

Interview Questions for QA Tester

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Qaquestions.com is down for some time. After it is down, I started receiving emails and phone calls from the prospective QA Engineers and then I realized how helpful this site has been to them. This was their "Bible". I am not yet sure whether I will be able to bring it back again, but this [qaquestions.net](#) will help them even better. I will try to put more organized and fresh materials as I go.

My apologies for all the disappointments caused by this.

(Note: I came to know that many institutions and even individuals are using this material without citing the source. It is OK to use this material, but please mention the source where you got from. It is a copyrighted material)

These questions and answers are totally based on the interview I attended during my 9 years of working experience as a QA Tester. In some sections, I have started including the interview questions that were asked by companies to some of the candidates who visited this website and wanted to share. I have mentioned their names who the questions were asked to. These questions and scenarios are based on practical experience. These were asked during my several interviews.

Therefore, a person who is looking for a QA job (Quality Assurance job) can greatly benefit from this. If you are the first time job seeker as a QA person, then it can help you even better. As a consultant (or contractor), I moved to different companies in various locations in the United States. Consulting job or contracting job is such a job where an individual takes (or has to take) a job anywhere in the United States and normally, it is for a short period of time, for example, 3 months to several years. Some companies allow a contractor to work only for 15 months (It is their policy) and the consultant has to leave (for six months) the company no matter what. Some companies allow the contractors as long as they want.

*Therefore, it really depends on the company policy how long you will be working. Finally, if you are attending an interview, you have to know these questions and answers by **heart**, must be very fluent in answering these questions. Practice in front of the mirror, loud and clear (talk to yourself). Most of the time, when we read the questions, we feel good and feel comfortable, but the reality is, at the time of the interview, even though we feel we have the knowledge, can't express it well. This is the bitter reality. It may sound a little rough, but this is my experience. When we come out the door, we regret. If you cannot remember these by heart, trust me, it may not work. Therefore, let's not regret.*

HERE ARE THE QUESTIONS:

1. Can you tell me about yourself?

Answer: In my QA career, I have been working on various system platforms and operating systems like Windows 95, Windows 2000, Windows XP and UNIX. I have tested applications developed in Java, C++, Visual Basic and so on. I have tested Web-based applications as well as client server applications.

As a QA person, I have written Test Plans, Test Cases, attended walkthrough meetings with the Business Analysts, Project Managers, Business Managers and QA Leads. Attended requirement review meetings and provided feedback to the Business Analysts. I have worked in different databases like Oracle and DB2, wrote SQL queries to retrieve data from the database.

-By Prakash Nepal

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As far as different types of testing is concerned, I have performed Smoke Testing, Functional Testing, Backend Testing, BlackBox Testing, Integration Testing, Regression Testing and UAT (User Acceptance Testing) Testing. I have participated in Load Testing and Stress Testing.

I have written defects as they are found using ClearQuest and TestDirector. Once the defects were fixed, retested them and if the passed, closed them. If the defects were not fixed, then reopened them. I have also attended the defect assessment meetings as necessary.

In the meantime, a continuous interaction with developers was necessary.

This is pretty much what I have been doing as a QA person.

2. What did you do in your last project?

In my last project, the application was a web-based application developed in Java platform. As a QA Person, I wrote Test Plans from the requirement documents and Use Cases. I performed Smoke Testing, Functional Testing, Backend Testing, BlackBox Testing, Integration Testing, Regression Testing and UAT (User Acceptance Testing). I have participated in Load Testing and Stress Testing. I attended several walkthrough meetings for requirement reviews and provided feedback to the Business Analysts. Mostly, I was in the backend testing, which required writing SQL queries directly to the database.

Besides these, I wrote defects using ClearQuest. Once the defects were fixed, retested them and if the passed, closed them. If the defects were not fixed, then reopened them.

3. Have you written Test Plan? What is a Test Plan? What does it include?

Yes.

What is a Test Plan?

A Test Plan is a document describing the scope, approach, resources, and schedule of intended testing activities. It identifies test items, the features to be tested, the testing tasks and who will do each task (roles and responsibilities) and any risks and its solutions.

What does it include? A Test Plan includes Heading, Revision History, Table of Contents, Introduction, Scope, Approach, Overview, different types of testing that will be carried out, what software and hardware will be required, issues, risks, assumptions and sign off section.

Click here to see how a complete [Test Plan Sample](#) looks like.

4. Have you written a Test Case?

Yes.

What is a Test Case? What does it include?

A Test Case is a document that describes step by step process how to test the application. A Test Case includes Test Case ID, Steps Description, Expected Output, Actual Output, Pass/Fail, Remarks.

Click here to see how a complete Test Case looks like.

5. How many Test Cases did you write in your last project?

Answer: I wrote about 1100 Test Cases in my last project. (The reasonable number of Test Cases varies from 500 to thousands. The number 1100 test cases can be completed in a 6 month project duration).

6. What document did you refer to write the Test Cases?

Requirement document. (NOTE: It can also be Use Cases, or Design Document)

(Note: It depends company to company. In some companies, they use Use Cases. In some companies, they use Requirement Documents and in some companies, they use Design Document. However, in practical scenario, most of the companies have requirement document at least). This is the sample [Requirement Document for Mercury Tours](#).

7. Did you have a situation where you did not have any documents (no requirement document, no Use Cases, or no Design Document) and you had to write the Test Cases? How did you write the Test Cases?

Yes. I have been to that kind of scenarios several times. There were companies where they had no documents at all. In that case, I had to discuss the application scenario and functionalities with the Business Analysts or developer. I kind of prepared a document in consultation with Business Analysts and Developers and then started writing Test Cases.

8. Have you worked with the Uses Cases before?

Yes. I have written Test Cases using Use Cases.

Can you tell me what a Use Case is?

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A use case is a document that describes the user action and system response for a particular functionality. (you can also include, For example, in the Use Case given below, is a Use Case for login system for a company called Auto Parts One. This application is being developed by Digital Systems, Inc. The project name is Auto Parts One. However, the business owner (user) is a company called American Auto Parts of the North (imaginary name). Or

What is a Use Case and what does it include?

A Use Case is a document that describes the user action and system response for a particular functionality. It includes cover page, Revision History, Table of Contents, Flow of Events (normal flow and alternative flow), Exceptions, Special Requirements, Pre-conditions and Post-conditions.

Please see the Use Case: Click this link: [2. Use Case Sample](#)

This is how it looks (Next Page) (*coming soon*)

For the complete Use Case sample, click here. (*coming soon*)

Now, Let us write Test Cases based on this Use Case. Remember, one Use Case can have many Test Cases. For example, look below:

For a complete Test Case for www.digitalsystemsllc.com, please click here.

9. What is Software Development Life Cycle?

The systems (or software) development life cycle (SDLC) is a conceptual model used in project management that describes the stages involved in an information system development project, from an initial feasibility study through maintenance of the completed application.

It includes the following different stages:

1. Requirement phase
2. Design phase
3. Coding (programming)
4. Testing
5. Release (Production)
6. Maintenance (Support)

10. What is Business Requirement Document (BRD)?

It is a document that describes the details of the application functionalities which is required by the user. This document is written by the Business Analysts.

What is Software Testing Life Cycle (STLC)?

The testing of software has its own life cycle. It starts with study and analyzing the requirements. Here is the software testing life cycle:

1. Requirement Study
2. Test Planning
3. Writing Test Cases
4. Review the Test Cases
5. Executing the Test Cases
6. Bug logging and tracking
7. Close or Reopen bugs

To see the diagram [click here](#).

What is Business Design Document?

It is the document which describes the application functionalities of the user in detail. This document is the further details of the Business Requirement Document. This is a very crucial step in the SDLC. Sometimes the Business Requirement Document and Business Design Document can be lumped together to make only one Business Requirement Document.

What is Code Generation or Program?

Coding is the process of translating the Business Design Document into the machine readable form. If the design is done in detailed manner, the Code Generation can be done without much application. Programming tools like Compilers, Interpreters and Debuggers are used to generate the code thru different high level language like C, C++, Pascal, Java.

11. What is a Module?

A 'Module' is a software component that has a specific task. It can be a 'link' which can go inside to its component detail.

12. What is meant by Walk-thru meeting?

Before start working in a module and/or after accomplishing the testing of a module, the tester calls a meeting to disseminate his findings or to share his queries to other tester or leads of the company working

on the same application that is called the Walk-thru meeting.

