

**1) Why do you want to pursue your career in the field of software testing?**

**Answer:** Based on my research, it is compulsory for any product to be of good quality to sustain in a market. To gain satisfaction and confidence in the quality of services or products, from the end-user, we must verify that product behaves as expected and outperforms the desired quality standards. To gain excellence and value for money spent, we should offer the best quality products and services to our clients. I strongly believe that software testing decides the measures of product quality and performance.

As I always look for quality rather than features rich product, that do not perform as expected. That is the main reason why I decided to pursue in the software testing domain.

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**2) Please explain your nature, habits, or likes that you think you are the right candidate for the testing?**

**Answer:** From my childhood, I was curious about how things work, I used to ask many questions to my parents on why, how, and what about the things. During my school and college days, I was debating on many topics, reading books, and searching libraries and the internet to understand and find out reasons and Answers to many of my questions. I used to visit my mentors often to know and discuss my queries. Based on my knowledge seeking nature and desire for perfection, I think I am right candidate for software testing

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**3) Why should we test?**

**Answer:** It is essential to test to verify that The product or software built behaves as expected by the customer, meets or exceeds the expectations.

Personal information shared by the end-user is secured while using the product, application, or services. The features provided in the application perform as per expectation and requirement.

The product has no serious anomalies.

By testing an application, any deviation from expected behavior can be identified and reported to the stakeholders.

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**4) What do you mean by testing?**

**Answer:** Testing is a process of running an application to identify any defects that breaks the functionality, Features provided in software offer results as expected, System securely display output as quickly as possible. Software features should display same output and behave as expected every repeated instance of running it.

The software can be tested manually by testers or can run automatically using a script and follow steps that tester execute to test the application.

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**5) What are the features you check before you purchase the mobile?**

**Answer:** Priority will be the price of a mobile, but various features to check before we make our choice for our dream mobile will be

**Display** – Screen size, resolution, browser support, movable keypad, reliable network connectivity.

**Storage** – capacity to store large files, images, documents, downloaded programs

**Battery** – long-lasting and quick charging batteries that should be easily available in market.

**Processing power** – for remote work situations should be able to process designing graphical images, presentation, comfortable keypad, file sharing options.

**Ease of use** – for elderly or novice, helpful settings, and configuration.

**Camera**– with high-quality picture, zoom effects, large pixel resolution.

Accessories should include the charger, battery, hands free and screen guard

The warranty should include any online help in case of difficulty to use mobile, repair of mobile due to hardware fault or replacement of mobile set.

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#### **6) What do you mean by quality?**

**Answer:** Quality of a product or service can be defined as a level of reliability that meets or exceeds expectations of end-user. For Example, the taste of Amul ice cream or any of the dairy products available in the market produced by Amul is reliable for the quality, new products introduced in market also exceed the expectation.

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#### **7) What do you mean by performance?**

**Answer:** Performance of a product or service is a measure of achieving continuously preferred results in the most efficient and effective way. For Example, Toyota Motor Corporation produces cars that run more mileage with less fuel consumption and produce lesser pollution.

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#### **8) Can you write possible test cases for a pencil?**

**Answer:** Following are possible test cases for pencil

1. Check the length of a pencil, strength of the outer wooden body,
2. Check thickness and resilience of graphite material (one type of crystalline carbon black in color)
3. Check readability after writing text using pencil
4. Check if written on different types of paper, cloth, or wood.
5. Check how many meters can be written with the available graphite material in single pencil.
6. Check the written text on paper is erasable with a normal rubber eraser.
7. Check if a normal sharpener can sharpen the pencil or not
8. Check if you can write after graphite is dipped in water, oil or dust.
9. Check if the name of the company written has correct spelling printed on pencil or not.
10. Check if graphite is not broken already or brittle.

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#### **9) What do you test in One Time Password (OTP) creation application?**

**Answer:** Before processing online financial transactions, a bank will send One Time password (OTP) on the registered mobile number of the customer trying to send money to the payee. OTP sent on mobile or an email address acts as a measure to verify that person is genuine.

The following are possible scenarios for OTP received on mobile. 1.

OTP should be received within the specific time period,

2. OTP must only be received over the registered mobile number or email address provided 3.

Previously sent OTP if used should not allow any transaction

4. Expired OTP should not be used in any transaction

5. Already used OTP cannot be reapplied for any other transactions.

6. There should be a facility to receive OTP again.

7. The resent OTP should not match with any of the previously sent or future OTP.

8. OTP should be case sensitive and should not be accepted if not used exactly as received on mobile or email.

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#### 10) What are the essentials of software testing?

**Answer:** Following are important artifacts essential for testing any software application

**Test strategy** is high-level document that defines test approach for the software, what features are essential to test (objective of testing), how to test (methodology), Types of testing to be carried out, and execution of tests.

**Test plan** decides which tests are for manual testing and which one is for automated testing (distribution of testing task), Who will test what (test schedule), and when to start testing and end testing (duration within which testing should complete)

**Test cases** are scenarios with steps to be carried out, mapped to requirements with the expected output, to be carried out during testing of an application with status for each scenario, based on the actual result. Test cases can be executed manually or converted into scripts to be executed with the help of tools like selenium or QTP.

**Test Data** is the valid values that are fed to an application as inputs while running an application in order to test it. It is mandatory to design valid test data as per the scenario that results in expected output. In case the actual output differs from the expected output, the deviation is reported as a bug in the defect management system.

**Test Environment** is a system configured that mimic or match to system specifications at the client, in order to run software on this system to verify how the system at client be have for the tests and use cases.

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#### 11) What is required for the tester to know before testing software applications?

**Answer:** In order to test, a tester should first understand

The requirements and output expected by using a software application and from software requirement document approved by the customer and project owner

How software works, domain knowledge (software used in specific discipline or field such as e - commerce, Banking, Insurance, Enterprise Resources planning, Gaming, Education or training, or Search - based application)

Whether the software is desktop based or web based

What are the features and its functionality,

How many input forms to be filled in, what are the input fields and their valid values,

How user interface elements like text field, radio button, checkbox, drop -down list, buttons and their types (submit, reset, cancel) functions.

What to expect in an output form.

Working of computer, types of networks.

In case of desktop application, what technology is used in developing a software How to install the software?

What technology is used in building user interface? (HTML, XHTML, JSP, ASP, JavaScript, VBScript, JQuery)

Where reference data gets stored, where data for analysis will be uploaded and then processed What database type is used to store data?

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## **12) What are desktop applications?**

**Answer:** Desktop applications are those software that can be installed on standalone machine called as client machine (desktop or laptop). These software use native resources of standalone machine such as network, CPU, memory and storage, in order to perform specific task for which they are designed for.

Desktop applications are designed to run on standalone machine, by single user. Multiple users can access the printer, scanners if they are LAN connected with desktop applications.

Some Examples of desktop application are Windows file explorer – to access files stored on hard drive of local machine, Microsoft's office applications such as word, excel, PowerPoint to write and access documents, generate tabular reports on finance and design presentations, Web browsers to access websites and searching information on the internet.

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## **13) How to test desktop applications?**

**Answer:** Desktop applications are feature-based applications, where users should be proficient in operating such applications, understand its features, accessing the menu, submenu. Software's features can be tested with Graphical user interface tests, end to end testing, and functional testing. Non-functional testing will depend on stand-alone machine's limited resources such as CPU, memory, storage, accessing files, or use features like printer/scanner if desktop applications are connected in local network.

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## **14) What are web-based applications?**

**Answer:** Web-based application need web server in order to host them, visitors need internet connection and need a browser to access the web site, and internally web sites process user requests and send responses via hyper Text Transfer Protocol (HTTP). Multiple users can access same feature of web application at same time simultaneously.

Examples of web-based application are e-commerce portals for online purchase of products of our choice (amazon.com, Flipkart, bookmyshow.com), websites of most of the companies, universities, search engines (google.com, altavista.com)

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## **15) How to test web-based applications?**

**Answer:** web-based applications require browsers such as (Internet Explorer, Chrome, Firefox, Safari, Opera), and a reliable internet connection to explore. Web-based applications can be tested for functionality testing for any invalid page redirects, broken links, page not displaying.

Working of web elements such as input field, drop-down list, checkbox, radio button, submit button. verify for valid input data entered, methods used while data submits, compatibility tests for browsers used, performance to test latency (time taken to access pages), delay in opening next pages or output, and Security testing for verifying login for authentication.

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## **16) What are anomalies in software?**

**Answer:** Anomalies are something that deviates from normal, standard or expected. Based on different situations anomalies are termed as listed below

**Error** – When the developer identifies mistakes in his code, he says Error for the anomaly.

**Defect** – When Tester discovers and reports the anomaly, he says Defect to the anomaly.

**Bug** – When the reported defect is accepted by the developer, it is called Bug.

**Failure** – When software build does not meet requirements, it is called a failure by the product owner.

**Wrong** – when there is a deviation from specification or requirements not understood, the anomaly is termed as wrong

**Missing** – when a feature is missing after the software is deployed at the client site, it is said features are missing.

**Extra** – when the developer produces the feature more than the requirement, it is called an extra feature. It will be termed as an anomaly as you are giving what is not asked for.

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### 17) What are the types of defects in software applications?

**Answer:** Various defects found in the software are as listed below

**Arithmetic defects** – are numerical data related defects, like not displaying decimal points in case of banking, scientific, or e-commerce sites, these defects occur due to mistakes from the developer side.

**Logical defects** – are due to not understanding business logic for the required output, like if age  $\geq 18$  you will get driving license, in case developer reverses the condition, even with age equal to or greater than 18, you won't get a license, but will get for age less than 18 years, that adversely affect real-time situation.

**Syntax defects** – occur if the condition required is not applied properly by developer, like in software that corrects grammar in sentence, say to locate vowels in sentence i.e. word beginning with a, e, i, o, and u characters, will be a vowel, and should proceed with letter 'an'. If developer forgets to enforce this condition, vowel can't be found or corrected if 'an' is not preceding it.

**Multithreading defects** – multithreading is an ability of CPU to execute multiple tasks simultaneously. If developer cannot able to produce such ability programmatically, then application cannot execute multi-tasking, such as downloading an image in web page and rendering it onscreen.

**Interface defects** – If developer cannot maintain order in which data flow should follow or page displayed after current displayed page, then it is called interface related defect.

**Performance defects** – If latency (delay in displaying page) is too high, if server crashes during multiuser access, these are Examples of performance defect. This can affect adversely and user will not return back to website.

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### 18) How many different ways you can test software?

**Answer:** There are two possible way software can be tested, Manual and automation.

**Manual testing** – a tester will run the software and follows the steps described in test case in order to verify the requirement, in manual testing tester has to sit in front of software and test it without any tool, as well record test status manually.

**Automation testing** – a tester writes a script that gets executed with help of automation tool which follows the steps described in test case in order to verify the requirement, the test results are also recorded automatically without any manual intervention.

Automation tools like selenium, UFT, JUnit are used with script written in Java, Ruby, python, and C++ etc. languages.

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#### **19) What is expected from the testing team on testing a software application?**

**Answer:** It is expected while testing a software, tester should reveal all the defects and deviations from requirements, while running an application such that it should break. Tester should understand domain knowledge, able to design actual scenarios, conditions that are not thought of and not handled by developer, able to configure specifications and preconditions to verify how application performs. Have analytical knowledge and logical thinking; think out of box while testing software.

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#### **20) What is Unit testing?**

**Answer:** Unit testing is primary test level, one way is static testing, where code is verified for syntax, rules followed by organization which is conducted by developer, second way is dynamic testing where small snippet of code is debug (tested) with sample test data to validate the output. Various tools for unit testing are JUnit, Hansel, and Testing are used to verify code coverage.

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#### **21) What is sanity testing?**

**Answer:** When application build is released after bugs fixed from the developer, and or changes due to additional requirement, the testing carried out is called sanity test, to verify that bugs are fixed, still functionality is in place, and no new bugs or defects are observed. In case while running sanity tests, bugs still exists, testers can reject the build.

Example of sanity test can be like remember me checkbox was installed against the bug raised, but forget password link stops working, then it is a new bug.

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#### **22) What is smoke testing?**

**Answer:** When software build is released, tester conducts primary tests like all the menus and submenus are clickable, and display the corresponding page, tester make sure that modules and feature are present in application, and there is absence of 'Page Not found' message while accessing any page, Forms and Pages have all usable web elements and displayable pages.

Example, drop down list in all the input form does not display items for user to select, due to any reason, this if found during the smoke test, then tester will stop testing and can reject the build by informing the short coming to development team.

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#### **23) What is exploratory testing?**

**Answer:** Tester use testing experience, while testing an application, explores the features and learn about how the application works, during testing, he makes note of how the application behaves, and such tests are called exploratory testing. The requirement document is absent, and testers are exposed to the application first time, without any test cases created.

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## **24) What is integration testing?**

**Answer:** Integration testing is the second level of testing after unit testing, where different modules are combined together and then tested for verifying that data flow in sync between the modules and there is no a broken page or failed functionality.

Example – During integration testing, IRCTC site can be checked where after searching train, booking seats in particular train, when payment gateway, which is integrated in to application found not working.

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## **25) What is system testing?**

**Answer:** System testing is the third level of testing after integration testing, where the application under test is tested for an end to end functionality, to confirm that it works as desired.

Example – matrimonial portal can be tested from registration, searching candidate, receiving contact details and meet or fix appointments with prospects.

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## **26) What is Interface testing?**

**Answer:** Interface testing is a verifying communication and data transfer between two different systems, where interface can be API or web services.

Example – Booking air tickets using ticketing portals like goibibo.com, where ticket is booked using web service of the airlines showing flight time, destinations, availability of seats and fare to travel to destination from starting point.

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## **27) What is Regression testing?**

**Answer:** Regression testing is conducted on the build after bugs are fixed build, to validate that code change to fix bug has not adversely affected functionality and there should not be another defect.

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## **28) What is Alpha testing?**

**Answer:** Alpha testing is a type of acceptance testing, where testers are employees of an organization who has built the application, these tests are conducted to verify that all the issues found have been resolved and have not reoccurred, before releasing to the client.

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## **29) What is Beta testing?**

**Answer:** Beta testing is tests conducted at the client's site after application is deployed and handed over to client. These tests include usability, functionality, and reliability of application.

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## **30) What is performance testing?**

**Answer:** Performance testing falls under non-functional testing type, where latency (speed or delay in accessing or loading a page), responsiveness and stability of application, network, stress or load tests are carried out to check efficiency/performance of application.

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### **31) What is Load testing?**

**Answer:** Load testing is one form of non-functional testing, in which behavior of application is observed when it is exposed to load.

Example, verifying behavior of Netflix portal during movie streaming by viewers between evening 7 pm to 9 pm in any time zone.

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### **32) What is Stress testing?**

**Answer:** This non-functional testing is conducted by subjecting an application to overload in order to verify till how long system is sustaining to the stress, hence the name – Stress testing.

Example – during amazon festive season sale, subjected to overload when users multifold times than expected will access the portal and book a newly arrived mobile, there by website server may fail to handle such a heavy load.

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### **33) What is Security testing?**

**Answer:** Security testing is a testing of an application against malpractice from hacker, how effective protective software like firewall or antivirus installed are in data protection, and vulnerabilities of login system by sql injection.

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### **34) What is Static testing?**

**Answer:** Software or an application is tested without executing code, such as Code Review, coverage that business logic is properly taken care is called Static testing. Variable declared but not used in code, undefined variables, unreachable code, syntax violations and code structure approved in organization. Tools like code compare, coverity, parasoft are used for static code analysis

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### **35) What is dynamic testing?**

**Answer:** For dynamic testing, application should have compiled code and executed in order to run application, various parameters such as CPU, memory, latency or time taken for output, are analyzed and recorded. Valid input values are prepared and expected output values are listed as requirement. Main test types included in dynamic testing are functional and non-functional testing. test level included in dynamic testing are Unit, integration, system and acceptance testing.

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### **36) What is Compatibility testing?**

**Answer:** Compatibility testing are conducted to verify that software runs on various environments, operating systems without any conflicts. Compatibility of an application is tested across different Hardware configuration, operating systems like Ubuntu, Linux, windows, MacOS, Network, Browsers like firefox, chrome, opera, safari, various devices like desktop pc, laptop pc, mobile, etc.

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### **37) What is Reliability testing?**

**Answer:** Reliability testing is carried out in order to confirm that software display reliable output that is same irrespective of test environment, operating system, browser etc.

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### 38) What is Compliance testing?

**Answer:** Compliance testing is a non-functional test that validates that the software designed meets all the prescribed standards as described in requirement document. for Example Vehicles in North America are made according to Canadian Environmental Protection Act 1999 (CEPA 1999), under this act Environment Canada has an authority to regulate emission from on-road engines.

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### 39) What is Localization testing?

**Answer:** Localization tests verify that application can be used in specific region. The test include user interface, language, currency format, date and time format for that specific continent or country having particular language dominance.

Example, In case software developed specific for middle east, language will be Arabic, currency being riyal and dirham for united arab emirates. date format in Saudi Arabia is dd/mm/yyyy.

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### 40) What is test case?

**Answer:** test case is set of instructions and steps to be followed to validate particular feature should fulfill requirement specified in software requirement document. test cases can be derived from requirement traceability matrix, which is derived from requirement document.

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### 41) What columns are present in test case template?

**Answer:** test case template should have details common across test case such as test case created by, tested by, tested on, module name tested with their details. Test case template should contain columns as listed and explained below

Test case id – unique identification of test case

Requirement Traceability Matrix id – test case scenarios or condition mapped with RTM id. Test scenario – short description of what should be tested eg. user should able to log in

Pre Requisite – assumption for test to carry out, such as application log in page is already displayed in browser or desktop.

Test steps – steps to follow in order to test the scenario, manually or using scri pt automatically

Test data used – valid test data created specific to the scenario eg. username – admin and password test123 to be used

Expected Result – what is expected from the feature being tested e.g. welcome page with menus of other features should be displayed after user successfully logged in to the application.

Actual Result- what is actual output or result after testing application, this is to be filled in by tester Status –

If there is difference between actual and expected result test will fail, else test will pass

Remarks – In case test fails, bug report details can be mentioned here.

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### 42) What columns are important in testcase?

**Answer:** Important columns in test case common across IT industry are as below

test case id, test scenario, description, prerequisite, test steps, test data, expected result, actual result, status, remarks

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**43) What test case management tool have you used?**

**Answer:** test case management tools I have used are testlink, JIRA.

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**44) What is use case?**

**Answer:** Use case describes how person utilizes system or process to achieve his goal. it helps to assess entire process, which part of the process is error prone. Main elements of use case are Actor, System and Goal. Stakeholders, preconditions, and triggers are additional elements of the use case.

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**45) Explain main elements of use case.**

**Answer:** main elements of use case are Actor, System and Goal.

Actor in Use case – is an end user, single or group of people, interacting with a process

System is the process required to reach final outcome.

Goal is successful user outcome.

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**46) What is test scenario?**

**Answer:** Test scenario is functionality or feature that can be tested. It also provides high level idea of what need to be tested, in order to create scenario we need set of test cases where we can understand features of application and any shortcomings of application.

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**47) What is a positive test case?**

**Answer:** positive test cases ensure that using valid data, application performs required output as expected or not. With positive test case, tester decides that feature provided works if provided with valid test data.

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**48) What is a negative test case?**

**Answer:** negative test cases are performed to try break the system, by providing invalid data, or following path not proposed, main intention here is to uncover hidden defects, that are otherwise remain in the software.

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**49) What is Behavior Driven Testing?**

**Answer:** behavior driven testing focuses more on user behavior in certain conditions (say how printing a document in case he receives a message for “page area out of margin” =- how will he react..., normally) rather than technical functionality of software.

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**50) What is Acceptance Testing?**

**Answer:** Acceptance testing is final level in software testing, where purpose of test is to analyze if software features are in compliance with business requirement, and can we deliver to the client, does all features functions as expected, and with the features can we deploy software on production environment.

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#### **51) What is Vulnerability testing?**

**Answer:** vulnerability testing are assessment of software and underlined infrastructure, to reveal security loopholes or risks that are critical present in software due to which some loss should be incurred.

Example – some application requires end user's email address as username as log in credential, registering email can offer a risk of receiving unsolicited mails.

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#### **52) What is black box testing?**

**Answer:** When we test application without worrying or having knowledge about details of implementation, how internal code structure applied to software to achieve required output. it is called black box testing. This type of testing is carried out mainly by testers. Some of the testing techniques for black box testing are Equivalence Partitioning, Boundary Value Analysis, and Cause Effect Testing.

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#### **53) What is white box testing?**

**Answer:** when internal implementation and internal code structure are known to the tester, while testing an application, it is called white box testing. White box testing involves code verification for security holes, poorly structured code process path, data flow of inputs in code, conditional loop, testing of statement, object, and functions in each code class. Some of the testing techniques for white box testing are Statement Coverage, Branch Coverage, Decision, Condition, Control flow and Data flow testing.

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#### **54) What is grey box testing?**

**Answer:** When tester has partial knowledge of internal working and features of an application. Grey box testing is conducted to find defects due to code structure, improper functionality and missing condition in the feature. Various techniques used in grey box testing are Matrix testing, regression testing, orthogonal array testing, pattern testing.

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#### **55) What are the different levels of testing?**

**Answer:** In Software Development Life Cycle, there are mainly four testing levels –starting from Unit testing, followed by Integration testing, System testing, and finally user Acceptance testing.

