SFDC Development Interview Questions

01. What is Apex?

Apex is a strongly typed, object-oriented programming language that allows developers to extend the Salesforce platform by writing their own business logic into the platform. Apex looks similar to Java and can be launched through a variety of user-initiated events such as record updates, button clicks, triggers on objects, or external web service requests.

02.What is SOQL used for?

SOQL stands for Salesforce Object Query Language. It is very similar to the widely used language SQL (Structured Query Language), to query databases. SOQL is specifically designed for Salesforce data and is used to query the Salesforce platform to retrieve data. SOQL is used within Apex & Visualforce to return sets of data.

03. What options are available to you for deploying from a Sandbox to Production?

There are various ways to deploy from Sandbox to Production. The main way is to use a Salesforce feature called Change Sets. These allow you to package up components and then deploying them to another Salesforce Org. There are various other methods including ANT MIgration Tool, Force.com IDE and Unmanaged packages.

04. Can you customise Apex & Visualforce directly in a production org?

Apex cannot be customised in a production Org, it must be changed and deployed through a sandbox and meet test coverage. Visualforce, on the other hand, may be customised directly in production (Although this is not best practice)

05. What are the two options for when Apex Triggers can run?

Apex Triggers can either run before a record has been saved of after. A before operation is usually used to verify information that is going to be inserted, and

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

after trigger is used to access data that has previously been entered by a user or system.

06. When should Apex be used over Workflow rules or Process Builder?

There are various reasons why you should use Apex over declarative automation options:

- *Workflow rules and Process Builder operations sometimes have feature limitations that can be overcome with Apex. For example, pulling information from an external system.*
- *When dealing with certain or large sets of data, Apex can be more efficient than declarative options due to less limitations.*

07. What are Governor Limits? Can you name 3 examples?

Salesforce runs on a multitenant environment which means resources (Storage, CPU, Memory) are shared with other companies on the Salesforce platform. This means limits must be in place to ensure that all companies using the Salesforce architecture abide by certain rules and don't let their code or processes monopolize shared resources. A few examples of Governor Limits are:

- *Total number of records retrieved by a SOQL query – 50,000*
- *Total number of SOQL queries issued – 100 (Synchronous) 200 (Asynchronous)*
- *Total number of DML statements issued – 150*
- *Total number of callouts (HTTP requests or Web services calls) in a transaction – 100*
- *Maximum CPU time on the Salesforce servers – 10,000ms (Synchronous) 60,000ms (Asynchronous)*

08. What is Apex test coverage? What's the minimum test coverage required to deploy?

To ensure that your code meets certain standards, Apex Code coverage shows you how many executable lines of code in your classes and triggers have been exercised by test methods. Code coverage percentage is a calculation of the number of covered lines divided by the sum of the number of covered lines and uncovered lines. The minimum test coverage required to deploy to production is 75%

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

09. What are some Apex best practices?

- *Bulkify your code*
- *Avoid SOQL Queries or DML statements inside FOR Loops*
- *Avoid Hardcoding IDs*
- *Use of the Limits Apex Methods to Avoid Hitting Governor Limits*
- *Querying Large Data Sets*

10. What is an Apex Email Service?

You can use email services to process the contents, headers, and attachments of inbound emails. For example, you can create an email service that automatically creates contact records based on contact information in messages

11. What are the different type of Collections you can have in Apex?

There are three main types of collections…

- *Lists – A list is an ordered collection of elements that are distinguished by their indices. List elements can be of any data type—primitive types, collections, sObjects, user-defined types, and built-in Apex types.*
- *Sets – A set is an unordered collection of elements that do not contain any duplicates. Set elements can be of any data type—primitive types, collections, sObjects, user-defined types, and built-in Apex types.*
- *Maps – A map is a collection of key-value pairs where each unique key maps to a single value. Keys and values can be any data type—primitive types, collections, sObjects, user-defined types, and built-in Apex types.*

12. What is Visualforce?

Visualforce is the component-based user interface framework for the Force.com platform. The framework includes a tag-based markup language, similar to HTML. Each Visualforce tag corresponds to a coarse or fine-grained user interface component, such as a section of a page, or a field. Visualforce boasts about 100 built-in components and a mechanism whereby developers can create their own components.

13. What is a Static Resource?

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

Static resources allow you to upload content that you can reference in a Visualforce page, including archives (such as .zip and .jar files), images, style sheets, JavaScript, and other files.

14. What is the difference between a standard and custom controller?

Standard Controllers are generated automatically for all standard pages. They provide you with all the functionality that a standard page contains, such as editing or saving a record.

Custom Controllers can be written by a developer to override the standard functionality that a standard controller provides on a Visualforce page.

15. What is a Lightning Component?

The Lightning Component framework is a UI framework for developing dynamic web apps for mobile and desktop devices. It's a modern framework for building single-page applications engineered for growth. The framework supports partitioned multi-tier component development that bridges the client and server. It uses JavaScript on the client side and Apex on the server side.

16. Explain the use of an Outbound Message?

An outbound message is one automation function that can fire from a workflow rule. They can send a message to external web services which can contain field values, this can subsequently kick off additional processes in external systems.

17. What is a Connected App?

A connected app integrates an application with Salesforce using APIs. Connected apps use standard SAML and OAuth protocols to authenticate, provide single sign-on, and provide tokens for use with Salesforce APIs. In addition to standard OAuth capabilities, connected apps allow Salesforce admins to set various security policies and have explicit control over who can use the corresponding apps.

18. What is OAuth?

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

OAuth is an open standard for access delegation, commonly used as a way to grant websites or applications access to their information on other websites, but without giving them the passwords.

19. Can you give an example of a Salesforce API and it's usage?

Salesforce has a variety of API's that let you interact with the system in different ways..

REST – The REST API lets you integrate with Force.com applications using simple HTTP methods in either XML or JSON formats, making this an idea API for developing mobile applications or external clients.

Bulk – The Bulk API provides a programmatic access that lets you quickly load data into your Salesforce organisation.

Streaming – The Streaming API can be used to receive notifications for changes to Salesforce data that match a SOQL query you define. Streaming API is useful when you want notifications to be pushed from the server to the client based on criteria that you define

20. What are External ID fields used for?

Certain fields can be defined as an external ID on an object. These can be used in order to match up data from external systems with a unique reference ID. For example, if you need to match up data from an external accounting system to the Accounts in Salesforce, you can use an external ID field to reference the Accounting systems unique ID instead of the Salesforce ID.

21. What are Triggers in Salesforce? How are they different from Workflows?

Triggers in Salesforce are called **Apex Triggers**. These are distinct and are available specifically for common and expected actions like lead conversions. It is just a code that is executed before or after a record is inserted or updated.

A trigger is different from a workflow as the former is a piece of code; whereas, a workflow is an automated process and uses no code.

22. What is trigger.new?

Trigger.new returns a list of records that have been added recently to sObjects. The records that are yet to be saved in the database are returned. Only insert and update triggers have the sObject list, and records can only be modified in before.trigger.

23. What is the minimum test coverage required in order to deploy a trigger?

75 %

24. Differentiate between Salesforce Object Query Language and Salesforce Object Search Language.

- **Salesforce Object Query Language (SOQL)** lets us search only one object. We can query for all types of fields in SOQL. Data Manipulation Language (DML) operations can be performed on the query results.
- **Salesforce Object Search Language (SOSL)** lets us search for multiple objects. But, in SOSL, we can query only for texts, emails, and phone numbers. Also, DML operations cannot be performed on the search results.

25. What are the different methods of Batch Apex Class?

Database.Batchable interface contains three methods that must be implemented:

- Start method:

```
global (Database.QueryLocator | Iterable<sObject>) start(Database.BatchableContext bc) {}
```

- Execute method:

```
global void execute(Database.BatchableContext BC, list<P>){}
```

- Finish method:

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

```
global void finish(Database.BatchableContext BC){}
```

26. What are the different types of Collections in Apex?

Collections are the type of variables used to store multiple numbers of records (data). Types of collections in Salesforce are:

- Lists
- Maps
- Sets

27. What are Maps in Apex?

Maps are used to store data in the form of key–value pairs, where each unique key maps to a single value.