13. What is Build?

When each of the different modules of software is prepared, they are put in a single folder by the Configuration Management Team (CMT) and it is called the 'Build'. In other word, the developers put their code in the shared location (folder) and all those code (modules) are combined together so that it is a complete application that works.

What is meant by the Build Deployment?

When the Build so prepared by the CMT is sent to different Test Environments, it is called the Build Deployment.

14. What is Test Strategy?

A test strategy is an outline that describes the testing portion of the software development cycle. It is created to inform project managers, testers, and developers about some key issues of the testing process. This includes the testing objective, methods of testing new functions, total time and resources required for the project, and the testing environment.

The test strategy describes how the product risks of the stakeholders are mitigated at the test-level, which types of test are to be performed, and which entry and exit criteria apply. (source: Wikipedia)

The test strategy is created based on development design documents.. It is written by the Test Manager or Lead.

The following are some of the components that the Test Strategy includes:

1 Test Levels. 2 Roles and Responsibilities. 3 Environment Requirements. 4 Testing Tools. 5 Risks and Mitigation. 6 Test Schedule. 7 Regression Test Approach. 8 Test Groups. 9 Test Priorities. 10 Test Status Collections and Reporting. 11 Test Records Maintenance. 12 Requirements traceability matrix. 13 Test Summary

[Click here to see how the Test Strategy looks like.](#)

Are Test Plan and Test Strategy same type of document?

No. They are different documents. Test Plan is a document that collects and organizes test cases by functional areas and/or types of testing in a form that can be presented to the other teams and/or customer where as the Test Strategy is the documented approach to testing. Test Plan is prepared by the tester whereas the Test Strategy is prepared by the QA Manager or QA lead.

Both are important pieces of Quality Assurance processes since they help communicate the test approach scope and ensure test coverage while improving the efficiency of the testing effort.

15. What does the Test Strategy include?

It includes introduction, scope, resource and schedule for test activities, acceptance criteria, test environment, test tools, test priorities, test planning, executing a test pass and types of test to be performed.

16. What are different types of software testing?

Different types of testing carried out are:

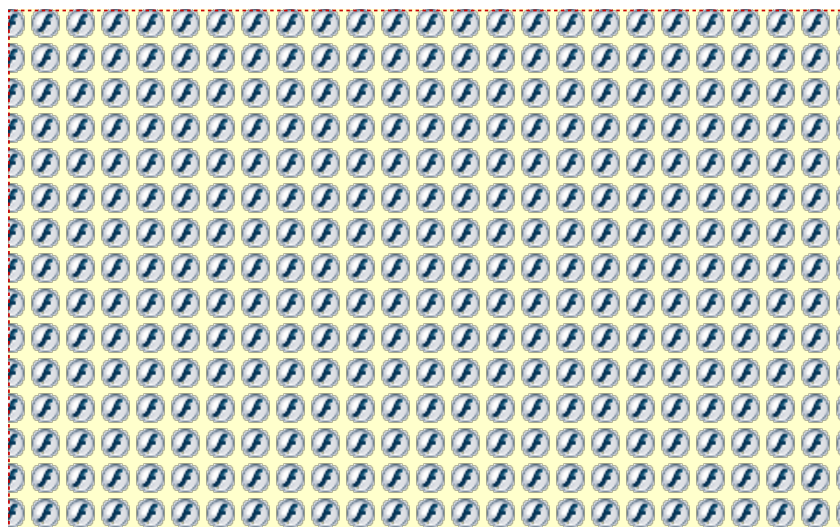
- 1) Unit testing
- 2) Shakeout testing
- 3) Smoke testing (Ad-hoc testing)
- 4) Functional testing
- 5) Integration testing
- 6) Regression testing
- 7) System testing
- 8) Load testing
- 9) Stress testing
- 10) Performance testing
- 11) User acceptance testing
- 12) Black box testing
- 13) White box testing
- 14) Alpha testing
- 15) Beta testing

Note: Except the Shakeout testing and Unit testing which are respectively done by the CMT and Coder/Developer, all other testing are done by the QA Engineer (Tester).

1) **Unit testing:** It is a test to check the code whether it is properly working or not as per the requirement. It is done by the developers (Not testers).

2) **Shakeout testing:** This test is basically carried out to check the networking facility, database connectivity and the integration of modules. (It is done by the Configuration Team)

3) **Smoke testing:** It is an initial set of test to check whether the major functionalities are working or not and also to check the major breakdowns in the application. It is the preliminary test carried out by the SQA tester.



4) **Functional testing:** aIt is a test to check whether each and every functionality of that application is working as per the requirement. It is major test where 80% of the tests are done. In this test, the Test Cases are 'executed'.

5) **Integration testing:** It is a test to check whether all the modules are combined together or not and working successfully as specified in the requirement document.

6) **Regression testing:** When a functionality is added to an application, we need to make sure that the newly added functionality does not break the application. In order to make it sure, we perform a repeated testing which is called Regression Testing. We also do regression testing after the developers fix the bugs. See the video below for more understanding. (Courtesy of guru99.com).

7) **System testing:** Testing which is based on overall requirements specification and it covers all combined parts of a system. It is also a black box type of testing.

8) **Load testing:** It is a test to check the user's response time of number of users using any one scenario (single business process) of the same application at the same time.

9) **Stress testing:** In this type of testing the application is tested against heavy load such as complex numerical values, large number of inputs, large number of queries etc. which checks for the stress/load the applications can withstand.

10) **Performance testing:** It is a test to check the user's response time of number of users using multiple scenarios (multiple business process) of the same application at the same time.

11) **User acceptance testing:** In this type of testing, the software is handed over to the user in order to find out if the software meets the user expectations and works as it is expected to.

12) **Black box testing:** It is test where a tester performs testing without looking into the code. OR A testing method where the application under test is viewed as a black box and the internal behavior of the program is completely ignored. Testing occurs based upon the external specifications. Also known as behavioral testing, since only the external behavior of the program is evaluated and analyzed.

13) **White box testing:** It is a test where a tester looks into the code and performs the testing.

14) **Alpha testing:** In this type of testing, the users are invited at the development center where they use the application and the developers note every particular input or action carried out by the user. Any type of abnormal behavior of the system is noted and rectified by the developers.

15) **Beta testing:** In this type of testing, the software is distributed as a beta version to the users and users test the application at their sites. As the users explore the software, in case if any exception/defect occurs that is reported to the developers.

What is Negative Testing?

Testing the system or application using negative data is called negative testing, for example, testing password entering 6 characters where it should be 8 characters should display a message.

When we test an application by putting negative values (instead of actual values), then the system should not allow the other values rather than the actual value. The system should give an message that the value is not correct. This is called negative testing.

Another example is, if a user tries to type a letter in a numeric field, the correct behavior in this case would be to display the "Incorrect data type, please enter a number" message. The purpose of negative testing is to detect such situations and prevent applications from crashing. Also, negative testing helps you improve the quality of your application and find its weak points. (source: Jerry Ruban)

What is the difference between Load Testing and Performance Testing?

Basically Load, Stress and Performance Testing are the same. However, Load testing is the test to check the users' response time of number of users of any one scenario of the application whereas Performance Testing is the test to check the user response time for multiple scenario of the same application.

17. What was the process of QA testing in your company where you worked for the last time? (or As far as the QA process is involved, what was the testing process in your company?)

The QA testing process that was followed in my last company where I worked was like this: First of all the Business Requirement Document was prepared as per the client's requirement (with the muck-up screen shots). Then on the basis of the requirement document, Test Strategy, Test Plans and Test Cases were written in sequential order. Once the Build is made and deployed to the different testing environments where different types of testing were performed to check whether there are any defects.

18. What is SQL?

SQL stands for Structured Query Language. SQL is an ANSI (American National Standards Institute) standard computer language for accessing and manipulating database systems. SQL statements are used to retrieve and update data in a database. SQL works with database programs like MS Access, DB2, Informix, MS SQL Server, Oracle, Sybase, etc.

Unfortunately, there are many different versions of the SQL language, but to be in compliance with the ANSI standard, they must support the same major keywords in a similar manner (such as SELECT, UPDATE, DELETE, INSERT, WHERE, and others).

Note: Most of the SQL database programs also have their own proprietary extensions in addition to the SQL standard.

Where do you write SQL query?

We write SQL queries using some these tools: Todd, Squirrel and Rapid SQL.

Do you really need to write SQL as a QA Engineer?