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#### **56) Explain integration testing of modules in real life Example ?**

**Answer:** When testers testing of various modules that are linked together in order to accomplish features expected to accomplish. Testing modules in combination are called integration tests.

Example – After log in to Amazon portal, user can view his orders history, pending orders, Amazon wallet details, Prime videos streamed from where he can re order already procured item using his wallet balance amount as well as check video or movies already streamed. Integration tests require tester to

check log in details of a user, that has placed orders and has purchased from amazon in past, also should be a prime member to avail facility like music, movie and free of charge deliveries.

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#### **57) What is Top Down Approach?**

Answer: Top Down Approach of testing is breaking down complex module into smaller portions till it becomes easy for assessment.

Example – Top management forms rules for organization, middle level management and lower level employees has to follow the rules enforced.

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#### **58) What is Stub in Top Down Approach of integration testing?**

Answer: Stubs are the called programs that temporarily replace the missing modules, help in testing integration testing, where flow of data is takes place from Top to down approach.

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#### **59) What is Bottom Up Approach?**

Answer: Bottom Up Approach of testing is combining smaller modules which are easy to test, into larger single complex module.

Example – Small group of students assess the situation or problem, find solution to resolve it. The solution is discussed with teachers and then applied to other groups, and on successful outcome, becomes appeal to higher management, who can make it implementation.

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#### **60) What is Driver in Bottom Up Approach of integration testing?**

Answer: Test Drivers are calling modules that are temporary replacement of upper level module that are not yet integrated. Drivers fill the gap of absence of modules to verify flow of data to higher level modules.

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#### **61) What is GUI or UI testing?**

Answer: GUI ie. Graphical User interface, relates to frame or screen displayed to end user as an interface that makes them easier to access an application or software. In case of desktop application, Microsoft office or paint opens up user interface when paint.exe file gets executed, In case of web based application, all the portals that opens index.html page where user can check all general information about the website, and has login and signup links, allowing new user to register and existing user to log in.

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#### **62) What is functional testing?**

Answer: Functional testing is test working of web elements; drop down, buttons, check box or radio button, and features of an application. Functional testing is categorized into various types such as unit test, integration tests, GUI tests, localization tests, usability tests, regression tests, system tests.

Example: on clicking print button, a pop menu should display showing existing page and print configuration window, with print button. On clicking on print button, contents such as text, images or spreadsheets on selected page should be sent for printing.

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### **63) What is non-functional testing?**

Answer: Nonfunctional testing deals with testing parameters other than features of an application, these include performance, reliability, security, integrity, scalability, portability, etc.

Example: In case of desktop software say calculator, how quickly it displays an output, for multiplication of four digit numerals. In web based application, how quickly an image is rendered on the webpage, or if site is available 24x7 or is subjected to frequent maintenance, making it non-available to end users.

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### **64) What is requirement traceability matrix?**

Answer: requirement traceability matrix (RTM) is a document that maps test cases with the requirements discussed in software requirement document. RTM is a single document that make sure that all the requirements are mapped and are covered and has test cases corresponding to the requirement.

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### **65) What is the defect traceability matrix?**

Answer: Defect traceability matrix is a document that maps defects if any with corresponding test cases, this document helps to trace defects, test cases and requirements thereby gives an idea of whether defects have been resolved or not, if resolved and build is received, then test cases selected for regression tests corresponding to this defect and some integration test cases to make sure defect has been resolved.

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### **66) What are the techniques used in test design?**

Answer: Following are few techniques used in test case design i)

Equivalence Partitioning

ii) Boundary Value Analysis

iii) Decision Table

iv) State Transition

v) Error Guessing

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### **67) Give Example of Equivalence Class Partition.**

Answer:

Test Scenario- In order to get a driving license the age of applicant should be between 18 to 49 years.

There will be 3 (three) partition where tester should check possibility i) If

applicant's age is less than or equal to 17 years – Invalid

ii) If applicant's age is between 18 to 49 years. – Valid

iii) If applicant's age is greater than or equal to 50 – Invalid

So there will be 3 possible scenarios where only one valid group of applicant having age is between 18 to 49 years, will get driving license.

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### 68) Give Example of Boundary value analysis

Test Scenario- In order to get a driver's license, the age range should be between 18 to 49 years.

Boundary values to be verified here is

First Boundary value

Minimum age – 1 i.e.  $18-1 = 17$  years – invalid age

Second Boundary value

Minimum i.e. 18 years, minimum +1 i.e. 19 years, maximum -1 i.e. 48 years, and maximum i.e. 49 years (18, 19, 48, 49) – Valid values for age criteria

Third Boundary value

Maximum +1 = 50 years – invalid age

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### 69) Give Example of Decision Table

Answer:

Scenario – You want to buy headphone and have budget Rs.1000

You have following buying options

- i) Vijay Sales
- ii) Reliance Digital
- iii) Chroma
- iv) Amazon

Based on Answers to the following queries, we will be able to decide

Where should we buy headphone from

Can take trials before purchase

Have EMI options

Accepts Credit Cards

Accepts Cash on Delivery

Do they have return policy

Have Item in your budget?

Find Decision table

Conditions	Vijay Sales	Reliance Digital	Chroma	Amazon.in
Can take trials before purchase	Yes	Yes	Yes	No

Have EMI options	Yes	No	No	Yes
Accepts Credit Cards	Yes	Yes	Yes	Yes
Accepts Cash on Delivery	No	No	No	Yes
Do they have return policy	Yes	No	Yes	No
Have Item in your budget?	Yes	Yes	No	Yes

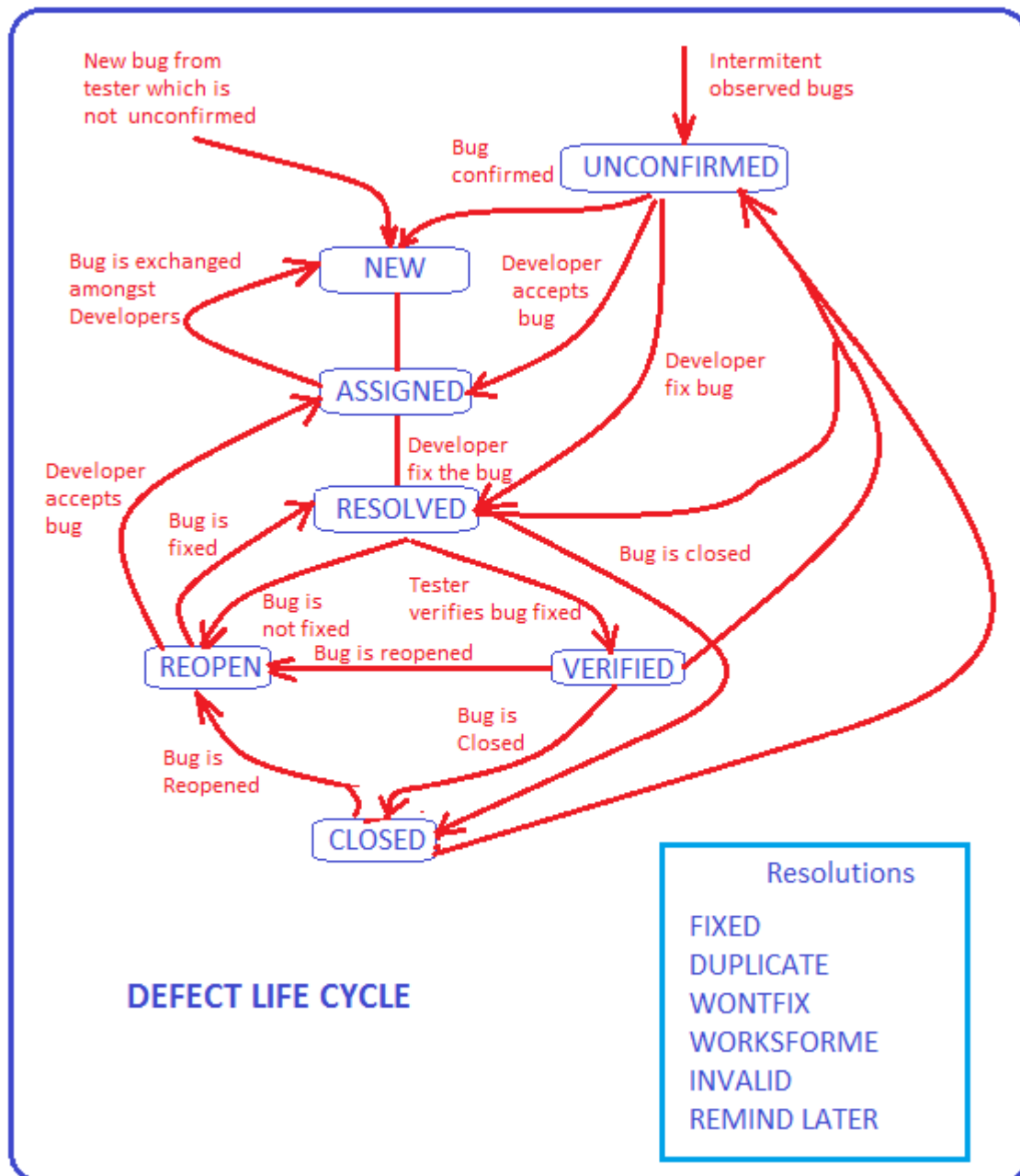
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## 70) Can you explain Defect Life Cycle?

Answer: When tester finds a defect while testing application, he will confirm deviation with expected result, registers defect (bug) in bug management tool like Bugzilla or JIRA. Bug status will be 'New', If defect is not agreed by product team or developer, its status will become 'Rejected'.

When developer agrees with the defect in application, when assigned to developer, bug status will be 'Open', If Developer does not agree to the defect; its status will be 'Deferred'.

'Open' bugs when resolved by developer its status becomes 'Fixed', once the bugs are fixed and build is retested for regression testing, defect is verified, if defect is not resolved, bug will be 'Reopen', which will be reassigned to the developer for fixing. if defect is resolved and confirmed by tester then Bug status will be 'Closed'.





## 71) What is Defect severity?

Answer: Severity of bug is an extreme level of damage like financial loss, company's reputation and loss of life, due to presence of the bug. Example such as if point of sales machine does not function as expected, and does not dispense bill, thereby customer may not pay the amount for the purchases, in such situation, the defect due to which bills are not displaying amount of purchase, is termed as severe test case, as due to such defect, there will be huge financial loss. Further say, infrared machine that used for removing decay in the teeth malfunction and damages the jaw of patient, it may result into loss of life.

Defect severity are categorized into following levels

**Blocker** – Due to this defect type, it becomes impossible to further run the application, there for the name – Blocker

**Critical** – There are some workarounds to accomplish the task, e.g. pdf format of file type is not downloaded, whereas word type is possible.

**Major** – some error may lead to understanding the title or content by end user, e.g. software display s title and content in English, but does not display some of the title in Arabic language, but display it in English only.

**Minor** – there are some defects which has very minor impact on functionality of application, e.g. missing space between words, commas are missed in sentences.

**Low** -These defects does not impact at all, however if fixed it will be aesthetically pleasing, eg. Size of button, form border go out of screen and need to scroll in order to view the content.

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## 72) What is Defect priority?

Answer: Priority gives a need of urgency to fix or resolve the defect,

Example can be if a reputed pen manufactures company while printing the pen model or company name will wrong spellings, then such bugs should be fixed on priority basis.

Defect priority are categorized into following levels

**Urgent** – this must be fixed immediately e.g. payment gateway pages not displaying, or conformance of order processed not sent via email or sms, or transaction records not printed in account details in banking software.

**High** – this should be resolved in subsequent releases, e.g. presentation or video does not have company logo or has written content, but does not have voice that narrates above content.

**Medium** – should be fixed based on the level of severity- eg. Error occurring while user updates his mobile number, while communication has options such as his email and mobile.

**Low** – May or may not be fixed e.g. spelling or grammar mistake in introductory page of portal, as long as meaning is conveyed to the audience.

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## 73) Difference between quality assurance and quality control.

Answer: Quality assurance (QA) is targeted for avoiding defect, whereas quality control (QC) is aimed at identify defect and fix these defects. QA is process focused whereas QC is end product focused. Quality Assurance team usually in manufacturing industry gathers certification related to quality of raw

materials used, machineries used in processing the end product and final product. Whereas Quality Control team is software testers inspects by running or analyzing steps followed in products and services to make sure that it is working fine as per expected standards.

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#### **74) What is difference between inspection and audit?**

Answer: Inspection is an observation where a site is expected to perform or follow standards as compliance obligations, whereas audit is a process of checking if obligations are met or not.

Inspections are simple, quantitative and help create actions, whereas audits are complex, qualitative and forms recommendations.

---

#### **75) What is Quality assessment measurement?**

Answer: It is a analysis to observe deviation between actual performance and expected performance. Basis of assessment is an improvement in actual performance, whether new hardware, or additional storage capacity or memory improvement or line of code that does not consume processing power, but quickly display output.

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#### **76) What is test management measurement?**

Answer: It is important for test managers to keep an account of test procedures followed, test plan, test methodology, justification of number of test cases required to be conducted manually in order to verify complete feature coverage, and why these manual test case not able to be carried out using script, automatically, and finally after executing said number of tests both manual and automatically, how many defects have been captured. There are various test management tools that help manager with reports on what is optimum effort put in testing and what is final outcome. These tools have built-in test ware management; test scheduling, test tracking, incident management, and test reporting.

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#### **77) What is test maturity model?**

Answer: Based on the level of maturity model i.e. implementation of various processes of software life cycle, adherence of procedures even during critical and crisis situation is called test maturity model.

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#### **78) How is level of software development organizations decided?**

Answer: Based on Capability Maturity Model (CMM), software development organization's level are decided. There are five levels

Level 1 – there is an ad hoc testing, chaotic work culture and no adherence to process during time of crisis, they always use new and undocumented repeat process during software life cycle.

Level 2 – The processes are defined and same steps are repeated during each new project.

Level 3 – There is standard business process in each of the defined processes followed without any alterations.

Level 4 – The mapping of the processes are managed accordance with agreed upon metrics.

Level 5 – there is regular and frequent process optimization and improvement during process management.

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**79) What is Process Capability Measurement?**

Answer: There is a measure of process capability calculated using specification limits and standard deviation of the process, which is Cp index. Most companies require Process Cp = 1.33 or greater.

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**80) What is difference between Corrective actions and preventive actions?**

Answer: The term used in short is CAPA, stands for Corrective Action Preventive Action.

Corrective Action Preventive Action (CAPA) is a process which

investigates and solves problems,

identifies causes,

takes corrective action and

Prevents recurrence of the root causes.

Example – when we fall sick, we seek medical attention, and health care specialist offer us remedy and relief, but what if we do not get relief or do not recover. We ask for corrective actions and we think of preventive action as well.

---

**81) What is Software Testing Life Cycle?**

Answer: Software Testing Life Cycle (STLC) is a sequence of activities performed by testers such as

Requirement & Analysis – Understanding the client's requirement and what actually requires, How to test the requirements,

Test Planning – what should be tested in an application, How and who will test the application

Test Case Design – test scenarios, mapping with requirement traceability matrix, test case creation, and test data used

Test Environment Setup – what hardware and software need to install or configure to build test environment.

Test Execution – running the application in order to verify features as per test case designed, reporting bugs, track the bugs and regression test till it gets resolved.

Test Closure – Creation of test reports, total bugs pending, critical bugs if any, justification for releasing application to client.

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**82) What is Requirement Specification Document?**

Answer: Document approved by customers and project owners that describe, what is expected from the software to perform, how many features and functionality, what is requirement ( what to verify/validate). In short, Software requirement specification document has a purpose for software to be built, description of software to accomplish and requirement in specific required to fulfill using the software.

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**83) What documents will you refer to understand about features in the software?**

Answer: In order to understand features and their functionality we refer requirement document (SRS).

In order to understand overview of data flow, integration between systems, we should refer design document, For understanding documentation on code, algorithms, interfaces and APIs used in software technical documents or process documentation containing UML diagrams, How end user will use the software we can find from user manual, and finally how to install the software can be found from installation guide of the software.

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#### **84) What is a virus?**

Answer: computer virus is a type of computer program that if found in network and get installed in our computer, it will infect all other software present in our computer, and make them malfunction (does not function as expected, or stop to work). It is compulsory to remove this virus from the computer, in order to safely execute and perform our tasks as desired.

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#### **85) How antivirus program works?**

Answer: Antivirus programs prevent, detect, and remove malware, including computer viruses, worms, and Trojan horses. Various Antivirus programs available in market are Norton Antivirus Plus 2020, McAfee Total protection, Quick Heal etc.

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#### **86) Give few Examples of sensitive information can be shared across network?**

Answer: There are many incidents where we unknowingly share our information across network; they are our email address- we may receive spam messages i.e. messages for which we have not granted permission to receive. they may contain, files attached that if opened may contain virus, or may have damaging software. Our mobile number is second confidential information, we may receive calls from persons we don't know, they may harass us by calling at any time, demanding donations, or try to send sms messages, may use our email and mobile number against our knowledge in criminal and unlawful activities. Our credit card details like 16 digits number, pin number – this will drain our all the money from our account and we will be unaware until collection agencies knock our doors, or we receive the withdrawal notice via mail or mobile number. Our pictures or anything that may be used against our self esteem over Social media platform like Facebook or Instagram are sensitive information.

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#### **87) What is IDE and their use ?**

Answer: Integrated development environment (IDE) is a tool that facilitates code creation, building the program and debug (test) the code. IDE brings together text editor, integration of code libraries, compilers, debugging facility and running the code. IDE supports various languages and their libraries so that developers can write code and test their code in IDE itself.

Web based IDEs help creation of web based application using HTML and JavaScript.

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#### **88) List name of IDE made of Java.**

Answer: Eclipse, IntelliJ IDEA and NetBeans are some Examples of IDE made from using Java programming language.

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#### **89) Give some Examples of use of Java applets used in your application**

Answer: Java applets were used to select local files from client machine in order to process them, HTTP protocol sends these files over to server location.

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#### **90) What is required to run Java applet in a browser?**

Answer: The Java Runtime environment, JRE is required as plug in in order to run Java applet in a firefox browser.

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#### **91) Can you explain methods used in applet life cycle?**

Answer: When applet begins following methods are called

init() – init() is first method being called, we can initialize our variables here, init() is called only once during run time of an applet.

start() – start() method is called after init() has been called, start() is called everytime HTML page is displayed on screen. start() method help to restart stopped applet.

paint() – paint() method is called when applet begins its execution. paint() method has Graphics param, with Graphics object, we can draw Shapes.

When an Applet is terminated following methods are called

stop() – stop() method is called by browser or appletviewer to suspend execution of applet

destroy() – destroy() method is called once before browser unloads the applet.

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#### **92) What is JRE?**

Answer: Java Runtime Environment contains Java Virtual machine, libraries and other components to run applets and applications written in Java.

JVM + libraries+other components= JRE

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#### **93) What is JVM?**

Answer: Java virtual machine helps run java bytecodes. when .java file are compiled using javac compiler into .class file. These .class file contain bytecode understood by Java virtual machine.

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#### **94) Why do we need JDK?**

Answer: Java Development Kit (JDK) contains JRE and compilers and debuggers for developing applets and applications.

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#### **95) How JRE, JVM and JDK related?**

Answer:

JVM help run java byte codes created by compiling .java files into .class files.

JRE contains JVM (Java Virtual Machine), libraries and other components to run Java applets and applications

JDK contains JRE, compilers and debugger (development environment for applications using Java programming language)

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**96) List types of class loaders in Java**

Answer: Java has 3 kind of class loaders Bootstrap, extension and application class loader.

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**97) What is a difference between JRE and JVM?**

Answer: (Java Runtime Environment) JRE contains Java Virtual Machine (JVM) + Java packages (util, math, lang, awt, etc) + runtime libraries You need to install JRE on your machine in order to run Java applications or applets.

Java compiler Javac converts .java file into .class files which contain bytecode, (Java Virtual Machine) JVM converts bytecode into machine language. JVM is platform dependent, there are different JVM for different OS, Bytecode converted into machine language for particular machine, executes depending on its kernel. Without JVM you cannot run Java Applications.

---

**98) What is difference between interpreter and compiler?**

Answer: Both compilers and interpreters are used to convert program written in high level language into machine code understood by computers.

Interpreter converts program one statement at a time, takes less time in analyzing source code, slower than compiler, there is no intermediate object form, hence memory efficient

Compilers scans entire program and then converts it as a whole into machine language, takes more time analyzing source code, however it is faster than interpreter, generates intermediate object code hence takes more memory.

Programming languages like JavaScript, Python and Ruby use interpreters

Programming languages like C, C++ and Java use compilers.

---

**99) What exe stands for?**

Answer: exe is a filename extension for program that gets executed on Microsoft Windows operating system. Executable file can be run by a program in Microsoft DOS or Windows through command line or by double clicking over .exe file using mouse.

COM and BAT are other executable file types in Windows.

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**100) Give some Examples of executables in Windows**

Answer: various programs like mspaint.exe runs paint application on windows machine, firefox.exe runs firefox browser, MS word exe run document editing software for windows

Adobe Acrobat reader exe file runs to read pdf files in windows.

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**101) Give name of four Java framework**

Answer: Spring, Hibernate, Struts, JSF are some well-known Java framework

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**102) Can you explain Hibernate framework?**

Answer: Hibernate is Object Relational Mapping tool (ORM) that simplifies java application development and interacts with database. It implements Java Persistence API for data persistence.

