Agile methodology?

- Here we build large products under shorter cycle
- It is a model wherein we develop the s/w incremental and interactive process
- We come up with this model to overcome the drawback of traditional model.

Explain your project with respect to agile?

- In my current project as soon as we got requirements in the form of story cards.
- So, **our architect, scrum master, product owner, business analyst**, they sit together and they go through with user story and understands the entire requirement in detail.
- So, after understanding the requirement of the user story they convert entire story card into product backlog.
- So, this product backlog is the prioritized requirement document
- In which requirement are documented,
- which bunch of features to be developed in First sprint
    1. which bunch of features to be developed in Second sprint
    2. which bunch of features to be developed in Third sprint,
  - so that is how entire user story divided into many bunches of features.
- And each bunch they prioritized based on customer business needs.
- so, the prioritized requirement document we call it as product backlog.
- And One product backlog contains many story cards.
- Each story card contains many stories.
- So, once after preparing the PB then architect and scrum master they pullout 1ST prioritized story card to develop it.
- Then the 1st pullout story card we call it as 1st sprint backlog.
- So, by taking the first SPBLOG our entire scrum team used to do meeting call **sprint planning meeting.**
- In the sprint planning meeting
    1. We used to discuss about how many days one sprint should be.
    2. In this first sprint what type of target and activities should be happen.
    3. And who should do which activity.

Testing team:

1. They Used to discuss in first sprint which features to be tested first and next.
2. In first sprint what kind of testing technique we need to do in future.
3. When sprint starts which, activity should start and end
   we have to discuss overall plan of our future testing in our first sprint.

- So overall we used to discuss how to manage one sprint this is how we used to do SPM.

- And once after done with SPM end of meeting we used to get first sprint backlog.
- They share 1st SPBLOG to us and for development team.

--------- ---- - - ---This is how we use to do sprint planning meeting----------
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- In 1st SPBLOG developers they used to go through requirement's and they estimate to develop each story how much time it will take to start.
- Same time we used to estimate in this first SPBLOG to test each story how much time it will take.

Estimation time we used to call it as story point.

- And development team designs with lld and hld for 1st sprint
- We used to have free time in that free time we used to go through 1st SPBLOG We understand all the stories in detail, so while understanding if we get any queries, we used to communicate with senior in team.
- If we don't get any solution we used to communicate with developers and we understand our story completely
- This is full we call it as **system study**
- Once after doing system study in first sprint backlog then, we used to identify all possible scenarios after identifying that we used to prioritize the identified scenarios then we **need to convert that scenario into test cases,**
- so, in this first sprint they allocated a Campaign module since it is the medium size module, I have written 60 test cases on that.
- And to write a test case we use test case management tool so that is called as test rail
- once after completion of writing test cases we have that confusion whether we have written test cases for all the stories or not for that we used to prepare a traceability matrix wherein we use to map the stories to test cases then we use to make sure that every req or every test story got at least one test case or not
- so, once we sure about all coverage then wat **we use do a review in that process** me and my colleagues strap our test cases my colleague is to review our test cases and I used to revie my colleague test cases and I have given lot of review comments even I too got review comments so once after review process then we used to get approval for our test cases at same time.
- parallelly our developer used to ready with the first build soon we get build from dev team our test lead used to receive the build and install the build in the testing server
- And we used to get a mail from test lead which contains URL to access the build and start testing
- so, wat we used to do is access the build and the first day we use to start with smoke testing to check whether build is eligible or not and we used to do through testing while

doing through testing whenever find defect, we used to prepare defect report and sent to dev team and we use track the defect until it gets fixed so to do the defect tracking in our current project, we use tracking tool called Jira after completion of testing entire build