28. What is an Apex Transaction?

An Apex transaction represents a set of operations that are executed as a single unit. These operations include DML operations that are responsible for querying records. All the DML operations in a transaction either get completed successfully or get rolled back completely if an error occurs even in saving a single record.

29. What is the difference between Public Classes and Global Classes in Apex?

A global class is accessible across the Salesforce instance, irrespective of namespaces.

Whereas, public classes are accessible only in the corresponding namespaces.

30. What are Getter and Setter methods?

The get (getter) method is used to pass values from the controller to the VF page.

Whereas, the set (setter) method is used to set the value back to the controller variable.

31. Which fields are automatically indexed in Salesforce?

The following fields are automatically indexed in Salesforce:

- Custom fields marked as an external ID or a unique field
- Primary keys (ID, Name, and Owner fields)
- Audit dates (such as SystemModStamp)
- Foreign keys (Lookup or Master–Detail relationship fields)

32. What is Sandbox in Salesforce? What are the types of Sandboxes available?

Sandbox is a similar copy of a Salesforce production for testing, development, and training. The content and size of a sandbox may vary depending on the type of sandbox and the edition of the production organization which is associated with the sandbox. There are four types of sandboxes available:

- Developer Sandbox
- Developer Pro Sandbox
- Partial Data Sandbox
- Full Sandbox

33. What is Apex Class?

An apex class is a template from which Apex objects can be created. These classes consist of other classes, variables, user-defined methods, exception types, and the static initialization code.

34. Why use Batch Apex instead of Normal Apex?

There are various reasons why Batch Apex is better than Normal Apex.

- A Normal Apex uses 100 records per cycle to execute SOQL queries. Whereas, a Batch Apex does the same in 200 records per cycle. So, it is very fast when the execution of SOQL queries is considered.
- A Normal Apex can retrieve 50,000 SOQL queries but, in Batch Apex, 50,000,000 SOQL queries can be retrieved.
- A Normal Apex has a heap size of 6 MB; whereas, a Batch Apex has a heap size of 12 MB.
- When executing bulk records, Normal Apex classes are more vulnerable to encountering errors as compared to Batch Apex. The latter is normally error-less.

35. How can you call an Apex Class in Salesforce?

Ways to call an Apex class in Salesforce are as follows:

- From the Visualforce page
- From Developer Console
- From JavaScript links
- By using a trigger
- From another class
- From home page components

36. What is the difference between isNull and isBlank?
Answer: Use the ISBLANK() function for text fields. As text fields can never be NULL, even if nothing is provided as a value, ISNULL() function takes only an empty value. If ISNULL() is used with a text field then it returns false.

37. What is the use of SOQL? What are the differences between SOQL and SOSL?
Answer: The full form of SOQL is Standard Object Query Language. SOQL evaluates to a single sObject and a list of many sObjects or an integer for count method

queries. It is used to retrieve data from the Salesforce platform and resides inside Apex or Visualforce and returns a set of data.

The differences between SOQL and SOSL are given below.

SOQL	SOSL
It is possible to search only one subject at a time.	Multiple objects can be searched here at a time.
Uses "SELECT" keyword for retrieval of records from the database.	Uses "FIND" keyword for retrieval of record from database.
It allows to search only one table.	It allows to search multiple tables.
It allows to perform DML operations on query results.	It is not possible to perform DML on search results.
This is used in a query ( ) call.	This is used in a search ()call in the API.
This is used in classes and triggers.	This cannot be used in triggers.
Returns records.	Returns fields.

38. What are the options for deploying from Sandbox to Production org? What is an Outbound Change Set?

Answer: Various methods are adopted for deploying a sandbox to production. The main method is using the Change Sets. A Change Set enables to create and test a new object in the sandbox and then send that to the production org. It contains information on org and not on any data such as records.

The other methods to deploy sandbox to production org include Force.com IDE, unmanaged packages as well as ANT migration tools.

When sending customizations from current org to another org the Outbound Change Set is used. Once received by the receiving org it is called Inbound Change Set.

39. What is Data Skew in Salesforce?

Answer: The full form of SOQL is Standard Object Query Language. SOQL evaluates a condition in an enterprise when you require to work with say 10,000 records. A single user owns huge number of records and we call that as "ownership data skew" and it causes performance issues while updating in Salesforce.

40. What is the use of Custom Settings? What are the types of Custom Settings in Salesforce?

Answer: Custom Settings are similar to the custom objects. The developers create custom data and associate custom data for an organizational profile or a specific user.

The exposure of custom data settings to the application cache is beneficial due to the efficient access with no need for the cost of the repeated queries to the database. This data can be used by SOAP API, validation rule or formula field.

41. What is a Wrapper Class in Salesforce?

Answer: A Wrapper class is defined as a class and a data structure. It is an abstract data type which has its instances formed by a collection of objects.

The basic nature is that of a custom object and is defined by the Wrapper class properties. It allows records to be checked from a list and process them for a specific action.

42.What is the difference between WhoID and WhatID?

Answer: WhoID refers to people such as contact or leads. Whereas "What ID" refers only to objects.

43. Is it possible to edit Apex Class/Trigger in the Production Environment?

Answer: No, it is not possible. We cannot directly edit the Apex Class/Trigger in the production environment. It can be done only in the Developer edition, sandbox org or the testing org

44. What is Asynchronous Apex? What are its different types?

Answer: Asynchronous Apex is used to run processes that are scheduled at a later time. There are four types of Asynchronous Apex.

They are:
- Future Methods
- Batch Apex
- Queueable Apex
- Schedules Apex

45. How can we implement Pagination in Visualforce?

Answer: Pagination in Salesforce refers to displaying a large number of records that are spread across multiple pages. The list control displays 20 records per page, hence pagination is used to change the page size with controller extension.

46. How to call a Controller Method within a JavaScript?

Answer: To call a controller method (Apex function) from JavaScript, you need to use **actionfunction**.

47. What are the types of Bindings used in Salesforce?

Answer: There are three types of bindings used in Salesforce as shown below.
1. **Data Bindings:** It refers to the data set in the controller.
2. **Action Bindings:** It refers to the action methods in the controller.
3. **Component Bindings:** It refers to some other Visualforce components.

48. What is a Developer Console?

Answer: The Developer Console is an integrated development tool which has a collection of tools. These can be used to create, debug and test the applications in Salesforce.org.

49. What are Packages? What are the types of Packages? What are Managed Packages?

Answer: A package is a bundle/collection of a list of components or related applications.

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

There are two types of packages:
- Managed
- Unmanaged

Managed Packages are used to sell and distribute applications to clients. Developers can sell user-based licenses and applications through the AppExchange for the managed packages. These are fully upgradable. In the case of seamless upgrades, removal of objects or fields is performed.

50. What are the ways to deploy Metadata in Salesforce?
Answer:
The metadata in Salesforce is deployed in the following ways:
- Change Sets
- Eclipse with Force.com IDE.
- com Migration Tool – ANT/Java-based.
- Salesforce Package

51. Which tag is used to create a Button? Which tag is used for a URL link? Which is the tag for Password Protection?
Answer: The tag <apex: commandbutton> is used for the button. The tag used for URL link is <apex: outputLink>. The tag used for password protection is <apex: inputSecret>.

52. What is Obligatory Outer Tag? Which tag is used for displaying a video in the Visualforce?
Answer: The tag <apex: page> is the obligatory outer tag. The tag<apex: flash> is used to display a video in the Visualforce.

53. How to display a Chatter Feed Record?
Answer: <chatter:feed> is the component that is used for the display of chatter feed.

54. Explain Exception Catch in a Program.

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

Answer: Java has inbuilt exception handling and the normal code goes into the TRY block and the exception handling code into the CATCH block.

55. What is an Access Modifier in a Program?

Answer: Apex uses access modifiers for defining methods and variables. These are private, protected, global or public access modifiers

56. Which operation does not have Undelete?

Answer: The before operation does not have Undelete.