Yes. You need to. No matter whether it is a small company or big, they have a database and you need to validate the data by writing SQL queries going into the database. The stronger you are in SQL, the better the chance of getting a job.

What are the basic commands in SQL+?

They are:

SQL>select *from tab;	-to directory of database tables
SQL>ed	-to edit the queries in the notepad
SQL>/	-to run or execute the query command
SQL>create table 'table name'	-to create a table
SQL>desc 'table name'	-to display table with column name with type
SQL>alter table 'table name'	-to add a columnadd 'column name' 'type'
SQL>alter table 'table name'	-to modify the name and type of a columnmodify 'column name' 'type'

What is the most common syntax you have used while writing SQL query?

Answer: SELECT

What is a Primary Key?

In a database table, the Primary Key is a column which has a unique value for each of the row within that column. It can't have NULL value.

What is a Unique Key?

In a database table, the Unique Key is a column which may or may not have null value of each of the row within that column.

What is Data?

Data is number, character or image which has some information.

What is Database?

It is collection of logically related data designed in a tabular form to meet the information needs of one or more users.

19. What is Change Control (OR Change Request)?

Answer: It is a document that describes the additional functionalities that are added after the Business Requirement Document is signed off. It can be updated in the old business requirement document or it can be a separate document.

(For example, in the Business Requirement Document, on the login page, there are User Name and Password fields. The owner of the software wants to add, "If you do not have User Name and Password, please click here." This is a change. But this change came after the document is signed off by the Project Managers. Now this is a change control and comes as a separate document. (It is also called Change Request, Modification Request)).

20. Have you written Change Control?

Answer: Yes. There was a situation where in one page of an application in my previous project, when the user clicked "Contact" link, it would pop up a different window (new separate window). But it was NOT the way it was described in the requirement document. In the requirement document, when the user clicks "Contact" link, then it should navigate to another page (Not a separate new window. Then was it a problem? Functionality wise, it was NOT a problem, however, on all the other pages, when the user clicked "Contact" link, the system would navigate to next page (not a separate window). So, it was NOT CONSISTENT with the other functionalities on the other pages. Therefore, it was a consistency issue. I reported this as a bug. But the Project Manager asked me to write it as a Change Control (because it requires more budget to fix this issue) so that he can address this issue at a later time. So I wrote this as a Change Control. (However, it is NOT a job of a tester to write change control. It's the business analyst's job)

20. What is Backend Testing?

It is a test to check whether the data displayed in the GUI front end report format matches with the particular data in the original database.

21. Have you done any Back End Testing and/or if you did, how did you do it in your last project?

Yes I did. I was working on Reports. When I was working in my last project, this was my scenario:

It was the case of testing one part of application used in the bank, where a customer comes to a bank's

front desk associate and ask for opening an account. The associate then asks for the personal information about the customer which, are the primary data, such as: First Name, Last Name, Date of Birth, Address and Social Security Number. The associate then put these primary data of that particular customer into the computer, which then afterwards batch-processed into the DATABASE in XML Format. Then the batch-processed data is sent to ETL (Extract-Transform-Load, which is software made by 'AbInitio' or 'Informatica') which processes the job to create a file to produce the report. The file is displayed to a GUI Front End report format with the help of Crystal Report/Business Object. In the GUI Front End report, let us say, if for January, the income of that person was displayed as \$ 900.00, then my job was to validate this data by writing SQL queries whether this displayed data matches with the original input data in the database, being called as the Back End Testing.

How can you be sure that the query you wrote is correct? Or how do you know that the data you pulled from the database is correct?

Answer: I write SQL query based on the requirement document. In the requirement document, various conditions are given for the query. Based on those conditions, I write SQL query. Therefore, anything different from the requirement document is definitely a defect.

22. What is XML?

- XML stands for EXtensible Markup Language.
- XML is a markup language much like HTML.
- XML was designed to describe data.
- XML tags are not predefined and we must define our own tags.
- XML uses a Document Type Definition (DTD) or an XML Schema to describe data.
- XML with a DTD or XML Schema is designed to be self-descriptive.
- XML is a W3C Recommendation.

23. From you resume, I see that you have been working in one place for a very short period of time. This raises me questions why. Can you explain why?

Ans. As a consultant, I am hired for a certain period of time, normally for 6 months to 1 year. Once the project is over, I needed to move to another project. That's why you see me in the resume jumping frequently here and there.

24 What do you do on your first day of the work?

(Note: The person who is asking this question probably wants to know how the real scenario of a working person at work. It is a hard question for those who has never worked in a work place as a Software Tester.)

Answer: On the first day, normally, we will be given a computer and support people will set up the User Name and Password for the computer. If that is done already, then the QA Lead or QA Manager will give me a brief walk through of the documents (which documents are where), introduce to different team members (normally to the ones you will be working with). Then your boss will ask you to step into work what needs to be done. However, the first thing normally is, they will ask you to read the documents available for that project.

What do you do if you have any questions to ask? Who do you ask?

At the beginning, we all panic, what kind of questions to ask? What if they ask questions that I don't know? Is it OK to ask questions? What do I do if I don't know how to do the job I am assigned to? and so on. As mentioned earlier, on the first day, your Manager will give you the system (computer) (They normally call system, not computer), will tell you what the User ID and Password is, where are the QA documents on the shared drive (or Network drive) are and so on. They will definitely ask you to read a lot of documents at the beginning (And you must read read and read those documents AS MUCH AS POSSIBLE. At the beginning, allocate about 2 hours extra at home for reading these documents. This habit will put you on the top of your job). These documents are normally design specification document (DSD). Different companies call it with different names, for example, Requirement Specification Document (RSD) and so on. After reading the documents, you will be asked to write Test Plans or Test Cases (Don't panic. The Test Plans and Test Cases templates will be give by your manager or test lead and they will tell you what to do and how to do because different companies have different formats they follow. If they don't have one, then you can always prepare a sample from this website (see on the right column) and give it to them. You will be hero)

Who do you ask?

Now let's say you did not understand something while reading documents. Who are you going to ask? Answer-Business Analysts who wrote this document. If you have any other questions that you don't know, you will be asking that to you friend first, if he/she is not able to answer, then ask this question to the Lead (or Manager). Do not ask too many questions (some people get irritated). Therefore, it is important to read read and read. That's the only way to succeed.

If you have any questions in TestDirector, or QTP or any other automation tools, then there is a HELP menu as well as tutorial. Please go through these, read them before you ask any questions to anyone else. What kind of questions should I ask in the meeting? Nothing. My advice is, keep your mouth shut. Just listen. This is the best way to handle the job until you are confident enough to speak and you know what you are talking about. If they ask you some questions, then reply gently, wisely.

How to deal with your team members?

Most probably, you will not be the only tester in the team. There will be more than you. Sometimes, dealing with you team members is frustrating, specially when you are new. They try to ignore you. They want to show themselves smart. Don't worry. Don't blame them. This part of the human nature. Try to cope with it. Invite them when you go for coffee (in the coffee room in your office, don't go outside), try to share your feelings and so on. It is all how you handle your friends. It is part of your daily activities, handle it gently. This is part of the situation I have gone through, my friends have gone through. I am just sharing this with you.

28. Have you used automation tools?

(Normally, when some one asks this question, we tend to think about automation functional testing tools, like WinRunner, LoadRunner, QTP (Quick Test Pro), Rational Robot, Experian and so on. But the reality is, even a Manual Tester also uses automation tools like bug tracking tools like TestDirector, ClearQuest, PVC Tracker and so on. Therefore, your answer should be Yes)

Answer: Yes. I have used TestDirector and ClearQuest as defect tracking tools. (Your answer is based on whether you have used automation tools specially for functional and load testing. If you have NOT used, but read about these tools, then you may be better off saying, "I know about the tools. I was involved in some of the testing using these tools, but would need some brush up in order to work independently." I am saying this because these tools are difficult to tackle in the interview and have to know in depth. In order to pass the interview on functional automation tools, it may not be easy unless you really know the stuff. But, since there is not much to learn in ClearQuest and TestDirector, you only have to know what different types of fields are there in the defect logging window when writing a defect.)

29. When you log a defect using TestDirector (or ClearQuest) what fields do you see?

Answer: When we log a defect, we see Defect ID (it shows later in TestDirector), Summary (where we write short description of the defect), Description (long description of the defect), Detected by (Person who found the defect, (it's you), Severity (meaning-is the defect critical? High? Medium? Or Low?), Date, Detected in Version, Priority, Project, Status, Assigned to and so on.