- End of the test cycle we use to prepare a test execution report which contains summary of test case execution on one build
- aft completion of test execution report then we used to prepare all types of graphs regarding bugs which we found in first build.
- **so once after preparing test execution report and sent it back to test lead then only we used to consider one test cycle is completed**
- By the time we complete testing in 1st build same time parallelly our developer used to ready with the second build as soon as second build comes our test lead, he uninstalls old build and install new build aft installing new build immediately we never used to start testing.
- because as soon **as new build comes, we used to do meeting called impact analysis** meeting where entire **testing team sit together**, we need to discuss which are all the new changes and where and all it will affect we need to discuss
- and **we use to come up with all possible impact areas** and those impact areas our test lead used to **document that doc we used to call it as impact matrix**.
- once aft impact analysis meeting then only we used to start actual testing
- when we Start actual test first, we need to test new changes once after coming to know new changes are working fine then only, we used to test impacted areas by referring impact matrices.
- so **that is how we used to do regression testing** that's all we started reg testing from second build so again when we find a defect prepares defect report and sent it to dev team the same process will continue on till end of the sprint
- so, like this in this **first sprint we had around 5 builds** so by the way complete developing entire first sprint backlog
- By the time complete entire first sprint software once we come **to know everything is working** fine then we use inform our senior developer and senior dev use to take one copy of the s/w and it goes to customers place and launch the s/w to customer then is wat we used to do this sprint
- When we used to say sprint once actually start testing, we use to say for us sprint is started so **sprint is a place where test engineer we test same product for many cycles** and this is a place where test engineer finds a defect report and send it dev team and helps to improve the quality of the product
- Where test engineer spends max times
- This a place where we conduct all diff technique on product
- Sprint were test engineer productive to the company

- And defect must be tracked that is known as defect tracking and every test cycle we used to prepare test execution report and we never use to share with the customer
- only last test cycle of the sprint we used prepare one test execution report and this only we used to share with the customer as soon as receive last test exec report by looking into that customer used to think this the end of one sprint
- so, this test exec reports this stage is end of one sprint for our customer and for our scrum steam just because we launched product to customer, we never use to consider one sprint is completed and
- After launching product to customer scrum team, **we used to do another meeting call sprint retro spec meeting**
    1. wherein entire scrum team sit together and
    2. we used to discuss reg writing process which we use to followed in entire sprint and
    3. we use to document it and also,
    4. we use to discuss reg good process which we did it in entire sprint we used to doc it that doc we call it as sprint retro spec meeting doc
- And that doc we used to store it in a sever we had server in our company by QMS for sec purpose and aft completion of meeting the only we used to consider one sprint is completed
- **starting of sprint to end daily we need to have meeting called daily sprint stand up meeting where in entire scrum team sit together,**
    1. we used to discuss yesterday what we did n today what we have to do and
    2. what problems we faced while doing work and in future wat might stop our work,
    3. we used to discuss all these impedemance and our scrum master used to doc all these impedemance so that doc we used to call it as impedemance backlog
- so, because of these daily sprints stand up meeting **30 % of our process is improved actually**
- After completion of first sprint then again, our scrum master architect and our product owner they used to discuss then they **used to pull out second priority story card to develop it** and that with as second sprint backlog by taking that backlog we used to do meeting called second sprint planning meeting
- while doing it we used to refer pervious sprint retro spec meeting doc and we used to make sure that which are the good steps followed in previous sprint that must be repeated in current sprint wrong process not be repeated this same need to follow till end of the project.
- In the middle of the sprint the customer asks changes in the middle of the sprint we need to accept It but what we need to do is we need to postponed to next sprint this postponed we use to call as carry forward this is how we used to handle the changes whatever the sprint we had entire project almost we did regression testing.

Smoke testing (B, C, S)

- It is also called (build verification test (BVT), confidence testing, sanity testing, and build acceptance test)
- Testing the basic critical features of an app, before doing thorough testing (FT/IT/ST) and regression testing

NOTE

- While doing smoke testing, we need to do only positive testing
- don't do negative testing.
- After completion of smoke testing then we can go for thorough testing like (FT/IT/ST)
- 1st time they receive 20 to 30 builds

2 types of smoke testing

1. Formal ------
2. Informal ---- no documentation or no process followed

Why we need to smoke testing?

- We do smoke testing to check whether the build is testable or not.
- To check whether s/w is installed properly or not.
- To check whether s/w contains any blocker or critical defects.
- To check whether have we received any broken build or not, it is a kind of general health check-up.

Blocker:

critical defects:

broken build:

when do we do smoke testing?