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**103) A type of testing in order to expose defects in the interfaces and in the interaction between integrated components is?**

Answer: Integration Level Testing

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**104) Identify type of testing wherein we subject the target of the test, to varying workloads to measure and evaluate the performance behaviors and the ability of the target and the test to continue to function properly under these different workloads?**

Answer: Load Testing

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**105) What do you ask for in order to purchase computer?**

Answer: There are few questions listed below we should ask ourselves and find their Answers before deciding on purchase of computer,

Desktop or Laptop? – If you get same performance from laptop as well as desktop, it would be cheaper to purchase desktop, in case you can manage steady workstation and space where you can concentrate on your study or work. Otherwise if you are required to carry your machine under BYOD (Bring your own device) policy, able to manage power cables along with you to and from the work on daily basis, laptop may be right choice.

What is a processor you are looking for? – What Processing power are you looking for, number of cores, speed of processer, data handled, etc. What is a main purpose of purchasing a computer, for study, some assignments, or remote work as a developer or tester? or for searching over an internet, for watching movies or play games.

How much RAM and why? – Random Access Memory or RAM help to speed up the things, multitasking like loading applications, browsing internet, image editing or experience graphics effect in gaming.

Hard Drive and their capacity, how much you really want? – In order to store more files, you need more storage, desktop will have more storage capacity than laptop. Based on Gigabytes of Hard drive you install, you pay more.

Peripherals – Peripherals like USB ports – how many do you need? For keyboard, headphone, printer etc.

HDMI for viewing Television with TV tuner if you want to view it over your computer,

SD slot – SD card in case you want to keep your pictures, process these photos etc. you may need them, with extra price.

Wi Fi – In case you want to connect your pc with wifi for internet or wifi enabled speakers

Bluetooth – In case you are looking for connecting various appliances using Bluetooth.

What Operating System Mac OS, Windows or Linux – What operating system you are comfortable using your computer in, type of software loaded, remote work like tech support will only require Linux

operating system, whereas windows may be helpful for various User friendly applications, but may get virus if not protected with antivirus software.

Play Game, or watch movies or Search internet? What is your purpose of purchasing will matter on how much you should spend after it.

---

**106) What is a Difference between Regression and Retesting?**

Answer: The difference between Regression and Retesting is explained below

Regression testing is the testing of an application that verifies that there is no adverse effect of the changes made due to defect fix or change request to other areas of application. regression testing involves test cases other than those that are related to defect or change as per client request, but it also tests features that directly or indirectly connected with the feature that was rectified by developer against the defect raised, such as integration tests, test case related to web components and their functions along with those involved directly with defect raised. Regression testing is usually carried out using automated scripts by selecting test cases and re executing the scripts to run those test cases.

Retesting is a testing to make sure that previously failed test cases due to defect are passed and the defect has been resolved. The test cases involved in retesting focus only on the failed test cases due to the defect or the scenarios or steps followed result in failed functionality. It is better to carry out manual testing in case of retesting to make sure that defect has actually been resolved.

---

**107) What is a difference between Debugging and Unit testing?**

Answer: Debugging and unit testing are both carried out by developers, but in case of debugging, code in focus is verified by debugging tool line by line for any syntax or programming level issues such as runtime or compile-time exceptions or capturing and transferring data through lines of code.

Unit testing is a testing of a unit or program for validating functionality carried out by developer, essential to carry out to minimize bugs found at later stage like integration or system testing. These testing are known as White Box testing.

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**108) What are Unit testing techniques?**

Answer: The various unit testing techniques are listed below

Statement Coverage

Decision Coverage

Branch Coverage

Condition Coverage

Control Flow

Data Flow

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**109) How do you decide which test cases to consider for Regression Testing?**

Answer: selection of test cases for regression testing for the build received from release, should based on following scenario priority for testing those test cases that were failed due to defect, on testing if they are passed. All integration tests, boundary value scenarios, testing functionality of components



related to defect, end to end tests that involve change request or resolved test cases after release, should be considered for regression.

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#### **110) What is a Difference between Integration Testing and System Testing?**

Answer: The difference between system testing and integration testing is listed below

System testing is a test level after unit tests and integration tests in software testing life cycle, where application as a whole is tested end to end for functional as well as non-functional requirements. It is performed after integration testing. Usability, performance, scalability and security testing are involved.

Integration testing is testing of interconnected units and their interfaces, the data flow between these units and to make sure that feature is working as per expected. It is carried out after unit testing.

Various test approach like top down, bottom up or hybrid integration are carried out during testing.

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#### **111) What are the various contents of a Test Plan?**

Answer: Test plan document should include following details

Features to be tested

Features not to be tested

Approach like should we test manually, automated scripts, test techniques (white, black or grey box)

Criteria for Failed tests / pass tests

What condition for suspending test activities

Test environment such as hardware, software, network etc.

Man hours estimated while testing

specific training required, Risks involved, any assumptions or dependencies

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#### **112) Do you know Exploratory Testing?**

Answer: Tests that are carried out while exploring an application, and learning about the business requirements are called exploratory testing. These tests are carried out by manual testers without referring to any test cases or test scripts. Exploratory tests are carried out by experienced Software testers based on their previous testing expertise thereby test cases are designed during test execution. Test steps carried out should be noted. In case of any defect found during exploratory testing, as there is no test cases and test steps written to carry out exploratory testing.

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#### **113) What is Prototyping? What are the various types?**

Answer: software prototype is an application with limited features. prototype gives an idea of how software is going to look like, input pages, output reports, ready to get feedback from end users for any flaws and usability issues.

Software prototype types are listed below

Horizontal prototype

Vertical prototype

Throwaway prototype

Evolutionary prototype

Incremental prototype

Extreme prototype

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**114) What are SDLC phases?**

Answer: The Software Development Life Cycle consists of following phases

Requirement Gathering and Analysis

Design

Coding

Testing

Deployment

Support

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**115) List some of the SDLC models used in software development?**

Answer: famous SDLC models usually followed by companies depend on the requirement.

Waterfall, Iterative, V-model, Spiral, Big Bang, Agile

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**116) What kinds of reviews are conducted during SDLC phase?**

Answer: Types of software reviews are

Software Peer Review is a detailed examination of low level and high level design documents by one or more individuals working on the project to find and resolve errors or defects in application during early stages of SDLC.

Code Review – review of code by peer developer will ensure that functionality is met with as expected; there are no memory leaks or dead code which is not utilized while coding.

Pair Programming – Is a process where same portion of code is developed by pair of developers individually and then most efficient code is finalized.

Software Management Review – The project head verifies project progress, status of plans and their status, infrastructure allocation to test and develop the application during management review.

Software Audit Reviews is an independent examination of product, process, assessment with compliance to specifications.

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**117) What is the role of Metrics in Testing?**

Answer: Software Testing Metrics is a quantitative measure that helps in estimating progress, quality and well being of software testing efforts. This helps in improving efficiency and effectiveness of software testing processes.

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### **118) What are key challenges while testing a software application?**

Answer: Some of the challenges of testing a software applications are listed below

Test entire application – It is virtually impossible to test and verify entire application with each and every scenario. Even one of the seven principles of software testing says, “Exhaustive Testing is Not Possible”.

Relationship with developers: Tester’s responsibility to check for any defects in the software and how to break an application, it becomes tough to keep amicable relations hip with developers

Regression testing: In every build released from developer, tester has to check entire application for end to end functionality every time along with resolved defect and components or units that are integrated that may get affected due to change request or resolved defect.

Testing always under time constraint: All the stack holders keep an eye on how the built has came out, testers has to quickly start testing the build with sanity test, smoke test and regression tests as send their observations as soon as possible.

Which tests to execute first? – Based on available timeline, and complexity of modules, test lead has to distribute testing like user interface or feature testing using script automatically and regression and integration tests manually. Non functional testing using tools like load runner, API testing using Postman or REST assured. Regression tests using selenium and mobile testing using Appium.

Understanding the requirements: There should be a walkthrough and review of software , domain knowledge, how to test features etc. is mandatory for each member of tester.

Decision to stop the testing: Testing manager should explain testers when should testing be stopped, based on what critical bugs should get resolved, any blockers affecting feature pending by developers.

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### **119) Explain your views about Quality.**

Answer: Software Quality work begins before the testing phase and continues after the software is delivered. It is utmost important to deliver quality product to the end user, this will impart confidence, reliability, long term partnership regards to the quality of product.

Quality is doing the right thing, doing it the right way, doing it right the first time, and doing it on time without exceeding cost.

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### **120) What is the advantage of using any bug tracking tool?**

Answer: Main objective for using bug tracking tool is to deliver high quality software product by keeping track of defect discovered and track these defects till it gets resolved, Improve Return on Investment (ROI) by reducing cost of development, when quality product is developed, so that it will have more reliable quality product, satisfied customers with long loyalty. Product and Project team can keep a track of detect Issues Earlier and understand defect trends in ongoin g software development.

Better Communication, Teamwork and connectivity amongst stack holders about software quality.

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### **121) Explain about website Usability testing.**

Answer: website usability testing is to measure and understand how web visitor would experience navigating website to verify its features, accomplish their tasks and any pain points in doing so.

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**122) What are defect attributes?**

Answer: various properties in order to measure defect quality or nature in software can be known as defect attributes, Defect attribute are properties that determine extent of damage due to the defect on the software application. for Example severity, priority, type of defect are some of the Examples.

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**123) What is pesticide paradox?**

Answer: pesticide paradox is a principle wherein same set of test case if executed again and again over interval of time, then these test cases are not capable of identifying any new defects in the system. in order to overcome this effect, the set of test cases are regularly reviewed and re vised to make them effective.

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**124) Explain V model.**

Answer: V model is a SDLC methodology where software development instead of moving downwards like waterfall model, moves downwards and then back upwards in V shape, starting with requirement analysis, system design, module design, unit testing, integration testing, system testing, user acceptance testing

---

**125) What is the difference between Web application and Client Server Application?**

Answer: Client Server application is distributed on at least two systems, Client and Server where client has visual pages like input forms, validation for valid data before sending requests to server and output pages as response from server. Server has all business logic, database storage where request received from client machines are responded back after processing through logic and database tables, procedures. Client Server applications require LAN connection and Database Drivers so that they are connected whenever request is sent for response. Some Examples are ATM machine, Banking software, and Stock Trading etc.

Web application are built in one server with all front end files, back end and processing logic placed on single web server, various technologies such as HTML or ASP with JavaScript or JS libraries are used for front end design, whereas back end storage and processing is done on server in class files and DB procedures and tables. web application are accessed using web browser, hence it require internet in addition to web application files placed on web server. Examples of web applications are Amazon, Flipkart and Snapdeal online portal, Gmail, Saavn online music streaming services

---

**126) What is Localization testing?**

Answer: Localization testing is validating software that is customized for users for specific language or country. Where user interface will be displayed in english are translated into the country specific local known language, in addition the currency and time denomination and any instructions are displayed in locale language. in addition the software should support entering language specific text using virtual keyboard. e.g. tamil for andhra pradesh state. or mandarine for china country specific.

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**127) What is difference between Black box testing and White box testing?**

Answer: In case of White box testing it is mandatory to know internals of software applications, such as structure, program functions, and implementation of how data flows between components. The tests covers white box testing are unit testing and integration testing. These tests are performed by

developers, and it is mandatory to know programming and implementation knowledge, the test is based on design document provided by design team. Various testing techniques used in White box testing are Statement Coverage, Branch coverage, decision coverage, path coverage.

Black box testing does not need any understanding about internal structure of application, the tests covers black box testing are system and acceptance testing, testing is based on requirement document received from product team. Various testing techniques used in Black box testing are Equivalence partitioning, Boundary value analysis, Decision table testing, and Error Guessing.

---

**128) What is the difference between Authentication and Authorization give an Example.**

Answer: Authentication is verify logged in user's genuineness, in real world you were required to show photo identity documents such as Aadhar card, Driving license, PAN card or Passport in order to receive documents addressed to you from courier, know your account balance at your bank.

whereas authorization is verifies what module access rights the logged in user has. real life Examples are You are allowed to explore feature of an application based on your trial period, once you become registered user by paying the registration fees, you can access more features of the software.

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**129) Other than functionality what else you should test in Web Application?**

Answer: In addition to functionality and feature testing, we should test browser compatibility, security tests for authentication and authorization rights, latency – how long it takes to load a web page, or request to come back as a response, load testing based on number of users logged in during peak hours, and scalability testing.

---

**130) How you know that testing is enough?**

Answer: The criteria and conditions are specified in exit document that guides us on when testing should be stopped. When most of blockers and critical bugs have been resolved and application has performance in acceptable limits, we can stop testing. This is however based on some risk that have to be undertaken and time limit.

---

**131) How will you test the reports?**

Answer: It is important to prepare report on the testing activities and their end result on regular basis to the management. It helps to analyze quality of tested product, and based on the end result, the decision to release the product or hold back till its quality improves, can be taken.

Instead of oral confirmation or denial about the software quality discussions, the report will give written evidence of test status, summary of defects logged into bug tracking system. Number of tests carried out, test method, what steps taken, deviation observed between actual and desired expectation.

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**132) What is Database? Which database you are aware of?**

Answer: Collection of data that can be accessed referred and manipulated in order to use in an application. Relational database, nosql database, cloud database, distributed database, object -oriented database, graph database are database types.

You can inform the interviewer about name of database you have worked on or are aware of.

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**133) Can you name some of Relational database?**

Answer: some Examples of relational databases are sqlserver, oracle, mysql, IBM DB2, postgresSQL.

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**134) Can you name some of nosql database?**

Answer: some Examples of Nosql databases are – ElasticSearch, Mongoddb, Couchdb, Cassandra db, HBase.

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**135) Can you name some of cloud database?**

Answer: some Examples of cloud databases are – amazon S3,RDS, dynamoDB,Redshift,SAP, Azure

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**136) Can you name some of distributed database?**

Answer: some Examples of distributed databases are – teradata, exadata,SAP Hana

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**137) Can you name some of object-oriented database?**

Answer: object-oriented database – smalltalk, LISP in Gbase, COP in Vbase

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**138) Can you name some of graph database?**

Answer: graph database- Neo4j, amazon neptune,

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**139) What is Database Testing?**

Answer: Database testing is a testing of database entities such as schema, tables, views, triggers, stored procedures, partitions created on tables, indexing. We should be proficient in SQL queries.

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**140) What do you mean by Cookies?**

Answer: cookies are small text files that contain web visitor information such as websites explored, pages visited, visitor's ip address to identify already visited user.

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**141) How do you test Cookies?**

Answer: cookies are small text files that contain web visitor information such as websites explored, pages visited, visitor's ip address to identify already visited user. There are various types of cookies,

Session cookies – user navigating websites actively, once they leave particular site, session cookie disappears.

Tracking cookies – are used to keep record of multiple visits that was made to same particular web site.

Authentication cookies – whether a valid registered user has logged in again and if so with what name?

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**142) What are Stored Procedures?**

Answer: In relational databases, use of parameters, variables and output parameters to design procedure which has data processing in order to incorporate business logic for expected result.

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**143) How many types of Joins are in sql?**

Answer: the Joins are of following types in SQL

Inner Join

Left Join

Right Join

Full Join

Self Join

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**144) What are DML and DDL commands give Example.**

Answer: Data Definition Language (DDL) commands in SQL are create database, schema, constraints, users, tables etc. DDL commands are CREATE, DROP, RENAME and ALTER

Data Manipulation Language (DML) commands in SQL are insert, update, and delete records from database tables. DML commands are INSERT, UPDATE and DELETE

---

**145) What is Normalization?**

Answer: Normalization in SQL is a process of eliminating useless repeated data from tables, ensuring data dependency makes sense in final tables.

---

**146) What is Primary key and Foreign key?**

Answer: Primary key is a type of constraint applied on particular column values in order to uniquely identify a record (row) in the table. A column value should be unique ( cannot repeat), and cannot hold null values. There can only be single primary key per database table.

Foreign key is a type of constraint applied on the column value which already exist as a column in another table with primary key constraint applied on. Foreign key value can accept multiple null values. There can be multiple foreign key in single database table.

---

**147) What is RDBMS?**

Answer: RDBMS stands for relational database management system, where relational database refers to storage of data in structured manner in row and column format.

---

**148) What is difference between delete & truncate?**

Answer: Delete is a DML command whereas Truncate is a DDL command, with delete command applied on table record(s) records will get removed, records removed using Delete command can be recovered with Rollback command.

Using truncate command, records along with table structure gets removed from database schema, WITHOUT recovering the table again.

---

**149) What design documents you receive from PM?**

Answer: Low level Design and High level Design documents are received from Project manager.

---

**150) What are documents are created in Design phase?**

Answer: Design Documents such as Low Level Design, High Level Design documents created by developers and design team explaining data flow in application or modules using UML diagram.

---

**151) What challenges you have faced in testing so far?**

Answer: This one is a tricky question; interviewer wants to know firsthand information from you about your weakness in handling difficult or crisis situation. Answering this question like what is your weakness – you need to keep yourself specific and not to lament problem or difficulties or show any kind of annoyance or hatred for particular stakeholder or reporting manager, colleague or developer or some process. You can explain situation however, but should end your statement explaining how you were successful in controlling the situation.

---

**152) Realizing you won't be able to test everything – how do you decide what to test first?**

Answer: There are a situation where testing a new build is allotted a bare minimum time, or you are given several tasks or projects to look into. In such case, where you cannot able to completely cover all the scenarios of testing, you can focus on main functionality and features released and check if any critical or blocking defect should not be present in an application during regression tests. Usability, functionality, security, performance are few testing that should be carried out either using scripts automatically or test manually.

---

**153) What is SQA?**

Answer: Software Quality Assurance (SQA) is a set of activities that validates that the software being designed or built, meets desired quality measures and specifications. Test Assurance team has tasks like auditing and training the stakeholders about standards for quality that software should satisfy as per user expectations.

---

**154) What are the contents of defect report?**

Answer: A defect report should inform description about the defect.

Which version or build of software release being tested during which defect occurred

Which is the module name, how to access this module (path), what were the steps carried out What was the functionality affected, how severe you think the defect is

Name of the tester who discovered the defect, name of the developer to whom defect has been assigned,



Test case affected mapped to requirement specification document ids and number of test cases that may not be tested due to the defect.

---

**155) What is Big Bang type of testing?**

Answer: Big Bang test type is an integration tests where multiple modules are being tested simultaneously which may get affected due to change request or defect if any. This helps exploring software with end to end functionality and gives tester an idea about features included and functionality carried out using the software.

---

**156) What is Traceability Matrix & Coverage Matrix?**

Answer: Traceability Matrix & Coverage Matrix is a document that is mapped with software requirement documents and test case or scenarios all in single document. The purpose of such document will ensure that the entire requirements have been covered by test cases and there is no feature or functionality that has been left unchecked.

---

**157) What is UAT and Alpha and Beta Testing?**

Answer: User Acceptance Test (UAT) is a final test by end user or client's representative before software is handed over to production environment. It is an end to end functionality testing and verify that proposed features have been included in the software. User Acceptance test are essential as end user will test and verify the application, to make sure that the developer has incorporated the features and functionality expected by end user in the software. In addition change requests asked for have been properly incorporated by developers.

---

**158) List OOPS features?**

Answer: The OOPs features are as listed below

Inheritance

Polymorphism

Encapsulation

Abstraction

---

**159) What is Hot fix?**

Answer: HotFix is a workaround which can be some sort of configuration change in order to resolve an issue that could occur in running application or server, with minimum downtime.

---

**160) Where Exit and Entry Criteria are written in Test Plan?**

Answer: Entry criteria are written document without referring to which one cannot begin any of the SDLC phases. In order to begin SDLC phase Requirement document and complete flow diagram of the application as well as Test Plan should be ready and available. An exit criterion is the detailed document that decides moving from current phase of SDLC to the next phase. In order to exit SDLC phases test

cases should be written and reviewed, test data has been identified and ready to use, scripts for automate the execution of test cases must be ready.

---

**161) What are different scenarios for verifying Email address?**

Answer: In order to verify email address, the front end tester should consider following criteria

Email address may contain alphanumeric characters as initial portion,

special character allowed are dot (.), underscore (\_), in initial portion, there

should only be single @ symbol separating local part and domain

Domain name may end separating dot (.) with net, org, com and edu as well as country specific characters eg. In for india, ca for canada.

---

**162) What is the query for update table?**

Answer: in order to change column value in the table based on condition, the query is as given below

UPDATE table\_name

SET column1 = value1, column2 = value2, ...

WHERE condition;

---

**163) if there is mistake in company Logo, what is Priority and Severity Justify your Answer?**

Answer: Mistake in company logo on a product, does not impact its functionality or working , as well as buying or selling activities of product, the defect has low severity. But, this defect will impact greatly brand identity and impact how user will interact or may take as duplicate product, hence such defect is of high priority.

---

**164) What is A/B testing?**

Answer: A/B testing is comparing two version of same product, for difference in user experience, performance and any changes that are evident during tests. E.g. comparison of features of microsoft's word 95 and word 97.

---

**165) What is Test driven development?**

Answer: When requirements are specific to test cases, such that code can be improved or defect in code can be fixed in order to meet with the requirements, such kind of development is known as test driven development. The test cases are designed around various scenarios to cover the expected requirements.