57. What is the use of Blob Variable?

Answer: Blob is a data type that is meant to collect binary data. Tostring() is a method that converts the blob back into a string.

58. Which Platform is used for developing an App in Salesforce?

Answer: The force.com platform is used for developing an App in Salesforce.

59. What are Primitive Data Types?

Answer: Integer, Double, Long, Date, Date-Time, String, ID, Boolean, etc., are some of the examples of primitive data types. These are passed by value and not by reference.

60. What does the Data Wrapper Class contain?

Answer: This contains abstract, structured and collection data.

61. How long is Bit Variable for a long statement?

Answer: The long statement has 64-bit.

62. What are the development tools for Apex?

Answer: The development tools for Apex are Force. Com Developer Tools, Force. Com IDE and Code Editor, MS Visual Code.

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

63. What is the use of Debug Log?

Answer: Debug Log is used for catching the exception.

64. Can we reference Standard Controller and Controller Attribute at the same time?

Answer: No, it is not possible to reference both the Standard Controller and the Controller at the same time. Use the reference attribute to reference the standard controller with a custom controller.

65. What is the Development Mode? When do we enable the Development Mode? How do we do it?

Answer: The best way to build Visualforce pages is to enable the development mode. It makes it easy to simultaneously view the code and output.

The Development Mode helps in:

- Define new Visualforce pages by entering a new URL.
- Error messages containing detailed stack traces than what is received by the standard users.
- Displays a footer with the page's view state, a link to component reference documentation, and any associated controller link.
- Offers Page Markup Editor for highlighting find-replace functionality as well as auto-suggest for attribute names and component tags.

66. Why do You write Test Classes?

Answer: Test classes refer to the maximum lines of code covered when your execution takes place. If you want to develop a robust and error-free code, then the test classes are used as a tool for testing your code. It ensures that if any Apex customization has to be deployed in your org, then it will operate properly.
Every test class will be annotated with @isTestkeyword. In fact, we must annotate a test class with @isTest, for defining as a test class. If the keyword testMethod is used within any method within a class, then it is called as a test method.

67. What is the Minimum Test Coverage that is required for Deployment?

Answer: At least 75 % of your Apex code must be covered by unit tests in Salesforce, and all these tests must be completed successfully.

68. What are the different ways of Salesforce Deployment?

Answer: Salesforce code is deployed with:
- Salesforce packages
- Change Sets
- Com Migration Tools
- Eclipse with Force.com IDE (Decommissioned)
- MS Visual Code

69. What is the trigger?

The trigger is the code that is executed before or after the record is updated or inserted.

70. What is the difference between Trigger and Workflow?

Workflow is an automated process that fires an action based on evaluation criteria and rule criteria. As described above, Trigger is the code that is executed on or after the record is updated or inserted.

71. Why are Visualforce pages served from a different domain?

Visualforce pages are served from a different domain to improve security standards and block cross site scripting.

72. Which fields are automatically Indexed in Salesforce?

Only the following fields are automatically indexed in Salesforce:

- **Primary keys** (Id, Name and Owner fields).
- **Foreign keys** (lookup or master-detail relationship fields).
- **Audit dates** (such as SystemModStamp).
- **Custom fields** marked as an External ID or a unique field.

73. How many callouts to external service can be made in a single Apex transaction?

Governor limits will restrict a single Apex transaction to make a maximum of 100 callouts to an HTTP request or an API call.

How can you expose an Apex class as a REST WebService in Salesforce?

You can expose your Apex class and methods so that external applications can access your code and your application through the REST architecture. This is done by defining your Apex class with the **@RestResource** annotation to expose it as a REST resource. You can then use **global classes** and a **WebService callback method**.

74. How can you call a controller method from JavaScript?

To call a controller method (Apex function) from JavaScript, you need to use **actionfunction**.

75. How to get the UserID of all the currently logged in users using Apex code?

You can get the ID's of all the currently logged in users by using this global function: **UserInfo.getUserId()**.

76. How many records can a select query return? How many records can a SOSL query return?

The Governor Limits enforces the following:-

Maximum number of records that can be retrieved by SOQL command: 50,000.

Maximum number of records that can be retrieved by SOSL command: 2,000.

77. What is the use of "@future" annotation?

Future annotations are used to identify and execute methods asynchronously. If the method is annotated with "**@future**", then it will be executed only when Salesforce has the available resources.

78. What is MVC Architecture?

When a Custom Object is created in Salesforce and a VF is created to display the details of the record of the custom object using controller. In this scenario, We

observer three parts

"Object Creation", "Visualforce Page", "Controller".

- Object Creation is a Part of "Model".
- Visualforce Page is a Part of "View"
- Controller is a Part of "Controller"

79. What are the various event on which a trigger can fire?
A trigger is a set of statement which can be executed on the following events. In above trigger events one or more of below events can be used with comma separated.

- before insert
- before update
- before delete
- after insert
- after update
- after delete
- after undelete

80. What are different type of Triggers?
There are two types of triggers:

- **Before triggers** are used to perform a task before a record is inserted or updated or deleted. These are used to update or validate record values before they are saved to the database.
- **After triggers** are used if we want to use the information set by Salesforce system and to make changes in the other records. are used to access field values that are

set by the system (such as a record's Id or LastModifiedDate field), and to affect changes in other records. The records that fire the *after trigger* are read-only.

What are the considerations while implementing the Triggers?

Consider the following before implementing the triggers.

- Upsert trigger fires on 4 different events :- before(insert, update), after (insert, update)

- Merge trigger are fired on both events on delete

- Field history is updated after the trigger has successfully finished processing data.

- Any callout should be asynchronous so that trigger does not have to wait for the response.

- A trigger cannot have a static keyword in its code.

- If a trigger completes successfully the changes are committed to the database and if it fails the transaction is rolled back.

81. What are **context** variables in triggers?
All triggers define implicit variables that allow developers to access run-time context. These variables are contained in the System.Trigger class.

82. How is Trigger.New Different from Trigger.newMap?
Trigger.New variable returns the list of sObject which has invoked the trigger and Trigger.NewMap returns the map of ID's with the newly entered records. NewMap is only available in after insert, before and after the update and after undelete.

83. How is Trigger.new different from Trigger.old?
Trigger.New variable returns the list of sObject which has invoked the trigger and Trigger.old returns a list of the older versions of the records which have invoked the trigger. Trigger.Old is only available in update and delete events

84. Can a trigger call a batch class?
Yes, we can call a batch class in the trigger as we do in the normal apex code.

85. Can a trigger make a call to Apex callout method?

we can call a callout method in Apex Trigger but the only condition is that it has to be an asynchronous callout because the trigger flow cannot wait on the response received by the callout method.

86. Define Recursive Trigger and how to avoid it?

There is a possibility that the result of the trigger can end up calling the same trigger again and can run in a loop, this is known as a recursive trigger. To avoid this scenario we should create a static variable and check the value of this variable before we execute anything in the trigger.

87. What do you mean by the bulkifying trigger?

A trigger should be able to handle single record and thousands of record. There are two important point for it:

- Write triggers that operate on collections of sObjects.
- Write triggers that perform efficient SOQL and DML operations.

  If we will not follow above point we may hit governor limit when records are created/updated/deleted in mass using data loader or other tool.

88. Is there any limit on number of triggers define on an object?

We can define as many triggers on an object as we want but **it is recommended to have one trigger per object** because the order of execution of different trigger is not guaranteed and any trigger can fire first.

89. Can you explain the order of execution in Triggers?

Following is the order of execution of events which Salesforce perform before a DML Event.

1. The record is loaded from the database or is initialized in case of upset statement.

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

2. New record's field values are overwriting the old values, now depending on the origin of the request this flow varies: if the request is from a UI page then the following validations are performed by Salesforce:

1. Any layout specific rules are checked

2. All the required values are checked at layout and field level

3. All the field formats are validated along with the maximum length of field values

   If the request originates other than UI then Salesforce only checks for Validation of foreign keys.

3. Now all the before triggers are executed at the database.

4. Most of the validations are performed again to verify that all the required fields are holding some values and are not null, at this step user defined validations are also executed and the only validation which is not repeated in this step are the rules specific to the layout.