[Click here to see the fields in TestDirector \(go to page 24-27\)](#)

[Click here to see the fields in ClearQuest \(go to page 9\)](#)

30. Are you better working in a team or working alone?

Answer: I am a team player. I get along with team members very well. As far as the working is concerned, I can be equally productive in team or working alone.

(Caution: Never say, I like working alone. This could lead you to not getting a job as they are always looking for people who can get along with other people.)

31. Do you have any situations in the past where you have some arguments with your team members?

Answer: No. I never had that type of situation wherever I have worked.

(Even if you had one, it's a good idea to say "No". This could be a red flag, which might stop you from getting the job)

32. What do you like about a Manager? And what don't you like?

Answer: The best thing I like about a Manager is that the Manager should be able to coordinate with the other teams so that we can get the updated documents, for example, updated requirements documents right away. A Manager who can efficiently in distributes the work to the team, without being biased and easily accessible and protective to his team for the right cause. As far as "what I don't like" is concerned, I don't like a manager who keeps coming to desk 10 times a day to check my work even if it is just a regular work. Once the responsibility is given, the team member should be trusted and let his work done.

33. Where do you see yourself in another 5 years?

Answer: I see myself a QA Lead in another 5 years.

(You can also say "QA Manager", but since the QA Manager is taking your interview most of the time, they some times feel challenged. Therefore, it might be a good idea to limit you to QA Lead)

34. Why are you in QA?

Answer: I am in QA because I like this job.

35. Why do you like this job?

Answer: I like this job, because it is process oriented. Meaning that I get an opportunity to work from analyzing the requirement documents to writing test plans, test cases, testing the application, logging defects, retesting, preparing reports and finally testing in production as well. Therefore, I am involved from the very beginning to the end of the software development life cycle (SDLC) process. I like this.

Another reason is I like to find defects. I enjoy logging defects. The more defects I find, the happier I am.

36. How do you determine what to test in an application?

Answer: First of all we have the test cases (or test scripts) that are written based on the requirement document. This pretty much covers what functionalities to test. Therefore, looking at the test cases tells us what to test in the application.

37. If you have no documentation about the product, how do you test an application? Describe the process.

Answer: Well, this is a situation where I have come across several times. Some of the companies in my previous projects did not have any documents. In this case, I went to the Business Analyst and some times to developers to find out how exactly the functionalities work, how to navigate from one page to another page and so on. After getting a clear vision, I write test cases based on the conversation (which is a step by step procedure to test an application) and get ready for testing.

What do you do once you find a defect?

Once you find a defect, this is what we need to do:

1. Recreate the Defect: *Once you find a defect, we must try to recreate (meaning that we should be able to reproduce it) at least 3 times so that we are sure that it is a defect. Some times, once we find it log it without recreating, may put us in a false situation (because sometimes the application does not behave in the same way). Therefore, it is important to recreate the same defect several times.*

2. Attach the Screen Shot *(supporting document): Once we confirm that it is a defect, and then it is a good idea to attach supporting documents when we log (write) a defect. For example, screen shot, requirement document etc. For instance, let us say that instead of "Continue" button on a page, there is a typo "Contiinuee". Now, we will make a screen shot of this page (To make screen shot, press "Print Screen" button on the keyboard, and open a Word document, and Click Edit on the Word document and "Past" it. You will see the screen now) Now, a tester needs to write defects in easy and clear language to make all the developers to understand easily.*

3. Log the Defect: *Now, the next step is, we need to log it. Depending on the company what kind of tools they are using (for example, some companies use TestDirector to log defects, some companies use Rational ClearQuest, some use PVC Tracker and so on). If the company is small and cannot afford these expensive tools, then they may simply use Excel sheet to log defects. We log the defect.*

38. What are the basic elements you put in a defect?

Answer: Basic elements we put in a defect are: SEVERITY, PRIORITY, CREATED BY, VERSION NO, HEADER, DESCRIPTION OF THE DEFECT where we write how to recreate a defect, in what module the defect is found, Status, and so on.

39. What is the biggest bug you have ever found?

Answer: Well, there are many big defects I have found in various projects. For example, in the last project, on a page, there was a button called "More Information". Once the user clicked that button, the system would open a new window (pop up).

We could close the new window in 3 ways:

-By clicking X at the top right corner of the page

-By clicking "Close" button on the page

-By pressing combination keys (Alt+F4) on the key board

Although the combination key (Alt+F4) was not mentioned in the test case, I just wanted to try how the application reacts when Alt+F4 is pressed. Then I pressed Alt+F4. The result was a disaster-the application crashed (broke). The application disappeared from the computer monitor. Since it was the last day of testing for us, it brought chaos in our Managers, Leads and the whole teams. Finally, the developers disabled Alt+F4 as a temporary solution and the application went into production.

40. How do you make sure that it is quality software?

Answer: There is a certain process how the quality of software is guaranteed (ensured). It is defined by the 'exit criteria'. (What it means is, a QA Manager writes a document called Test Strategy. This Test Strategy defines the 'exit criteria'.) Exit Criteria gives the measurement, for example, in order to confirm the quality, how many critical defects, high defects, medium defect and low defect are acceptable? These are all defined in the exit criteria. (Normally in practice, for a quality software, there should no critical defects (0 critical), no high defect (0 high), no medium defect (0 medium) and may be 1 low defect)

41. As a QA Tester, can you tell me the situation when you felt the most proud of it?

Answer: When I find the defect that normally others don't find, then I feel very proud. For example, there were situations where I found bugs that crashed the whole system at the end of testing phase. I tried the scenarios where the scenarios were NOT mentioned in the test cases. For example, we can close the windows by clicking X on the page, with "Close" button and so on. But there is another way that you can close the window, by pressing Alt+F4 on the keyboard. Not many testers test this scenario. I have done this in my last two projects. Both the time, the application crashed which became a big issue. I felt proud.

42. What made you to choose testing career?

Answer: I am a very detailed oriented person and I like process-oriented job. The way QA process works is just the kind of work I like. For example, analyzing requirement documents, attending walk-through meetings, writing test plans, writing test cases, executing the test cases (or running the test cases) testing the application, logging defects, retesting them and so on. I think I really like the process and that's why I chose this career.

43. When should testing start in a project? Why?

Answer: We should start testing as soon as the following things are ready:

- Test Data are ready
- Build (all the developers have coded their code and merged them together)
- Test Environment (servers, network etc) is set up and ready
- When the manager asks us to go ahead and start testing.

44. Let us say you have a web application to test. How do you go about testing it? What is the process?

Answer: First of all, I will look at the requirement documents (or design document in some companies). The requirement document will tell us what the functionalities in the application (software) are. Once I analyze the requirement documents (one module=one requirement document). After that, I will write test plans for each module (one module =one test plan). Then after the test plan is complete, I will write test cases (One module can have hundreds, even thousands test cases). Once the test cases are ready and the application is ready (or once the build is ready), then I will start testing. Before I start testing, however, I will make sure the test environments, test data and defect logging tools are in place. This is how I will go about testing an application.

45. What is a "bug?"

Answer: A bug is a bug is an error, flaw, mistake, failure, or fault in a computer code (program) that prevents it from behaving as intended (e.g., producing an incorrect result). (You can also add this: When the expected results (accordingly to the requirement documents) don't match with the actual results (while testing), then it is considered a bug)

46. How would you ensure that you have covered 100% testing?

Answer: The testing coverage is defined by exit criteria (There is exit criteria and entry criteria in the Test Strategy). For example, if the exit criteria says "The software will be acceptable to the client only if there are no critical defects, no high defects, no medium defects and only two low defects", then all the critical, high, medium should be zero. Only 2 low defects are acceptable. Thus, 100% coverage is measured by the exit criteria. Also, 100% test cases must be executed in order to cover 100% of testing.

47. What problems did you face in the past? How did you solve it?

(You will be OK if you just give one of the problems below, not all of them)

Answer: I had many problems while testing applications in the past.

As far as I remember one of them (then describe one of them from below), this was the scenario:

(i) It was a web-based application. I was working on a module called "Transaction Summary". There was "Submit" button on that page. After entering data in all the fields, for example, First Name, Last Name, Social Security Number, Date of Birth and so on, I clicked the Submit button. Once I clicked Submit button, an error page displayed, "Page cannot be found...". Since it was a critical defect, I immediately informed the Test Lead. There was a chaos in the room. All the developers, Database Administrators and Testers gathered in my cube (room). No body could tell exactly what was wrong with it. Finally, one smart guy checked into the database and found out that one of the files in the database was closed. The status of all the files should be in the open status. Once the status of the closed file was put in the "open" status, the application worked fine.

