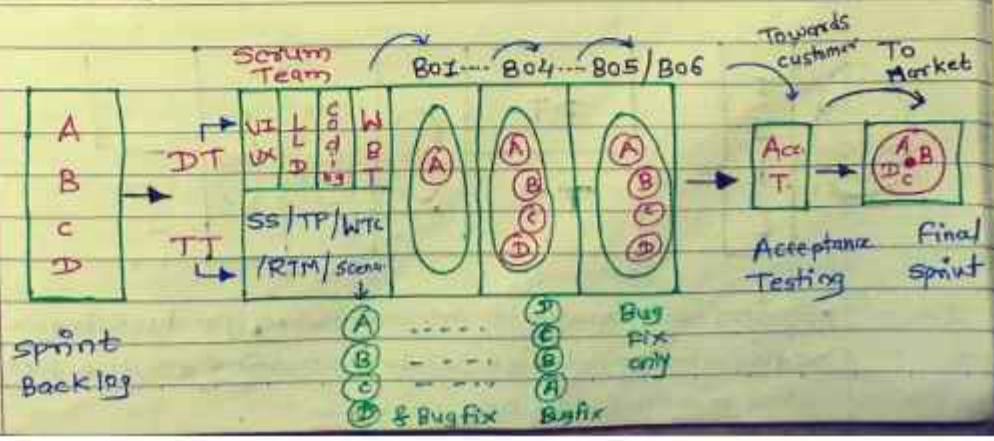
* Story Point :-

- Time required to complete one story (i.e. for D/T) is called "story point".
- Also, time required or estimated to complete one task, (i.e. for D/T the one story), is called "story point".



4) * Sprint :-

- Sprint is nothing but an release.



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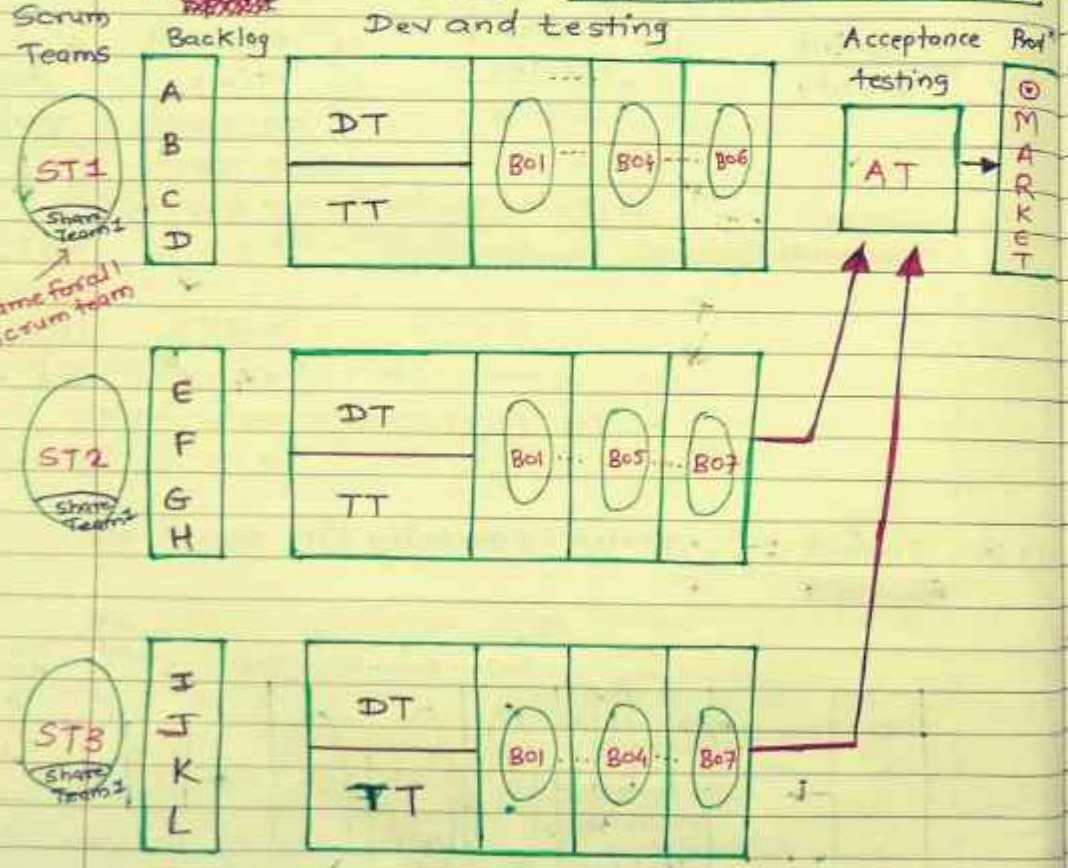
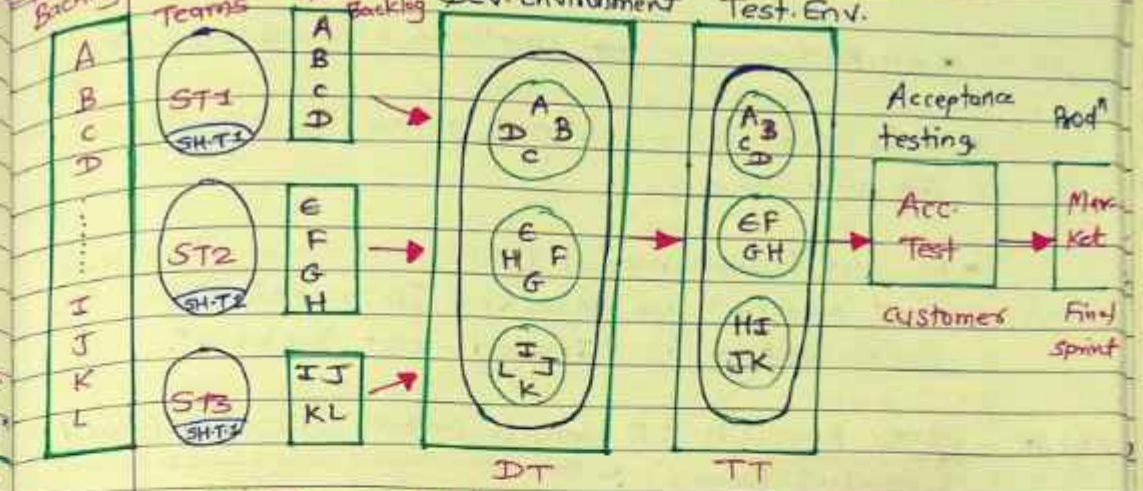
* Average Time periods :-