5. After the success of the previous step, the record is reviewed for duplicate records, by running the duplicate rule. If a duplicate is found the flow is stopped and no further actions performed.

6. In this step, record is saved to the database but it not committed yet.

7. Now all the after Triggers are executed.

8. In this step, assignment rules are executed.

9. Now if there is any auto-response rule is present then they are executed.

10. Next in the queues are the workflow, they are executed after the auto response.

11. If the workflow was updating a field, then the fields updated in this step and the flow after this step varies if this was the case.

12. If a field was updated then the before and after update triggers are fired once more and standard validation are also executed again. Custom validation escalation rule and duplicate rules are not required to run again.

13. Once the execution has reached this stage, then process is fired if there are any declared on the object.

14. Now the escalation rules are executed.

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

15. Entitlement rules are executed if any.
16. If there are any roll-up summary field, then they are calculated at this step and the parent object go through the save process.
17. Now the sharing rules are executed.
18. If we reach this stage, then that means no error has occurred and the data is ready to be committed to the database and is committed now.
19. Now if there is any post-commit logic like email, then that is executed.

90. How to restrict trigger to fire only once(Recursive trigger)?

Recursion occurs when your trigger fires again and again.
The situation such as when you are using after update trigger and updating parent record and again on parent record, there is a trigger which updates child records. It can lead to an infinite loop.

91. What is the use of trigger.isexecuting?
Suppose we have a method in apex class and we want this method to run only when the method is getting called from apex trigger than we can make use of trigger.isexecuting in apex class to check if the method is getting called from trigger .

92. What is the difference between database.insert and insert?

Using insert if one record fails entire operation is stopped and none of the record is inserted into database, whereas with databse.insert partial insertion is supported.

93. What are the context variable available with before insert event?

Only Trigger.new is available.

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

94. What are the context variable available with after insert event?

Trigger.new and Trigger.newMap.

95. What are the context variable available with before update event?

Trigger.new, Trigger.old, Trigger.newmap and Trigger.oldmap

96. What are the ontext variable available with after update event?

Trigger.new, Trigger.old, Trigger.newmap and Trigger.oldmap

97. What are the context variable available with before delete event?

Trigger.old and Trigger.oldMap.

98. What are the context variable available with after delete event?

Trigger.old and Trigger.oldMap.

99. What are the context variable available with after undelete event?

Trigger.new and Trigger.newMap.

100. What is the condition to call a method from trigger which is making callout?

The callout should be asynchronous.

101. In Which object all Apex Triggers are stored?
Answer: ApexTrigger

102. What is an abstract class?
Answer: Abstract classes will be classes that contain at least one dynamic strategies. A conceptual technique is a strategy that is pronounced however

contains no usage. Unique classes may not be instantiated, and expect subclasses to give usage to the theoretical techniques.

103. How to insert value to a parent and child element at the same time?
Answer: Use triggers.

104. What is the page reference?
Answer: A Page Reference is a reference to an instantiation of a page. Among different characteristics, Page References comprise of a URL and an arrangement of inquiry parameter names and qualities.

105. How do you pass the parameters from one apex class to another to another?
Answer: You can simply pass the parameters through the URL.

106. What are outbound messages? what it will contain?
Answer: In outbound message contains the endpoint URL.

107. What is a virtual class?
Answer: In protest situated programming, a virtual class is a settled inward class whose capacities and part factors can be abrogated and reclassified by subclasses of the external class. Virtual classes are closely resembling virtual capacities.

108. What is overloading?
Answer: Over-burdening alludes to the capacity to utilize a solitary identifier to characterize numerous techniques for a class that contrasts in their information and yield parameters. Over-burden techniques are for the most part utilized when they reasonably execute a similar undertaking yet with a somewhat unique arrangement of parameters.

109. What is overriding?

Answer: Abrogating is a protest situated programming highlight that empowers a tyke class to give diverse usage to a strategy that is as of now characterized and additionally actualized in its parent class or one of its parent classes. The overriding technique in the kid class ought to have a similar name, mark, and parameters as the one in its parent class.

110. Onchange Event Does Not Work With <apex:actionsupport> In Ie9. How To Resolve This Error?

Answer :

If we add the Header on Visualforce page then it creates lots of problem in IE9. I think there are few java-script library loaded by Header of Salesforce which makes IE9 compatible. So the best solution is to enable the Header by using "showHeader=true" in Apex page.

111. What is Queueable Apex?

It's an extension of the Future Methods. It uses the Queueable interface which is an enhanced way of running your asynchronous Apex code compared to using future methods. The limitations which Future methods have, through Queueable Apex, we can overcome them.

112. How does Queueable Apex differ from Future methods?

Queueable Apex is similar to future methods in that they're both queued for execution, but they provide us these additional benefits.

When you queue a Queueable Apex, you get a job ID, that can be used to trace it easily, which is not possible in case of future methods.

You can use non-primitive datatypes in Queueable Apex, like objects and sObjects, which is not possible in case of future methods, because it supports only primitive data types as params.

You can chain jobs, by calling another starting a second job from a running job, which is not possible in case of future methods, because we can't call another future method from a future context.

---

113. Can you write a sample Queueable Job?

Create a class, implement the Queueable interface, and override the execute method.

```
public class QueueableApexExample implements Queueable {
   public void execute(QueueableContext context) {
      //some process
   }
}
```

---

114. What is QueueableContext?

It is an interface that is implemented internally by Apex, and contains the job ID. Once you queue the Queueable Job, the Job Id will be returned to you, by apex through QueueableContext's getJobId() method.

---

115. How can I queue above Job(QueueableApexExample)?

Using System.enqueueJob Method.

```
ID jobID = System.enqueueJob(new QueueableApexExample());
```

---

116. How can I use this Job Id to trace the Job?

Just perform a SOQL query on AsyncApexJob by filtering on the job ID.

```
AsyncApexJob jobInfo = [SELECT Status,NumberOfErrors FROM AsyncApexJob WHERE Id=:jobID];
```

---

117. I have 200 records to be processed using Queueable Apex, How Can I divide the execution Context for every 100 records?

Similar to future jobs, queueable jobs don't process batches, so you can't divide the execution Context. It will process all 200 records, in a single execution Context.

---

118. Can I do callouts from a Queueable Job?

Yes, you have to implement the Database.AllowsCallouts interface to do callouts from Queueable Jobs.

---

119. How Chaining works in Queueable Apex?

Chaining allows us to customize the execution order of a set of jobs in a process.

let's say there are N jobs, A, B, C and so on. We have a process in which A has to run first and gives output to B and then B runs and gives output to C and so on. So, instead of calling the individual Queueable Jobs explicitly, we can link the calls, logically within Queueable Jobs,

---

120. How many numbers of jobs, can be chained at a time?

You can add only one job from an executing job, which means that only one child job can exist for each parent job.

Since, no limit is enforced on the depth of chained jobs, you can chain one job to another. You can repeat this process with each new child job to link it to a new child job.

---

121. How many numbers of jobs, I can queue using System.enqueueJob() at a time?

Interviewee: You can add up to 50 jobs to the queue with System.enqueueJob in a single transaction in Synchronous apex. In asynchronous transactions, you can add only one job to the queue.

---

122. Interviewer: Can I chain a job that has implemented allowsCallouts from a Job that doesn't have?

Yes, callouts are also allowed in chained queueable jobs.

---

123. Can I call Queueable from a batch?

Yes, But you're limited to just one System.enqueueJob call per execute in the Database.Batchable class. Salesforce has imposed this limitation to prevent explosive execution.

---

124. If I have written more than one System.enqueueJob call, what will happen?

System will throw LimitException stating "Too many queueable jobs added to the queue: N".

---

125. How can we handle this error, without using a try-catch?

We can check whether the current count of queuable jobs has exceeded the limit or not, if not, queue them.

Limits.getQueueableJobs() returns the currently queued jobs count.

Limits.getLimitQueueableJobs() returns the limit.