---

**166) Explain error guessing with an Example.**

Answer: Based on testing experience, testers design their test cases or scenarios, such method or tests which are exploratory in nature, in order to locate defect in software, are called error guessing.

---

**167) In bug life cycle, who opens the bug?**

Answer: In Bug Life Cycle, Developer opens the bug which was logged in bug management tool by a tester, and assigned to respective developer by development head for fix.

---

**168) What is Compatibility, Multiplatform and Configuration testing?**

Answer: Compatibility testing involves testing software and their compatibility with standards, platforms, transfer of data, and all possible combinations can be verified using different operating systems, web browsers for same hardware, how functional and non-functional features behave . Multiple platforms such as operating systems, network and hardware and their combination used as test environment and how performance of software will behave can be tested.

Configuration testing involves verifying parameter set up for various computer components such as PC, components, peripherals, interfaces, graphic cards, device drivers are composed of variety of configurations. With help of installation guide and manual we can verify configuration of various parameters in various hardware and infrastructures.

---

**169) What are Session and Cookies and what is difference between them?**

Answer: Cookies and Sessions are small text files that store information.

Cookies	Sessions
Cookies are stored only at client machines	Sessions get stored at both client machine as well as server.
Cookies are independent of session	Session is dependent on cookies.
Cookie expires based on lifetime set by user	Session ends when user closes web browser.
As HTTP is stateless protocol, cookies track application state using small text files on user's computer i.e. client.	Sessions store important information such as user id on the server and are used to pass data values from one page to another.

---

**170) What is Mutation testing?**

Answer: Mutation testing is white box testing usually conducted in unit testing level, by changing few statements in source code and validate using debugger. Objective of mutation testing is to assess test case quality based on fault based test strategy that fails mutant code while debugging.

---

**171) Difference between Ad-hoc & Exploratory testing**

Answer: Exploratory as well as Ad-hoc testing should be carried out by experienced testers for validating critical application that requires early iteration so to test if the application satisfies essential functionality or not.

Following is the difference between Ad-hoc and exploratory testing

Adhoc Testing	Exploratory Testing
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Ad-hoc is an informal test that can be carried out without referring to requirement specification documents for the application being tested.	Exploratory is formal tests are carried out by experienced Software testers based on their previous testing expertise thereby test cases are designed during test execution. There is no test case or scenario created during exploratory testing.
Ad-hoc tests primarily tests negative scenarios	While exploratory tests, both positive as well as negative tests should be tested thoroughly,

You can learn more about exploratory testing please visit <https://www.qafox.com/importance-of-exploratory-testing/>

---

### 172) Difference between HTTP and HTTPS, Explain how the data is secured in HTTPS?

Answer: HTTP is short for Hypertext Transfer Protocol, when you enter http:// in your browser, you inform browser to allow connection via http protocol which is TCP (transmission control protocol), in order to send and receive data packets over the web.

HTTPS is short for Hypertext Transfer Protocol Secure, when you enter http:// in your browser, you inform browser to allow connection via http protocol over secured connection encrypted by transport layer security.

---

### 173) Have you heard of Agile Methodology? Explain?

Answer: Agile is a process or a framework where a small team develops and tests customer requirement assigned to them in their order of priorities to be accomplished in the small interval in agreement with client representative from the team.

To learn more about Agile terminologies please visit <https://www.qafox.com/agile-environment-and-terminologies/>

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### 174) What is scrum?

Answer: Scrum is a term used in agile environment of software development where stack holders that develop product meet daily to discuss about Work and its Progress like what task is done, what is being worked upon, what are the difficulties delaying the progress. Scrum meet ensures the team member especially product owner about the status of the work completed and backlog.

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### 175) What is sprint?

Answer: Sprint is usually period of 3 to 4 weeks in which team members have to complete their assigned tasks along with any change request. This is spread across entire software development life cycle, with every new sprint starting after completing task of previous sprint.

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### 176) What is epic?

Answer: Epic is product feature which are broken down into achievable smaller tasks known as user stories in sprint interval. Epic are completed on incremental order of user stories achieved in sprints.

---

**177) What is product backlog?**

Answer: The product backlog comprises a list of new product features, changes in any of the features or functionalities, bug or defect fixes, changes in hardware infrastructure in order to enable the team to achieve a specific outcome. A close eye on product backlog is kept by the scrum master and product owner. This helps in defining burn down reports. Product backlog results in a count of pending tasks that are recurring over a couple of sprints.

---

**178) What is burn down report?**

Answer: Burn down Report is A pending task from user stories during sprint interval due to any reasonable reasons specified by developer, against the time interval. Product owner help to remove impediments due to which tasks are being delayed or left pending.

---

**179) Have you used any Configuration Management tool?**

Answer: I have assisted DevOps team occasionally and have used Chef and Puppet tools for Configuration Management of their infrastructure.

---

**180) Do we always need to do regression after retesting?**

Answer: Retesting is required to verify that the test cases failed in previous release, are passed after the defects are fixed.

Regression is mandatory to verify all relative or dependent modules and integration tests that are intact even after defect is fixed or after change request.

You need to retest the portion of application where defect was fixed. This may be a portion of tests in regression testing. Experience says, it is safe to do regression after retesting as to make sure that other portions of software are intact and not affected after defect fix.

---

**181) What is Web server, which web servers you know?**

Answer: Web server is an infrastructure that uses hypertext transfer protocol to respond client requests over internet. Its main function is to store, process and deliver web pages requested to web site visitors. In addition web server also supports Simple Mail Transfer Protocol (SMTP) and File Transfer Protocol (FTP) protocols for email, file transfer and storage. Microsoft Internet Information Services (IIS) and Apache Tomcat are some Examples of a web server.

---

**182) What is Inter-system testing? Have you done that?**

Answer: When various systems are internally connected with each other and can access or exchange information as well as process one system with another system as interface. Real Life Example is ATM machines, if you have account in State Bank of India of any branch and you have SBI debit card. You need to withdraw cash immediately, you have ICICI bank ATM machine near you. You insert SBI debit card in ICICI bank ATM machine, you enter your credential, the system will internally access SBI server and verify your authentication details along with account balance. When you request the amount to be

withdrawn, ICICI bank ATM machine will dispense the cash requested for. with amount remaining in your SBI account. Another Example is you can access and use all banking related functionality from different branch of SBI bank across India.

---

**183) What is a build? What is the release?**

Answer: The software build is application compiled and integrated in order to get tested by software testers. Release is deploying software with new version deployed to the customer, it has additional features that were absent in previous release, and change request requested by customers using previous release.

---

**184) What is production server?**

Answer: production server is a server used to host website contents such as front end pages, css files, javascript files, backend tables, sql files, procedures etc. integrated and deployed so that end users can access them through their website address using browser and internet, or download on their mobile for using the features of application.

---

**185) What is Recovery Testing?**

Answer: Recovery testing is to test how quick the application is recovered after it has gone through system crash or hardware failure. Tester can change interface, protocol, firmware, hardware, and software configurations as close as the actual conditions. Recovery tests after hardware restored will be tested for getting application again coming back and start running as before. The expense and risk to carry out recovery testing may be substantial and prohibitive for smaller startup companies.

---

**186) What are the properties of a good Requirements Document?**

Answer: The requirement should be feasible, completely explained in requirement specification document. There should be single requirement, easily read and understood by non-technical people, should not contain definitions, reasons for need of requirement. The requirement should not have any guess work or any confusion (e.g. for how long, 50% or more) should not conflict with other requirements, must include same terminology across document, Can be achieved with existing technologies, met within the schedule.

---

**187) What is Accessibility Testing?**

Answer: Accessibility testing is a subset of usability testing, is a process of testing an amount of ease of using the application by disabled individuals. Based on the type of disability various tests are carried out on software to check accessibility features designed specifically for disabled either manually or automatically using tools.

The objective of accessibility testing is listed below

To make sure that application or software can be used by a disabled individual with ease,

To verify that the software is in compliance with the laws formed over requirements for accessing software by disabled individuals.

To make sure that there is no legal action against the software provider in the future

---

**188) How can you make your software ready for accessibility?**

Answer: Screen Readers like JAWS, NVDA, VoiceOver, Window-Eyes, and Digital voice recorders of brands like EVISTR, OLYMPUS WS-852, Zoom, Tascam and SONY can be integrated with software to add accessibility feature for disabled individuals

To learn more about accessibility testing visit <https://www.qafox.com/importance-of-accessibility-testing-for-disabled/>

---

**189) What is Jenkins?**

Answer: Jenkins is an open source automation tool that help devops to automate build, test and deploy, integration and delivery of software, whenever multiple developer tries to commit his/her source code and code is built, build status will be notified to developers such as which commit has defect i n case, next when the build is deployed over to test server any integration issue if any will be reported to developer for any drawback or failed build. Jenkins a tool that automates Continuous Integration, Deployment, feedback to developers, defect in build can be resolved immediately.

---

**190) What is an Insurance?**

Answer: Insurance is a protection or risk management against any unforeseen events such as theft, accidents, illness, damages of properties, due to loss of life in the form of sum total of the am ount by paying the premium for the coverage and claim in case of incident or after maturity

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**191) What are some of the types of insurance?**

Answer: Some of the insurance types are Life Insurance, Term Life Insurance, Retirement plans, Health insurance, Home Insurance, Automobile Insurance, Travel Insurance, Commercial Assets Insurance, and Mobile insurance.

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**192) How many types of banking have you heard of?**

Answer: Banking is divided largely into Retail banking, Corporate banking, Investment Banking, Internet or net banking, and Mobile banking.

---

**193) What is retail banking?**

Answer: Retail banks provide liquidity, an amount of money for spending and investment in form of treasury bills(currency). In addition to save and invest individual and their families finances, offer credit (loans) to purchase homes, cars, and other expenses. They also offer credit cards based on their repayment history. debit card so that people can withdraw cash from ATM machines, or shop groceries, clothing or things of need at point of sales using debit or credit cards and cash management such as demand draft, ECS, RTGS/NEFT, cheques payment.

---

**194) What is NetBanking?**

Answer: Digital Banking – customers who have their accounts in banks can access various financial services offered by retail banks any time using the internet. Viewing account statement, fund transfer, online shopping by payments and confirming OTP (one-time-password) in order to verify the transaction is authenticated by the account holder, apply for loan, credit cards, investments like mutual funds,

cumulative investments etc. various other services like cheque book request, online password changes, credit card payments, viewing transactions statements.

---

**195) Name some digital payment platform**

Answer: Users can make cashless payments with global digital payment platforms such as PayPal, Visa, MasterCard, Amazon, E-wallets, Bancontact, and Indian payment platforms such as CCAvenue, PayTM, Google Pay, PhonePe, BHIM, etc.

---

**196) What entities are present in health care domain?**

Answer: Following are the entities in health care domain applications

**Insurer**– health insurance policy providers who look after all the medical treatment expenses for policyholder.

**Policy holder**– one who is covered for the sum insured amount of medical expenses by paying the premium to the insurer

**Provider**– healthcare professional, a registered doctor or physician treating a patient, a policyholder for his illness.

**TPA**– is an interface between policyholder and Insurer Company, who processes the claim for the medical treatment charges and reimburse them to the facility, hospital, and medical doctor.

**Broker**– is an agent that sells the health insurance policy to the customer against the premium amount for the sum insured healthcare expenses covered under the policy.

---

**197) What are the seven layers of OSI model in network?**

Answer: OSI model contains 7 layers starting with Physical, Data Link, Network, Transport, Session, Presentation, and Application Layer

---

**198) What do you mean by protocol?**

Answer: Protocols are set of rules or procedures that are already agreed by the software industry, for transmission of data between resistors, capacitors, inductors, diodes, and transistors of electronic devices like desktop, laptop computers, mobile phones, printers, electronic devices like digital cameras, DVD players, smart televisions etc

---

**199) What are various types of e-commerce sites?**

Answer: The various types of ecommerce sites are Business to Business (B2B), Business to Consumer (B2C), Consumer to Consumer (C2C).

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**200) What are system integration test types?**

Answer: System Integration test types are Big Bang Integration, Top Down Integration, Bottom Up Integration, and Sandwich /Hybrid Integration.

---



**201) Name few of System integration testing tools.**

Answer: The different Testing tools to verify system integration that are used across industry are Citrus, FitNesse, Jasmine, LDRA, Protractor, Rational Integration Tester from IBM, SITA(Smart Integration Test Accelerator), Tessy, Validata VectorCAST(C++/Ada),

---

**202) What is Defect cascading?**

**Answer:** Defect cascading is defects that are encountered by software testers, which further uncover another defect in the system while integration testing takes place. In order to locate defects that are primary this may further realize other defects in the application.

---

**203) Give some Test Management Tools you are aware of.**

Answer: TestRail, Zephyr, TestFlo, JIRA, TestComplete, and TestLink are some of the industry recognized test management tools.

---

**204) Where are Jenkins files stored?**

Answer: Jenkins stores the configuration for each job within an eponymous directory in jobs/. The job configuration file is config.xml, the builds are stored in builds/, and the working directory is workspace/

---

**205) Have you heard about GIT?**

Answer: GIT is an open source version control system used as a depository to save code base of multiple developers, which will be integrated after compiling and build using continuous integration tool such as Jenkins.

---

**206) Have you worked on SQL query? What you have done?**

Answer: Yes, I have worked on SQL select commands where I queried on the database tables to view and compare records present in tables and that displayed on application's output.

---

**207) Explain REST API.**

Answer: REST API is a set of rules in order to receive data or information from internet when you request about this information using URL. API is application programming interface, created by developers and client or end user can use them in order to fetch information, such as weather reports for next 5 days of particular location, Share market updates for particular company, Book movie or flight tickets using third party applications like bookmyshow.com or goibibo.com, with REST API payment gateways of banks can also be integrated with the ecommerce sites so that buyer can purchase product online.

---

**208) What are tools used in software industry for API testing?**

Answer: Some of the industry famous API testing tools are

SOAPUI

Postman

REST Assured

---

**209) How to upload data in Jenkins?**

Answer: Steps to upload file in Jenkins.

After login to Jenkins, select left hand side menu title 'Jenkins' and submenus – 'Manage Jenkins'. A list of options will display.

Select '-Configure System' by clicking on it. Configuration page will open. You can check menus, 'Maven Info Plugin Configuration'. In Maven Info Plugin Configuration click on the checkbox that reads "This project is parameterized". You will get 'Add Parameter' drop down. Where in you will get a window with title 'file parameter', where file location should be copied and click on save button. There is another option known as 'Build with Parameters', click it to find location of file entered along with Choose file button, clicking this will allow you to select local file to be selected for uploading. You should click Build button to build with uploaded file.

---

**210) Have you heard about GIT?**

Answer: Git is a version control software used for uploading and hence managing worked files among programmers in software development projects. GitHub is cloud based hosting service that lets devops team manage Git repositories.

---

**211) Have you worked on SQL query? What you have done?**

Answer: SQL query are english like statements used to access and manipulating database. You can create new databases, create views in database, set permissions on tables, procedures, views, create new tables, update table with constraints, insert, view, modify or delete records in tables, execute queries against a database tables.

---

**212) What is Primary Key please explain.**

Answer: Primary Key is a constraint or a condition on table columns. There is only one primary key per table, It is a criteria to uniquely identify a record in table. Primary key constraint on table column makes

sure that there is unique value in column, (i.e. it should not allow duplicate value in the column), column should not allow null value, (i.e. it will not allow empty value)

---

**213) If there are same multiple entry in the table, how to find Unique element in the table?**

Answer: Using 'Distinct' keyword in sql statement make sure displaying unique value in the table. eg. select distinct (state) from customers.

---

**214) How to get 3rd Highest Salary from employee table?**

Answer: SELECT MIN(EmpSalary) from (SELECT EmpSalary from Employee ORDER BY EmpSalary DE SC LIMIT 3); You can here just change the nth value after the LIMIT constraint.

Here in this the Sub query Select EmpSalary from Employee Order by EmpSalary DESC Limit 3; would return the top 3 salaries of the Employees.

---

**215) How to find any particular date of joining of employee from Employees table, date is in number format then how to change it to date format?**

Answer: The Date of employee joining an organization is in number format, say 01/02/2001, It can be converted into date format DD/MM/YYYY as follows

TO\_CHAR (TO\_DATE('01022001','DD/MM/YYYY'), 'DD/MM/YYYY')

---

**216) What is end to end testing?**

Answer: End to End (E2E) testing validates application flow from start to end. A main criterion of E2E testing is to recreate user scenario and validate system under test, components for integration and data integrity. eg. Accessing website using browser and its web address (URL), Login to application with valid credentials, for ecommerce portal, the user should be able to view his account details, delivery address, past orders, current order (in case), default payment instructions (like his credit card registered for easy payment method), in addition to this user should be able to view all other items on sale, wish list, adding items to shopping cart, and paying for the item selected with his preferred way of payment options and finally logout of the software.

---

**217) Arrange the following testing types in sequence in which we test any application**

**Functional   Smoke   Integration   System   Sanity   Retesting   Regression**

Answer: Following is the order in which respective tests are carried out during STLC.

Smoke à Sanity à Integration à System à Functional à Retesting à Regression

---

**218) List Name of HTTP methods for RESTful services**

Answer: The HTTP methods used for RESTful services are POST, GET, PUT, PATCH, and DELETE.

---

**219) What are status codes in HTTP?**

Answer: HTTP status code is 3 digit integers displayed as a response from the server, the first digit defines a class of response as explained below

1xx –informational  
2xx – Success  
3xx – Redirection  
4xx – Client Error  
5xx – Server Error

---

**220) Have you used SOAPUI?**

Answer: SOAPUI is an open source tool for web services testing. This tool can be used for RESTful API and SOAP web service testing, GraphQL and microservices and other backend services. The API testing tool is used to validate communication between software made from different technologies, supports REST, JSON, XML, SOAP, JDBC, JMS, and other protocols in a single test case.

---

**221) Have you used Postman?**

Answer: Postman is a scalable open source API testing tool, API is an interface that communicate between applications using HTTP protocols using data formats like JSON.

---

**222) Have you used REST Assured?**

Answer: REST Assured tests REST APIs using Java libraries, integrates with maven. REST Assured has methods that fetch data from all requests and responses from any complex JSON structure. Developers with Java development background can implement REST Assured methods to test API and integration tests using automation scripts.

---

**223) What is Installation Testing?**

Answer: Installation testing is to verify that the application has been successfully installed on environment as per the steps and order of installation listed in installation guide and is working as user acceptance tests and expected as requirement document. During every build deployed by software testers on test servers installation testing is carried out. The steps written in installation guide for different operating system can be verified and application is run to check that installation is successful.

---

**224) Have you come across any severe bugs in your application and did you contribute so that it gets resolved?**

Answer: There were severe, critical and blockers defects that were found during every build. I sat with developer and product owner and explained the expected behavior of system and feature and functionality. I tried understanding code and functions used to achieve the functionality and pointed out shortcomings, there by rectifying the defect.

---

**225) What is Application Server? Give Example.**

Answer: Application server is connected with network and database, web applications are hosted on application server and are connected via network and request from client and response to client reach this server with the help of HTTP protocol. Database connected to this application server validates logged in user's authenticity and requests asked for from the respective tables to fetch information and send them in form of response to the client.

Application server platforms are J2EE, WebLogic, Glassfish, JBoss Enterprise Application Platform, Apache Tomcat.

---

**226) If any bug is reproducible at client-side (in production environment) not in the test environment what are the different possibilities that this scenario occurs?**

Answer: There are various scenarios like additional load of uploaded files for processing, logged in users, time taken to receive response back due to which bug are reproduced at client side (production environment) and not in the test environment.

---

**227) If any bug is reproducible only on Testing server and not on Development server, how you make sure that the developer fixes that bug?**

Answer: The steps or scenario carried out to reproduce defect at test environment but the same steps carried out at development server if does not produce defect. It may happen that there can be some files missing at test environment, code changes at development server due to update on build. Tester has to reproduce the defect carefully conducting steps at development server and advice developer to fix the defect.

---

**228) What is Data Migration Testing? What are the different approaches followed in Data Migration?**

Answer: Migration testing validates migration of application from old system to new system with data integrity, no loss of data, and minimal downtime, with functional and non-functional aspects are met post migration. Pre migration, migration and post migration tests are phases of migration test. In addition backward compatibility and rollback tests are executed along with.

---

**229) What are broken links?**

Answer: broken links are the reason when website are no longer available giving 404 error (Page not found), as webpage was moved without any redirect added, URL structure of website modified or moved.

---

**230) What is ETL testing / Data warehousing testing?**

Answer: ETL testing is for Extract required data or information from data warehouse, Transform data in order to make it suitable so that it can be loaded into the database.

---

**231) What is Closer Report?**

Answer: Summary of tests conducted during software development life cycle, build wise results, status of defect resolution, final critical or major defect still pending in an application is called test closure document. This report also display number of test cases executed, number of defects and their types, defect density etc.

---

**232) write test cases on online software product for free?**

Answer: There are many software companies that introduce their software to end user on limited trial base, in order to explore the features offered and validate functionality. In order to test such software there are few test cases listed.

Verification of features offered in free trial software.

Once executable files for the software are downloaded on user's machine, it is asked to enter user credit card information, in order to start remitting amount after trial period.

Once trial period is over, the software should ask for activation key.

iv) In order to continue using the software, user should either get valid activation key or purchase the software which provide activation key for lifetime use.

