Oracle Interview Questions and Answers:

How does one see the uptime for a database? (for DBA )

Look at the following SQL query:

SELECT to\_char (startup\_time,'DD-MON-YYYY HH24: MI: SS') "DB Startup Time"

FROM sys.v\_$instance;

Marco Bergman provided the following alternative solution:

SELECT to\_char (logon\_time,'Dy dd Mon HH24: MI: SS') "DB Startup Time"

FROM sys.v\_$session

WHERE Sid=1 /\* this is pmon \*/

/

Users still running on Oracle 7 can try one of the following queries:

Column STARTED format a18 head 'STARTUP TIME'

Select C.INSTANCE,

to\_date (JUL.VALUE, 'J')

|| to\_char (floor (SEC.VALUE/3600), '09')

|| ':'

-- || Substr (to\_char (mod (SEC.VALUE/60, 60), '09'), 2, 2)

|| Substr (to\_char (floor (mod (SEC.VALUE/60, 60)), '09'), 2, 2)

|| '.'

|| Substr (to\_char (mod (SEC.VALUE, 60), '09'), 2, 2) STARTED

from SYS.V\_$INSTANCE JUL,

SYS.V\_$INSTANCE SEC,

SYS.V\_$THREAD C

Where JUL.KEY like '%JULIAN%'

and SEC.KEY like '%SECOND%';

Select to\_date (JUL.VALUE, 'J')

|| to\_char (to\_date (SEC.VALUE, 'SSSSS'), ' HH24:MI:SS') STARTED

from SYS.V\_$INSTANCE JUL,

SYS.V\_$INSTANCE SEC

where JUL.KEY like '%JULIAN%'

and SEC.KEY like '%SECOND%';

select to\_char (to\_date (JUL.VALUE, 'J') + (SEC.VALUE/86400), -Return a DATE

'DD-MON-YY HH24:MI:SS') STARTED

from V$INSTANCE JUL,

V$INSTANCE SEC

where JUL.KEY like '%JULIAN%'

and SEC.KEY like '%SECOND%';

Where are my TEMPFILES, I don't see them in V$DATAFILE or DBA\_DATA\_FILE? (for DBA )

Tempfiles, unlike normal datafiles, are not listed in v$datafile or dba\_data\_files. Instead query v$tempfile or dba\_temp\_files:

SELECT \* FROM v$tempfile;

SELECT \* FROM dba\_temp\_files;

How do I find used/free space in a TEMPORARY tablespace? (for DBA )

Unlike normal tablespaces, true temporary tablespace information is not listed in DBA\_FREE\_SPACE. Instead use the V$TEMP\_SPACE\_HEADER view:

SELECT tablespace\_name, SUM (bytes used), SUM (bytes free)

FROM V$temp\_space\_header

GROUP BY tablespace\_name;

What is a profile ?

Each database user is assigned a Profile that specifies limitations on various system resources available to the user.

How will you enforce security using stored procedures?

Don't grant user access directly to tables within the application. Instead grant the ability to access the procedures that access the tables. When procedure executed it will execute the privilege of procedures owner. Users cannot access tables except via the procedure.

How can one see who is using a temporary segment? (for DBA )

For every user using temporary space, there is an entry in SYS.V$\_LOCK with type 'TS'.

All temporary segments are named 'ffff.bbbb' where 'ffff' is the file it is in and 'bbbb' is first block of the segment. If your temporary tablespace is set to TEMPORARY, all sorts are done in one large temporary segment. For usage stats, see SYS.V\_$SORT\_SEGMENT

From Oracle 8.0, one can just query SYS.v$sort\_usage. Look at these examples:

select s.username, u."USER", u.tablespace, u.contents, u.extents, u.blocks

from sys.v\_$session s, sys.v\_$sort\_usage u

where s.addr = u.session\_addr

/

select s.osuser, s.process, s.username, s.serial#,

Sum (u.blocks)\*vp.value/1024 sort\_size

from sys.v\_$session s, sys.v\_$sort\_usage u, sys.v\_$parameter VP

where s.saddr = u.session\_addr

and vp.name = 'db\_block\_size'

and s.osuser like '&1'

group by s.osuser, s.process, s.username, s.serial#, vp.value

/

How does one get the view definition of fixed views/tables?

Query v$fixed\_view\_definition. Example: SELECT \* FROM v$fixed\_view\_definition WHERE view\_name='V$SESSION';

What are the dictionary tables used to monitor a database spaces ?

