Commands

Thursday, January 20, 2022 9:18 AM

Displaying Distinct Rows

The DISTINCT keyword is used to suppress duplicate values.
The syntax is:
SELECT DISTINCT column FROM tablename;

SELECT DISTINCT City FROM Student;

City
Bhubaneswar
Jharkhand
Uttar Pradesh
Ranchi
Rajastan
Delhi
Cuttack
Kolkota

Use of Arithmetic Expressions

The arithmetic expressions are used to display mathematically calculated data. The syntax is:
SELECT column, expression FROM tablename;

SELECT Name, Age, Age+3 FROM Student;

Name	Age	Age+3
Ram	19	22
Uday	20	23
Vikas	19	22
Sweta	19	22
Yogesh	18	21
Smriti	20	23
Sudam	21	24
Vikas	23	26
Manish	19	22

SELECT Name, Age, Age+3 "Passing Age"FROM Student;

Name	Age	Passing Age
Ram	19	22
Uday	20	23
Vikas	19	22
Sweta	19	22
Yogesh	18	21
Smriti	20	23
Sudam	21	24
Vikas	23	26
Manish	19	22

Concatenation

Concatenation joins a column or a character string to another column. The syntax is:
SELECT column1||' '||column2 [AS] ALIAS FROM tablename;

SELECT Name||' '||City FROM Student;
SELECT Name||' '||City AS "Address"FROM Student;

Name||' '||City	Address
Ram Bhubaneswar	Ram Bhubaneswar
Hari Bhubaneswar	Hari Bhubaneswar
Uday Jharkhand	Uday Jharkhand
Vikas Uttar Pradesh	Vikas Uttar Pradesh
Sweta Ranchi	Sweta Ranchi
Yogesh Rajastan	Yogesh Rajastan
Smriti Delhi	Smriti Delhi
Sudam Cuttack	Sudam Cuttack
Vikas Kolkota	Vikas Kolkota
Manish	Manish

Selecting Specific Records

Specific records can be selected by using a WHERE clause with the SELECT statement. The syntax is:
SELECT columns FROM tablename WHERE *cond^n***;**

*SELECT * FROM Student WHERE city= 'Bhubaneswar';*

Roll	Name	City	Age	CGPA
101	Ram	Bhubaneswar	19	9.0
102	Hari	Bhubaneswar		6.7

Operators used in WHERE condition

Relational Operators

- = ex: CGPA=9.0
- > ex: Age>20
- < ex: Age<20
- >= ex: Age>=20
- <= ex: Age<=20
- <> or != ex: Name !='Hari'
- ANY ex: Age > ANY(20,23,19)
- ALL ex: Age > ALL(20,18)

Logical Operators

- AND ex: City='Bhubaneswar' AND Age=20
- OR ex: City ='Bhubaneswar' OR Age=20
- NOT ex: NOT(Age=20 OR Age=21)

LIKE Operator

LIKE operator uses wild cards for matching as:
%: represents zero or more characters
_: represents any one character

ex: Name LIKE 'S%'
ex: Name LIKE 'S__'
ex: Name LIKE '%i%'
ex: Name LIKE '_i%'

Special Operators

- IN ex: City IN('Delhi','Cuttack','Ranchi')
- BETWEEN ex: Age BETWEEN 20 AND 22
- IS NULL ex: SELECT Name FROM Student WHERE Age is NULL;

ALTER Statement

Stud (roll, name, age)

Column	NULL?	Datatype
ROLL		NUMBER(6)
NAME		VARCHAR2(20)
AGE		NUMBER(2)

Adding a New Column

ALTER TABLE tablename ADD(column definition);

ALTER TABLE Stud ADD (address number(20));

Column	NULL?	Datatype
ROLL		NUMBER(6)
NAME		VARCHAR2(20)
AGE		NUMBER(2)
ADDRESS		NUMBER(20)

Modifying an Existing Column

ALTER TABLE tablename MODIFY(column definition);

ALTER TABLE Stud MODIFY(address varchar2(20));

Column	NULL?	Datatype
ROLL		NUMBER(6)
NAME		VARCHAR2(20)
AGE		NUMBER(2)
ADDRESS		VARCHAR2(20)

Dropping a Column

ALTER TABLE tablename DROP COLUMN columnname;

ALTER TABLE Stud DROP COLUMN address;