The feature working in trial period should continue to work after purchasing software, without any limitations that might have been imposed during trial period.

The feature offered during trial period should work reliably during trial period.

---

### **233) write test cases on company web portal (say ACC cement)**

Answer: various companies have their online presence in the form of web portal and social media. The web portal should provide following information

The URL or web address provided should be browser compatible and should display the similar content on all the browsers namely, Internet explorer, mozilla firefox, google chrome, safari, opera etc.

Web site should by default display his home page on page load, without any delay.

The company information such as offerings, products, services are the links provided on clicking which should display web pages with relevant information.

Company location, current contact information, like phone/mobile, email address and current head of operations name should be displayed.

In Contact form, user can enter his details and on clicking submit button, a reply from the company should be received and customer care department should speak with the visitor in order to provide services asked for.

The product or services page should display their area of expertise, product range, zone wise dealer's address where visitor can get product or services via these dealers.

The web portal should also provide link for any current openings available or product information so that visitor can avail these facilities.

---

### **234) write test cases on gaming software**

Answer: Test cases or scenarios for gaming software should consider following points

Background music, camera (zoom in and out) in case of remote players, compatibility with different screen sizes.

Advancement in Game, Rules, prerequisites to attain next level.

Event triggers, scores, logic to calculate points, what makes games stop.

Special effects, use of buttons, touch screen mobiles, mouse, keyboard, and joysticks

Required minimum configuration of mobile in order to get the best gaming experience.

---

**235) write test cases on image editing software**

Answer: Test case or scenarios for image editing software are listed below.

Verify acceptable image formats are allowed for uploading image editing software

Validate uploaded image are converted into complete and usable image after processing.

Verify the software has preview feature after editing an image online.

Validate a software has drag and drop feature for image to be uploaded.

Validate a software can able to include more than one image in single pane.

Verify the image developed as a result of merging and modification should not include any patches.

Validate the font inserted while image editing software should not blur out the text.

Verify the font along with image gets expanded or reduced while using zoom function without any blur or breaks.

Verify it should not accept any document other than that of image format.

Validate that the image should be converted into final modified form as soon as possible. Verify that the modified image is sent in email supplied.

Verify that to have image size limitation in order to quickly upload, process and send back processed image.

---

**236) write test cases on online file format conversion**

Answer: Test case or scenarios for online file format conversion are listed below.

Online file format conversion software should have a registration button.

Online file format conversion software should have login button for registered users.

Online conversion of Audio format of files should only accept audio file formats for conversion.

Online conversion of Document format of files should only accept document formats for conversion. Online conversion of videos should only accept video file formats for conversion.

Online conversion of images should only accept image file formats for conversion.

Online conversion of PDF to word should only accept PDF format only.

Online conversion of PDF to JPG should only accept PDF format only.

---

**237) what is captcha? Where did you see captcha?**

Answer: A CAPTCHA is a type of challenge–response test used in computing to determine whether or not the user is human. e.g. of captcha are sum of two digits, selection of characters containing symbols, numerals, and alphabets which are distorted for user to identify and write in text field provided.

Selection of pictures that contain some of the images asked for. The pages where sensitive user information may get revealed CAPTCHA can be installed, They prevent hackers from performing attacks where they try to break into an account by guessing every possible password combination, and they can also prevent fraudulent sweepstakes entries or illegitimate contest votes.

---

**238) explain functionality of captcha.**

Answer: CAPTCHA makes sure that the end user visiting website is human and not a script that automatically enters predefined password or sensitive credentials and tries to explore the software. They prevent hackers from performing attacks where they try to break into an account by guessing every possible password combination, and they can also prevent fraudulent sweepstakes entries or illegitimate contest votes. Captcha can be sum of two digits, selection of characters containing symbols, numerals, and alphabets which are distorted for user to identify and write in text field provided, or selection of pictures that contain some of the images asked for.

---

**239) Why all websites visited want to have your consent to use cookies?**

Answer: Many websites have changed their privacy policies after the law and the recent developments of user data breaches in the tech industry. This will help make the users understand what data are collected using cookies and what happens to it after they are collected.

---

**240) Give Example of Statement coverage.**

Answer: Statement coverage is white box testing method where quality of code as well as different path flow is verified. Limitation of statement coverage is we cannot test false condition in it.

Formulae to calculate statement coverage is as below

**Statement coverage = No of statements Executed/Total no of statements in the source code \* 100**

Example:

Read Akshay's marks Ak\_mks

Read Binoy's marks Bn\_mks

if Ak\_mks > Bn\_mks

Print "Akshay has secured better marks than Binoy"

else

Print "Binoy has secured better marks than Akshay"

endif

Set1 :If A =75, B =62

No of statements Executed: 5

Total no of statements in the source code: 7

Statement coverage =  $5/7 * 100 = 71.00\%$

Set1 :If A =82, B =95

No of statements Executed: 6

Total no of statements in the source code: 7

Statement coverage =  $6/7 * 100 = 85.20\%$



#### 241) Give Example of Decision coverage.

Answer: Decision coverage is white box testing method where scenarios or condition reports boolean value true or false as output. It is very hard to achieve 100% coverage.

**Decision coverage = Number of Decision outcomes exercised/Total number of Decision Outcomes**

Example:

```
function eligible(var htinft) { if
(htinft > 5)
htinft = htinft * 30.48
document.write("You are eligible to appear military exams");
document.write("Your height is" + htinf +"cms");
}
```

scenario 1

value of htinft is 4.8

Here boolean value – No when if (htinft > 5) is checked

highlighted code will be executed,

```
function eligible(var htinft) { if
(htinft > 5)
htinft = htinft * 30.48
document.write("You are eligible to appear military exams");
document.write("Your height is" + htinf +"cms");
}
```

Decision coverage = 50%

scenario 1

value of htinft is 5.4

Here boolean value – Yes when if (htinft > 5) is checked

highlighted code will be executed,

```
function eligible(var htinft) { if
(htinft > 5)
htinft = htinft * 30.48
document.write("You are eligible to appear military exams");
document.write("Your height is" + htinf +"cms");
}
```

Decision coverage = 50%

**242) Give Example of Branch coverage.**

Answer: Branch coverage is same as Decision coverage, hence you can give Example given in Decision coverage for branch coverage.

**Branch coverage = Number of executed Branches/ Total number of branches**

---

**243) What is Testing?**

Answer: Testing is a testing framework that covers unit, functional, integration, end to end testing categories. It tests java project testing, Testing supports Annotations, uses Java and Object-Oriented features, supports multi-threaded testing and has flexible plugin API.

---

**244) What is Test Driven Testing?**

Answer: The development is governed by test cases designed for each of the features. Development team starts developing their code base and functions so that the tests pass. Testing considers various aspects such as valid/invalid inputs, errors, exceptions, boundary conditions, events handled and everything that may break resulting defect. Due to test driven development, it takes much less debug time, code designed to meet requirement, shorter development cycles and near zero defects.

---

**245) What is Behavior Driven Testing?**

Answer: Behavior Driven Development (BDD) is a branch of Test Driven Development (TDD). BDD uses human-readable descriptions of software user requirements as the basis for software tests. Like Domain Driven Design (DDD), an early step in BDD is the definition of a shared vocabulary between stakeholders, domain experts, and engineers. This process involves the definition of entities, events, and outputs that the users care about, and giving them names that everybody can agree on.

---

**246) What is Latent Defect?**

Answer: Latent Defect is a hidden defect in software still unknown to end user until particular task or operation is not performed by running the application. this type of defect are difficult to identify, pass through all testing, remains hidden even after production, occurs only in certain scenario, can surface after release of the product.

---

**247) What is fault-masking?**

Answer: fault masking is a technique wherein one defect prevents the detection of another. there are many features that may have defects but remain hidden until these feature are utilized. For eg. In case of login page, developer has provided option to log in with email address and mobile number, until user logs in with valid credentials, the defect as below, wherein forgot password when registered mobile number is entered OTP is not received on mobile (unhandled task by developer), remains un noticed. This is known as fault masking.

---

**248) Explain what the difference between latent and masked defects is?**

Answer: Latent defect is a failure that is still hidden as the set of condition were never met that can uncover a defect.

Masked defect is a defect that has not yet caused because another defect has prevented the area of code from being executed so that masked defect can be found.

When set of condition or scenario are executed, latent defect will be discovered. Masked defect can be found once the defect preventing to execute area of application is resolved.

---

**249) Explain what LCSAJ is?**

Answer: LCSAJ is a short for Linear Code Sequence and Jump is a white box testing technique and determines code coverage. LCSAJ contains start and end of linear sequence of executable statements as well as target line where control of flow is transferred at the end of linear sequence. 100% LCSAJ coverage denotes 100% decision coverage.

---

**250) What is Fuzz testing and when it is used?**

Answer: Fuzz testing is an automatic test technique where invalid, random and unexpected data is sent as an input that may result into exceptions like crash, memory leaks or fails to build-in code assertions. fuzz testing tools for web security testing are Burp Suite, Peach Fuzzer, Spike Proxy.

---

**251) what is test planning?**

Answer: Test plan document is designed by test lead managers per every product under test is a document that explains scope, approach, resources, and schedule of testing activities. This document covers test strategies, objective for testing, exit or closure criteria, resource schedule planning, as well as test deliverables to be included

---

**252) What are commonly used testing types across industries?**

Answer: Unit testing, API testing, Integration testing, web services testing, security testing, automation testing are commonly used testing types across industries.

---

**253) what are the steps to follow when you discover defect?**

Answer: Once tester finds a defect in an application, he should complete following steps in order to register the defect.

Verify and validate the steps followed and try reproducing the defect.

Repeat the test steps and ensure that the defect occurs repeatedly.

Attach screenshots, backend server logs and/or database logs,

Understand the requirement and analyze the deviation from expected output for the scenario.

Include the scenario or test case in case, the scenario tested is not covered.

Report the bug in bug tracking system like Bugzilla or JIRA,

Analyze the defect and rank it based on its severity.

---

**254) How would you resolve conflict amongst team members?**

Answer: It is essential to work in team environment for software development industries. Team members may face challenges amongst their colleagues while communicating, exchanging their views, mentoring or allocating the work. Team member conflicts are common while delivering tasks in high pressure environment.

To resolve conflict amongst team members as a test lead you should

Talk individually to each person and note their concerns

Find a solution to the common problems raised by team members

Arrange a team meeting, reveal the solution and ask people to co-operate

---

#### **255) What is Charles Proxy testing?**

Answer: Charles Proxy testing is a testing for decrypting web traffic on computers and mobile devices. It is a cross platform HTTP debugging proxy server application that enables user to view HTTP, HTTPS, and enabled TCP port traffic from and to local computer or mobile device. In addition, it also records requests and responses along with HTTP headers and metadata (e.g. cookies, caching and encoding information) during web traffic.

---

#### **256) What is meaning of Code Walk Through?**

Answer: Code Walk Through is a review meeting lead by a developer who has designed the program code, walks through his/her written code to other member of his team. The purpose of such review is to impart knowledge transfer to the new team members as well as find defects in the code, based on the requirement use case scenarios.

---

#### **257) What things to consider while project monitoring?**

Answer: During project monitoring, a manager responsible analyzes all the tasks carried out are as per plan? Due these tasks any unforeseen consequences that may occur, what is performance of your project team at given time period, Any change in project elements desired, what could be an impact on processes due to these changes, After all the actions, will that lead to expected result?

---

#### **258) List common pit holes or mistakes that creates issues in project delivery?**

Answer: There can be various mistakes that may create issues in project delivery.

Assigning incompetent resource to manage the project

Lack of resources and skills

Doing everything myself approach instead of distribution of work as per resource and their skills Lack of proper communication and failure to pass the message across the stack holders

Project initiation or start up is poorly managed

uncertain or unclear objective of project and processes

Wrong Estimation of time and budget

Failure to manage scope described in project

Over micro managing of projects like police and enforcing the pressure in order to achieve the tasks

Daily or weekly meets amongst team to update and understand the progress. Not following the Processes

These are few of the mistakes that may result in delays in project delivery and there by losing the project

---

#### **259) What the basic components of defect report format are?**

Answer: The defect report consists of unique identification number by which the defect is registered in bug tracking software, project, product name, released version, product build, and module of a software where this defect was observed. Defect report will have summary of defect, description and steps followed that will reproduce the defect, Actual result and expected result, defect severity, ie. degree of negative impact on quality of software due to the defect – critical, major, minor or trivial, priority of defect is the urgency of fixing the defect, name of tester who has identified the defect, name of developer to whom the defect has been assigned to resolve. Current status of defect whether it is still new, assigned, open, resolved by developer, under test by tester, fixed or closed, based on bug life cycle.

---

#### **260) What is risk-based testing?**

Answer: Risk based testing starts with accessing risks related to complexity of logic, business criticality, defect prone areas in application, frequency of use of sensitive computation of application features. This involves priority of testing those areas of an software that involve critical features and functionalities that are likely to fail. Such type of testing involves experienced testers that have understanding of possible risks involved in mission critical applications.

positive impact of risk based testing are opportunity to learn and improve business sustainability when you test application based on the risks involved

negative impact of risk based testing are threat of customer dissatisfaction, impact of overall project cost due to detailed testing, bad or negative user experience, and possible loss of customers.

---

#### **261) When is used Decision table testing?**

Answer: Decision table testing are used to validate system behavior with different input combinations. Best Example of such tests can be login to the application where there are two input values, namely username and password and possible output can either be an error with not allowing to enter in application or allowed to enter the welcome page.

scenario 1 – username and password both can be wrong, resulting in error

scenario 2 – username can be correct, but password could be wrong, resulting in error

Scenario 3 – username can be wrong, but password could be right, resulting in error.

Scenario 4 – username and password both can be right and valid, allowing user to the welcome page.

---

#### **262) What is a Proxy server?**

Answer: Proxy servers acts as a gateway between your client machine's browser and internet, offering varying level of security, and good privacy from the threats from hackers and protect any data loss. Proxy server masks your IP address, thereby gives you additional security.

One can use proxy to access those sites that are otherwise blocked eg. Your school library, or accessing website back home while travelling abroad, posting comments on websites keeping your identity hidden.

---

**263) what is test environment?**

Answer: Test environment is a setting software and hardware similar to that of production environment in order to execute test cases and scenarios in order to test and verify the feature and functionality developed in software results and thereby check the quality of software, find defects in application.

---

**264) what is test execution?**

Answer: test execution begins as entry criteria that starts during software testing life cycle, in order to verify application under test for any defect or deviation between actual and expected behavior of an application, by following test steps as per test cases and run application to find bugs.

---

**265) what is the difference between test scenarios, test cases, and test script?**

Answer: Following are the definitions that differentiate between them

Test scenario can be a description of test objective, tester can accomplish by testing an application in multiple ways to ensure that the scenario has been covered with satisfaction.

Test case is summary of test scenario with steps or procedure to carry out with test data to the application in order to validate that the application behaves as expected, or reproducing the defect by following the steps written in test case, thereby validate that the actual result deviates from expected result.

Test script is steps in order to mimic test case to validate application's behavior as expected or behaves differently to locate defect.

---

**266) What all things you should consider before selecting automation tools for the AUT?**

Answer: Following are few points to be considered before selecting automation tool for application under test.

Suitability of tool to accomplish types of tests to be carried out.

Skills require configuring and designing scripts to execute in order to run application as per test scripts.

Ability to capture reports, status of tests by the tool.

Availability of resources that can understand the technology used in designing the scripts and tool. Price of the tool and its implications on project cost.

---

**267) How will you conduct Risk Analysis?**

Answer: Risk analysis can be conducted by analyzing the testing methods and selection of tests and way in which it is carried out by testers, skills in identifying risks, prioritize their impact, and create mitigation plans where appropriate in case those risks become real issues.

There are various aspects of project that impact risk such as estimation of resources and duration of activities, schedule, cost estimates, budget, quality and decision of either rent cloud services or procurement of infrastructure.

---

**268) How would you allocate responsibilities to your team members?**

Answer: Team manager or test lead should allocate responsibilities to your team members to achieve the team's goals. Roles or responsibility assigned to the team member based on his/her skills, experience and abilities, in such a way that it increases his morale and motivation.

---

**269) What Is Docker?**

Docker describes themselves as "an open platform for developers and sysadmins to build, ship, and run distributed applications". Docker container image is standalone, lightweight, executable package that includes code, runtime, system tools, libraries and settings required to run the software. This can be quickly deployed and run on different computing environments.

---

**270) What is ETL testing / Data warehousing testing?**

Answer: ETL testing is for Extract required data or information from data warehouse, Transform data in order to make it suitable so that it can be loaded into the database. ETL testing is process of validating, verifying and qualifying data preventing data duplication and data loss.

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**271) What steps would you verify in case your desktop takes too long to start up?**

Answer: In case slower Microsoft Windows startup (boot up) are due to various reasons

Disable startup programs by observing by starting Windows task manager

Running ScanDisk and Defrag utility tools in order to free up hard drive from any errors

Check if hard drive space is insufficient, by removing any junk files or unused programs

Verify if computer is running with corrupt, incorrect, or out of data drivers as well as older version of windows operating system required to upgrade.

Try clean system registry

Try considering format and reinstall Windows on the computer.

---

**272) What do you mean by Defect Triage?**

Answer: Defect triage is process of analyzing defect priority based on factors such as severity, risk, and time required to fix /resolve the defect. During defect triage meet, stack holders discuss and decide the priority of fixing the defects.

---

**273) What is a test harness? Why do we need a test harness?**

Answer: Test harness is collection of test data, software and scripts that drive software to execute test case or steps in order to verify its behavior and output. Test execution engine and test script repository

are two main parts of test harness. Usually exists while unit and integration testing, it involves stubs and drivers that are required for testing software modules and integrated components.

---

#### **274) Why software has bugs?**

Answer: Defects occur in software due to various reasons such as

Software complexity – making developer difficult to understand requirement, or how to design the desired output.

Miscommunication between product team and customer in knowing the exact requirement.

Programming errors during runtime or compile time of code base during integration process.

Timeline pressure that limits unit testing of all possible scenarios on design codes or programs

Change in requirements by customer that can introduce defect in already running application code.

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#### **275) What is Cause Effect Graph?**

Answer: Cause Effect Graph is a black box test technique that represents graphically relation between outcome and factors that affect the outcome, which assist in designing test cases.

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#### **276) What are the different strategies for roll out to end users?**

Answer: Software Roll out to end users has following strategies

Pilot: The actual production system is installed at a single or limited number of users. Pilot basically means that the product is actually rolled out to limited users for real work.

Gradual Implementation: In this implementation we ship the entire product to the limited users or all users at the customer end. Here, the developers get instant feedback from the recipients which allow them to make changes before the product is available. But the downside is that developers and testers maintain more than one version at one time.

Phased Implementation: In this implementation the product is rolled out to all users in incrementally. That means each successive rollout has some added functionality. So as new functionality comes in, new installations occur and the customer tests them progressively. The benefit of this kind of rollout is that customers can start using the functionality and provide valuable feedback progressively. The only issue here is that with each rollout and added functionality the integration becomes more complicated.

Parallel Implementation: In these types of rollouts the existing application is run side by side with the new application. If there are any issues with the new application we again move back to the old application. One of the biggest problems with parallel implementation is we need extra hardware, software, and resources.

---

#### **277) What are error guessing and error seeding?**

Answer: Description between Error Guessing and Error Seeding as details below.

Error Guessing – It is a test case design technique in which testers have to imagine the defects that might occur and write test cases to represent them.

Error Seeding – It is the process of adding known bugs in a program for tracking the rate of detection & removal. It also helps to estimate the number of faults remaining in the program.



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**278) Do you feel comfortable standing up to developers who disagree with your results?**

Answer: In some situations, reporting failures can be a delicate process. Perhaps a developer spent a lot of time on some code which does not exactly meet specifications. QA engineers need to be able to stand up for what they know is right.

---

**279) Are you willing to cut corners to save time?**

Answer: The correct Answer is NO. All test cases need to be run, and making assumptions frequently leads to issues down the road, because as a Software quality tester it is your duty to cover all the scenarios for the application for test coverage. It may happen that in case some area of test uncovered may contain error at client side, and you can fall on your face by not testing that area.

---

**280) what is validation in software testing?**

Answer: The meaning of validation is to confirm if application or system designed is in compliance with the client's requirements and its feature functions as desired and thereby meets goals and needs of end user. In short it is to verify the software build is right product.

---

**281) what is verification in software testing?**

Answer: The meaning of verification is to confirm that the designed product delivers and satisfies all the functionalities expected to fulfill as expected by end user. In short it is to test whether the product build is right (functions as expected)?

---

**282) what is API testing?**

Answer: API testing is a part of integration tests that verifies that the application programming interface communicates between two different systems and meets functionality, reliability, performance, and security as expected by client. Various API testing tools are SOAPUI, Postman and REST Assured.

---

**283) what is web service testing?**

Answer: Web service testing validates web services build on API works as expected. The functionality, reliability, performance, and security of application programming interface (API) provided to communicate in order to receive response of requests sent via HTTP protocol over an internet. Web services can be tested by asking requests over internet via HTTP protocol and receives response. Various web service testing tools are SOAPUI, Postman and Meter, vest

---

**284) what is Postman?**

Answer: Postman is open source API client that sends REST, SOAP and GraphQL requests and used to test RESTful API that have been created. It uses GET, PUT, POST and other HTTP methods in order to verify API functionality.