DBA\_FREE\_SPACE

DBA\_SEGMENTS

DBA\_DATA\_FILES.

How can we specify the Archived log file name format and destination?

By setting the following values in init.ora file. LOG\_ARCHIVE\_FORMAT = arch %S/s/T/tarc (%S - Log sequence number and is zero left paded, %s - Log sequence number not padded. %T - Thread number lef-zero-paded and %t - Thread number not padded). The file name created is arch 0001 are if %S is used. LOG\_ARCHIVE\_DEST = path.

What is user Account in Oracle database?

An user account is not a physical structure in Database but it is having important relationship to the objects in the database and will be having certain privileges.

When will the data in the snapshot log be used?

We must be able to create a after row trigger on table (i.e., it should be not be already available) After giving table privileges. We cannot specify snapshot log name because oracle uses the name of the master table in the name of the database objects that support its snapshot log. The master table name should be less than or equal to 23 characters. (The table name created will be MLOGS\_tablename, and trigger name will be TLOGS name).

What dynamic data replication?

Updating or Inserting records in remote database through database triggers. It may fail if remote database is having any problem.

What is Two-Phase Commit ?

Two-phase commit is mechanism that guarantees a distributed transaction either commits on all involved nodes or rolls back on all involved nodes to maintain data consistency across the global distributed database. It has two phase, a Prepare Phase and a Commit Phase.

How can you Enforce Referential Integrity in snapshots ?

Time the references to occur when master tables are not in use. Peform the reference the manually immdiately locking the master tables. We can join tables in snopshots by creating a complex snapshots that will based on the master tables.

What is a SQL \* NET?

SQL \*NET is ORACLE's mechanism for interfacing with the communication protocols used by the networks that facilitate distributed processing and distributed databases. It is used in Clint-Server and Server-Server communications.

What is a SNAPSHOT ?

Snapshots are read-only copies of a master table located on a remote node which is periodically refreshed to reflect changes made to the master table.

What is the mechanism provided by ORACLE for table replication ?

Snapshots and SNAPSHOT LOGs

What is snapshots?

Snapshot is an object used to dynamically replicate data between distribute database at specified time intervals. In ver 7.0 they are read only.

What are the various type of snapshots?

Simple and Complex.

Describe two phases of Two-phase commit ?

Prepare phase - The global coordinator (initiating node) ask a participants to prepare (to promise to commit or rollback the transaction, even if there is a failure) Commit - Phase - If all participants respond to the coordinator that they are prepared, the coordinator asks all nodes to commit the transaction, if all participants cannot prepare, the coordinator asks all nodes to roll back the transaction.

What is snapshot log ?

It is a table that maintains a record of modifications to the master table in a snapshot. It is stored in the same database as master table and is only available for simple snapshots. It should be created before creating snapshots.

What are the benefits of distributed options in databases?

Database on other servers can be updated and those transactions can be grouped together with others in a logical unit.

Database uses a two phase commit.

What are the options available to refresh snapshots ?

COMPLETE - Tables are completely regenerated using the snapshots query and the master tables every time the snapshot referenced.

FAST - If simple snapshot used then a snapshot log can be used to send the changes to the snapshot tables.

FORCE - Default value. If possible it performs a FAST refresh; Otherwise it will perform a complete refresh.

What is a SNAPSHOT LOG ?

A snapshot log is a table in the master database that is associated with the master table. ORACLE uses a snapshot log to track the rows that have been updated in the master table. Snapshot logs are used in updating the snapshots based on the master table.

What is Distributed database ?

A distributed database is a network of databases managed by multiple database servers that appears to a user as single logical database. The data of all databases in the distributed database can be simultaneously accessed and modified.

How can we reduce the network traffic?

- Replication of data in distributed environment.

- Using snapshots to replicate data.

- Using remote procedure calls.

Differentiate simple and complex, snapshots ?

- A simple snapshot is based on a query that does not contains GROUP BY clauses, CONNECT BY clauses, JOINs, sub-query or snashot of operations.

- A complex snapshots contain atleast any one of the above.

What are the Built-ins used for sending Parameters to forms?

You can pass parameter values to a form when an application executes the call\_form, New\_form, Open\_form or Run\_product.

Can you have more than one content canvas view attached with a window?

Yes. Each window you create must have atleast one content canvas view assigned to it. You can also create a window that has manipulated content canvas view. At run time only one of the content canvas views assign to a window is displayed at a time.

Is the After report trigger fired if the report execution fails?

Yes.

Does a Before form trigger fire when the parameter form is suppressed?