- whenever we got new build.
- After releasing project to production environment, we need to do smoke testing.
- If the customers need to start acceptance testing then before he should first start with smoke testing.
- In some projects development engineer will do smoke testing before giving s/w to tester.

How do we manage smoke testing?

- We manage by writing smoke test cases and by writing automation test scripts.

Smoke	Sanity
Testing the basic critical features (not going depth in app but in high level)	It is Narrow regression testing focus on few areas on functionality (deep testing)
basic critical features working fine or not	New functionality or new implementation or bug fixes are working fine or not

Testing full module of critical feature	Subset of regression testing, small portion
+ve testing	Both +ve & -ve
Both tester & developer	Only by tester
Like General health check	Like specify area health

How you did smoke testing on your project?

- In my current project there are bunch of test cases out of that I took only basic and critical feature test cases and I executed and did smoke testing
- so, in this project for me they allocated
    1. campaigns module
    2. leads module,
    3. contacts module,
    4. accounts module and potentials module.
- In campaigns module there is a feature called new campaign so **that new campaign feature it is a critical feature** because in my client business they had a new product so they want to increase the sales of their new product.
- Since no one is aware of that new product that is the reason, my client decided to market their product, so they came up with many marketing strategies.
- Whatever the marketing strategies they come up those marketing details they store into the software because of this what happens after few years in the software if they want to track earlier what type of marketing strategies they applied and how much success they got

  they can easily track in the software and if they want to apply the same marketing strategies again. they can apply and again they can see the same success.
- so, storing marketing strategies details into the software, it is a critical activity and to do this critical activity we use a feature called new campaign feature.
- That is why it is a critical feature.
- So, what I did is, **I tested this new campaign feature** I checked whether by using this new campaign critical feature I can able to store all marketing strategy details or not, when I checked, I came to know that. Yes, I can store and really, I created a campaign, so that is where I came that new campaign critical feature is working fine then I said smoke testing pass on new campaign critical feature.

  Then one moved on to another critical feature, Here
- Another critical feature is **in leads module there is a feature called new lead**
- So, this new lead feature is a critical feature because in my client business once after doing the marketing of their product many customers start to visiting their show room whoever visits the client's show room, they collect customer details and they store into the software.

- Because of this what happens in future they will be having better communication with the customers, so when my clients are having better communication with their customers definitely my clients' sales will increase.
- So, storing customer details into the software in a critical activity. To do this critical activity we use a feature called new lead feature that is why this new lead feature is a critical feature.
- So, what I did is, I tested this new lead critical feature, by using this new lead critical feature, I can able to store all the customer detail or not I checked it when checked
- Yes, I can store and really stored and I created a lead in the Software. So, that is where I came to know that new leads critical features working fine
- Then I said smoke testing is pass on new lead critical feature
- Once I came to know that one critical feature is working fine
- Then I moved on to another critical feature Here another critical feature is
- In **contacts module there is a feature called new contact feature** this new contact feature is a critical feature because when customer visits the show room, they collect not only customer details along with that they collect customers contact details also like
    1. Phone number
    2. Email address
    3. Address
- so, after collecting customers contact details those customer details were also, they store into the software because of this in future is they have any new product in the showroom they can advertise their new product or they can send their new product information to many customers. within a minute using this their contact details which they stored in the software. So, when the new product in getting more visibility within short time obviously my clients will sales increase and they will get more profit
- so, storing customer contact detail is a critical activity to do this critical activity
- He uses a feature called new contact feature that is why it is a critical feature.
- So, what I did is, I tested this critical feature by using this new contact critical feature
- I can able to store the all customers contact details or not I checked it, when I checked
- I came to know that. Yes, I can store and really, I stored and really, I created a contact that where I came to know that new contact critical feature is one working fine, then I said Smoke testing is pass on new contact critical features.
- Once I came to know that one critical feature is working fine
- Then I moved on to another critical feature Here another critical feature is

Functionality testing / component testing

- Testing each and every component thoroughly against the requirement spec.
- FT used to do how our s/w how it will work
- All the type of FT can be done only by manual testing
- Checking Behaviour of app

Component testing: testing of component like textbox, links, dropdown box, etc

Thoroughly: Entering all possible scenarios

NOTE:

- Here we should never assume our own requirements
- If we get any confusions then we have to consult with business analyst.