---

**285) what is REST Assure?**

Answer: REST assured is a java based library used to test RESTful API and web services, HTTP responses, status code, status messages and headers and body of responses.

---

**286) what is Cucumber?**

Answer: Cucumber is a tool that supports Behavior driven development, allowing expected software behavior specified into logical language a customer can understand. This tool is developed using Ruby, and Gherkin which is the format for cucumber specifications.

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**287) what is Capybara?**

Answer: Capybara is a web-based automation framework used for creating functional tests that simulate how users would interact with your application. It supports selenium web driver, JavaScript, HTTP resources outside of application, used in running automated functional tests for web based application.

---

**288) What is Salesforce?**

Answer: Salesforce is a cloud based customer relationship management service, designed to help you sell, service, market, analyze, and connect with your customers. This is software that stores customer contact information like names, addresses, and phone numbers, as well as keeps track of customer activity like website visits, phone calls, email, and more.

---

**289) What is Testing?**

Answer: Testing is an automation testing framework used to cover a wider range of test categories: unit, functional, end-to-end, integration, etc., with more powerful and easy-to-use functionalities such as use of annotations, parallel testing etc. for application developed using java programming language.

---

**290) What is TeamCity?**

Answer: TeamCity is continuous integration servers that help integrate the code, build an application in premise and over the cloud.

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**291) What is Gradle?**

Answer: Gradle is a build automation tool for multi-language software development. It helps to compile, package, test, and deploy an application.

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**292) What is Framework?**

Answer: Software framework is a structured way in which certain type of files are saved at particular folders, making it uniform to use and search for by end users and development team, eg. Eclipse is an integrated development Environment where various project can be designed by keeping together compiled code and reference classes in such a way that their integration is taken care by eclipse internally making developers free from integration of these files. Eg. JavaScript framework, Application framework, web framework and Ajax framework.

---

**293) have you heard about Teradata?**

Answer: Teradata is one of the relational database management systems, suitable for building large scale data warehousing applications for large volumes of data. Used in telecom, social platforms like twitter, facebook, and online marketplace such as amazon, flipkart, and other ecommerce sites.

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**294) Have you heard about Hadoop?**

Answer: Hadoop is an open source framework or collection of software utilities that stores data and runs applications on clusters, providing massive storage for any kind of data, processing power and limitless concurrent tasks.

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**295) Have you heard about Hansoft agile planning tool?**

Answer: Hansoft is an agile planning tool providing single platform for decision making at project, program and portfolio level, can be extended to diverse and dispersed teams across the globe for various projects.

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**296) what is JIRA Issue and project tracking tool?**

Answer: Jira help create user stories and issues, plan sprints, and distribute tasks across software teams, prioritize and discuss team's work with complete visibility; keep track of latest release related information and real time visual data on team's performance.

---

**297) What do you think our company could do better?**

Answer: This interview question helps you to uncover how much research the candidate did before meeting with you, and it demonstrates their ability to think on the spot.

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**298) What experience do you have with developing corner cases?**

Answer: This question will help you to figure out if your tester is willing to dig for different test case scenarios that might not be as intuitive or clear up front.

---

**299) Explain any of bug tracking tool,**

Answer: I have used Bugzilla, to log bugs and track their status during software development life cycle, Once the bug and its description and steps carried out to reproduce it is logged in, and assigned to developer. The defect can be searched using advanced search, it is very easy to use, and is lightweight open source software for bug management.

---

**300) What is DevTrack cloud based development?**

Answer: DevTrack is a cloud based software development tracking software that keep connected with all the stakeholders, interact, communicate and thus manage, prioritize and track tasks, and bugs during development lifecycle. create projects, sprints and user stories on the fly, view and share real time reports and data to analyze project status.

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**301) Did you use TestRail Test case management tool?**

Answer: TestRail is powerful test management, test execution, and results tracking, as well as project and quality planning. It helps capture test results, attach files and logs, screenshots as a proof of testing, and link with bugs registered.

---

**302) What is configuration management?**

Answer: configuration management is to maintain optimum state of product such as hardware, software and network as an infrastructure's performance, functional and physical attributes in line with its requirement, design and operations in order for their best performance throughout its life.

---

**303) What are popular configuration management tools you have heard of?**

Answer: Popular configuration management tools are Ansible, Chef, Puppet Enterprise, Terraform to name a few which are industry famous configuration management tools for infrastructure maintenance.

---

**304) What is scalability testing?**

Answer: Scalability testing is test methodology where performance of application is tested by measuring scale up and scale down the number of user requests and cope up with the load accordingly. eg. Amazon cloud services offer best real time Example where during peak hours amazon an online shopping web portal handles extreme load of user's accessing the site and in normal case very few customers accessing the site.

---

**305) What is concurrency testing?**

Answer: Concurrency testing is verifying the performance and load bearing capacity of application when multiple users accessing the website and performing same action such as accessing the pages, searching the products, checking the review and shop the selected products online. concurrency testing checks latency of page load, and quick response rate during peak hours with multiple users logged in to the web portal.

---

**306) What is endurance testing?**

Answer: Endurance testing is nonfunctional testing of an application where the behavior of application is analyzed with a significant load extended over significant interval / period of time. It differs from load testing where load bearing capacity of an application is measured. In endurance testing the goal is to check any memory leaks and how system performs under sustained usage.

---

**307) Have you appeared for ISTQB foundation test?**

Answer: Many companies have hiring criteria of to hire someone who has passed ISTQB foundation exam as a tester, as it validates ability to understand testing related terms and principles in software industry. ISTQB foundation test is a universally accepted online exam to assessment of knowledge on fundamentals of software testing for testing professionals. If you have already appeared for the exam and passed this exam you can mention it. But if you have been thinking of appearing for this exam, you should convince the interviewer that you will sooner appear for the same.

---

### **308) When should you stop software testing activities?**

Answer: Software testing activities can be stopped based on following factors

How many Test case execution completed and bugs occurred fixed during the regression testing

Based on the Testing deadline decided in test plan by project manager

Mean Time between Failures (MTBF) rate if reduced and is within the acceptable rate.

Code Coverage Ratio can be calculated based on various tests like statement coverage, branch coverage etc.

---

### **309) Can you explain in short 7 principles of software testing?**

Answer: Seven principles of software Testing are as below

Testing shows presence of defects – testing any software will uncover defects in it Early

Testing is essential and will help defect in the initial stage of development.

Exhaustive testing is not possible – It is not possible to check each and every condition and criteria of application.

Testing is context Dependent – Different domains are tested differently, thus testing is purely based on the context of the domain or application.

Defect clustering – 80% of the problems are found in 20% of the modules.

Pesticide paradox – the set of test cases needs to be regularly reviewed and revised.

Absence of Error is fallacy as it will be impossible to imagine software without a defect.

---

### **310) what is Defect Clustering?**

Answer: Defect clustering is accumulation of most of the defects are found in just few modules. It is said that 80% of defects are found in 20% of modules.

Defect clustering occurs in following scenarios

1) When defects surface even after testing with multiple test cases and scenarios. 2)

These defects show up only around some application features.

---

### **311) What is Defect Density?**

Answer: Defect Density is number of confirmed defects identified in software/module during a development period divided by the size of the software. It is calculated as defect count/size of the release, where size of release is total line of code in release.

e.g. if module1 has 25 bugs, module2 has 15 bugs, and module3 has 50 bugs, total number of code per modules are module1 has 1250 LOC (lines of code), module2 has 2575 LOC, and module3 has 7500 LOC, then Total bugs =  $25+15+50 = 90$ , and size =  $1250+2575+7500 = 11325$ , Defect density will be =  $90/11325 = 0.00794$  defects/loc = 7.94 defects/Kloc.

---

### **312) what is Age of Defect?**

Answer: Age of Defect is the difference of time from date when defect was detected till the date defect was fixed or a current date if defect is still open (not resolved).

---

**313) What is Build?**

Answer: software build is a process that converts code files by compiling these files and with all dependent files forms an application which accomplishes the features and functionality expected by the end user. The build contains compiled source files compressed formats such as jar or zip formats.

---

**314) What is release?**

Answer: Software release is a deployable software package after several iterations, where all defects have been fixed to be installed at Production environment.

---

**315) What is a difference between Build and release?**

Answer: DevOps team gives Build to the testing team, release is tested and accepted version of product to their customers. Build is tested by testing team and after all the major and critical bugs have been resolved then this build becomes a release for the customers. Build can be rejected by testing team if it does not meet client's requirements.

---

**316) Can you list some Continuous integration tools?**

Answer: Jenkins, TeamCity, Bamboo CI, GitLab CI, and Cruise Control are some of famous continuous integration tools used across software industries.

---

**317) Can you list some Continuous Deployment tools?**

Answer: Jenkins, TeamCity, Bamboo, GitLab, and Octopus Deploy are some of famous continuous deployment tools used across software industries.

---

**318) What tools for version control have you used?**

Answer: CSV, SVN and GIT are some very famous version control tools/software's used across software DevOps community.

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**319) What API testing tools you are aware of?**

Answer: SOAPUI, Postman, and REST Assure are some of the well-known API testing tools.

---

**320) What Test management tools did you use?**

Answer: Zephyr, JIRA, TestLink and TestRail are few test management tools, to know more about test management tools refer link <https://www.qafox.com/test-management-tools/>

---

**321) What is CRUD stands for?**

Answer: CRUD stands for CREATE, READ, UPDATE, DELETE. In relational database applications these are major functions that are implemented.

---

**322) What important web browsers do you know?**

Answer: You can very well have known that Mozilla Firefox, Google Chrome, Opera and Safari along with Internet Explorer are important browsers accepted and used by end users and clients as approved browser for application under test.

---

**323) What Operating systems you are aware of?**

Answer: You may have worked on various operating systems such as Windows 7 or Windows XP, Ubuntu, Linux or Unix.

For Windows operating system in desktop computer,  
select Computer icon,  
right click and select Properties,  
will open You will come to know what windows version / edition etc.

For Unix or Linux operating system,  
open terminal,  
type For remote server login using the ssh:ssh user@server-name  
Type any one of the following command to find os name and version in Linux: cat  
/etc/os-release. OR lsb\_release -a. OR hostnamectl.  
Type the following command to find Linux kernel version:  
uname -r

---

**324) What is CRM software?**

Answer: CRM stands for customer relationship management, improves enhanced communication, managing sales team and customer opportunities, determining high quality sales leads, sales analytics, reports and dashboards, integration over email and mobile phones.

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**325) List few of CRM software used for customer relationship management.**

Answer: Salesforce, Pipedrive, Insightly, Zoho CRM, and Hubspot CRM are some of the CRM softwares utilized in sales and customer relationship management activities.

---

**326) What Is Cyclomatic Complexity in software testing?**

Answer: Cyclomatic complexity for a section of code is measure of number of independent linear path taken by it. This is a standard of measurement of complexity of a program or code. For eg. There are multiple if statement in a program code, then total number of path will be equal to number of if statements.

---

**327) mention the categories of debugging?**

Answer: There are mainly four categories of debugging

Brute force

Backtracking

Cause elimination

Program slicing

---

**328) How do you go about learning a new product?**

Answer: It is essential for all IT professionals to update his/her skills with new technologies, languages, software, tools and keep pace with new advancements in technologies. In order to learn new product, one should start researching about it on product's website under introduction or documentation, understand installation and install the software on his/her machine. Configure it and follow 'Getting Started'.

This will give you confidence as you are doing and accomplishing on newer areas which you have not explored. In case of new languages, read tutorials and watch you-tube videos.

---

**329) How you coped with having to learn any new skills?**

Answer: You should Answer above question by showing how passionate you are about knowing, learning and updating your skills.

You may say as, during my initial days with previous job as software developer trainee, It was a challenge to prove myself in 6 month of probationary period.

I began learning UNIX commands, took a course where basics of computer peripherals was taught. Lab training and surprise tests helped me a lot. My team lead and managers have supported and encouraged me to pursue various courses and certifications. This helped me gain solid background in basic knowledge.

---

**330) What is performance testing?**

Answer: performance testing is non-functional testing type to determine the speed, responsiveness and stability of computer, network, desktop or web based applications under load. Superset of load and stress tests are spike, volume, endurance, and scalability testing. During performance testing attributes like speed, response time, throughput, resource usage, and stability are tested.

---

**331) What is Load testing?**

Answer: A subset of performance testing, is nonfunctional type where analysis of system behavior during normal and peak conditions where highest number of logged in users as well as first time visitors exploring the site. Some of the load testing tools are Load Runner, Apache JMeter, NeoLoad and LoadNinja used in industry.

---

**332) What is Stress Testing?**



Answer: Stress Testing is nonfunctional testing to measure limit till software withstands the load, or limit at which system or software or hardware breaks.

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**333) What is Spike Testing?**

Answer: Spike Testing is nonfunctional testing where application under test are tested against sudden and extreme increase or decrease in load, the extreme variations are measured in such type of performance tests.

---

**334) What is Volume Testing?**

Answer: when software is subjected to high value of data, the performance test is known as volume testing.

---

**335) How well do you work with others?**

Answer: It is important and essential to work with others and usually in groups with people of different likes, dislikes, beliefs and expertise. Team work is a basis to achieve shared goal or outcome in an effective way. You as an individual have to listen to other team members, share your view, discuss and come with best way to bring the best work output from team shared efforts. This question is asked to understand you as a team player, ability to work in team, share your opinion and convince your group for best results, and find out how good communicator you are?

---

**336) What motivates you?**

Answer: This is a tricky question asked where if you have not prepared cannot Answer such questions. Interview here want to know you are honest about your motivations and how would it benefit with the job offered to you. Various factors like

meeting deadlines,

targets or goals,

mentoring and coaching others,

learning new things and

Finding a way to solve a problem, or overcome a challenge.

---

**337) Have you worked as independent contributor?**

Answer: In this interviewer want to know that are you able to manage your task without any supervision? How reliable you are if given position which needs your own decisions and instincts to drive yourself. In such position, co-workers from other department may rely on your work to complete their work. For eg. if you are accounts receivable clerk, your making invoices will help product dispatch department, your collection of payments from customers will bring in salary for entire staff.

---

**338) Explain PDCA Cycle (Plan-Do-Check-Act).**

Answer: PDCA OR Plan Do Check Act is an iterative four step management method to control and continuously improve processes and products. PDCA cycle are used while starting a new project, repetitive work by analyzing following

What is a core problem need to solve,

Resources we need, what resources we already have ,

Best optimum solution to fix the problem, How to bring success to your plan.

---

**339) Give one Example of High priority and high severity**

Answer: The Design software gets stuck or hangs often when enter key have been pressed to review the final draft. This is defect of high priority and high severity and should be resolved and corrected as such product cannot be shipped to client.

---

**340) Give one Example of High priority and low severity**

Answer: If a Company name is misspelled on the home page of web portal, is an Example of high priority to be fixed as it may impact company reputation or may represent as fake product with misspel led company name. However other functionality in the web portal will function perfectly.

---

**341) Give one Example of Low priority and high severity**

Answer: A printer printing multiple copies instead of single copy has a high severity as the customer will experience wastage, due to printing task still pending. This can be fixed in next release of the product.

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**342) Give one Example of Low priority and low severity**

Answer: The Example of Low priority and low severity can be Spelling, Grammatical, punctuation marks not properly placed, and such mistakes in product labels.

---

**343) Describe a situation where you successfully collaborated with developers to deploy a program or application.**

Answer: Interviewer wants to understand how do you handle your tasks in day to day basis, Are you motivated by accomplishing tasks that needs collaboration with other team members from different department? Can you convey your message to someone who is not from your team? Finally you're convincing and ability to drive or influence others is measured by this question.

---

**344) Describe a time when you acted proactively to increase system performance.**

Answer: In this question, interviewer wants to ascertain your reactiveness towards standards accepted and required by organization. You can narrate a story where you have proved your mattel by convincing your team lead, managers and product head to improve upon system performance by replacing hardware configuration and suggesting better alternatives hardware to install supplied software fo r better performance.

---

**345) How do you keep up-to-date with industry developments? Are there specific blogs or forums you read?**

Answer: This is a question where you can Answer based on your reading and being upgrade with latest technologies and industry developments, Where in you may be receiving emails from various domain experts, blogs, read articles and tutorials on various technologies in demand.

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**346) What process are you using for testing currently? Can you describe how you might improve it?**

Answer: As a software tester, you may be working on black box testing like functional, regression, smoke, database testing, API testing, web services testing etc. These are functional tests, then integration tests and then nonfunctional i.e. performance testing. Use of automation in API and database testing using scripts can improve the testing efforts.

---

**347) What is your favorite testing tool? Why? If some technical constraint meant you were unable to use it, what would you do instead?**

Answer: You may Answer this question only when you are aware of testing tools and what test types these tools are used for. You can explain why tool is favorite, as what special features make this tool unique from other tools testing same type of testing. Interviewer wish to underst and, how is your view with finding alternative solution or workaround, to what extent you are dependent to the environment, circumstances, teammates, tools, personal computer etc. Or you can quickly adapt the change. You should be well versed with the testing tool that is favorites, you should able to substitute in case it is not available.

---

**348) How to handle a situation when you don't have time for complete testing?**

Answer: Interviewer wants to know, how do you react real time scenario when there is a de livery and acceptance testing is on the way, what tests will you take on priority? The Answer to this question will depend on how did you work and perform under pressure environment. The most critical feature that was not working and have been send with a defect, It is mandatory to check if the critical and major bugs have been resolved or not, The regression tests should be carried out and integration tests that validates feature, end to end testing should be carried out. Based on the test results, we can decide to release the build or not.

---

**349) Do you measure how effective (or not) your testing is? What metrics do you use?**

Answer: You need to organize things first – You need to plan testing procedure, how will you divide the testing process, various types, test cases based on the test types, how will you test cases – using automation scripts or manual? Will you keep updating spreadsheets during testing application over version control software OR use test management tools like JIRA or Bugzilla so that all the testing execution, the date of execution, test cases executed, test status, registered bugs etc. can be accessed by everyone on central location.

Writing detailed bug reports with clarity, backend logs captured during reproducing the defect.

Test cases should be written clearly, with all steps and expected results, attend daily meets between team members and share concerns regarding any issues if any. Ask question to our self to understand better. Exploration of application to know the features, ultima tely find out various bugs in it.

---

**350) How well do you work under pressure and with deadlines?**

Answer: In Agile environment where requirements change frequently, development and testing activities are carried out in 2 weeks of interval where user stories need to be converted as working features in the software under development, testers need to verify that these features are designed as required by the end user. Regression tests are required to be carried out to verify resolved defects are fixed and no new bugs gets uncovered.

---

**351) What different software testing methods are used by a software company?**

Answer: There are mainly three software testing methods used during testing of their application namely

black box,

white box and

grey box

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**352) Name some of the test cases that you can automate.**

Answer: Types of test cases that can be automated are

Smoke test cases,

Regression test cases.

Data-driven test cases and

Non-functional test cases.

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**353) Name some roll out strategies for end-users.**

Answer: There are multiple strategies to choose from, you can select either of these according to your requirements-

Pilot

Gradual Implementation

Parallel Implementation

Staged Execution

---

**354) What is Application Binary Interface (ABI)?**

Answer: Portability of applications in binary forms across different systems, platforms and environments being the requirement defined in specifications of an interface known as Application Binary Interface (ABI). For conformation to an ABI specification, testing of an executable application is mandatory for portability across system platforms and environments.

---

**355) What is a interruption testing?**

Answer: In telecom industries mobiles and landlines call drop has been a common cause of interruption, which may have adverse effect on application in use, testing an application for interruption for behavior of application during interruption and then back to the point of start without any error or not?.

---

**356) What is CMM – Capability Maturity Model for a software?**

Answer: Capability Maturity Model for software is a model for judging the maturity of the software processes of an organization and for identifying the key practices that are required to increase the maturity of these processes.

---

**357) When is a case where automating a test case is not viable solution?**

There are many advantages of test automation and test cases should be automated when possible and when appropriate. However, there are certain scenarios when test automation is not preferable and manual testing is a better option:

When the validation depends on the person performing the test (UI/UX, usability, look -and-feel)

When the feature is being developed with constant changes and automating the test cases would mean a waste of resources

When the test cases have extreme complexity and automating them would be a waste of resources

When the requirement is for testers to perform manual sessions in order to gain deeper insight into the system

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**358) How well do you deal with Ambiguity?**

Answer: Ambiguity is scenario which is open to more than one criterion, making it unclear to decide, there are various use cases or test cases are not generally straightforward and QA Engineers should follow up on their own judgment. They have to feel great with ambiguity.

---

**359) What is Emulator?**

Answer: Emulator A device, computer program, or system that behave s like another system and accepts the same inputs and produces the same outputs as a given system, it behave s as translator.

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**360) What is Simulator?**

Answer: A simulator is designed to create an environment that contains all of the software variables and configurations that will exist in an application's actual production environment.

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**361) What is CAST?**

Answer: CAST is a short for Computer Aided Software Testing, refers to the computing-based processes, techniques and tools for testing software applications or programs carried out using combination of software and hardware based tools.

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**362) What is Race Condition?**

Answer: RACE is a problem caused due to multiple accesses to a shared resource, one of which is a write privilege, undesirable situation that occurs when a device or system attempts to perform two or more operations at the same time.