If(Limits.getQueueableJobs() < Limits.getLimitQueueableJobs()) {
//System.enqueueJob()}

---

126. I have a use case to call more than one Queueable Jobs from a Batch apex, how can I achieve it?

Since we can't call more than one Queueable Job from each execution Context, We can go for scheduling the Queueable Jobs.

127. how to test a Queueable Job?

A queueable job is an asynchronous process. To ensure that this process runs within the test method, the job is submitted to the queue between the Test.startTest and Test.stopTest block.

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

Also, The ID of a queueable Apex job isn't returned in test context —
System.enqueueJob returns null in a running test.

---

128. how to test Chaining?

You can't chain queueable jobs in an Apex test. So you have to write separate test
cases for each chained queueable job. Also, while chaining the jobs, add a check
of Test.isRunningTest() before calling the enqueueJob.

public class A imple

129. Whenever case is created send email to case owner. How to do that?1

We can do it using workflow.

130.How to call Future methods from Process Builder?

To call Future methods from Process Builder, call the future method from the
invocable method.

131.What is System.RunAs?

Generally, all Apex code runs in system mode, where the permissions and record
sharing of the current user are not taken into account. The system
method runAs enables us to write test methods that change the user context to an
existing user or a new user so that the user's record sharing is enforced.

The runAs method doesn't enforce user permissions or field-level permissions,
only record sharing.We can use runAs only in test methods

132. What are Mixed DML Exception?

This error means that two Sobjects(setup & non-setup) that we are using in our
code can not mix during the same transactions.This restriction exists because some
sObjects affect the user's access to records in the org.

For example, We cannot insert an account and then insert a user or a group
member in a single transaction.

To avoid this error, we should perform DML operation on standard/custom object records in a different transaction.

133. What are the solutions for Mixed DML Operartion?

Solution For Mixed DML Operartion.

1. Separate the Setup object and Non-Setup object dml operation using Future Method.
2. System.RunAs : Enclose mixed DML operations within System.runAs blocks to avoid the mixed DML error in test class.

134. Difference between before and after trigger?

Before triggers can be used to update or validate record values before they are saved to the database.

Use Before Trigger:In the case of validation check in the same object.
Insert or update the same object.

After triggers can be used to access field values that are set by the database (such as a record's Id or lastUpdated field) and to affect changes in other records, such as logging into an audit table or firing asynchronous events with a queue.Use After Trigger:Insert/Update related object, not the same object.
Notification email.

NoteWe cannot use After trigger if we want to update a record because it causes read only error. This is because, after inserting or updating, we cannot update a record.

135. What are the best practice in avoiding Trigger Recursion?

1. One Trigger Per Object

2. Logic-less Triggers – use Helper classes to handle logic.

3. Code coverage 100%

4. Handle recursion – To avoid the recursion on trigger,we should make sure our trigger is getting executed only one time.

136. What are scenarios where we can use without sharing?

Without Sharing

1.If we have VF page in which we are showing "Sales Rep Performance" which displays a flag in red, green and yellow. Now ideally this field should not be visible whenever a Sales Rep accesses this page. But it is always visible if the class has no keyword specified or if a class has without sharing specified.

2.We want to use apex class globally for integration purspose,then we can use without sharing.

137. Is apex class always execute in system context?

Yes,apex class always execute in system context i.e. Apex code has access to all objects and fields irrespective of the logged in User.

138.What are the considerations while using with sharing?

If the class is not declared as With Sharing or Without Sharing then the class is by default taken as Without Sharing.

Both inner classes and outer classes can be declared as With Sharing.

If inner class is declared as With Sharing and top level class is declared as Without Sharing, then by default entire context will run in With Sharing Context.

If a class is not declared as With/Without Sharing and if this class is called by another class in which sharing rules is enforced then both the classes run with With Sharing.

Outer class is declared as With Sharing and inner class is declared as Without Sharing, then inner class runs in Without Sharing Context only(Inner class don't take the Sharing properties from outer class).

139. What is the difference between apex managed sharing and with sharing?

Apex Managed Sharing is used to grant the access to the records.It is about pro grammatically configuring sharing rules. Keyword "With Sharing" is used to respect the current user sharing rule.

140. What are considerations while using apex managed sharing?

If record owner changes, then sharing created through apex managed sharing are maintained but if user share record manually, then record sharing will be lost if owner changes.

User with "modify All Data" can only add, edit or delete records in share table.

141.What are the limitations of manual sharing?

Manual Sharing cannot be stricter than Organization Wide Defaults.

Manual Sharing is only available on individual records, it is not available for all records of a certain object.

Only applicable on records that have Private or Public Read Only access in OWD.

When setting Automatic and Manual Sharing users and admins should define if the security should be extended to related records.

142.What is database.savepoint?

database.savepoint is a method which is used to define a point which can be roll back to. If any error occurs during a transaction, that contains many statements, the application will roll back to the most recent savepoint and the entire transaction will not be aborted.

143.What are the considerations while using save point?

If you set more than one savepoint, then roll back to a savepoint that is not the last savepoint you generated, the later savepoint variables become invalid.

References to savepoints cannot cross trigger invocations, because each trigger invocation is a new execution context. If you declare a savepoint as a static variable then try to use it across trigger contexts you will receive a runtime error.

Each savepoint you set counts against the governor limit for DML statements.

144.What is database.rollback?

Rollback is an operation which returns the database to some previous state. Rollbacks are important for database integrity, because they mean that the database can be restored to a clean copy even after erroneous operations are performed.

145.How to deactivate a validation for a particular user in production?

For deactivating for a particular user we will use hierarchy Custom Settings: A type of custom setting that uses a built-in hierarchical logic that lets us personalize settings for specific profiles or users.

146.What is external ID?

An external ID is a custom field that has the "External ID" attribute, meaning that it contains unique record identifiers from a system outside of Salesforce.

147.What is the use of external Id?

1.It is mainly use for integration purpose.

2.The field becomes searchable in the sidebar search.

3.We can use the upsert API call with the external ID to refer to records.

148.What is Unique ID?

Every Record, regardless of entity type, has a globally unique identification value in its ID field which is generated at the time of record creation. That Record ID value will never change, even if the record is deleted and then undeleted.

149.Why and How to Convert a 15-character Id to an 18-character Id?

We can convert 15 character IDs to 18 character IDs to update records, or to make it easier to work in systems that aren't case sensitive. Create a formula that will give you the 18-character Id of records.

150.What is custom login flows?

Login flow is powerful solution for organization. Flow designer is a point-and-click tool that lets you automate business processes by building flows.

Common uses cases includes

Collecting and updating user data at login

Configuring two-factor authentication

Integrating third-party strong authentication methods.

151.What is TOTP?

TOTP is time-based one-time password. We can use login flow that enhances TOTP authentication with a two-factor authentication method that Salesforce supports. The TOTP algorithm computes a one-time password from a shared secret key and the current time.

Users can use a time-based authentication application (such as Salesforce Authenticator or Google Authenticator) to scan the QR code and generate a TOTP token.

152.What is InvocableMethod Annotation?

This annotation lets us mark an Apex method as being something that can be called from somewhere other than Apex.

153.Can we call apex class from process builder?

Yes we can call an apex class from process builder. To call an Apex method, add the Call Apex action to your process and select an Apex class with a @invocable method Annotation.

154.What are limitation of outbound messages?

We have outbound messages as one of the Actions for workflows.This works if other party implements the WSDL that is generated once Outbound messaging is defined with appropriate end point .

155.What is the best approach of making callout to external web services?

Future method invoked through triggers allowed to do apex callouts and invoke external web service provided the future method is annotated with @future(callout=true).This provides lot of flexibility and one of the best approaches.

156.Can we make callout directly from trigger?

No we cannot. Callout is a Asynchronous process where as Trigger is Dynamic / Synchronous. Callouts would hold up the database transaction until the callout completed, which can be up to 120 seconds from a limits perspective. This could cause significant contention with other transactions and impact performance. That means it is not directly possible to do a web service callout from a trigger. But using @Future annotation we can convert the Trigger into a Asynchronous Class and we can use a Callout method.