Non functionality testing

- Mainly focuses on performance of s/w like stability, reliability, load
  Load: ex (Pages are loading more secs)
- Non-FT can't be done only by manual testing
- Checking performance of app

Types of non-functionality testing

Load testing, stress, soak, web security testing

How you did functional Testing in your project?

- In my current project as soon as got the requirement we gone through the requirement by understanding the requirement.
- That is where we came to know one application contains many features and one feature contains many components
- And also, we should know how each and every component works and how it is interrelated each other.
- So based on that we can identified all possible scenarios for every component and we convert it as a functional test case.
- As soon as we got build from development team. We executed those functional test cases and we test each & every component thoroughly and independently.

---------- **This is how we did functional test in our project**. ----------

- In my current project for me they allocated campaigns module, leads Module, contact module, product module, invoice module and capability module.
- So, I started doing functional testing from campaigns module
- I clicked on campaign module by clicking on campaign module I checked whether its campaign module list page displayed or not.

- when I check that is where came to know yes really campaign list page displayed.
- Then What I did is according to the requirement in campaign list page, New Initiative button should be there, I check whether it is there are not. Yes, it was there.
- Then what I did is I clicked on New Initiative button. I checked whether it is displayed create campaign page or not. As I was expecting really it displayed Create campaign page.
- So that is where came to know that new campaign button is working fine. Then I said that Functional testing passed on new campaign button.
- In create campaign page it contains many components like
  1. Campaign Name,
  2. Start Date,
  3. End date,
  4. Type drops down list,
  5. Status,
  6. Actual cost,
  7. budgeted cost,
  8. expected revenue sent,
  9. expected response.
- So, I started doing Functional testing from (campaign Name text filed).

  The requirement for campaign Name text filed is
  1. (It should accept 3 to 121 characters
  2. It should accept only characters and
  3. It should not accept space between character).
- So, this what requirement for the Initiative Name text Filed. Since Initiative Name text filed requirement was given in range of values.
- So, I Applied test cases design techniques in test case design techniques I applied Pressman 1st lesson.
- According to pressman 1st lesson I derived one valid and two invalid values and since I was testing 1st time I tested for (valid data).
  1. (I entered greater than 3 and less than 121 characters in to campaign Name text filed and
  2. I clicked on save button. The moment I click on save button I checked whether its accepting or not.
  3. As I was expecting so it was accepting the valid data)
- So that where came know the campaign Name text filed working fine for valid data.

Then I moved on same component for invalid data.

I started one by one for invalid data.so

1. (I entered only digits in Initiative Name text filed,
2. I clicked on save button and I was expecting it should not accept. So, as I was expecting it not accepted it showing error message saying that Digits are not allowed.
3. so that its where I came know Initiative Name text filed is working fine).

- Then I tested for some other invalid data. I entered space between characters clicked on save button. So, as I was expecting it not accepted it showing error message saying that Space between characters is not allowed.
- so, this how by applying pressman technique I tested it.
- Once after this then I was thinking like I should test this component thoroughly.

Error guessing technique

- so, what I did is so applying Error guessing technique by applying error guessing I tested this campaign Name component thoroughly for all possible invalid values.
- What I did is I entered alpha numerical values in that text filed clicked on save button and it was not accepting
- Then I entered characters and special characters combination in campaign Name text filed clicked on save button and it was not accepting.
- Then software is their English language and I entered other language in campaign Name text filed, clicked on save button and it was not accepting it.
- Then I kept campaign Name text filed empty, clicked save button and it was not accepting so that error message saying that empty page should not allowed.
- so, like this I tested campaign Name component thoroughly by applying Error guessing technique for all possible invalid values.
- Once after tested thoroughly some where I feeling like let me test Edge values so that I may find some more Bugs.

Boundary Value Analysis (BVA).