---

**363) What is Binary Portability Testing?**

Answer: Binary Portability Testing is a test to verify portability across different platforms and environments, these tests validate Application Binary Interface specifications; it is carried out on various Windows flavors of operating systems, Linux, Mac OS, Java, Solaris and Android operating systems

---

**364) What are the challenges that you face as a software tester in the current/previous company?**

Answer: Interviewer wants to dig into your sentimental area of mind, where in case you let excitement reveal pain areas and tough situations you are facing at present, it will be an input for the recruiter to assess your potential or limit of stress that you can handle during a pressured environment and deal with people with discipline.

---

**365) What is a difference between functional and nonfunctional testing?**

Answer: Following are the differences between functional testing and non-functional testing

Functional Testing	Non Functional Testing
Verifies operations and actions on application under test	Verifies behavior of application when subjected to load or stress
These tests check if features function as expected by end user's requirements	These types of tests check applications are developed as per expectations of end user
Functional tests help enhance user experience	Nonfunctional tests improve performance of an application
Types of functional tests are unit testing, smoke tests, integration tests, regression tests	Types of nonfunctional tests are performance, load, stress, and scalability tests

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**366) List REST constraints that describe basis of RESTful style?**

Answer: The six constraints that describe basis of RESTful style are

Uniform Interface

Stateless

Cacheable

Client-Server

Layered System

**367) What 201 HTTP response codes describes?**

Answer: 201 – means HTTP Request is successful creation via either POST or PUT – HTTP methods.

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**368) What is a status code for internal server error?**

Answer: HTTP status code for internal server error is 500

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**369) Have you come across 404 response code?**

Answer: Yes, The meaning of 404 response code displayed on web page is – The server cannot find the requested page. i.e. There is no page found at server for the URL search.

---

**370) What is a difference between PUT and POST in case of REST API?**

Answer: PUT updates a specific resource or collection of resources, whereas POST creates a new resource.

---

**371) What is expected for a manual tester to master automation testing?**

Answer: It is mandatory for manual tester to have understanding on following for executing automation script for testing an application.

Understanding and hands-on working using Unix commands

Installation of selenium on a client machine having various operating system – Windows and Unix

Understand the automation framework and installation of automation related build / patch on client machine.

How to capture and locate xPath of various web elements

Create test data for the automation script in order to execute test cases

Understanding shell script to automate execution in Windows or UNIX operating system.

Analysis of test status

Understanding of errors, exceptions, or assert statement that may stop execution of script.

---

**372) What could go wrong during execution of automation script to test application?**

Answer: There can be various scenarios which may stop execution of test cases.

Automation execution of bulk test cases may stop, if any of the web element takes longer than implicit wait period set by script.

xPath of element wrongly defined would fail locating web element

Network connection may get lost while executing application that was accessed from web server

Assert command may fail further execution

If execution of script failure gets identified, tester has to remotely analyze, how many test cases have successfully executed, from which test case id execution should start again. Setting of flag so that already executed test cases do not again gets executed.

---

**373) What is a unix command to read contents of file?**

Answer: In order to read content of a file, unix command used is **cat**, command line code to type after opening a terminal is **cat filename**, alternatively, you can use **vi** command or **vim** command like **vi filename** or **vim filename**.

---

**374) What is a Unix command to run programs with security privileges?**

Answer: In order to execute or run program or read, write or execute files with security privilege, unix command used is **sudo**.

---

**375) What is a unix command to copy file from remote machine?**

Answer: **scp** is a unix command used, In order to copy file from remote machine to a local machine.

---

**376) How multiple inheritance feature can be used in Java?**

Answer: Multiple inheritance is a feature from object oriented concept, where class can implement properties of more than one parent class. this can be done using syntax as

**class childclass implements parentclass1, parentclass2**

---

**377) What is an interface in Java?**

Answer: Java interface may have methods and variables, interface methods are without body i.e. abstract methods or methods should be inside abstract class. Interface are used to achieve abstraction and multiple inheritance.

---

**378) What are various permissions to access file?**

Answer: There are three permissions to access file

Read – File with read permission, can be viewed and copied from, but cannot modify contents of a file. Write

– File with write permission, can be modify, rename, move as well as create new files.

Execute – File with execute permission can run the file by any user.

---

**379) What is a Unix command to change the access mode of a file?**

Answer: **chmod** is a unix command is to change access mode of a file.

---

**380) What is silk test?**



Answer: Silk test is a regression testing tool used for testing application based on Java, Windows and Web based client server applications.

---

**381) What is an error seeding?**

Answer: Error seeding is a process of intentionally adding a defect in an application to identify the pace of error detection as well as tester's understanding of functionality of an application.

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**382) What is a data driven testing?**

Answer: Data driven testing usually carried out while executing automation scripts, where user inputs are captured from Excel, CSV, file formats or ODBC database connection.

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**383) What is desired by a project head as a candidate while taking an interview?**

Answer: It is observed that a candidate is responsive, quick learner, has a passion to understand, can exceed expectations, problem solver and able to handle pressure. As software projects demands quick responses when client requests a demo, requests discussion on requirement, need help trouble shoot his issues with existing infrastructure or application bought from your organization. This will create a lasting image of your organization and after sales service, it will also give you an opportunity to showcase the skills and problem solving abilities.

---

**384) List classes and interfaces from Java collection framework.**

Answer: Java Collection framework consists of 4 interfaces and 7 classes as listed below

<b>Collection Interface in Java</b>	<b>Set, List, Queue and Deque</b>
<b>Collection Classes in Java</b>	<b>ArrayList, Vector, LinkedList, PriorityQueue, Hashset, LinkedHashSet, TreeSet</b>

---

**385) what is a difference between SVN and GIT**

Answer: SVN and Git are both version control software, with a difference as SVN is centralized version control software without centralized server or repository, whereas Git is distributed version control that utilize multiple repositories like centralized repository, server as well as local repositories.

---

**386) What is Git?**

Answer: Git is open source version control software to manage small to complex software projects.

---

**387) Can you explain how a page of any web portal would display that sell software online allowing free downloads**

Answer: I can give details about Techsmith's Camtasia web portal.

Left side corner display company icon with name of company, with menu titles such as Products, Solutions, Support, Resources, About and Store

Right side corner display search icon where in user can click it and search product/software for download or tutorials or installation guide

contact information icon will display how to connect with Sales, Customer service, distributor and link to renew the software

Product menus display list of softwares offered by the company

Solution menus display where and how can we use the software

Support menus display tutorials, videos, online help of the software

Resources menus display media, customer reviews,

About menus display company information

Store menus displays software download links

---

### **388) What is Artificial Intelligence?**

Answer: Artificial Intelligence (AI) is making instruments that can think and act like human. Machine learning and statistical techniques with available data are used to make this simple task progressively better.

There are two categories of Artificial Intelligence

Narrow Artificial Intelligence where single task is performed extremely well and rationally, some Examples are Google search, Image recognition software, Siri, Alexa, self driving automobiles.

Artificial General Intelligence is a machine with intelligence like a human, and solve problems just like humans. Some Examples are Disease mapping, drone robots, Song or TV show recommendations from Spotify and Netflix.

---

### **389) Have you heard of (IoT)Internet of Things?**

Answer: The internet of Things (IoT) is a network of physical objects such as sensors, softwares that connects with each other and exchange data that can be collected or analyzed to bring out and understand pattern that help identifying such pattern which gives results or conclusion.

For Example – weather report of particular geographic location can be collected for past 10 years to cultivate particular variety of vegetation. From the medical history of a group of people and the medicines treatment will bring us for better treatment alternatives.

---

### **390) Explain how can IoT can be used in advantage?**

Answer: Common uses of internet of Things (IoT) are smart manufacturing, power grid, smart cities, and preventive and predictive maintenance.

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### **391) In order to check the condition frequently, what do you use in a program?**

Answer: We look loop to check particular condition repeatedly until it is satisfied.

---

**392) what various loop types are you aware of, say in Java?**

Answer: there is for loop with syntax

for (initialization, condition, iteration) { some action}

while loop with syntax while (condition) { some action}, do

(some action) while (condition)

For (type var : array) { statements using var;}, this syntax is used to iterate each element of array.

---

**393) What are the steps you take when things does not work?**

Answer: This question is asked to understand your response to adverse conditions, how you react, and how do you resolve the situation. In Software industries, people always work between next deadlines, and hence work under continuous pressure of delivery and limited time line. At times browsers freeze, software fail to perform, you don't get result after repeatedly trying various solutions, and then first thing you should do is to try ask help from the superiors or experienced group member who can give you quick workaround. The Answer will display your ability to remain open to discussion, seek solution and prove you to have determination to bring results in adverse situations.

---

**394) What is your approach when automation script does not work?**

Answer: There are many reasons for automation script not working as expected. Some scenarios can be as listed below

The build might miss essential libraries, driver files or reference files. Java

version or browser type/version may not be compatible

Application may have web element moved to different place or missing due to change request Xpath

may have not working for the element, need customized xpath that identify the element Newer

browser like chrome may not support the drivers that help execute script

Either data provided or event fired may not perform as expected

Exception not handled properly leaving script stop intermittently Wait

applied may not able to locate element due to network issue

DOM structure not being uploaded properly resulting in assert or verify fail the script.

Application may not be stable yet, making script fail due to dynamic xpath of element.

---

**395) How would you approach your seniors and request them to help you resolve the issue?**

Answer: Experience makes person perfect in the ways he perform. Seniors have experience with working in software industry, dealing with people, communicating, implementing things in most efficient way. You have to respect your seniors and approach them in case you need help to resolve the issue, you can take their time due in advance, respect their time, explain all the queries they ask. Seniors are always eager to help new comers and welcome them.

---

### **396) Have you done test environment set up yourself?**

Answer: It is usually testers who have to install new build or patch releases on incremental base. It is essential to create test environment similar to that of production. Tester should be able to install entire build released to clients by connecting remotely to their servers and give demo as well as acceptance test with test data. Tester will refer installation guide published along with the build with list of bugs fixed and assigned back to testers to test/verify. Testers undergo regression tests using automation script for functionality, performance, API and security tests. Tester follows steps to install released build which comes in JAR format web application designed using java programming language. In case he/she finds difficulty or error installing build, he can communicate with operations team and take help of system admin/database admin or developer. Installation document should have steps for installing build on servers that usually have UNIX operating system. But from the client system that operate on Windows or UNIX operating system. Testers should be well versed with Unix as well as Windows commands to go to file location, create new folder, save, rename, copy downloaded JAR build at remote server, Use Servers like Tomcat, AWS, IIS servers, IDEs like Eclipse, NetBeans. Once Installation is done Testers have to smoke test application to verify that application pages are stable and display all the pages and database connection works fine.

---

### **397) How do you configure Tomcat server?**

Answer: We need to install JDK into client machine, download tomcat from [tomcat.apache.org](http://tomcat.apache.org) as per System type (usually 64 bit operating system for Windows), and set CATALINA\_HOME as location. We need to configure server.xml, web.xml and context.xml, from bin folder double click on startup.bat to start tomcat server. Open browser and type, <http://localhost:8080> and press enter. Welcome Tomcat page should display.

---

### **398) Where do you gather test data from to test social networking site prototype?**

Answer: Social networking sites like face book, twitter, WhatsApp are used to communicate between two or more friends or group of people. User can send messages, share files, image files, audio and video files. There should be various test data in each of the formats for testing transferring these files.

---

### **399) What is a sentiment analysis?**

Answer: For social networking sites like face book and twitter people share personal pictures, videos and comments or famous quotes as well as send videos and images of news trending (currently popular) becomes test data. Viewers can either like, dislike or write comments. Number of likes is positive sentiments; numbers of dislikes are negative sentiments, further from viewer's comments. These texts are analyzed and synonyms extract subjective information and help business to understand social sentiment of brand, product or service during online conversations.

---

### **400) How would you list features from the requirements?**

Answer: Requirement is capability of a product or services to satisfy customer need and features are set of requirements that are bundled in an application so that user gets satisfy by using application's features.

Example – Requirement is on click of a button documents or image should be printed.

Feature Microsoft word software has a Print feature, which on clicking a print icon will send the content of a document to attached printer.

---

#### 401) What is a difference between multi-tasking and multi threading

Answer: Following are the major differences between multitasking and multithreading

<b>Multitasking</b>	<b>Multithreading</b>
CPU perform many tasks during multitasking	Multiple threads are created from a process with multithreading
CPU keep switching the task in multitasking	CPU switch threads during multithreading
In multitasking, each process is allocated separate resources	In multithreading, each process share same resource.
Termination of process takes more time in multitasking.	Termination of process takes less time in multithreading.

---

#### 402) What are differences between collection types eg enumeration and iterator?

Answer: Iterator and enumeration both are cursors that are used to access an element from collection, both are interfaces from java.util package, however there are differences between them as listed below

<b>Iterator</b>	<b>Enumeration</b>
Reading and removing element while traversing elements is possible with Iterator	Element can only be read with enumeration, while traversing elements during enumeration
Iterator can be used with any class of collection framework	Enumeration can be used with legacy class like Vector and HashTable of collection framework
Any changes in collection like removing elements throw concurrent modification exception during iterating collection.	Enumeration is fail safe and does not throw any concurrent modification exception
Methods used iterator are hasNext(), next(), remove()	Methods used by enumeration are hasMoreElements(), nextElement()

---

#### 403) Why do we use Joins?

Answer: Joins are commands used to combine records from two or more tables based on related column and have one-to-many or many-to-many relationship between these tables. Based on relation between columns of multiple tables, records common from these tables can be retrieved using join commands.

---

**404) What is a penetration testing?**

Answer: Penetration testing is done in order to reveal security weakness of systems or software, where a query is created that tries to break the security and enter into the system and can steal valuable information. Pen testing is of various types like External, Internal, Blind, Double Blind, and Targeted Testing. Various pen testing tools are Metasploit, Burp Suite, and Nessus vulnerability Assessment.

---

**405) What can one track with history of changes using version control software?**

Answer: Devops team can keep track of activities from the list of commands executed from the history folder of version control software. It is possible to revert back the clock by comparing code of earlier version with current version.

---

**406) How would you test application related to Payments domain?**

Answer: Payments domain deals with all online transactions that can be carried out to avail services or purchase products from the seller. There are many ways payments can be made through an interface called payment gateway. It is essential to understand what inputs are required in order to pay through credit or debit card, UPI transaction, paying through bank transfers, Payment in international currencies like dollars etc. How quickly the transaction gets verified, in case of failed transaction, reason of failure, in case of successful transaction, report of transaction via email or SMS to registered mobile number. In case of any delay or network issue, refund of transaction should take place. These integration tests should be carried out with all possible scenarios.

---

**407) What do you know about iOS and mobile testing?**

Answer: Mobile testing is mainly divided into Android and iOS operating system, as Android or iOS mobiles are most popularly used and purchased by general public. The testing of mobile applications can be tested for web based applications, native applications on mobile or hybrid (web based as well as native apps). The testing is usually done using Appium as mobile testing tool.

---

**408) Explain what do you mean by UML diagram?**

Answer: UML diagram is a modeling language to design and explain business processes and workflow involved in software modules that can be either done before coding the application (Forward Design) or after writing the code (Backward Design) for activities, roles, actors and workflows. UML diagrams are further divided into behavioral and structural categories. Behavioral UML include Activity and Use Case diagram, whereas Structural UML include class or object diagram.

---

**409) How would you configure any open source software into your system?**

Answer: There are two main operating systems being installed on systems in any organization, Linux/Unix OR Windows. In order to install any open source software,

For UNIX or Linux Operating system, we need to go to download section of the open source web page, install pre-built binary package,

Run “./configure” from command line to configure the software Run

“make” to compile the software

Run “make install” to install the software.

for Windows operating system, go to download page of open software site, select port specific to your client machine, run the installer and install the application.

---

**410) Have you heard of Oracle PL / SQL,**

Answer: PL/SQL is an extension to structured query language to accomplish more comprehensive solution for building mission critical applications running on oracle database. It has various functions, procedures, triggers, cursors and conditional looping for designing solutions using database records.

---

**411) What are stored procedures?**

Answer: Stored procedures are functions or procedures that are compiled and stored in oracle database, these are PL/SQL functions that accepts parameters and return a value whereas procedures does not return a value, PL/SQL block structure are like

**DECLARE**

**BEGIN**

**EXECUTION**

**END;**

---

**412) Give a situation where Triggers are used**

Answer: Triggers are similar to stored procedure defined such that these triggers run as soon as specific actions occur within a database. Triggers are run after DML actions such as INSERT, UPDATE and DELETE. They can be INSTEAD OF or AFTER Triggers.

---

**413) What is the difference between XML and JSON?**

Answer: JSON (JavaScript Object Notation) is a lightweight data interchange format easy to understand and generate whereas XML is textual data format that support Unicode for different human languages, designed to carry data, not to display data.

---

**414) What do you mean by protocol testing?**

Answer: Protocol testing validates the structure of packets sent over a network in domains OD switching, wireless, VoIP and Routing using protocol testing tools.

---

**415) How would you test free online video making software?**

Answer: video making software that help create videos online, the features are written on the website. Testers can verify these features by creating use cases and scenarios that cover these features and executing them.

---

**416) Write test cases for PDF to PNG converter software**

Answer: Following are few test cases for converting pdf document into png document.

Document with pdf format should only allowed to upload

The conversion should instantly take place and should have preview option so that one can view converted image and font inside the document properly converted.

The png document should be immediately downloadable

The downloaded image should open instantly and should have all content converted as image.

---

**417) Write test cases on WhatsApp application**

Answer: WhatsApp are mobile application to communicate between two friends or more group of people by sharing text, image, video or audio files.

WhatsApp application should able to quickly download in mobile

WhatsApp numbers should be present in Contact List to send messages to that number from mobile via whatsapp.

The message received should be from whatsapp number may not be present in contact list of mobile.

WhatsApp should allow typing text

WhatsApp should allow attaching image(s)

WhatsApp should allow video and audio file(s)

WhatsApp should able to send or receive text, image, video or audio files.

The received files should able to download to the mobile's storage and viewer should able to read or view these files

WhatsApp should have notification of receipt of new files, give status of time of receipt and provide status of read files to the sender.

WhatsApp web application should be accessible on scanning the image using registered mobile on which WhatsApp application has been installed.

---

**418) Write test cases on Google Drive**

Answer: Google Drive allow you to save, share and exchange files or documents with click of a button.

In order to access Google Drive, you should have Google account

User should able to upload file to Google Drive and should store the file instantly

User should able to share file to particular person by adding their email addresses

The sharable link of file on Drive should able to be sent via email

On clicking shared link, the file should able to open in read only format The

shared file should able to get downloaded.

---

**419) What is a difference between Arrays and collection in Java?**



Answer: The differences between Arrays and Collection in Java are listed below

<b>Array</b>	<b>Collection</b>
Arrays are fixed in size	Collections are dynamic in size, its size increases or decreases based on entered elements
Arrays are not recommended to use as it runs on computer's memory	Collection are recommended to use as it does not utilize computer's memory
Arrays are recommended to use as it gives good performance	Collection are not recommended to use as performance is reduced on use of collection
Arrays are able to hold homogeneous data types	Collection uses both homogeneous and heterogeneous elements
There is no underlying data structure for arrays and no supporting methods	Collection has standard data structure and methods support.
Arrays can hold both object and primitive type of elements.	Collection can hold only objects not primitive type of data

---

#### **420) Write test cases on Sharefile / Fileshare software**

Answer: ShareFile is a file sharing application that help share maximum document size upto 100 GB, for web based as well as mobile

ShareFile should allow access to software and use its features for free for first 30 days after to registered users

During trial period the number of document accepted for sharing will be limited

File should be shared and received successfully to recipient even during trial period

On expiration of free trial period the ShareFile should not allow sharing of any document

Once you pay the per month or per annum fees, the Share File should allow sharing of files and size upto 100 GB as agreed by conditions

Registered User should able to change password as well as retrieve forgotten password via mobile or registered email instantly.

User should receive a reminder in email as well as mobile sms before 15 days of expiration of plan period.

---

#### **421) What is an advantage of using collection over arrays?**

Answer: Array are fixed in size, whereas Collection are dynamic in size, allowing additional elements or removal of elements, Collection are preferred to use over Array as consume more computer's memory. Array only hold homogeneous data types whereas Collection handles both homogeneous and

heterogeneous data as well. Collection has standard data structure and methods to support compared to Array which does not have any data structure or methods.

---

**422) What are differences between class and interface?**

Answer: Following are the differences between Class and Interface

Class contains attributes and behaviors of an object, whereas Interface contains behaviors that a class implements.

Class may contain abstract as well as concrete methods, whereas Interface contains only abstract methods.

Class can be instantiated whereas Interface can never be instantiated

---

**423) How would you plot a pie chart between two parameters SalesAmt vs Years using spreadsheet say MS Excel?**

Answer: Charts are used to give pictorial / graphical representation of item vs price.

In excel spreadsheet where you will have a list of items and corresponding price or rate in two columns.

Hence select Item and price columns, then select Insert (next to Home tab) from menu tab, select Pie – & select 2D Pie.

A Pie Chart will display circle divided into arcs of different colours,

Right click this chart & select “Add Data Labels”,

It will display Prices labels to each of the coloured arc in circle

---

**424) Have you heard of Headless Testing?**

Answer: Headless testing bypass or ignore GUI and communicates directly with application’s backend or service by sending request and receives response back using HTTP protocol using internet. Some Examples of headless technology are HTTP databases, web services and Java Messaging services.