156.What are setup objects?

Setup objects are those which interacts with metadata All other object (Standard and Custom) are non setup object.

157.What are use cases of future method?

Make a callout to external web services

 Avoid MIXED_DML_OPERATION exception

158.What are the considerations while using future method?

Methods with the future annotation must be static

It can only return void data type.

The parameter must be primitive data types, arrays of primitive data types, or collections of primitive data types.

159.Difference between static and non static members of the class?

Static

Static means that it's a variable/method of a class which belongs to the whole class but not to one of its certain objects. This means that static keyword can be used only in a 'class scope'. We can access those members from outside the class also using the class name without instantiating a new instance of the class

Examples of static methods could be convert millimeters to centimeters, subtract two numbers, and convert String to uppercase

Non-static

Non-static method (and variables) must have a new instance of the class instantiated in order to be used. Typically these rely on data inside the class that then is referred to inside the class.

Examples of non-static methods include

lead convert, delete opportunity, and edit contact.

160.What is the difference between keyword and literal?

Keyword- Reserved word having specific meaning. The words which have meaning already defined. We cannot use keyword to define variable.

Literal – The name which we give. Like variable name.

161.Can we declare static variable inside method?

We can not declare variable as static inside a method.

162.What are access modifiers in apex?

Apex allows you to use the private, protected, public, and global access modifiers when defining methods and variables.

Private: The method or variable is accessible only within the Apex class in which it is defined. Note: By default all variables are private.

Protected: The method or variable is visible to any inner classes in the defining Apex class, and to the classes that extend the defining Apex class

Public: The method or variable can be used by any Apex in this application or namespace.

Global: The method or variable can be used by any Apex code that has access to the class, not just the Apex code in the same application.

163.What is Recursion ?

Recursion occurs when same code is executed again and again. It can lead to infinite loop and which can result to governor limit sometime.

164.How to avoid recursion?

To avoid the situation of recursive call, we have to write code in such a way that the trigger will execute one time. To do so, we can create a class with a static Boolean variable with default value true.

165.What is With sharing and without sharing?

With Sharing: It means "with Security Settings enforced".If you declare a class as a With Sharing, Sharing rules given to the current user will be taken into the consideration. This, pertains to only respecting OWDs and Sharing Rules. We cannot "automatically" enforce field level security or profile permissions with "with sharing,"

Example

public with sharing class sharingClass

Without Sharing:If you declare a class as a Without Sharing, then this Apex class runs in system mode which means Apex code has access to all the objects and field

irrespective of current users sharing rules, field level security and Object permissions.

166.What will happen if SOQL query is written in for loop to access Custom Metadata Candidate Response?

It will hit the governor limit.There is a governor limit that enforces a maximum number of SOQL queries.
When queries are placed inside a for loop, a query is executed on each iteration and governor limit is easily reached.

167.What is the difference between insert and database.insert?

Insert

Partial insert is not supported.

Roll back is not supported.

If we use the DML statement (Insert) in bulk operation, then if error occurs the execution will stop. In that case Apex code throws an error and none of the record will insert to the database.

Database.Insert

Database methods are static methods available in Database class.

Partial insert is supported.

Roll back is supported.

Includes the optional all or None parameters that defaults true.

If we use DML database methods (Database.Insert) in bulk operation, then if error occurs the remaining records will be inserted/updated means partial DML operation will be done. The only record throwing an error will not be inserted/updated.

Example: If we are inserting 10 records in an object, Where 5 records are correct and remaining 5 records are incorrect.

In DML statement (Insert) all the 10 records will be failed, because if one record is incorrect or error means all other remaining records will not be inserted. It will throw error.

In Database.insert 5 records will be inserted, remaining 5 records will be failed.(i.e. Partial DML Operation).

168.Can we use DML operation on before and trigger?

When we use before insert operation records are not committed to database.Here we dont need DML operations as whatever values we give in our code is automatically assigned to that record.

After Triggers, the record is already committed to the database hence we need an extra DML operation to reflect any changes.

169.How can we monitor batch job?

We can monitor a Bulk API job in Salesforce. The monitoring page tracks jobs and batches created by any client application.

170.Can we deactivate trigger in production?

We can do it using custom settings. We can create custom settings where we have checkbox field which will refer in the trigger and modify that record value to make it active or inactive.

171.What is difference between trigger and workflow?

Workflow

Workflow is automated process that fired an action based on Evaluation criteria and rule criteria.

We can access a workflow across the object.

We cannot perform DML operation on workflow

We cannot query from database

Trigger

Trigger is a piece of code that executes before or after a record is inserted or updated.

We can access the trigger across the object and related to that objects

We can use 20 DML operations in one trigger.

We can use 20 SOQL's from data base in one trigger.

172.What is Difference between SOQL and SOSL?

SOQL(Salesforce Object Query Language)

Using SOQL we can Search only on one object at a time.

We can query on all fields of any datatype

We can use SOQL in Triggers and classes.

We can perform DML operation on query results.

SOSL(Salesforce object Search Language)

Using SOSL we can search on many objects at a time.

We can query only on fields whose data type is text,phone and Email.

We can use in classses but not in Triggers.

We cannot perform DML operation on search result

173. What are best practices of using trigger?

1) One Trigger Per Object
We should write single Apex Trigger per object. If we develop multiple Triggers for a single object, we have no way of controlling the order of execution if those Triggers can run in the same contexts.

2) Logic-less Triggers
If we write methods in our Triggers, those can't be exposed for test purposes. We also can't expose logic to be re-used anywhere else in your org.

3) Context-Specific Handler Methods
Create context-specific handler methods in Trigger handlers

4) Bulkify your Code
Bulkifying Apex code refers to the concept of making sure the code properly handles more than one record at a time.

5) Avoid SOQL Queries or DML statements inside FOR Loops
An individual Apex request gets a maximum of 100 SOQL queries before exceeding that governor limit. So if this trigger is invoked by a batch of more than 100 Account records, the governor limit will throw a runtime exception

6) Using Collections, Streamlining Queries, and Efficient For Loops
It is important to use Apex Collections to efficiently query data and store the data in memory. A combination of using collections and streamlining SOQL queries can substantially help writing efficient Apex code and avoid governor limits

7) Querying Large Data Sets
The total number of records that can be returned by SOQL queries in a request is 50,000. If returning a large set of queries causes you to exceed your heap limit, then a SOQL query for loop must be used instead. It can process multiple batches of records through the use of internal calls to query and queryMore

8) Use @future Appropriately
It is critical to write your Apex code to efficiently handle bulk or many records at a time. This is also true for asynchronous Apex methods (those annotated with the @future keyword). The differences between synchronous and asynchronous Apex can be found

9) Avoid Hardcoding IDs
When deploying Apex code between sandbox and production environments, or installing Force.com AppExchange packages, it is essential to avoid hardcoding IDs in the Apex code. By doing so, if the record IDs change between environments, the logic can dynamically identify the proper data to operate against and not fail.

174.What is apex design pattern?

Singleton:

Repeated execution of a class within a single transaction may lead to exceed the governor limit. This pattern is to reduce repeated instantiation of a class.

Strategy:

Strategy pattern is to provide different solutions for the same problem at runtime.

Decorator:

This pattern is used to provide the additional functionality to the sObject using Apex code.

Bulk State Transition:

Implementing Bulk State transition ensure that the bulk action is performed based on the change of bulk record state.

175. How to use HTTP Callouts in batch class?

To use HTTP Callouts in batch class we need to use Database.allowcallouts in interface.

176. Difference between REST and SOAP API?

SOAP API:-

1)Supports data in the form of XML only

2)Requires WSDL for the integration

3)Use SOAP API in any language that supports Web services.

REST API :-

1)Supports both XML and JSON format

2)Preferred for mobile and web apps since JSON being Lighter the app runs smoother and faster

You can also use Apex SOAP and REST Web services to expose data from platform or allow an external application to invoke Apex methods.

177. While creating JavaScript button to execute anonymous apex, what should you keep in mind ?

Ans : End user must needs to have "Apex Author" permission and this is something should not be granted to end user. Also, while creating JavaScript button, user must be aware that its only supported in Salesforce classic and not in Salesforce Lightning.