(ii) One of the problems was in the Login window (page). When the user enters and Login Name and Password, then Password should be encrypted. One of the Test Cases was that I needed to open database and see whether the password is encrypted or not. I found out it was not encrypted. I reported it as a bug (defect) and it was fixed in the next release (build).

(iii) Defects I have found in a project was a defect to close a window (pop up).

For example, in the last project, on a page, there was a button called "More Information". Once the user clicked that button, the system would open a new window (pop up). We could close the new window in 3 ways:

- By clicking X at the top right corner of the page
- By clicking "Close" button on the page
- By pressing combination keys (Alt+F4) on the key board

Although the combination key (Alt+F4) was not mentioned in the test case, I just wanted to try how the application reacts when Alt+F4 is pressed. Then I pressed Alt+F4. The result was a disaster-the application crashed (broke). The application disappeared from the computer monitor. Since it was the last day of testing for us, it brought chaos in our Managers, Leads and the whole teams. Finally, the developers disabled Alt+F4 as a temporary solution and the application went into production.

(iv) Another problem was that a user would search for branch location information of a bank. The user logs in by using User Name and Password. After the log in, on the "Search Location" page, the user enters and zip code of the location he wants to find, then clicks Find button. After that the system (application) gives a number of branch locations. The user now clicks "Request Information" for one of the branches. As soon as the user clicks "Request Information" button, the application breaks (displays "Page cannot be found" error). I logged this defect as a critical defect. When the developers and database administrator looked into

it, then they found out that in one of the tables, the data was not recorded. In all the tables (UserProfile table, ClientID table and SessionID table), the data should be populated with the information entered by the user. For some reason, in one of the tables, it was blank (null). Once they wrote a small code to populate data (enter data) to the table, the application started working.

(v) In my previous project, when the customer wants to upload a document, for example, a copy of a monthly statement (in Word format), on the website, the system should automatically change the Word document into .pdf format. Once the document was uploaded, I saw that the fields in the .pdf document were interchanged (misplaced). For example, the First Name displayed in the Last Name section. Date of Birth displayed in the Social Security Number field and so on. We found out that the problem was a mapping problem (remember this word). Once the mapping was correct, I tested in the new build. It was fixed.

(vi) The most common problem that I have faced in my previous projects are the Java script errors, data connectivity, error, HTTP 500 error (This error occurs when server is down), HTTP 400 error (when file is not found) and so on.

(vii) "Father" pop up displayed when Print/Print Preview button clicked. (This was coded by the developer to mark this coding portion (for his/her own purpose as a mark to indicate where he/she made changes, however, forgot to remove it). Once the developer fixed it, it still displayed the same thing (because it was in the servers memory and could not go). Now, I had to reset memory of the server from my machine. Therefore, what I did is, I went to the website I was testing (for example, http://mysite.app.org/My_profile) and added [reset.aspx](http://mysite.app.org/My_profile/reset.aspx) at the end of the URL (Now the URL becomes http://mysite.app.org/My_profile/reset.aspx and hit enter. It took me to the server memory and I selected section and submitted the query and it was cleared. Retested again and it is now OK.

(viii) I was testing a web application. On one page, I clicked Save & Continue button twice (my mistake). Once this button is clicked twice, the system displayed an error message, "Could not save the answers, please contact technical support". (When clicked only once, the button works fine.).

Solution: Once the user clicks the button once, the button was disabled later so that the user cannot click twice.

(ix) I was testing a web-based application. Once all the fields are entered on the one of the pages, we had Print Preview button. If the user clicks this button, we were supposed see the same information in a new window in PDF format. While looking at the data in PDF file, there were some fields missing, for example, Date of Birth was missing in the PDF file.

48. Tell me about the worst boss you've ever had. (Here, you should be careful not to say any negative words about the past boss. This will give a reflection that you cannot work with different nature of people. You should be able to show them that you can cope with any kind of boss. Therefore, just take an idea below how the answer should be.)

Answer: I can hardly think of any Manager that was really bad. But when I compare, then I remember of a Test Lead who was just made a lead from the developers team. She used to feel that she has been very proud of her position and used to boss around. Some times, she used to call home and check where I was and what I was doing. Or have I completed my job before leaving and so on. I think, whatever she did, was in the benefit of the company and myself in the long run which would give me more confidence in future.

49. What do you like about QA?

Answer: The best thing I like about QA is, I like the job which is more process oriented. For example, we have to work right from reading the requirement documents, providing feedback to the Business Analysts as necessary, writing test plans, test cases, execute the test cases, interaction with different developers, attend walk-through meeting and so on. I am a very detailed oriented person. When I test applications, I try to get into the depth of functionality so that I don't miss out anything. Finally, I love logging defects.

50. What are all the basic elements in a defect report?

Answer: The basic elements in a defect report are: Defect ID, Header, Description, Defect Reported by, Date, Status, Version, Assigned to, Approved by, Module where the defect was found and so on.

51. What is the difference between verification and validation?

Verification: Verification is a process to ensure that the software that is made, matches the original design. In other words, it checks whether the software is made according to the criteria and specification described in the requirement document. It is to check whether you built the product right as per design. It is a low level checking. (It is done in walk-through meetings generally). It checked whether it is made accordingly to the design..

Validation: Validation is a process to check whether the product design fits the client's need. It checks whether you built the right thing. It checks whether it is designed properly.

52. How do you know it is sufficient testing?

Answer: Every company has entry and exit criteria. When we test applications, we refer to exit criteria. When we are about to finish testing, then the QA Team (QA Manager) refers to the exit criteria (exit criteria tells the level of defect that you can be comfortable with before it goes to production. For example,

there should be ZERO critical defect, ZERO high level defect, ZERO medium defect, 1 Low level defect, all the test cases must be 100% executed etc). Once the exit criteria meet the requirements, then the software is considered to be sufficiently tested.
Every company has entry and exit criteria. When we test applications, we refer to exit criteria. When we are about to finish testing, then the QA Team (QA Manager) refers to the exit criteria (exit criteria tells the level of defect that you can be comfortable with before it goes to production. For example, there should be ZERO critical defect, ZERO high level defect, ZERO medium defect, 1 Low level defect, all the test cases must be 100% executed etc). Once the exit criteria meet the requirements, then the software is considered to be sufficiently tested.

53. How to derive test scenarios and use cases? What are the contents and format?

Answer: Test scenarios are derived from requirement documents. We follow each and every functionality (called business rules) mentioned in the requirement document. One functionality can have multiple business rules. For example, let us say in there is one requirement called "Login". This "Login" may have various scenarios. For example, one scenario is, enter the right User ID and wrong password. The system should display an error message. Another scenario would be to enter wrong User ID and right Password. The system should display an error message. The third scenario could be to enter the right User Name and right Password. The system should allow the user to get into the system. This is how the test cases are derived from the requirement documents or from the Use Cases.
(For contents for formats of test scenario, please refer to question 4 in qaquestions.com)

54. What are the types of test cases that you write?

Answer: We write test cases for smoke testing, integration testing, functional testing, regression testing, load testing, stress testing, system testing and so on.

55. How to write Integration test cases?

Answer: I have never written separate Test Cases Integration Testing. Since Integration Testing is a test to check whether the all the modules are integrated together or not (meaning that when the developers compile all their module and make a build, all modules should be working when they are combined together and those modules when combined, should work as expected). If they are not integrated (combined) in a nice way, then the application breaks. Basically, when we do the functional testing, the integration testing is automatically done. This is my experience.

56. How to write Regression test cases? What are the criteria?

Answer: Regression test cases are also based on the requirement documents. They are written more into detail and with every release (build), the testers need to do regression testing. The criteria for regression testing are; there should be no major defects while we do our smoke test and functional testing.

57. Is there a format for a test case? Do you follow any methodology for numbering test cases?

Answer: Yes. It depends upon the company how the company has followed the numbering of test cases. However, normally, it is just a simple numbering in most of the time (see question 4 of qaquestions.com). But some companies may also relate this numbering to the requirement number. For example, if the requirement for Login is "REQ-LOG-001", then we can number the test cases like REQ-LOG-001-001 and so on.