1) Sprint planning = 8 hr.
2) Sprint (1) = 4/5 weeks.
3) 1 Test cycle = 3/5 days
4) Test cycles in 1 sprint = 5-8 cycles
5) Scrum team members = 3-7 members.

* fig (a) :- Sprint having no of scrum teams.



- Sprint is a complete process from product backlog or requirements, design, coding, testing to the production of a given software.



* fig (b) :- Sprint having 3 scrum Teams :-

- For getting larger numbers of stories in a one sprint, the scrum team numbers should be increased.
- Also, for every scrum team they have their scrum masters and all scrum team having only one share team or resources.
- e.g :- In fig (a) and fig (b), there is stories are A→Z, But we consider important stories first and assigns a 3 scrum teams with ABCD, EFGH & IJKL stories & backlogs develop and testing purpose. Having same share team 1.

4a) * Scrum Meeting / Daily standup / Standup Meeting OR Daily Scrum :-

- It is a meeting to be conducted every day by scrum master with entire scrum team.
- In this meeting, each engineer explains about tasks completed yesterday and challanges faced.
- The engineer will also explain the tasks to be completed on the same day & expected challanges.

- Impediments → challanges, problems, etc.
- This meetings should not go on for more than 15 minutes.
- All the impediments (problems or challanges) that cannot be resolved in meeting are documented in "Impediment Backlog".

4b) * **Story Board :- OR White Board / Scrum Board (Status Board) :-**

TestE	Pending Task	Completed Task
TE1	1 2 3 4	
TE2	2 3 4	1
TE3	4	1 2 3

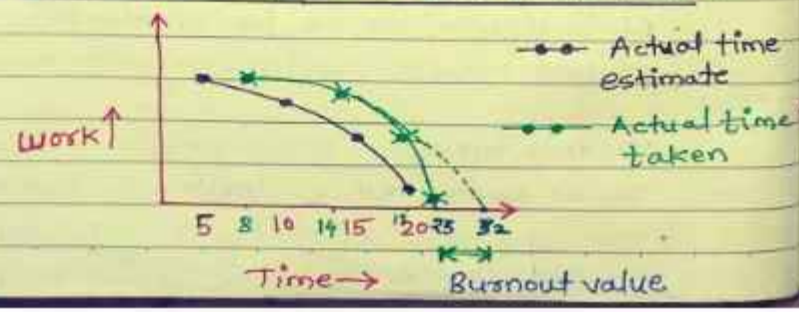
- In General Technique

TE	To be done	doing	done
TE1	2 3	2	1
TE2	1 2 3		
TE3	3	3	1 2

- Modern technique

- It is an representation of tasks that are given to a test engineer to complete in given period.
- It indicates the actual working effieiency of an engineer over the given tasks or stories.
- It gives Tester working stage at a particular day/time

*** Burnout chart OR Work Estimation chart :-**



- Burnout chart is an graphical representation of work done to time taken for that work..
- Burnout chart indicates or shows the how efficiently the work is done, which gives performance of the team.
- It show how fast you or team achieves the goals.
- Generally, this chart is always checked by Product owner.

*** Chicken :-**

- A engineer who is part of scrum team, but not doing any work. The engineer either understanding process or learning, that person is called "chicken".
- e.g :- Freshers.

*** Done done done :-**

- White box testing is done, code is stable, then it can be given to testing.
- Black Box testing is done, application is working according to requirement and it can be given to customer.
- Acceptance testing is done and software is working according to business requirement, Now it can be moved towards production.
- This process is known as "done done done".

4c) * **Retrospect Meeting :-**

- It is meeting, where all team members comes together and discuss about the achievement and mistakes

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done during the sprint of an software.

- This retrospect meetings can be done by :-

1) Testing Team.
2) Development Team.
3) Scrum Team.
4) stake holders.

- The outcome of this type of meetings gives the proper way to design and progress the work according to that retrospects backlog in future planning of sprint.