- So, what I did is to test edge values only I applied another technique called Boundary Value Analysis (BVA).
- so, by applying BVA I tested that campaign Name text filed for Edge values.
- I entered less than 3 values, clicked on save button so it may accept I may find Bugs and it was expecting it accept but it was not accepting.
- Then I entered Great than 3 values that means I entered 4 characters it accepted. Then I entered great than 121 values that means 122 characters entered and clicked on save button, and it was not accepting it.its working fine.
- Then I entered 120 characters it accepted. This is how I tested Initiative Name text filed thoroughly by applying BVA techniques.
- That where came to know these components working fine.

Integration testing

- Testing the data flow b/w 2 modules
- Integration testing need to done after completion of functionality testing.

(Modules like compose mail, sent item.)

Ex: In Gmail

(parent)compose mail (1) ---------→ (child)sent box (2) | checking composed mail in sent item or not

Types of integration testing

incremental integration (testing data flow b/w more added modules like chain reaction)

top down & bottom up

what is sandwich testing? IQ

- combination of top down and bottom-up incremental testing.
- **non incremental integration**/big bank method

Adding all modules in a single shot and testing data flow b/w them
In these we can't able to understand the root cause of problem

How do we do integration testing?

- Understand the app in depth.
- Understand how each and every module related
- Identify all possible scenarios
- Prioritize the scenarios
- Document all the possible scenarios
- Execute all the documented scenarios and if finds any defects communicate with dev team.

Two ways of integration testing

One way: data flow from A to B and B to A | Two ways: data flow from A to B or B to A

How you did Integration Testing on your project?

- In my current project as soon as got the requirement from customer we read the requirement we understood the requirements by understanding the requirement.
- That is where we came to know there are some Data Flow between the modules and we identified those data flows and we Documented it as Integration Test Cases.
- As soon as we got build from Development team, we executed those integration test cases and we tested each &every data flow practically whether its working or not.

----------This is how we did Integration testing in our project. ---- -------

- In this project for me they allocated

campaign modules, Leads modules, contacts module. Accounts module and capability modules.

- I started integration testing from campaign module.
- When I selected campaign module it displayed campaign list page in campaign list page there is feature called new campaign
- So, using this new campaign feature we can create new camping.
- After creating new campaign this new campaign details also, it should display in campaign list page this what customer mention in the requirement. That means that means there is data flow between new campaign page to campaign list page, so this what customer mentioned in the requirement.
- What I did is I tested this data flow really it working fine or not. by using this new campaign feature,
- I checked whether I can able to create a new campaign or not.
- When I check I came to know that yes, I can create and I really created a camping.so after creating a campaign I was in campaign details page.so after creating campaign I want check it in campaign list page.
- So, what I did is again I selected campaign module by selecting campaign module I checked it really campaign list page displayed or not. When I checked that where I came to know that yes campaign list page really displayed.
- When campaign list page displayed then I checked in that page newly created campaign list is displayed or not. When I check that where i came to know that yes really displayed. That is where I came to know data flow between create campaign page to campaign list page is working fine. Then I said that integration testing passed between create campaign page to campaign list page. This is how I tested one data flow.
- **Then I moved on another data flow**.
- Here another data flow is whatever campaign we created in create campaign modules the same campaign details also it should display in campaign name look up page in Create Lead page that was the requirement.
- so, what I did is in campaign list page by using new campaign feature I have created new campaign, after creating new campaign then what I did is I selected leads modules by selecting leads module it took me to leads list page.
- In leads list page I checked whether new lead button present or not. Yes, it was there by clicking on that button create leads page should be display.
- Yes, really displayed then I checked in create leads page campaign name lookup icon present or not.
- When I check it was present then what I did is by using that camping name lookup page icon whether it take me to campaign lookup page. I was expecting. Yes, as I was expecting camping name lookup page should display campaign list page.
- That where I came to know data flow between camping module to leads module is working fine. Then I said the integration Testing passed between camping to lead feature. **These is how I continued for all modules**

Questions on test cases

• It tells how to test your application
• It is derived from the test scenarios
• It is low level or detailed documentation
• Test case have various components and each components have multiple steps
• We can validate or check if test scenarios are correct or not

How many test cases are there in your project?

- In my current project we have around 2000 test cases.

How many you wrote?

- I wrote 320 test cases.

How many test cases you can write per day?