58. What is Test Harness?

Answer: (Definition from www.wikipedia.org) "In software testing, a test harness or automated test framework is a collection of software and test data configured to test a program unit by running it under varying conditions and monitor its behavior and outputs. It has two main parts: the test execution engine and the test script repository."

59. How to write User Acceptance Test plan & test cases?

Answer: The way of writing Test Plan and Test Cases is the same in all the test phases. However, specifically for User Acceptance Testing, the testers use data nearly real data (meaning that the data is very much similar to the production data or real data). For the format, please refer to question 3 and 4 in qaquestions.com.

60. What are the different matrices that you follow?

Answer: There are various reports we normally prepare in QA:
· Test summary Report – It is a report that has list of the total test cases, list of executed test cases, remaining test case to be executed, executed date, pass/fail
· Defect Report – In this report we normally prepare a list of defect in spreadsheet e.g. defect # CQ12345 [if you log a defect in the application called Rational ClearQuest]
· Traceability Matrix [also called RTM (Requirement Traceability Matrix)] Report – the document which shows the relationship between the functionalities or the business rules and the test cases. So, with the help of Traceability Matrix we make sure that we includes all the functionalities in our test cases according to the requirement document.

61. Explain Bug Life Cycle.

Answer: I would describe this as below:
A Tester finds a defect and logs it. (But before you log it, you must try to recreate it for 3 or 4 times so that you are 100% sure that it is a bug)

The defect is now approved or disapproved by the Test Lead.

(If it is disapproved, then the test lead will come to you ask for more details and you have explain to him why it is a bug)

After the Test Lead approves the bug, it is now assigned to a development Team Lead (or Development Manager). He/she now assigns that bug to the concerned developer. The developer now looks into the bug and fixes it. Once the fix is ready, there will be another build ready to test. The tester now tests the defect. If the defect is fixed, then the tester closes the defect, if not then the test will reopen it and same cycle starts.

Defect Life Cycle

62. What will you do if developer does not accept the bug?

Answer: If the developer does not accept the defect, then he will reject it. Once it is rejected, then it comes back to the tester. Now, the tester will ask for clarification with the developer why the defect is rejected. Since everything is based on the requirement documents, both tester and developer will have to look at the requirement document, validate it and then reopen it if necessary or close.

63. What are the different tests that can be done for Client Server Application and Web-based Application. Give details.

Answer: For both client server and web based applications, the testing is the same except one thing: We test web based applications in different browsers, for example, Internet Explorer (will test in different versions like IE 5.0, IE 6.0, IE 7.0), Firefox, Safari (for Mac) and so on where as for client server, we don't need to test in the browsers.

64. What is an inspection?

Answer: An inspection is a formal meeting, more formalized than a walkthrough and typically consists of 3-10 people including a moderator, reader (the author of whatever is being reviewed) and a recorder (to make notes in the document). The subject of the inspection is typically a document, such as a requirements document or a test plan. The purpose of an inspection is to find problems and see what is missing, not to fix anything. The result of the meeting should be documented in a written report. Attendees should prepare for this type of meeting by reading through the document, before the meeting starts; most problems are found during this preparation. Preparation for inspections is difficult, but is one of the most cost-effective methods of ensuring quality, since bug prevention is more cost effective than bug detection.

65. Give me five common problems that occur during software development.

Answer: Poorly written requirements, unrealistic schedules, inadequate testing, adding new features after development is underway and poor communication. Requirements are poorly written when requirements are unclear, incomplete, too general, or not testable; therefore there will be problems. The schedule is unrealistic if too much work is crammed in too little time.

Software testing is inadequate if none knows whether or not the software is any good until customers complain or the system crashes. It's extremely common that new features are added after development is underway.

Miscommunication either means the developers don't know what is needed, or customers have unrealistic expectations and therefore problems are guaranteed

66. What is the role of documentation in QA?

Answer: Documentation plays a critical role in QA. QA practices should be documented, so that they are repeatable. Specifications, designs, business rules, inspection reports, configurations, code changes, test plans, test cases, bug reports, user manuals should all be documented. Ideally, there should be a system for easily finding and obtaining of documents and determining what document will have a particular piece of information. Use documentation change management, if possible.

67. What if the software is so buggy it can't be tested at all?

Answer: In this situation the best bet is to have test engineers go through the process of reporting whatever bugs or problems initially show up, with the focus being on critical bugs. Since this type of problem can severely affect schedules and indicates deeper problems in the software development process, such as insufficient unit testing, insufficient integration testing, poor design, improper build or release procedures, managers should be notified and provided with some documentation as evidence of the problem.

68. How do you know when to stop testing?

Answer: This can be difficult to determine. Many modern software applications are so complex and run in such an interdependent environment, that complete testing can never be done. Common factors in deciding when to stop are...

Deadlines, e.g. release deadlines, testing deadlines;

Test cases completed with certain percentage passed;

Test budget has been depleted;

Coverage of code, functionality, or requirements reaches a specified point;

Bug rate falls below a certain level; or

Beta or alpha testing period ends.

69. What if there isn't enough time for thorough testing?

Answer: Since it's rarely possible to test every possible aspect of an application, every possible combination

of events, every dependency, or everything that could go wrong, risk analysis is appropriate to most software development projects. Use risk analysis to determine where testing should be focused. This requires judgment skills, common sense and experience. The checklist should include answers to the following questions:

- Which functionality is most important to the project's intended purpose?
- Which functionality is most visible to the user?
- Which functionality has the largest safety impact?
- Which functionality has the largest financial impact on users?
- Which aspects of the application are most important to the customer?
- Which aspects of the application can be tested early in the development cycle?
- Which parts of the code are most complex and thus most subject to errors?
- Which parts of the application were developed in rush or panic mode?
- Which aspects of similar/related previous projects caused problems?
- Which aspects of similar/related previous projects had large maintenance expenses?
- Which parts of the requirements and design are unclear or poorly thought out?
- What do the developers think are the highest-risk aspects of the application?
- What kinds of problems would cause the worst publicity?
- What kinds of problems would cause the most customer service complaints?
- What kinds of tests could easily cover multiple functionalities?
- Which tests will have the best high-risk-coverage to time-required ratio?

70. What can be done if requirements are changing continuously?

Answer: Work with management early on to understand how requirements might change, so that alternate test plans and strategies can be worked out in advance. It is helpful if the application's initial design allows for some adaptability, so that later changes do not require redoing the application from scratch.

Additionally, try to...

- *Ensure the code is well commented and well documented; this makes changes easier for the developers.*

- *Use rapid prototyping whenever possible; this will help customers feel sure of their requirements and minimize changes.*
- *In the project's initial schedule, allow for some extra time to commensurate with probable changes.*
- *Move new requirements to a 'Phase 2' version of an application and use the original requirements for the 'Phase 1' version.*
- *Negotiate to allow only easily implemented new requirements into the project; move more difficult, new requirements into future versions of the application.*
- *Ensure customers and management understand scheduling impacts, inherent risks and costs of significant requirements changes. Then let management or the customers decide if the changes are warranted; after all, that's their job.*
- *Balance the effort put into setting up automated testing with the expected effort required to redo them to deal with changes.*
- *Design some flexibility into automated test scripts;*
- *Focus initial automated testing on application aspects that are most likely to remain unchanged;*
- *Devote appropriate effort to risk analysis of changes, in order to minimize regression-testing needs;*
- *Design some flexibility into test cases; this is not easily done; the best bet is to minimize the detail in the test cases, or set up only higher-level generic-type test plans;*
- *Focus less on detailed test plans and test cases and more on ad-hoc testing with an understanding of the added risk this entails.*

71. What if the application has functionality that wasn't in the requirements?

Answer: It may take serious effort to determine if an application has significant unexpected or hidden functionality, which it would indicate deeper problems in the software development process. If the functionality isn't necessary to the purpose of the application, it should be removed, as it may have unknown impacts or dependencies that were not taken into account by the designer or the customer. If not removed, design information will be needed to determine added testing needs or regression testing needs. Management should be made aware of any significant added risks as a result of the unexpected functionality. If the functionality only affects areas, such as minor improvements in the user interface, it may not be a significant risk.