Yes.

What is SGA?

The System Global Area in an Oracle database is the area in memory to facilitate the transfer of information between users. It holds the most recently requested structural information between users. It holds the most recently requested structural information about the database. The structure is database buffers, dictionary cache, redo log buffer and shared pool area.

What is a shared pool?

The data dictionary cache is stored in an area in SGA called the shared pool. This will allow sharing of parsed SQL statements among concurrent users.

What is mean by Program Global Area (PGA)?

It is area in memory that is used by a single Oracle user process.

What is a data segment?

Data segment are the physical areas within a database block in which the data associated with tables and clusters are stored.

What are the factors causing the reparsing of SQL statements in SGA?

Due to insufficient shared pool size.

Monitor the ratio of the reloads takes place while executing SQL statements. If the ratio is greater than 1 then increase the SHARED\_POOL\_SIZE.

What are clusters?

Clusters are groups of one or more tables physically stores together to share common columns and are often used together.

What is cluster key?

The related columns of the tables in a cluster are called the cluster key.

Do a view contain data?

Views do not contain or store data.

What is user Account in Oracle database?

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How will you enforce security using stored procedures?

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What are the dictionary tables used to monitor a database space?

DBA\_FREE\_SPACE

DBA\_SEGMENTS

DBA\_DATA\_FILES.

Can a property clause itself be based on a property clause?

Yes

If a parameter is used in a query without being previously defined, what diff. exist between. report 2.0 and 2.5 when the query is applied?

While both reports 2.0 and 2.5 create the parameter, report 2.5 gives a message that a bind parameter has been created.

What are the sql clauses supported in the link property sheet?

Where start with having.

What is trigger associated with the timer?

When-timer-expired.

What are the trigger associated with image items?

When-image-activated fires when the operators double clicks on an image itemwhen-image-pressed fires when an operator clicks or double clicks on an image item

What are the different windows events activated at runtimes?

When\_window\_activated

When\_window\_closed

When\_window\_deactivated

When\_window\_resized

Within this triggers, you can examine the built in system variable system. event\_window to determine the name of the window for which the trigger fired.

When do you use data parameter type?

When the value of a data parameter being passed to a called product is always the name of the record group defined in the current form. Data parameters are used to pass data to products invoked with the run\_product built-in subprogram.

What is difference between open\_form and call\_form?

when one form invokes another form by executing open\_form the first form remains displayed, and operators can navigate between the forms as desired. when one form invokes another form by executing call\_form, the called form is modal with respect to the calling form. That is, any windows that belong to the calling form are disabled, and operators cannot navigate to them until they first exit the called form.

What is new\_form built-in?

When one form invokes another form by executing new\_form oracle form exits the first form and releases its memory before loading the new form calling new form completely replace the first with the second. If there are changes pending in the first form, the operator will be prompted to save them before the new form is loaded.

What is the "LOV of Validation" Property of an item? What is the use of it?

When LOV for Validation is set to True, Oracle Forms compares the current value of the text item to the values in the first column displayed in the LOV. Whenever the validation event occurs. If the value in the text item matches one of the values in the first column of the LOV, validation succeeds, the LOV is not displayed, and processing continues normally. If the value in the text item does not match one of the values in the first column of the LOV, Oracle Forms displays the LOV and uses the text item value as the search criteria to automatically reduce the list.

What is the diff. when Flex mode is mode on and when it is off?

When flex mode is on, reports automatically resizes the parent when the child is resized.

What is the diff. when confine mode is on and when it is off?

When confine mode is on, an object cannot be moved outside its parent in the layout.

What are visual attributes?

Visual attributes are the font, color, pattern proprieties that you set for form and menu objects that appear in your application interface.

Which of the two views should objects according to possession?

view by structure.

What are the two types of views available in the object navigator(specific to report 2.5)?

View by structure and view by type .

What are the vbx controls?

Vbx control provide a simple method of building and enhancing user interfaces. The controls can use to obtain user inputs and display program outputs.vbx control where originally develop as extensions for the ms visual basic environments and include such items as sliders, rides and knobs.

What is the use of transactional triggers?

Using transactional triggers we can control or modify the default functionality of the oracle forms.

How do you create a new session while open a new form?

Using open\_form built-in setting the session option Ex. Open\_form('Stocks ',active, session). when invoke the multiple forms with open form and call\_form in the same application, state whether the following are true/False

What are the ways to monitor the performance of the report?

Use reports profile executable statement. Use SQL trace facility.

If two groups are not linked in the data model editor, What is the hierarchy between them?