178. How to enable truncate custom object feature in Salesforce ?

Ans : Navigate to "App Setup | User Interface" and select "Enable Custom Object Truncate".

179. What may be reason truncate button is not visible on Custom Object ?

Ans :

Are referenced by another object through a lookup field or that are on the master side of a master-detail relationship

Are referenced in a reporting snapshot

Have a custom index or an external ID

180. How to report on User License field?

Ans :

Create formula field in User Object with formula "Profile.UserLicense.Name". Note: You need to copy and paste this value because it doesn't show up in the fields drop down.

181. Which custom fields or relationships in salesforce ends with "__pc" and "__pr" ?

Ans : In normal scenario all custom fields ends with "__c" and relationships ends with "__r" However for Person accounts, custom fields ends with "__pc" and custom relationship ends with "__pr".

182. Difference between Chatter API and Connect API.

Ans :

Chatter API is REST API for Chatter to display Salesforce data, especially in mobile applications. Responses are localized, structured for presentation, and can be filtered to contain only what the app needs.

Connect API provides apex classes for accessing the same data available in Chatter REST API. Use Chatter in Apex to create custom Chatter experiences in Salesforce.

---

183. How to capture errors after using Database DML methods in Salesforce?
Ans :

```
1  List<Contact> lstContact = new List<Contact>();

2  Contact con = new Contact (lastName = 'Zaa',
   SQL_Server_Id__c='3',firstName='Jitendra');


3  lstContact.add(con);

4  //.. Other Contact records added in List


5  Database.UpsertResult[] results = Database.upsert( lstSGAccOppInsert,
   Contact.SQL_Server_Id__c.getDescribe().getSObjectField() ,false ) ;

6


7  for(Integer i=0;i<results.size();i++){

8      if (!results.get(i).isSuccess()){


9          Database.Error err = results.get(i).getErrors().get(0);

10                      System.debug('Error - '+err.getMessage() + '\nStatus
                    Code : '+err.getStatusCode()+'\n Fields : '+err.getFields());


11     }

12 }
```

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

184. What causes Concurrent Apex limit error in Salesforce ?

Ans : If Synchronous Apex runs more than 5 sec it considered as long running job. And we have limit that only 10 long running job can execute at a time. So, whenever 11th Synchronous apex tries to execute, it gets Concurrent Apex limit error. Read more here about Concurrent Request Limits

---

185. What is custom metadata type ?

Ans : Custom metadata was introduced generally in Summer 15 release. Before Custom metadata type, we were using Custom settings of List type. Problem with custom setting was that, during migration or in packages, data were not migrated. We had to either use data loader or some API to create initial data. However, if we package custom metadata type or migrate it, data will also be migrated along with it.

---

186. Which component in Salesforce ends with "__mdt" and "__s"?

Ans : Custom metadata types ends with "__mdt" (meta data type), just like custom object or custom fields ends with "__c".

When we create Geolocation field in Salesforce, lets say by name "location__c" then internally Salesforce creates subfields with extension "__s". In this case "location_latitude__s" and "location_longitude__s".

187. How to disable Header ribbon in Salesforce Organization where Community is enabled ?

Ans : In Profile "View Global Header" controlls visibility of B lack ribbon whioch is used to switch between community.

---

188. How many record can be displayed in repeater or PageBlockTable in Visualforce ?

Ans : current limit is 1000 records.

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

189. How to display more than 1000 records in repeater or PageBlockTable component of Visualforce ?

Ans : If circumstances permits, we can use readOnly attribute available at apex page level. Read more about making complete page readonly.

---

190. How we can check API limits already used in any organization by using REST or SOAP API ?

Ans :

SOAP API and REST API always returns header after making successful call to Salesforce.

Account, Report, Salesforce, SOQL, Standard Report Visibility, Winter 14 with 2 Commentson Apex, Visualforce, Data Loader and SOQL Interview Question – Part 17

191. Sometimes while deleting record it gives error "Object cannot be Deleted". What is the reason for this kind of error ?

Ans :

This is generic error message prompted by Salesforce many times, which is not well informative. To get informative message, we can try to delete same record in "Developer Console". In Developer Console Debug log, we will get exact error message.

Example : Lets say there is one record which is parent of more than 2000 records and grand parent of 5000 records. In such scenario from developer console it gives error something like "record cannot be deleted because it has many associated objects" However in User Interface, it will just display that "Object cannot be deleted."

---

192. Why are Visualforce pages served from a different domain?

Ans :

If we see carefully, all our Visualforce pages are served like "c.YOURSERVER.visual.force.com/apex/YOURPAGENAME" ,
And because of this most of time we run into Same-Origin Policy error in Javascripyt if we try to access parent page from Iframe. Following reason is explained by one of the evangelist of Salesforce:

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

"The move to separate domains has one very specific purpose: leverage the browser security model (same domain policy) to protect our customers and the salesforce.com service from cross site scripting and cross site request forgery attacks.

Moving to the serving pages from separate domains is a critical component of our ongoing commitment to insure the highest level of security and availability for everyone.

In the world where everything is served from the same domain any custom page that you visit had full access to any other page in your org and also any page served from salesforce.com itself. This included potentially malicious code that was installed as part of a force.com package."

---

193. In below code snippet , What is your observation and what is going wrong ?

```
1 trigger TestBeforeDelete on Lead (before Delete) {

2


3      for(Lead l : Trigger.Old)

4      {


5        l.addError('error');

6      }


7

8      String msgBody = 'Test Email';


9      String Subject = 'Test from Cogni Force on Lead';
```

```
10        Messaging.SingleEmailMessage mail
          = new Messaging.SingleEmailMessage();


11     String[] toAddresses = new String[] {'abc@gmail.com'};

12     mail.setToAddresses(toAddresses);


13     mail.setReplyTo('abc@gmail.com');

14     mail.setSenderDisplayName('Cogniforce Test Simulator');


15     mail.setSubject(Subject);

16     mail.setPlainTextBody(msgBody);


17     mail.setHTMLBody(msgBody);

18     Messaging.sendEmail(new Messaging.SingleEmailMessage[] { mail });


19 }
```

Ans :

It will not send any email. Because "adderror" prevents all transactions from committing including emails.

---

194. Can we mass delete reports using Apex (Anonymous Apex) ?
Ans :

Salesforce has not exposed any API for Reports. So best way is :

Move all reports needs to delete in new folder.

Inform everyone that reports will be deleted after some time may be 30 days.

Import your reports folder in Eclipse including all reports to be deleted and then delete the the reports folder in eclipse. It will delete all the reports at once.

---

165. While creating Dynamic SOQL, which involves Datetime gives " no viable alternative at character '<EOF>' " error.
OR
value of filter criterion for field 'CreatedDate' must be of type dateTime and should not be enclosed in quotes
OR
How to use Datetime in Dynamic SOQL Query in Salesforce ?

Ans :

This error is because of wrong construction of Dynamic Query with Datetime. following code snippet will give idea on how to construct dynamic query for Datetime ?

1 //format the datetime to make it Dynamic Soql ready

2 String formatedDt = cutOffDateTime.format('yyyy-MM-dd'T'HH:mm:ss'Z'');

   String sql = 'SELECT a.Id FROM Agents_Answer__c
3 a   WHERE a.Agents_Test_Result__r.Agent_Name__r.IsActive__c = false
   AND LastModifiedDate < '+ formatedDt ;

Where, "cutOffDateTime" is variable of datetime type.

---

195. How you can use Datetime field as a criteria in SOQL Query ?
Ans :
We cannot use Datetime as condition in Where Clause in between single Quotes. You can do something like this ,

WHERE CreatedDate > 2005-10-08T00:00:00Z

Or, you can also use Date Literals like

WHERE CreatedDate > YESTERDAY

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

For more information on date formats and more literal values, check this URL.

---

196. After Data Export using DataLoader, Some time it appears that data is on New Line (Carriage Return) when we open CSV file in Microsoft Excel. For example , Address Data separated on different lines. How can we override this problem ?