72. How can software QA processes be implemented without stifling productivity?

Answer: Implement QA processes slowly over time. Use consensus to reach agreement on processes and adjust and experiment as an organization grows and matures. Productivity will be improved instead of stifled. Problem prevention will lessen the need for problem detection. Panics and burnout will decrease and there will be improved focus and less wasted effort. At the same time, attempts should be made to keep processes simple and efficient, minimize paperwork, promote computer-based processes and automated tracking and reporting, minimize time required in meetings and promote training as part of the QA process. However, no one, especially talented technical types, like bureaucracy and in the short run things may slow down a bit. A typical scenario would be that more days of planning and development will be needed, but less time will be required for late-night bug fixing and calming of irate customers.

73. What is parallel/audit testing?

Answer: Parallel/audit testing is testing where the user reconciles the output of the new system to the output of the current system to verify the new system performs the operations correctly. Let us say, for example, the currently software is in the mainframe system which calculates the interest rate. The company wants to change this mainframe system to web-based application. While testing the new web based

application, we need to verify that the web-based application calculates the same interest rate. This is parallel testing.

74. What is system testing?

Answer: System testing is black box testing, performed by the Test Team, and at the start of the system testing the complete system is configured in a controlled environment. The purpose of system testing is to validate an application's accuracy and completeness in performing the functions as designed. System testing simulates real life scenarios that occur in a "simulated real life" test environment and test all functions of the system that are required in real life. System testing is deemed complete when actual results and expected results are either in line or differences are explainable or acceptable, based on client input.

Upon completion of integration testing, system testing is started. Before system testing, all unit and integration test results are reviewed by Software QA to ensure all problems have been resolved. For a higher level of testing it is important to understand unresolved problems that originate at unit and integration test levels. You CAN learn system testing, with little or no outside help. Get CAN get free information. Click on a link!

75. What is end-to-end testing?

*Answer: Similar to system testing, the *macro* end of the test scale is testing a complete application in a situation that mimics real world use, such as interacting with a database, using network communication, or interacting with other hardware, application, or system.*

76. What is security/penetration testing?

Answer: Security/penetration testing is testing how well the system is protected against unauthorized internal or external access, or willful damage. This type of testing usually requires sophisticated testing techniques.

77. What is recovery/error testing?

Answer: Recovery/error testing is testing how well a system recovers from crashes, hardware failures, or other catastrophic problems.

78. What is compatibility testing?

Answer: Compatibility testing is testing how well software performs in a particular hardware, software, operating system, or network environment.

79. What is comparison testing?

Answer: Comparison testing is testing that compares software weaknesses and strengths to those of competitors' products.

80. What is acceptance testing?

Answer: Acceptance testing is black box testing that gives the client/customer/project manager the opportunity to verify the system functionality and usability prior to the system being released to production. The acceptance test is the responsibility of the client/customer or project manager, however, it is conducted with the full support of the project team. The test team also works with the client/customer/project manager to develop the acceptance criteria.

81. What is a Test/QA Team Lead?

Answer: The Test/QA Team Lead coordinates the testing activity, communicates testing status to management and manages the test team.

82. What is software testing methodology?

Answer: One software testing methodology is the use a three step process of...

- 1. Creating a test strategy;*
- 2. Creating a test plan/design; and*
- 3. Executing tests. This methodology can be used and molded to your organization's needs. Rob Davis believes that using this methodology is important in the development and in ongoing maintenance of his customers' applications.*

83. What is the general testing process?

Answer: The general testing process is the creation of a test strategy (which sometimes includes the creation of test cases), creation of a test plan/design (which usually includes test cases and test procedures) and the execution of tests.

84. How do you create a test strategy?

Answer: The test strategy is a formal description of how a software product will be tested. A test strategy is developed for all levels of testing, as required. The test team analyzes the requirements, writes the test strategy and reviews the plan with the project team. The test plan may include test cases, conditions, the test environment, a list of related tasks, pass/fail criteria and risk assessment. Inputs for this process:
· A description of the required hardware and software components, including test tools. This information comes from the test environment, including test tool data.

- A description of roles and responsibilities of the resources required for the test and schedule constraints. This information comes from man-hours and schedules.
- Testing methodology. This is based on known standards.
- Functional and technical requirements of the application. This information comes from requirements, change request, technical and functional design documents.
- Requirements that the system can not provide, e.g. system limitations. Outputs for this process:
- An approved and signed off test strategy document, test plan, including test cases.
- Testing issues requiring resolution. Usually this requires additional negotiation at the project management level.

85. How do you create a test plan/design?

Answer: Test scenarios and/or cases are prepared by reviewing functional requirements of the release and preparing logical groups of functions that can be further broken into test procedures. Test procedures define test conditions, data to be used for testing and expected results, including database updates, file outputs, report results. Generally speaking...

Test cases and scenarios are designed to represent both typical and unusual situations that may occur in the application.

Test engineers define unit test requirements and unit test cases. Test engineers also execute unit test cases.

It is the test team that, with assistance of developers and clients, develops test cases and scenarios for integration and system testing.

Test scenarios are executed through the use of test procedures or scripts.

Test procedures or scripts define a series of steps necessary to perform one or more test scenarios.

Test procedures or scripts include the specific data that will be used for testing the process or transaction.

Test procedures or scripts may cover multiple test scenarios.

Test scripts are mapped back to the requirements and traceability matrices are used to ensure each test is within scope.

Test data is captured and base lined, prior to testing. This data serves as the foundation for unit and system testing and used to exercise system functionality in a controlled environment.

Some output data is also base-lined for future comparison. Base-lined data is used to support future application maintenance via regression testing.

A pretest meeting is held to assess the readiness of the application and the environment and data to be tested. A test readiness document is created to indicate the status of the entrance criteria of the release.

Inputs for this process:

Approved Test Strategy Document.

Test tools, or automated test tools, if applicable.

Previously developed scripts, if applicable.

Test documentation problems uncovered as a result of testing.

A good understanding of software complexity and module path coverage, derived from general and detailed design documents, e.g. software design document, source code and software complexity data.

Outputs for this process:

Approved documents of test scenarios, test cases, test conditions and test data.

Reports of software design issues, given to software developers for correction.

86. How do you execute tests?

Answer: Execution of tests is completed by following the test documents in a methodical manner. As each test procedure is performed, an entry is recorded in a test execution log to note the execution of the procedure and whether or not the test procedure uncovered any defects. Checkpoint meetings are held throughout the execution phase. Checkpoint meetings are held daily, if required, to address and discuss testing issues, status and activities. The output from the execution of test procedures is known as test results. Test results are evaluated by test engineers to determine whether the expected results have been obtained. All discrepancies/anomalies are logged and discussed with the software team lead, hardware test lead, programmers, software engineers and documented for further investigation and resolution. Every company has a different process for logging and reporting bugs/defects uncovered during testing. A pass/fail criteria is used to determine the severity of a problem, and results are recorded in a test summary report. The severity of a problem, found during system testing, is defined in accordance to the customer's risk assessment and recorded in their selected tracking tool. Proposed fixes are delivered to the testing environment, based on the severity of the problem. Fixes are regression tested and flawless fixes are migrated to a new baseline. Following completion of the test, members of the test team prepare a summary report. The summary report is reviewed by the Project Manager, Software QA Manager and/or Test Team Lead.

After a particular level of testing has been certified, it is the responsibility of the Configuration Manager to coordinate the migration of the release software components to the next test level, as documented in the Configuration Management Plan. The software is only migrated to the production environment after the Project Manager's formal acceptance.

87. What testing approaches can you tell me about?

Answer: Each of the followings represents a different testing approach:

*Black box testing,
White box testing,
Unit testing,
Incremental testing,
Integration testing,
Functional testing,
System testing,
End-to-end testing,
Sanity testing,*

*Regression testing,
Acceptance testing,
Load testing,
Performance testing,
Usability testing,
Install/uninstall testing,
Recovery testing,
Security testing,
Compatibility testing,
Exploratory testing, ad-hoc testing,
User acceptance testing,
Comparison testing,
Alpha testing,
Beta testing, and
Mutation testing.*

88. How do you divide the application into different sections to create scripts?

Answer: First of all, the application is divided in different parts when a business analyst writes the requirement document (or Use Cases or Design Document), he/she writes EACH requirement document for EACH module. Let us say, if there are 12 different modules in an application that a business analyst has written the requirements for, then a tester would write the test cases for each module, which means in 12 different sections. This is the standard practice. There might be scenarios where you might have to break down scripts into sub-categories. For example, if a tester is writing a script for Login Page, he/she might write one for positive and negative testing and another sub-set of test cases would be for error message when the wrong information is entered. In short, the test cases are divided according to the modules. (The following questions were asked to Padma in one of her interviews very recently)
(This question is asked to check how ambitious you are as far as your career is concerned, whether you like the job you are doing and so on. Therefore, no matter what, you should stick to your QA job at this point and say that you love this so much and your goal is some thing similar to the one below)

What is your salary requirement?