Two group that is above are the left most rank higher than the group that is to right or below it.

An open form can not be execute the call\_form procedure if you chain of called forms has been initiated by another open form?

True

Explain about horizontal, Vertical tool bar canvas views?

Tool bar canvas views are used to create tool bars for individual windows. Horizontal tool bars are display at the top of a window, just under its menu bar. Vertical Tool bars are displayed along the left side of a window

What is the purpose of the product order option in the column property sheet?

To specify the order of individual group evaluation in a cross products.

What is the use of image\_zoom built-in?

To manipulate images in image items.

How do you reference a parameter indirectly?

To indirectly reference a parameter use the NAME IN, COPY 'built-ins to indirectly set and reference the parameters value' Example name\_in ('capital parameter my param'), Copy ('SURESH','Parameter my\_param')

What is a timer?

Timer is an "internal time clock" that you can programmatically create to perform an action each time the times.

What are the two phases of block coordination?

There are two phases of block coordination: the clear phase and the population phase. During, the clear phase, Oracle Forms navigates internally to the detail block and flushes the obsolete detail records. During the population phase, Oracle Forms issues a SELECT statement to repopulate the detail block with detail records associated with the new master record. These operations are accomplished through the execution of triggers.

What are Most Common types of Complex master-detail relationships?

There are three most common types of complex master-detail relationships:

master with dependent details

master with independent details

detail with two masters

What is a text list?

The text list style list item appears as a rectangular box which displays the fixed number of values. When the text list contains values that can not be displayed, a vertical scroll bar appears, allowing the operator to view and select undisplayed values.

What is term?

The term is terminal definition file that describes the terminal form which you are using r20run.

What is use of term?

The term file which key is correspond to which oracle report functions.

What is pop list?

The pop list style list item appears initially as a single field (similar to a text item field). When the operator selects the list icon, a list of available choices appears.

What is the maximum no of chars the parameter can store?

The maximum no of chars the parameter can store is only valid for char parameters, which can be upto 64K. No parameters default to 23Bytes and Date parameter default to 7Bytes.

What are the default extensions of the files created by library module?

The default file extensions indicate the library module type and storage format .pll - pl/sql library module binary

What are the Coordination Properties in a Master-Detail relationship?

The coordination properties are

Deferred

Auto-Query

These Properties determine when the population phase of block

coordination should occur.

How do you display console on a window ?

The console includes the status line and message line, and is displayed at the bottom of the window to which it is assigned.To specify that the console should be displayed, set the console window form property to the name of any window in the form. To include the console, set console window to Null.

What are the different Parameter types?

Text ParametersData Parameters

State any three mouse events system variables?

System.mouse\_button\_pressedSystem.mouse\_button\_shift

What are the types of calculated columns available?

Summary, Formula, Placeholder column.

Explain about stacked canvas views?

Stacked canvas view is displayed in a window on top of, or "stacked" on the content canvas view assigned to that same window. Stacked canvas views obscure some part of the underlying content canvas view, and or often shown and hidden programmatically.

How does one do off-line database backups? (for DBA )

Shut down the database from sqlplus or server manager. Backup all files to secondary storage (eg. tapes). Ensure that you backup all data files, all control files and all log files. When completed, restart your database.

Do the following queries to get a list of all files that needs to be backed up:

select name from sys.v\_$datafile;

select member from sys.v\_$logfile;

select name from sys.v\_$controlfile;

Sometimes Oracle takes forever to shutdown with the "immediate" option. As workaround to this problem, shutdown using these commands:

alter system checkpoint;

shutdown abort

startup restrict

shutdown immediate

Note that if you database is in ARCHIVELOG mode, one can still use archived log files to roll forward from an off-line backup. If you cannot take your database down for a cold (off-line) backup at a convenient time, switch your database into ARCHIVELOG mode and perform hot (on-line) backups.

What is the difference between SHOW\_EDITOR and EDIT\_TEXTITEM?

Show editor is the generic built-in which accepts any editor name and takes some input string and returns modified output string. Whereas the edit\_textitem built-in needs the input focus to be in the text item before the built-in is executed.

What are the built-ins that are used to Attach an LOV programmatically to an item?

set\_item\_property

get\_item\_property

(by setting the LOV\_NAME property)

How does one do on-line database backups? (for DBA )

Each tablespace that needs to be backed-up must be switched into backup mode before copying the files out to secondary storage (tapes). Look at this simple example.

