https://livesql.oracle.com/apex/livesql/file/index.html

DDl - data definition language

Create - Create a table in DB - Students(stdname, stdid,adress) , Subjects(subID, subName), Courses

drop - drop deletes all the rows of the table along with table structure

truncate - truncate deletes all the rows of the table but not structure

in drop and truncate we cannot give condition and it cannot be rolled back.

merge

DMl - data manipulation language - can be rolled back

select - to fetch the records of table based on given condition (using where)

update - empname- scott -> scot

delete - delete the emp with id 404, we can give condition for delete using where- if we do not give condition it deletes all rows but still

table structure remains. We can rollback.

insert - to add the data into the created table

to sort data- order by columnname asc/desc

distinct- to get unique column values

alias names of the column - as or blank space

SQl keywords , table or column names are not case sensitive but data is case sensitive

Null is undefined or unassigned , its not 0 or blank space

Any arithmetic operations on null values result in null.

You can include alias names inside quotations to maintain the case and also to insert spaces n between the alias names.

Like – ‘%s’- end with given char

Like – ‘s%’ - start with given char

Like – ‘%s%’ - contains given char

Data types in oracle – how the data is represented for each column

Varchar – String representation – can differentiate between space and null

Varchar2 – String representation – cannot differentiate between space and null

Number – 339, 4, 5- integer

Date- DD-MON-RR - date

Decimal

TIMESTAMP – date with time

45/ 5- divides and gives quotient

Mod(45,5)- gives remainder

Waiting for others—lets start in few mins

Nvl (expr, value)- if expr is null then replace with val

Nvl2 (expr, val1, val2)- if expr is null then replace with val2 else val1

Nullif(expr1, expr2)- if both expr’s are equals then return null

Coalesce expr1, expr2…..exprn)- return first not null expr value.

Decode is same like (case when then else end ) but without any keywords it takes comma separated values.

When using group by - the columns in select should be part of either group by or aggregate functions.

Find min salary for each department and each job from employees table , with department\_id=40

Also write a query to decide tax brackets based on employee salary.

Eg: 10k-20k – 10% tax

20k-30k – 15% tax

Query to Display date and number in given format – eg- mm-dd-yyyy , $6,500.00

query to display date according to input- dd-mon-rr and dd-mon-yy formats

[Training@whitebox-learning.com](mailto:Training@whitebox-learning.com)

Types of joins:

Natural join – gives matching records based on all common columns between two tables.

All Common columns between employees and departments tables:

Department\_id, manager\_id

It matches the rows only if both column name and also the data type is same in 2 tables.

Inner join – gives matching records based on common column between two tables.

1. with using - we cannot use alias names, and column name, data type should always match

2.with on – we can use alias names and we can use any column names in on condition, bcz of alias names performance is good.

Outer join:

Left outer join- it gives all common rows between left and right, and also it gives unmatched rows from left table

Right outer join- it gives all common rows between left and right, and also it gives unmatched rows from right table

Full Outer join- it gives all common rows between left and right, and also it gives unmatched rows from 2 tables

Cross join

Assignment :

Write a query to Select first\_name, dept name, deptid,salary from employees table and departments table based on all the common column.

Write a query to Select first\_name, dept name, deptid,salary from employees table and departments table based on dept id

Write a query to Select city, firstname, deptname for an employee

Write a query to fetch empname, deptname and deptid of all the departments with and without employees.

Which employees have salaries greater than Abel’s salary?

Subquery is a query inside a query or its like inner query.

Always Subquery is evaluated first and the result is used in the main query.

Single row operators like =,>=,>,<,<=,<> should be used with singlr row subqueries.

Multirow operators like In, Any,All should be used with multi row sub queries.

In

Any – and of the results

All- or of the results

Joins – joining tables not queries

Set Operators: To combine the results of more than one query.

Union

UnionAll

Minus

Intersection

Constraints: restrictions/rules on particular column

Primary key – it is always unique and not null, helps to identify row uniquely from table

Foreign key(referntial integrity)- fk in one table is pk in other table and it establishes relation between 2 tables using common column.

Eg- department\_id is pk in departments table, it is foreign key in employees table

Not null – it do not accept null values

Unique – it should always be distinct

SQl Statements:

DDl:

Create – cretae the table

Alter – alter table to add any column, delete any cloumn, modify datatype of existing column, add constratint on column.

Drop- deletes table along with table structure, it do not execute any triggers

Truncate- delete all rows of table along with space but not structure, it is faster than delete

Bcz it do not store data in cache as it do not rollback.

We cannot add where clause for drop and truncate, they cannot be rolled back.

But From oracle 10g version- there is speacial way to rollback drop statement using flashback.

Syntax:

Flashback table students to before drop;

DML – select, insert, update,

Delete- it is slower than truncate as it saves all data in cache(bcz if u ask to rollback to get data back)

It includes where clause and can be rolled back, this do not delete space allocated.

DCL – revoke, grant

Grant create table to username;

Revoke drop table to username;

TCl-

savepoint, rollback, commit

Database objects:

Tables – set of rows and columns

Views – virtual table based on the resultset of sql staememnt,

when u do not want to give access to all ur tables u can create views and give acces

for easy retrieval of frequently used data

Sequence- it generates sequence of numbers which can be used to insert data into any number column

Nocache – nothing is stored in cache until sequence is called

If nocache is not declared then by default it stores first 20 values of sequence in cache.

Nocycle- do not repeat the seq from beginning after reaching end value

Index- db object used to fast retrieval of any column data, by default primary key columns have indexes

Synonyms- alias names for table in case you want to hide actual table name for security reason.

write a query to select first\_name and hiredate of employees who were hired after employee smith.

query to find employees who report to king.

query to find top salaried employee details in each department.

query to find employee details of second highest salaried person.

query to find min sal under each job category in specific department.

Select 6th to 10th top salaries from employees table.

Trigger- is a special kind of stored procedure that gets automatically execiuted when certain events(dml operations) are occurred.

Desc tablename;

Desc dictionary;

Select \* from user\_objects;