\$70k (negotiable), or (\$35 per hour)

Please provide information (an example) of your experience testing Linux and UNIX environments (including type of system tested, how tested, actual commands and steps used for test) Testing applications using Linux and UNIX.

Answer: I have tested applications using UNIX. For every backend testing I have done in the past, I have used UNIX platform while performing backend testing. For example, when the data is fed into the system in the front end, that data goes to the database after the batch processing. From the database, the data is now sent to the ETL system (in XML format) for data manipulation as per our need (ETL is a software tool of Ab Initio company which is used to manipulate data in the data warehouse). In the ETL system, we manipulate those data according to our need), for example, it could be income statement of the company, balance sheet, monthly reports, and so on. In order to produce income statement, we need to run a job in ETL. To run this job, we use UNIX. In the same way, different types of jobs are created for each need (creating balance sheet is another job, creating reports is next job etc) then I had to run different jobs in the ETL system. Once we run the job, the running job finally creates an output file which is now validated by us tester. This output file can be in text format or GUI format. Thus, this is the scenario where I had to use UNIX. (I have used Linux much, however, since UNIX and Linux are the same thing, I should have no problem in using Linux)

Some of the commands I used while testing using UNIX are;

Ls -l ———> to check the file list
Pwd————> to see which directory I am in
Cd ———>change the directory
Cd .. ———>change the directory one level up
Mkdir ———>make a directory
Rmdir ———>Delete the directory
setenv name v ———>Set environment
kill% ———>Kill the running job
vi ———>editor Used to write scripts
more————> to see the contents page by page
cat ———>list contents of the file
chmod ———>change permission
cp ———>copy
rm ———>delete a file

The following are the some of the things that a tester has to know (but may not be asked in the interview)What is a cookie? (You must know how to clean cookies)

A small text file of information that certain Web sites attach to a user's hard drive while the user is browsing the Web site. A Cookie can contain information such as user ID, user preferences, archive shopping cart information, etc. Cookies can contain Personally Identifiable Information.

Does a tester have to know about cookie?

Yes. A tester has to know HOW TO CLEAN cookies (Does not have to know the difinition)

How to clean cookies?

Cookies are cleaned in the browsers like IE (Internet Explorer), Firefox, Safari (for MAC and windows both), Netscape and so on.

However, the mostly used (90%) browser is IE (Internet Explorer)

Here is how you clean cookies in IE (Internet Explorer):

1. Open IE (Internet Explorer)
2. On the menu, click Tools—>Internet Options—>Click Delete button (It is in General Tab)

(You will see different buttons now, for example, Delete Files, Delete Cookies, Delete History, Delete Forms, Delete Passwords,

Delete All).

3. Click Delete All button.
Now the cookies are cleaned in IE.

Here is how you can clean cookies in Fire Fox:

1. Open Firefox Brower.
2. Click Tools.
3. Click Error Console.

4. Click Clear.
Now the cookies are cleaned in Firefox.

What are different types of protocols?

-Generally, a Tester does NOT necessarily have to know different types of protocols. This is Network Engineers job. However, if you want to know more for your knowledge, you can visit:

http://en.wikipedia.org/wiki/List_of_network_protocols.

What is Web Architecture?

-A tester does not necessarily have to know this unless you are a very Senior Tester testing networks and doing some kind of development. However, if you want to know more about it, please visit:

<http://www.objs.com/survey/WebArch.htm>

Does a Tester need SQL?

Answer: Yes. For a Tester, SQL is needed. I had the same question in mind before I came to the actual implication-what is SQL used for? And now, I know that when we do the backend testing (see qaquestions.com for details), we need to write SQL queries to retrieve the data from the database and compare this data to the one with reports or output. Another scenario is, if something goes wrong in the application, for example, if there is an error, then we might have to write SQL queries to retrieve the data from the database and check what went wrong. Let's say, we need to check in the Error Log table what went wrong. To check this, we open the database, go to Error Log table and find out that happened. In the Error Log table, there are many records, so which one is your error then? To find out which one is yours, we need to write SQL queries. Example, you logged in to the application with User and password=sn992jj. Now, to retrieve your record, you can write a query some thing like this: select * from Error_Log where userID=devin99; This query will retrieve your record only so that you can see what happened.

What is a 'Show Stopper'?

A show stopper is a defect or bug that stops the user for further action (testing). It has no work around. In other words, it stops every thing and the user cannot go any further. This is called show stopper in software industry language. (This is not an interview questions, but you have to know this terminology)

Some Glossary

Test Plan, Test Case, Test Script, Requirement Document, Design Document, Shared Drive, Network Driver, Share Point, System, Build Configuration Management Team, Defect, Log, Automation Tools, TestDirector, Quality Center, ClearQuest, ClearCase, Rational Robot, Rational Functional Tester, WinRunner, LoadRunner, Business Objects, Crystal Reports, SQA, QA

Answer: My goal is to be QA Lead (or QA Manager) in near future.

90. What are you expecting from our company?

Answer: My expectation from you company would be I will have more challenges and new things to learn and whatever the skills I have to contribute, hopefully, I will be able to contribute if they are in any way helpful to enhance productivity of the company.

91. What did you learn from your previous companies?

Answer: I learned a lot from the previous companies wherever I have worked. Wherever I have worked, I found out there is always something to learn. Different companies have different ways of working. The environment and technology always differ from one company to another company. I have never found one company's environment matching with another company. For example, if one company is using documents

called requirement documents, then the other company might be using Use Cases and some companies might be using Design Document and so on. Therefore, in my experience, there are always new things to learn in every company and we can always contribute these thing in the next company if they help to be more productive.

92. What do you want to be in next 2 years?

Answer: I want to be QA Lead in another two years.

Why QA Lead? Why not something else?

Answer: QA is the only thing I love doing it. I love this job and want to progress in this sector. I want to know how to manage QA process, how to handle different jobs and so on. Since the next step is the QA Lead, that would preferably be one I will targeting for.

93. Why do you want to work for this company?

Answer: (This is a tricky question. They want to know what really interests you and you have to be careful when you answer this question. You must admire the line of that company. For example, if you are being interviewed by a pharmaceutical company, then tell them that you are always interested in the medical applications and the better part of your company is that it has exciting products that I am really curious to learn. That's why I would feel really great if I am given the opportunity to work in your company)

94. Did you get any compliments from your previous employers? What were those situations?

Answer: Yes. I did. There were many occasions where I had compliments. For example, I was testing an application going a little bit off my test cases. After I finished executing my test cases, I always think in a way what a real user would possibly click in various parts of the application. So I was just clicking back and forth and at one specific scenario, the application simply broke and displayed an error message. That scenario was not in the test cases. The manager really appreciated me and thanked for finding this kind of critical defect. Answer: Yes. I did. There were many occasions where I had compliments. For example, I was testing an application going a little bit off my test cases. After I finished executing my test cases, I always think in a way what a real user would possibly click in various parts of the application. So I was just clicking back and forth and at one specific scenario, the application simply broke and displayed an error message. That scenario was not in the test cases. The manager really appreciated me and thanked for finding this kind of critical defect.

What are your strengths?

Answer: I am a very detailed oriented person. I have the sense of urgency. I can prioritize my job according to the deadline. I am very much dedicated towards my job. I am honest. I have the skills and expertise in QA process. These are some of my strengths.

What is your weakness?

Answer: I think my weakness is that whenever I am given some responsibilities and there is a deadline for it, I work day and night, 7 days a week. This is probably bad for my family life, but I can't sleep unless I am done with my assignments.

(Note: You should think of your weakness where because of your weakness (like the one above), still the employer benefits. DON'T SAY anything negative thing, like "I cannot work long hours, it is hard for me to pick up things, it is difficult for me to understand requirement documents etc)

89. What is your goal?

Ans: My goal in the next 4 years is to be a QA Manager.

90. What is RTM (Requirement Traceability Matrix)?

Answer – Tractability matrix is used to cross check the test cases as per the requirement of the test cases. In other words, it checks whether the each functionality is covered in the Test Cases as per requirement document. (We create RTM using Quality Center tool)

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