Ans :

Excel does all sorts of "useful" things when it opens a CSV file. It will re-format dates, strip leading zeros, corrupt record IDs (if you have them in your report), and as explained it will also break line. Best way as per my experience till date is, Upload document to Google Drive. Export document back from Google drive as Excel.

197. How can you lock record using SOQL so that it cannot be modified by other user.

Ans : we will need "FOR UPDATE" clause of SOQL.

Sample :

 1 Account [] accts = [SELECT Id FROM Account LIMIT 2 FOR UPDATE];

---

198. If you set more than one savepoint, then roll back to a savepoint that is not the last savepoint you generated, What will happen to later savepoint variables ?

Ans : if you generated savepoint SP1 first, savepoint SP2 after that, and then you rolled back to SP1, the variable SP2 would no longer be valid. You will receive a runtime error if you try to use it.

---

199. What are few limitations (points to remember) of Savepoint or Transaction Control in Apex ?

Ans :

Each savepoint you set counts against the governor limit for DML statements.

Static variables are not reverted during a rollback. If you try to run the trigger again, the static variables retain the values from the first run.

Each rollback counts against the governor limit for DML statements. You will receive a Runtime error if you try to rollback the database additional times.

The ID on an sObject inserted after setting a savepoint is not cleared after a rollback.

---

200. What are few Considerations about Trigger ?
Ans :

upsert triggers fire both before and after insert or before and after update triggers as appropriate.

merge triggers fire both before and after delete triggers for the losing records and before update triggers for the winning record only.

Triggers that execute after a record has been undeleted only work with specific objects.

Field history is not recorded until the end of a trigger. If you query field history in a trigger, you will not see any history for the current transaction.

You can only use the webService keyword in a trigger when it is in a method defined as asynchronous; that is, when the method is defined with the @future keyword.

A trigger invoked by an insert, delete, or update of a recurring event or recurring task results in a runtime error when the trigger is called in bulk from the Force.com API.

Merge trigger doesn't fire there own trigger instead they fire delete and update of loosing and winning records respectively.

---

201. How to execute Apex from Custom button or Javascript ? Give Example.
Ans :

It is possible using Ajax toolkiit.

```
1 global class myClass {
2    webService static Id makeContact (String lastName, Account a) {

3       Contact c = new Contact(LastName = lastName, AccountId = a.Id);
4       return c.id;

5    }
6 }
```

we can execute above method from javascript like :

```
1 {!REQUIRESCRIPT("/soap/ajax/33.0/connection.js")}
2 {!REQUIRESCRIPT("/soap/ajax/33.0/apex.js")}

3 var account = sforce.sObject("Account");
4 var id = sforce.apex.execute("myClass" , "makeContact",
5 {lastName:"Smith", a:account});
```

To call a webService method with no parameters, use {} as the third parameter
for **sforce.apex.execute** .

Also, you can use the following line to display a popup window with debugging
information:
sforce.debug.trace=true;

---

202. What is difference between public and global class in Apex ?
Ans :

- Public class can be accessed within application or namespace. This is not exactly like public
  modifier in Java.

- Global class visible everywhere , any application or namespace. WebService must be declared as Global and which can be accessed inside Javascript also. It is like public modifier in Java.

---

203. Explain Considerations for Static keyword in Apex.

Ans :

- Apex classes cannot be static.
- Static allowed only in outer class.
- Static variables not transferred as a part of View State.
- Static variables and static block runs in order in which they are written in class.
- Static variables are static only in scope of request.

---

204. Explain few considerations for @Future annotation in Apex.

Ans :

Method must be static

Cannot return anything (Only Void)

To test @future methods, you should use startTest and stopTest to make it synchromouse inside Test class.

Parameter to @future method can only be primitive or collection of primitive data type.

Cannot be used inside VF in Constructor, Set or Get methods.

@future method cannot call other @future method.

Salesforce, Visualforce with 4 Commentson Salesforce Interview Question – Part 15

205. User Wants to set the starting day in Calendar as "Monday" instead of "Sunday". How to get it done?
Ans : Change the user locale to "English (United Kingdom) " in Personal information or User record.

---

206. Why CSS is not working in PDF created by Visualforce ?

Ans : In Many cases, i have observed problems faced by my colleagues and complaining that CSS is not working when they try to render any Visualforce page as "PDF". Same Question is asked many times in Interviews also. Basically there are two ways:

Use "apex:stylesheet" tag to import external CSS file

Wrap "Style" tag inside "Head" tag in Visualforce

---

207. How to get Ip Address of User in Apex?

Ans :

 1 String ipAddress = ApexPages.currentPage().getHeaders().get('X-Salesforce-SIP');

True-Client-IP has the value when the request is coming via the caching integration. X-Salesforce-SIP has the value if there is no caching integration (sandbox, developer edition orgs) or via the secure url.
Thanks to TechNrd for this tips.

---

208. How to get total number of Child records in Lookup relationship?

Ans: As Rollup Summary field is only supported in Master detail, we cannot use it for Lookup. There are following two ways (If anyone has any other idea please comment).

Inline Visualforce page

Trigger on Child Object, which will update field in Parent record if child record is inserted, deleted or undeleted.

---

209. System admin has created a Visualforce for Account. In future he created few more new Fields. How could System admin can code Visualforce so that in future if any new field is added or existing field deleted. It should reflect in Visualforce without changing anycode?

Ans : It can be done with help of Field Sets. Please read this article.

---

210. Once you convert lead, Few fields on lead should be reset so that sensitive information should not be queried using SOQL. How to get this done?

Ans : Once lead is converted, its READ ONLY. we cannot update it using Apex or Trigger. However we can use "Before Update" trigger on lead and check for fiels "IsConverted". If its true means lead is going to be converted so reset all fields in that case.

---

211. How to convert carriage returns in Textarea to Line Breaks in Visualforce?

Ans : We can use "<apex:outputField>" instead of "<apex:outputText>". It will maintain formatting automatically.

---

212. How to handle comma within field while uploading using DataLoader ?

Ans : Data Loader cannot handle this implicitly because there is no logical path to follow. In case your Data Loader CSV file for import will contain commas for any of the field content, you will have to enclose the contents within double quotation marks " ". Data Loader will be able to handle this.

Question Only :

1. What is Apex?
2. Explain about Apex syntax?
3. Does Apex support DML operations?
4. Is Apex strongly typed language?
5. Does Apex supports unit tests?
6. When should developers choose Apex?
7. What are the different data types in Apex?
8. What are the common methods of data types in Apex?
9. What are the limitations of Apex?
10. Does Apex support switch statements?
11. What types of statements we can use in Apex?
12. What types of collection does Apex supports?
13. How can you declare List/Map/Set in Apex?
14. What are the different types of Apex code development tools?
15. What is Force.com Developer Console?

Rupom Chakraborty
Capital Info Solutions
Shyamala Plaza, Behind Mythrivanam, Amerpet, Hyderabad, Telangana State, INDIA. Ph: 8686864286

16. Tell me something about Abstract Class?
17. Clarify a couple of considerations required for the Static Keyword in Apex.
18. Can you state some o the uses of APEX?
19. What are a couple of Considerations about Trigger?
20. Say about the statement "APEX a RAD Tool"?
21. Differentiate between Ajax and ActionPoller?
22. What are a couple of limitations (points to recall
23. What is the present version of APEX and for what reason would it be a good idea for me to update?
24. By what method would we be able to hard delete a record utilizing an Apex class/by code?
25. How might you refer to a present page id in Apex?
26. Difference Between Trigger.new And Trigger.old In Apex?
27. What is the distinction amongst public and Global class in Apex?
28. What is Apex Scheduler?
29. Tell me something about virtual class in the Apex programming?
30. What is outputLink?
31. What is the utilization of interfaces?
32. What is Apex Interface?
33. What do you mean Apex?
34. What is Scheduler class in Apex? Is it conceivable to call the Apex method in javascript code? If yes then clarify?
35. What is the distinction between apex:pageMessages, apex:pageMessage, apex: Message and apex: Messages?