---

**425) Why API testing is so important over Graphical user interface testing?**

Answer: Pre-agile, time spent after automation to validate functional and graphical user interface element locating and verifying their features in handling input data in variety of types like text, radio button, drop down, in form of arrays with radio button and multiple values selection like comma separated values etc. It is extremely frustrating when with user requirement change, element are changed from single value selection as in drop down replaced with multiple value selection from dropdown list, xpath does change and locating DOM elements again becomes tough.

API tests bypass GUI tests and verify sent request communicating with database and received response using HTTP protocol making sure integration tests communicate efficiently and data transfer is seamless. Hence API tests are important.

---

**426) Give name of API testing tools other than SOAPUI and Postman**

Answer: Apache JMeter, Katalon Studio and Citrus few API testing tools

---

**427) What are few important queries to enquire before automating a web service?**

Answer: There are few important points to consider before automating a web service

Web service to be tested responds with correct values – i.e. the values returned as a response are valid and expected as response output?

Sending a request and receiving a response is that what is expected as communication across client and server or client and database?

Response time taken by service to send back a response to the user - this is extremely important in case of online transactions done via mobile and links clicks from sms.

How capable web service is in handling unexpected user loads? Say if multiple requests are handled properly or not.

In case, bad or invalid corrupt data, how service be have s?

---

**428) Explain web service terminologies**

Answer: web service terminologies are as listed below

**XML** – xml allow user to share structured data across various systems over internet

**WSDL** – wsdL provides information how to access web services

**SOAP** – soap is a protocol to exchange information or data to and from web services using xml format

**SOA** – Service oriented architecture (SOA) is way in which software can be organized to respond marketplace requirement.

**REST** – REST is a light weight option that is used along with HTTP protocol to develop web service.

---

**429) What are elements of SOAP message?**

Answer: SAOP message is in xml format and is made up of SOAP envelope, Header and Body

---

**430) What is an importance of Cookies ?**

Answer: Although web services use HTTP protocol to communicate between client and server, or various applications. HTTP is stateless and is independent of previous requests i.e. it does not remember the state of request.

Cookies keep track of state from previous request for a session, when visitor revisits the website, his/her info stored in cookies is sent back to browser, thereby help website identify returning visitor to their websites.

---

**431) What are main requirement for web service to be RESTful?**

Answer: For web service to be Restful, there should be a separate client and server, and use stateless protocol like HTTP.

---

**432) What is phishing?**

Answer: It is way of stealing confidential information such as Addhar Card, PAN card, credit card, 4 digit PIN, in pretext of an give away lucrative offer of in exchange of these information.

Scammer contacts the prey via email and gives very attractive offer such as lottery, by clicking a link which transmits confidential information which is directed to device that deducts amount from banking account. It is essential to use HTTPS (S stands for Secured) sites while accessing online shopping.

---

**433) What is test driven testing?**

Answer: Test Driven testing involves creating scenarios and real world Examples as test case or use case in collaboration with testers, developers and end users of an application even before code is created. The test data required based on these scenarios, Unit tests should be created systematically. TDD helps test application with automation script.

---

**434) What is task scheduler in Windows?**

Answer: Task scheduler is a utility that allow schedule and run automated tasks on w indows machine.

---

**435) How gaming software is tested?**

Answer: Tester plays gaming software on gaming platforms and explores all menus and modes of play, such as beginner, intermediate, advanced from beginning to end to uncover any hidden defects in gaming software.

---

**436) What gaming platforms are used to test gaming software?**

Answer: various gaming platform like PlayStation, Xbox, Nintendo Wii and desktop are used to play games.

---

**437) What are test techniques for testing gaming software?**

Answer: To test gaming software testers can test functionality, combinatorial, Ad Hoc, compatibility, clean room and tree testing, regression and performance testing of gaming software.

---

**438) What is visual testing?**

Answer: Unlike functional testing visual testing is automated type of testing of software from visual standpoint.

---

**439) What are the requirements of ETL testing?**

Answer: ETL tester should have clear understanding of ETL mapping and trasformations, state of source data, diagnose correct data and clean or remove bad data from source, creation of multiple tests for data validation, selection of good data source supporting ETL tool, monitoring ETL jobs and exception handling, capturing logs and keep alert messages, and performance in ETL processes are key requirement for ETL testing.

---

**440) Can you think of some areas where very huge data exchange take place?**

Answer: Best Examples of huge data exchange are

Video on-demand streaming services you can subscribe like Amazon Prime, Disney plus Hotstar, NetFlix, Voot etc.

Big Data like 3G, 4G, voice and data providers like Jio, Airtel, Vodafone etc.

Traffic, Health industry, census, transportation and Logistics are few other Examples of big data exchange in form of information.

---

**441) Give Examples of some of the Big Data databases**

Answer: Casandra, Hive, HBase, MongoDB are few Examples that are open source big data database.

---

**442) Give some Example of unstructured data?**

Answer: Examples of unstructured data are log files, social media posts, audio, video and image files.

---

**443) What is log4j use in Java program?**

Answer: log4j is a tool that provide log statement for java program which helps debug the unit of code and to locate any exception during execution of program.

---

**444) Name few cloud service providers**

Answer: Amazon Web Services ( AWS ) is the top cloud service provider, followed by Google Cloud services, IBM Cloud, Verizon, Microsoft Azure are top players in cloud services.

---

**445) What are the components of AWS?**

Answer: main components of AWS are listed below

Route 53 is a DNS web service

Amazon S3 is data storage interface

Simple Email service a hosted email service using Restful API calls

Identity and Access Management (IAM) – create and manage users access permission

Elastic Compute Cloud (EC2) provide virtual server, configure security, storage and network and on-demand computing resources

Elastic Block Store (EBS) creates storage volumes and attaches to EC2 instance

CloudWatch – help monitor multiple instances such as EC2, RDS, S3, etc. remotely

---

**446) Do you know any Java web services framework?**

Answer: Apache Axis2, Jersey, Jetty, Jackson are some of the Java web services framework.

---

**447) Give an Example for simple join.**

Answer: Simple or inner join condition in case of multiple tables, there exists at least one column common in both tables, matches the join condition and return only those records that match with records of other table.

Example for Simple Join or Inner join is as given below

**Student Table**

Std_id	first_name	last_name	course_id	class_id
1	Ajit	Mohan	101	First_Year
2	Anil	Jhave ri	101	First_Year
3	Shanaya	Sharma	102	First_Year
4	Shrikant	Vyas	101	Second_Year
5	Yashashvi	Maheta	103	Second_Year
6	Madhav	Shah	102	Second_Year

**Course Table**

course_id	Course_name	Course_startdate
101	English Grammer	01/07/2019
102	Business English Speaking	05/07/2019
103	French and English	11/07/2019

Select first\_name, last\_name, course\_name from Student Inner

Join Course

On Student.course\_id = Course.course\_id;

first_name	last_name	Course_name
Ajit	Mohan	English Grammer
Anil	Jhave ri	English Grammer
Shanaya	Sharma	Business English Speaking

Shrikant	Vyas	English Grammer
Yashashvi	Maheta	French and English
Madhav	Shah	Business English Speaking

#### 448) where will you use left join

Answer: Use of Left Join can be done in certain scenarios like say which department has no employee. For that take a look at following records in department and employee table.

##### Department Table

dept_id	dept_name	emp_id
1000	Sales	1000
2000	Human Resources	1002
3000	Accounts	1003
4000	Operations	1004

##### Employee Table

emp_id	emp_Name	hiredOn
1000	Satish Mane	2010-08-15
1001	Suchitra Shah	2012-01-31
1002	Ashok Pandey	2015-05-25
1003	Nayana Jadhav	2011-09-20

Select department.dept\_name, Employee.emp\_name from Department

Left Join Employee On Department.emp\_id = Employee.emp\_id;

dept_name	emp_name
Sales	Satish Mane
Human Resources	Ashok Pandey

Accounts	Nayana Jadhav
Operations	NULL

Left join in above scenario gives information about which department has no employee!

#### 449) where will you use right join

Answer: Use of Right Join can be done in certain scenarios like say which employee has no department. For that take a look at following records in department and employee table.

**Department Table**

dept_id	dept_name	emp_id
1000	Sales	1000
2000	Human Resources	1002
3000	Accounts	1003
4000	Operations	1004

**Employee Table**

emp_id	emp_Name	hiredOn
1000	Satish Mane	2010-08-15
1001	Suchitra Shah	2012-01-31
1002	Ashok Pandey	2015-05-25
1003	Nayana Jadhav	2011-09-20

Select department.dept\_name, Employee.emp\_name from Department

**Right Join** Employee On Department.emp\_id = Employee.emp\_id;

dept_name	emp_name
Sales	Satish Mane



NULL	Suchitra Shah
Human Resources	Ashok Pandey
Accounts	Nayana Jadhav

Right join in above scenario gives information about which employee has no department!!

#### 450) Give an Example for full join

Answer: Full Join condition gives information from multiple table, In this case we have department and employee tables.

##### Department Table

dept_id	dept_name	emp_id
1000	Sales	1000
2000	Human Resources	1002
3000	Accounts	1003
4000	Operations	1004

##### Employee Table

emp_id	emp_Name	hiredOn
1000	Satish Mane	2010-08-15
1001	Suchitra Shah	2012-01-31
1002	Ashok Pandey	2015-05-25
1003	Nayana Jadhav	2011-09-20

Select department.dept\_name, Employee.emp\_name from Department

Full Join Employee On Department.emp\_id = Employee.emp\_id;

dept_name	emp_name
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Sales	Satish Mane
<b>NULL</b>	Suchitra Shah
Human Resources	Ashok Pandey
Accounts	Nayana Jadhav
Operations	<b>NULL</b>

Full join in above scenario gives information about Who is an employee without department and which department has no employee in it.

---

**451) What Java Script is used for?**

Answer: JavaScript is a scripting language which was primarily used for form level validation, but has been used in various other areas like DOM element handling, visualization, server side scripting and online exams to verify Answers selected by students, and other JavaScript libraries such as JQuery, Dojo, Angular JS, MooTools, and D3 .js

In unit testing namely Jasmine, Mocha etc.

---

**452) Name some of the JS libraries used in client side programs**

Answer: Various JavaScript libraries used in Client side programs are Dojo

jQuery

MooTools

js

AngularJS

---

**453) What are Apache Tomcat components**

Answer: It has Servlet container called Catalina, HTTP connector called Coyote and Jasper is a JSP engine.

---

**454) What is Catalina in Tomcat?**

Answer: Catalina is tomcat's servlet container that implements microsystem specifications for servlets and java server pages

---

**455) what can be used to handle multiple elements, in absence of Collection classes and interfaces?**

Answer: We can use Arrays, Vectors or Hashtables, before Java 1.2 introduced Collection classes and interfaces.

---

**456) What is List?**

Answer: List interface in Collection framework is an ordered collection of objects, where duplicate values are allowed. List keeps track of order of insertion, it is easier to insert new elements or access the elements present in the list.

---

**457) What is Set?**

Answer: Set interface from java.util package, extends Collection framework is an unordered collection of objects, in which duplicate elements are not allowed.

---

**458) Difference between List and Set**

Answer: List and Set both are collection interface from java.util package. List is an ordered collection of objects that may contain duplicate values. Whereas Set is unordered collection of objects which are unique as set does not allow duplicates.

---

**459) What is Array List?**

Answer: ArrayList are dynamic arrays in Java, allowing us to randomly access the list. They cannot be applied on primitive data types, we need to use wrapper class for such cases.

---

**460) What is Linked List?**

Answer: Linked List is a linear data structure, the elements are linked using pointers, the benefit of using linked list over arrays is Linked List are of Dynamic size, and it is easier in linked list to insert new elements or remove elements.

---

**461) What is similarities and difference between class and interface**

Answer: Like class, interface can have methods and variables, but methods in interface are always abstract (i.e. has only signature, without any body). Interface is blue print of class, and specifies how class should work and not be doing.

---

**462) what is a command to print out comments information in Linux?**

Answer: command to print out comments in linux or Ubuntu is **echo**.

---

**463) How would you view file kept in machine having Linux operating system?**

Answer: command to view file over Linux operating system is **cat**.

---

**464) I want to read a file one page at a time in Linux, what command should I use?**

Answer: In order to read one page at a time, the command is **less**

---

**465) I want to find out what were the first 10 lines of text file, what command should I use in Linux?**

Answer: the linux command to read first 10 lines of text file is **Head**.

---

**466) Tell me a command to read last 10 lines of say log file in Linux**

Answer: the command to read last 10 lines of log file would be **Tail**.

---

**467) I want to create an empty text file, what command you think I should use in Linux?**

Answer: In order to create empty text file, Linux command would be **touch** filename.

---

**468) I want to copy all files and directories to the destination directory, tell me Linux command**

Answer: **cp -r path\_till\_file path\_to\_destination**

---

**469) What is a command to display ip address of your system?**

Answer: you can use a command to display ip address of system **hostname -i**

---

**470) I tried using ifconfig command to find out my ip address, but it did not display, how can I still get IP address using ifconfig.**

Answer: As ifconfig command has been deprecated, you still can use it on Ubuntu by installing net-tools, **sudo apt install net-tools**, now you can use ifconfig command.

---

**471) What is ping command in Linux?**

Answer: ping command in Linux is a utility used to check status of connectivity between the source and destination, eg. **ping google.com**, will check if there is a network connected between client machine and google.com web site, there by what is a latency i.e. time it takes for the requests from client machine to access Google site for searching is sent and response are received properly or not.

---

**472) How would you resolve the issue, if your chrome browser stops working?**

Answer: You should verify following steps recommended, if chrome stops working

Check the Chrome is up to date by entering **chrome://settings/help** in browser address bar to find out the version

Check Chrome Task Manager, by pressing Shift + Esc key, that display open tabs, and memory each tab is utilizing.

Close the tab, and select the URL from the address bar, copy it and paste it in browser opened afresh.

Restart the Chrome browser – by pressing Alt+F4 on windows

Delete the cache and other browser data by going to Chrome Setting, Privacy and Security and click on Clear browsing data, select Time range as All time, delete browsing history and check other selected items and click on Clear data button

Check your computer for any malware, install antivirus software to protect your system

Check with your system admin if problem still persists.

---

**473) what is nslookup command in windows used for?**

Answer: nslookup domain\_name, say yahoo.com. nslookup is a windows command to know IP address associated with the domain name, or reverse eg **nslookup 74.6.231.20** will give domain name linked with the IP address, i.e. yahoo.

---

**474) What is Regex and where can you use them?**

Answer: Letters, digits, punctuation and symbols like !@#\$% etc. as well as Unicode characters all listed in ASCII tables. Regular expressions are writing patterns that match specific sequence of characters. They can be used to extract information from text from log files, spreadsheets, documents or code.

---

**475) Have you used JMeter before and what did you test using JMeter?**

Answer: If you Answer No being honest in case you have not used JMeter before, but then in that case you are not Answering the question. You can instead say I know about JMeter that it is open source load and performance testing tool.

---

**476) Why do you use Thread Group in JMeter?**

Answer: Thread groups are used to simulate user behavior with an application, as well to determine flow or steps carried out by user to accomplish some features.

---

**477) Why we use timer in JMeter?**

Answer: When user manually use an application or web site, by clicking the mouse on buttons, entering information into the text field etc. there are pauses and delays. These pauses or delays can be simulated using Timers.

---

**478) How would you achieve page refresh by press of a single key?**

Answer: When we press F5 key, page gets refresh or reloaded. This is often used when a browser kept running for a long, may get freeze. It is required to refresh the browser page.

---

**479) What is a difference between Alt+Tab and Ctrl+Tab?**

Answer: Pressing Alt+Tab switches between open programs like switching between an open browser and another program say document processing software.

Ctrl+Tab will switch between tabs in a program. For Example multiple tabs opened in your chrome or firefox browser, Ctrl+Tab switch between these tabs.

---

**480) What are features?**

Answer: features are characteristics or nature of software in which it be have s. in order to perform certain task or actions features are used. In case of car the features offered can be radial tyres, Kappa Engine, Power brakes, power steering etc. thereby increases product ratings and salability.

---

**481) What is a functionality of software or any product?**

Answer: Functionality of a software or any other product is fulfilling a requirement expected by a user. Example, an electric geyser is supposed to supply hot water within few seconds of opening a tap. Functionality is often compared as performance.

---

**482) What is root cause analysis?**

Answer: In software testing, to analyze or evaluate the reason for the particular defect is known as root cause. The brain storming or discussion is carried out to identify root cause for the defect. The root cause analysis is also applied to understand and go in depth of a problem and find out ways in which such defects are avoided. Identifying problem area and understanding the reason for its occurrence are often called root cause analysis.

---

**483) What preventive measures should be taken to design defect free software?**

Answer: Unit testing is an essential task where all possible scenarios should be listed and test cases designed even before coding begins. Each unit of code and integration of various systems should be repeatedly tested by developers and testers to verify that the software developed is a right one for the expected solution.

---

**484) What is Data warehousing Testing?**

Answer: Testing data for integrity, reliability, accuracy and consistency as per Organization's data framework.

---

**485) What is an importance of BI?**

Answer: BI or Business Intelligence is a process of collecting raw data and turning it into meaningful business information, that can be stored and useful analysis can be derived using various reports, data mining and interpretation known as Predictive Analysis.

---

**486) What are the benefits of data warehouse as a solution to store and gather data across various department?**

Answer: ToAnswer above question, take an Example of Retail store, different departments like sales, marketing, logistics, if act independently, there will be data is distributed in each of the departments and duplicates adding into database, instead. Storing information from different department and bringing a common platform and convert these data into valuable information is called as Data ware housing.

---

**487) What is ETL process**

Answer: ETL is extraction of data, Transforming a data and Loading a data from source to data warehouse. Data is extracted from various sources, getting clean, normalized and transformed or converted using tools, and inserted into data warehouse as valuable information to be utilized in analytical reports known as ETL process.

---

**488) What is a data structure?**

Answer: data structure is a technique to organize data so that it can be used efficiently.

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**489) What operations can be performed on various data structures?**

Answer: Following operations can be performed on data structures

- Add new data item into data item collection
- delete existing data item from data item collection
- access each data item at least once in order to process it
- find out location of data item if that item exists in data item collection
- Arranging data item in some order like ascending or descending for numeric data

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**490) What are basic types of data structure?**

Answer: Data structure is divided into two types

Linear and Non Linear

When elements of data structure form linear list or sequence like Array, List, Stack and Queues, computer memory is arranged in linear way.

When nodes traverse is of nonlinear nature, like Graph and Trees.

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**491) What would you test before an interview?**

Answer: There are few very essential features of zoom that need to be verified before going ahead with a zoom interview or meeting

Availability of Desktop or laptop computer

Arrangement of external internet like sharing mobile data, hotspot or wifi connectivity, in case there is an issue with network connection

Check your headphone settings like can you listen what is asked to you and be heard clearly by caller In case of power failure, can you transfer the meet to your mobile or not?

Do you have web cam display clear image of yours?

Do you have Hi speed broadband connection where you can reconnect if connection is lost Are you aware of screen sharing and video capturing features?

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**492) What are requirements for testing Electronics medical reports or equipments related to healthcare industries?**

Answer: In addition to software testing experience, HIPAA compliance and other understanding of medical healthcare industry like human safety and hygiene related knowledge is mandatory.

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**493) What file sharing software you know that are available in market?**

Answer: There are few very good file sharing software that are free to use available on Google Playlist, Google Drive, WhatsApp, OneDrive, DropBox, ShareIt

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**494) What role does UX and UI play in an application?**

Answer: Role played by user experience designer in implementing user interface, such a way that exploring software will be an interesting and wonderful experience. The interfaces should be user friendly, with not more than 3 input elements like text field, checkbox/radio button, dropdown in order to fetch records, The page should remain stable after final report has been displayed, There should not be long wait to connect or receiving response. API used should be extremely efficient and complete the task quickly and acknowledge the transaction.

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**495) What online education sites you know that are available in market?**

Answer: There are few sites that offer school subject courses like maths, science and language, competitive exams like JEE, NEET, GRE and GMAT

Byju's,  
Khan Academy,  
Vedantu,  
Meritnation

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**496) What online video streaming platforms in India you have used or aware of?**

Answer: Netflix, Amazon Prime, Disney+Hotstar, Zee5, Voot are some of the OTT platforms I am aware of.

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**497) What are common video formats and when to use them?**

Answer: Following are the video formats and their use AVI

– Audio Video Interleave used in TV and computers FLV

/SWF – Flash Video Format



MOV – Apple's QuickTime Movie format, used on Canon DSLR cameras

MP4 – developed for low-bandwidth compression, supported by YouTube, Face Book, Instagram. WMV – Windows Media Video, is smallest size video format, suitable for sharing it on email

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**498) What is the use of Grep command in linux ?**

Answer: Grep command in Linux help to search particular string in the file. The command can be used as below

**grep http filename**

Where http is a word that is searched

Filename is the name of file in which word is being searched

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**499) How will you justify your position as Quality Engineer?**

Answer: Such a question are usually asked by an interviewer who can be your immediate reporting manager, if hired. You should answer this question as Why should we hire you as Quality Engineer. You can list your positive points so that you justify your position as quality engineer.

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**500) What would you feel when your product is appreciated by clients?**

Answer: I would feel as rewarded on being appreciated, for all the effort I have put in making product as expected by end users, standing out and exceeds their expectation. Client or end user experience is a valuable input for product or services.