Column	NULL?	Datatype
ROLL		NUMBER(6)
NAME		VARCHAR2(20)
AGE		NUMBER(2)

ID	FNAME	LNAME	AGE	GENDER	LOC
1	Raj	Kumar	23	M	IND
2	Ajay	Panda	26	M	AUS
3	Sivam	Prasad	22	M	ENG
4	Pinky	Singh	26	F	AUS
5	Rahul	Kumar	24	M	BAN
6	Aditya	Das	29	M	IND
7	Avik	Das	28	M	IND
8	Shital	Jena	23	F	ENG
9	Soham	Tiwari	26	M	NZ

1. Create a table Customer with following attributes:
   Customer ID, First name, Last name, age of customer, gender of customer and present address of customer.
2. Display the structure of the created customer table.
3. Insert the following values in the table.
4. Retrieve and display the customer table with all values of attributes.
5. Retrieve and display all customer names.
6. Display the gender of all customers.
7. Fetch the unique addresses from customer table.
8. Display the current age and the age of customers after 2 years.
9. Combine the first and last name of customers and display it.
10. Retrieve the IDs of customer who lives in IND.
11. Display the customer details whose age is more than 25 years.
12. Display the IDs of customer who don't live in ENG.
13. Display the customer IDs and gender who either lives in AUS or age is 26.
14. Fetch all customer details whose name end with 'Das'.
15. List all customer IDs whose name starts with 'S'.
16. List out the customer age whose first name has 'i' as the 3rd letter.
17. Retrieve the customer details whose age is between 24 years to 28 years.
18. List out the customer address whose name has a 'n' alphabet in it.

```
SQL> select FNAME, LNAME from cust;

FNAME      LNAME
---------- ----------
Raj        Kumar
Ajay       Panda
Sivam      Prasad
Pinky      Singh
Rahul      Kumar
Aditya     Das
Avik       Das
Shital     Jena
Soham      Tiwari

9 rows selected.
```

```
SQL> select AGE, AGE+2 "age_new" from cust;

       AGE    age_new
---------- ----------
        23         25
        26         28
        22         24
        26         28
        24         26
        29         31
        28         30
        23         25
        26         28

9 rows selected.
```

```
SQL> select FNAME ||'      '||LNAME from cust;

FNAME||''||LNAME
------------------------
Raj      Kumar
Ajay      Panda
Sivam      Prasad
Pinky      Singh
Rahul      Kumar
Aditya      Das
Avik      Das
Shital      Jena
Soham      Tiwari

9 rows selected.

SQL> select ID from cust where LOC = 'IND';

        ID
----------
         1
         6
         7
```

```
SQL> select * from cust where AGE > 25;

        ID FNAME      LNAME             AGE G LOC
---------- ---------- ---------- ---------- - ----------
         2 Ajay       Panda              26 M AUS
         4 Pinky      Singh              26 F AUS
         6 Aditya     Das                29 M IND
         7 Avik       Das                28 M IND
         9 Soham      Tiwari             26 M NZ

SQL> select ID from cust where LOC !='ENG';

        ID
----------
         1
         2
         4
         5
         6
         7
         9

7 rows selected.
```

```
SQL> select ID from cust where LOC !='ENG';

        ID
----------
         1
         2
         4
         5
         6
         7
         9

7 rows selected.

SQL> select ID, GENDER from cust where LOC = 'AUS' or AGE =
26;

        ID G
---------- -
         2 M
         4 F
         9 M
```

```
SQL> select ID from cust where FNAME like 'S%';

        ID
----------
         3
         8
         9

SQL> select AGE from cust where FNAME like '__i%';

       AGE
----------
        29
        28
        23

SQL> select * from cust where AGE between 24 and 28;

        ID FNAME      LNAME             AGE G LOC
---------- ---------- ---------- ---------- - ----------
         2 Ajay       Panda              26 M AUS
         4 Pinky      Singh              26 F AUS
         5 Rahul      Kumar              24 M BAN
         7 Avik       Das                28 M IND
         9 Soham      Tiwari             26 M NZ
```


ID	FNAME	LNAME	AGE	GENDER	LOC
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2	Ajay	Panda	26	M	AUS
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5	Rahul	Kumar	24	M	BAN
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15. List all customer IDs whose name starts with 'S'.
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18. List out the customer address whose name has a 'n' alphabet in it.