1. No of test cases that I can write per day it depends upon clarity of the requirement
2. Earlier I used to write 3 to 4 test cases per day
3. After 2 to 3 sprints, I was able to write 8 to 12 test cases here number of test cases got doubled because by the time I got better product knowledge and by the time I started re executing the test cases and I used to it.

How many test cases you can review per day?

- In my current project to review one test case it always takes 15 mins to 20 mins so, in one hour I can review 3 to 4 test cases and per day I can review 24 test cases.

How many test cases you can execute per day? 40-60

- In my current project to execute one test case it always takes 10 mins to 15 mins that means I one hour I can execute 4 to 5 test cases and per day I can execute 40 test cases.

Whatever the test cases you wrote in your project can you write now?

- Yes, I can write (and write whatever you written in your project)

How do you make sure that your test coverage is good (test coverage means scenario coverage?

- I will follow stringent procedure to write test case
- And I will prepare traceability matrix and I will make sure that every requirement got at least one test case. when I say I will follow stringent procedure to write a test case consciously we do certain activities what I will do
- If I spent lot of time in reading the requirement and understanding the requirement and the identifying scenarios and documenting the scenarios because of that there will be better coverage and while writing test cases
- I will apply test case design technique because there will be improvement in coverages and also after writing test cases
- we spend lot of time in review and find missing scenarios and there will be improvement in the coverage and also while executing the test cases if I find any new scenarios, I will add it to my existing test cases because of that there will be a better coverage and also by doing adhoc testing we can cover more no of scenarios so by doing all these activities I make sure that I covered all possible scenarios my coverage is good.

How do you stop test testing what id the stop criteria?

Ans:

- when there are blocker bugs basic features only not working,
- When all critical bugs are fixed but there are some pending bugs which are not having impact on customer business
- when all end-to-end scenarios are functionally stable .and
- when met with deadline and allocated budget is over.

Test plan

What is Test plan?

1. It is a document which contains all the future testing activities
2. Test plan is prepared by test lead
3. After understanding the requirement, we prepare test plan
4. There are 17 sections in test plans

Test plans interview questions

Who prepared test plans in your project? Ans: our test lead.

Have you involved? Ans: No am not involved.

You said you have not involved; then how do you know wat it contains? Ans: yes, am not involved but when my test lead was preparing, I was just sitting next to him so I know wat it contains.

What test plan contains in your project?

Ans: **Objective, scope, approach, assumption, risk, Mitigation plan, Test methodology, Schedule, Test environment, Defect tracking, Test automation, Deliverable, Entry and exit, Roles and responsibility Templets.**

- In my current project whatever the test plan we have it contains several sections like
- **objective** it talks about aim of preparing test plans.
- Once after this there is a section called **scope** it talks about in future for this project as soon as testing starts in this project which features to be tested and which not be tested.
- Once after this there is a section called **approach** it talks about the way we test the product in future.
- Once after this there is a section called **assumption** it talks about all future assumption on future testing.
- And next we talk about risk it talks about if any future assumption fails what kind of risk will happen, they will predict now only and all future risk we are going to write in this section.
- **Mitigation plan**: it contains alternative solution for future risk.
- **Test methodology**: it contains all diff types of test techniques which we are going to conduct on product in future.
- **Schedule**: It talks about which activity should start and which activity should end for the project
- **Test environment**: in future for project wat are all the hardware and s/w contain.
- **Defect tracking**:
    1. It contains procedure of how to track the defect if test engineer finds a defect.
    2. and it contains what terminology we should use for severity and priority of the bug
    3. and which defect tracking tool be used for this project in future.
- **Test automation**:
    1. It talks about which automation test to be used and in future in this project
    2. which features to be automated and which to be not automated and
    3. which automated frame work to be adopted.
- **Deliverable**: wat is the output from testing team at the end of test life cycles.
- **Entry and exit**: It talk about in future for this project if you want testing wat are the content to be ready and if you want to stop one type of testing and start another type of testing then in previous type of testing wat criteria we have to satisfy
- **Roles and responsibility**: It talk about work allocation.
- **Templets**: It talks will have Templets for all documents which we are going to prepare on product in future.

----------This is what the information test plan contains in my project. ----------