3. **Boundary value analysis (BVA):**
   If the input is the range of values between A and B then design the test case for
   A-1, A, A+1
   B-1, B, B+1

   100-5000
   , 100, 101
   4999, 5000,

Ex: if the range of value is in between 100 and 5000 then we have to test it for the following inputs

99, 100, 101

4999, 5000, 5001

When comparing the equivalence partitioning and BVA, testing values are repeated – if that is the case, we can neglect Equivalence Partitioning and perform only BVA as it covers all the values.

Interview Questions:

1. What are the test case design techniques?

Q. How do you make sure that they review test cases seriously or completely?

➔ . TL should pick some test cases randomly and review

➔ Assign primary and secondary owners so that primary has seriousness to review.

Review Ethics

1. Always review the content not the author
2. Even after review if there any mistakes both author and reviewer are responsible.
3. While reviewing spend time only in identifying the mistakes not in identifying the solution for it.

Q. Why we review the test cases?

Or

If I give you few test cases what could be your approach to review?

Or

How do you review the test case?

1. First I will see the requirement for which the TC is written then I will go to the body of the TC and try to find
   Missing scenarios
   Repeated scenarios
   Wrong scenarios
2. Check whether the scenarios are organized properly or not so that it should take less time for execution.
3. Check whether it is simple to understand so the new engineer will be able to execute it without asking the question
4. I will look into the header of TC and check weather all the attributes are covered or not.
   I will check weather all the attributes are having relevant content or not
5. I will check whether TC template is according to standard, defined in the project.

Procedure to write the TC

1. System study: read the requirement and try to understand the requirement if you have any quarries interact with customer, developer and BA
2. Identify all the possible scenarios: Identify, Brain Storming Session (BSS), measure the BSS.
   In BSS, presentation
   - Features
     - Improves product knowledge
   - Scenarios
     - Missing
     - Wrong
     - Repeated
3. Write the test case:
   - Document the identified scenarios
     - Group all related scenarios
     - Prioritize with the group
     - Apply test case design technique
     - Use standard test case format
     - Document
4. Review the test case
5. Fix the review comments
6. Verify the fix
7. Test case Approval
8. Store it in a repository

Test case Repository (TCR):

Q**. Where do you store the test case?**

=>

1. In Exl sheets

2. Word file

3. Shared file

4. Test management tool eg QC (Quality control), test link. Jira

5. Version control tool

Q. How do you make sure that your test coverage is good?

Or

Q. How do you convince your customer or management that you have covered everything in testing?

=> Our test coverage is good because our test cases are good

1. We have followed a strict procedure to write the test cases.

    - I did through system study because of that I was able to identify more scenarios.
    - I identified scenarios and perform Brain Storming Session, because of that I was able to find many missing scenarios.
    - While writing the test cases I applied test case design technique because of that I was able to add more scenarios.
    - We review the TC's and found many missing scenarios because of that I was able to improve my test coverage.
    - While executing the TC's I found many new scenarios and I added them back into the test cases.
    - I also perform Adhoc testing to improve the test coverage.

2. We prepare traceability matrix and ensure that every requirement got at least one test case.
3. We adopted or applied code coverage analysis technique and found that every source code which is not covered as a part of test execution, later on written the scenarios for that.

Traceability Matrix:

It is a document prepare to make sure that every requirement got at least one test cases.

Advantages of traceability matrix:

1. It gives traceability from high level to automation script.
2. We can ensure that every requirement as got at least one test cases, which intern gives confidence that we are testing each and every features at least once.

Sl. No.	Module Name	High level Name	Detail Requirement	Test Case Name	Automation script Name
1.	Amount transfer	1.1 FAN	1.1.1 Should accept only the 10 digit No.	CBO_AT_FAN1	AUTO_CBO_AT_FAN1
			1.1.2 Should accept only those No. which is created by manager.	CBO_AT_FAN2	AUTO_CBO_AT_FAN2
2.	Loan	2.1 Personal loan	2.1.1 2.1.2 2.1.3	_____ _____ ------	_____ Manual test
		2.2 Home loan	2.2.1 2.2.2 2.2.3	_____ _____ ----------	_____ ---------- ----------
		2.3 Vehicle loan	2.3.1 2.3.2	_____ ---------	

Q. What is the difference between test case review and traceability matrix.

Test case Review	Traceability matrix
1. Here we check weather all the possible scenarios are covered on a specific requirement or not.	1. Here we check weather every requirement has got at least one test case or not.
2. Here we doesn't check every requirement got at least one test case.	2. Here we doesn't check weather all the possible scenarios are covered.

Test Management Tool:

It's a software used to record the test cases or the requirement and to write the test scenarios

Usability testing:

Testing the user friendliness of an application we call it as usability testing.

1. Look and feel should be good
2. Easy to understand
3. Easy to navigate
4. Easy to use
5. Small sentence should be used
6. Simple words should be used
7. It should take very less time to reach what users want
8. Within 3 clicks user should get what they want
9. Upper case letter should not be used
10. Lower case letters should not be used

Regression Testing:

Testing the unchanged features to make sure that it is no broken because of changes is called regressing testing. Here the changes can be addition, modification, removal of bug fixes.

Types of regression testing

1. Unit regression testing:
   Testing only the bug fixed or changes made is called unit regression testing.

2. Regional regression testing
   Test the changes and only the impacted region is called regional regression testing.

   Q. How will you identified the impacted areas? or How will you do Impact analysis?

1. Based on product knowledge as a TE I will be know how each and every module works in depth and also I will be aware of how all the modules are related based on that knowledge I will be able to find the impacted regions.

   Eg. If we changes attach file feature It will make an impact on compose mail, all mail, inbox, outbox, set items, spam.

   Eg. If I modify the login feature it will affect the features like remember p/w, forgot p/w.

3. By preparing the impact analysis matrix we will identify the impacted areas.

Changed feature	login	Rememper p/w	Forgot p/w	Compose mail	inbox	Out box	Sent item	spam	All mails
Attachment	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
Forgot password	Yes	Yes	Yes	No	NO	NO	NO	NO	NO

4. To identify the impacted areas the TE will do stand up meeting there they will discuss the bug fixed and what are all the impacted areas.
5. By conducting the impact analysis meeting where in entire testing team meet and discuss about list of changes (addition, modification, bug fixes) and impacted area.
   We should do this whenever new build comes before we start testing.

Disadvantages of Regional regression test is that we might missed some impacted areas and miss bugs. So in order to overcome this we do full regression testing.

Doing full regression testing will consume more time so, we use to do the full regression testing in between some cycles or we do it at every 5 or 10 cycles.

3. Full regression testing

Testing the changes and all the remaining features is called full regression testing.

Q. Why we do full regression testing and when we do?

=> 1. Whenever we have too many changes are made we go for full regression testing.

2. Whenever the changes are made in the core features or root of the product.

3. Last few test cycles we must do full regression testing since we are launching the product, at the end movement we do not like to get the issues.

Q. What are the disadvantages of manual regression testing?

=>

1. It is repetitive in nature over the period of time it becomes monotonous.

2. Manually testing the application consume more time, because of that test cycle duration increases which in turn increases the total time taken to deliver the product to the customer.

3. Man power is more expensive, over the period of time test engineer's may not beeffective because regression testing becomes repetitive.