ALTER TABLESPACE xyz BEGIN BACKUP;

! cp xyfFile1 /backupDir/

ALTER TABLESPACE xyz END BACKUP;

It is better to backup tablespace for tablespace than to put all tablespaces in backup mode. Backing them up separately incurs less overhead. When done, remember to backup your control files. Look at this example:

ALTER SYSTEM SWITCH LOGFILE; -- Force log switch to update control file headers

ALTER DATABASE BACKUP CONTROLFILE TO '/backupDir/control.dbf';

NOTE: Do not run on-line backups during peak processing periods. Oracle will write complete database blocks instead of the normal deltas to redo log files while in backup mode. This will lead to excessive database archiving and even database freezes.

How does one backup a database using RMAN? (for DBA )

The biggest advantage of RMAN is that it only backup used space in the database. Rman doesn't put tablespaces in backup mode, saving on redo generation overhead. RMAN will re-read database blocks until it gets a consistent image of it. Look at this simple backup example.

rman target sys/\*\*\* nocatalog

run {

allocate channel t1 type disk;

backup

format '/app/oracle/db\_backup/%d\_t%t\_s%s\_p%p'

( database );

release channel t1;

}

Example RMAN restore:

rman target sys/\*\*\* nocatalog

run {

allocate channel t1 type disk;

# set until time 'Aug 07 2000 :51';

restore tablespace users;

recover tablespace users;

release channel t1;

}

The examples above are extremely simplistic and only useful for illustrating basic concepts. By default Oracle uses the database controlfiles to store information about backups. Normally one would rather setup a RMAN catalog database to store RMAN metadata in. Read the Oracle Backup and Recovery Guide before implementing any RMAN backups.

Note: RMAN cannot write image copies directly to tape. One needs to use a third-party media manager that integrates with RMAN to backup directly to tape. Alternatively one can backup to disk and then manually copy the backups to tape.

What are the different file extensions that are created by oracle reports?

Rep file and Rdf file.

What is strip sources generate options?

Removes the source code from the library file and generates a library files that contains only pcode. The resulting file can be used for final deployment, but can not be subsequently edited in the designer.ex. f45gen module=old\_lib.pll userid=scott/tiger strip\_source YES output\_file

How does one put a database into ARCHIVELOG mode? (for DBA )

The main reason for running in archivelog mode is that one can provide 24-hour availability and guarantee complete data recoverability. It is also necessary to enable ARCHIVELOG mode before one can start to use on-line database backups. To enable ARCHIVELOG mode, simply change your database startup command script, and bounce the database:

SQLPLUS> connect sys as sysdba

SQLPLUS> startup mount exclusive;

SQLPLUS> alter database archivelog;

SQLPLUS> archive log start;

SQLPLUS> alter database open;

NOTE1: Remember to take a baseline database backup right after enabling archivelog mode. Without it one would not be able to recover. Also, implement an archivelog backup to prevent the archive log directory from filling-up.

NOTE2: ARCHIVELOG mode was introduced with Oracle V6, and is essential for database point-in-time recovery. Archiving can be used in combination with on-line and off-line database backups.

NOTE3: You may want to set the following INIT.ORA parameters when enabling ARCHIVELOG mode: log\_archive\_start=TRUE, log\_archive\_dest=... and log\_archive\_format=...

NOTE4: You can change the archive log destination of a database on-line with the ARCHIVE LOG START TO 'directory'; statement. This statement is often used to switch archiving between a set of directories.

NOTE5: When running Oracle Real Application Server (RAC), you need to shut down all nodes before changing the database to ARCHIVELOG mode.

What is the basic data structure that is required for creating an LOV?

Record Group.

How does one backup archived log files? (for DBA )

One can backup archived log files using RMAN or any operating system backup utility. Remember to delete files after backing them up to prevent the archive log directory from filling up. If the archive log directory becomes full, your database will hang! Look at this simple RMAN backup script:

RMAN> run {

2> allocate channel dev1 type disk;

3> backup

4> format '/app/oracle/arch\_backup/log\_t%t\_s%s\_p%p'

5> (archivelog all delete input);

6> release channel dev1;

7> }

Does Oracle write to data files in begin/hot backup mode? (for DBA )

Oracle will stop updating file headers, but will continue to write data to the database files even if a tablespace is in backup mode.

In backup mode, Oracle will write out complete changed blocks to the redo log files. Normally only deltas (changes) are logged to the redo logs. This is done to enable reconstruction of a block if only half of it was backed up (split blocks). Because of this, one should notice increased log activity and archiving during on-line backups.