Q Name of table Product Master.

P_no varchar(6) like %'P'

Desc

Q Uom Default 'Pieces'

Sel_Price

Cost_Price

Coh.

| P_no | P_desc | P_uom | Selling_Price | C_Price | C.O.H |
|---|---|---|---|---|---|
| P03453 | Cotton jeans | Piece | 600 | 450 | 100 |
| P06734 | D. shirt | " | 350 | 250 | 100 |
| P07865 | Trousers | " | 850 | 550 | 150 |
| P07885 | Tops | " | 300 | 175 | 80 |
| P07965 | Pull-overs | " | 700 | 450 | 150 |
| P07975 | Shirt | " | 500 | 350 | 100 |
| P08865 | T-shirt | " | 350 | 250 | 200 |

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create table tbl_ProductM
(P_no varchar(6) check (P_no like 'P%')
P_Desc char(20)
P_UOM char(5) default 'Piece'
S_Price number(3)
C_Price number(3)
P_COH number(3));

1 count product whose s_price lessthen 500
2 Display product name in the desc order their quantity available.
Order by column name desc
3. Display product name whose c_price is between 175 & 300.

Ans
1 select * from ProductM where S_price < 500;
2. select * from " order by P_no desc;
2 select * from order by P_Desc desc;
3 select * from where C_price Between 175 & 300;

## Like Operator

- Performs pattern matching in varchar or char data

1. '%' is used to match single or multpt multiple position for a given value
2. '_' is used to match only single char position for the given value.

Ex.

| City |
|---|
| Ahmedabad |
| Delhi |
| Surat |
| Baroda |
| Ahmedabad |
| Baroda |

Q. Display city which is starting with char 'B'?

```
select city from tbl_stud
where city like 'B%';
```

Q Display city whose third char 'r'?

```
select city from tbl_stud
where city like '__r%';
```

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```
select count
from tbl_stu
where city='Ahmedabad' or city='Surat'
```

Like Operator

- Performs patt
data

1. '%' is used to
position for c
2. '_' is used t
for the given v

Ex.

| City |
|---|
| Ahmedabad |
| Delhi |
| Surat |
| Baroda |
| Ahmedabad |

set is a command to alter the [illegible]

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IU19825200316mcaserver - 1to6.

Foreign Key constraint

- A foreign key is a column whose values are derived from the primary key of another table.
- Foreign key is alway depends on the primary key or unique key.
- Foreign key may have duplicate and null value.
- Whenever we insert a value in foreign key column it must be exists in the primary key column of another table.
- We cannot update the primary key records if value is already available in the foreign key table.

Syntax: At Columnlevel.

columnname datatype(size) references tablename (primarykey-columnname)

- Whenever we create a foreign key table the name of the table can be different from primary key table but references columnname must be same as declare in the primary key column.

Foreign Key.

Syntax :-

- Foreign Key can be specify using table level constraint in which we have to specify the unique name of the constraint
- If we have more than two FK in the same table then each & every FK must be declare individualy using table level constraint.

Note

Syntax :-

Constraint nameof constraint type of constraint columnname references tablename columnname

Constraint fk_rollno foreign key(Rollno)
references tbl_stu(Rollno);

Stud

| Rollno | Name |
|---|---|
| 1 | R |
| 2 | P |
| 3 | Q |
| 4 | T |
| 5 | S |

Subj

| Code | Name |
|---|---|
| S1 | FCO |
| S2 | DBMS |
| S3 | Maths |
| S4 | CPS |

Stud Subj

| Rollno | Code |
|---|---|
| 1 | S1 |
| 1 | S3 |
| 1 | S4 |
| 2 | S4 |
| 2 | S2 |
| 3 | S1 |
| 3 | S2 |

```
create ~~tbl~~ table tbl_stud_subj
(Rollno number(2),
 s_code varchar(2),
 constraint fk_r_no foreign Key(Rollno)
  references stud(Rollno),
 constraint fk_s_code foreign Key(s_code)
   references subj(code),
 Primary Key(Rollno, s_code));
```

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## Composite Primary Key

- CPK is a collection of two or more columns of same table.
- Maximum number of columns we can specify is 16 only.
- Whenever we specify CPK always it is declare in table level constraint.
- CPK cannot be used as a reference key in another table.

# On Delete Cascade.

* On Delete Cascade:
- Whenever the on delete cascade option is specify in FK defination then if record deleted from the PK table then co-respo records of table is also deleted. from pr foreign key

Syntax:-
delete from tbl_stud
where rollno = 104;

1 row deleted.

Syntax:

create table tbl_stud_subj1
(rollnum number(3) references tbl_stud
ON Delete Cascade,
subjcode varchar(8) references tbl_subject
ON Delete Cascade);

f. select instr(string, string2, start_pos, nth appearance)

"SCT on the net"

select instr('SCT on the net', 't') from dual;
- 8

select instr('SCT on the net', 't', 1, 2) from dual;
- 14

select instr('Indus University', 'i', 9, 2) from dual;
- 14

g. length(word)

select length('INDUS UNIVERSITY') from dual;
- 16
- This function written the total no. of characters present in the given word including the space.

h. left trim (ltrim)

ltrim(char set)

- select ltrim('Indus', 'I') from dual;
- NDUS / ndus

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c. ~~initcap~~ select initcap("IVAN BAYROSS") from dual;

- Ivan Bayross.
- This function written a string with the first letter capital of each word.

d. substr (string, start-pos, ~~length~~ length) output - D

- substr ('INDUS', 3, 1) from dual;
- The substr string function written being from 'm' character to 'n' characters
- If 'n' character is not provided then remain all characters will be displayed.
- substr ('Indus', 3) from dual
- Output 'Dus'

e select ascii('A') from dual;

- 65.
- ascii (american standard coard code for information interchange)

ex. select ascii('a') from dual;

- 97.
- ascii function written a number which is represented for specify character
- In this function single character is only provided in the parameter.

String Function

a. lower
b. upper
c. initcap
d. substr
e. ascii
f. instr
g. length
h. ltrim
i. rtrim
j. trim
k translate

Examples

a. select lower("INDUS") from dual;

- indus
- lower function is used to convert upper case string into lower case string

b. select upper("hello") from dual;

- HELLO
- upper function is used to convert lower case string into upper case string

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7 rtrim (right trim).

rtrim (char, set)
select rtrim ('INDUS', S) from dual;
- INDU

- 'LTRIM' & 'RTRIM' Both are used to remove first char. from left n side & right - n - side respectively.
- If no set is provided in the parameter then space will be remove from char.

ex. select rtrim ('Indus ') from dual;
- S.

J trim (length
trim (leading | trailing | both [trim_char> from]
<string>);

selection
select trim (' Indus ') from dual;
- Indus
Select trim ('leading 'x' from 'xxx Indusxxx')
from dual;
- Indusxxx
- The trim function is used to remove a no. of char. either from left - n - size or right - n - size or both the size simultaneously.

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6. Translate ( string1, string_to_replace, replacement string )

select translate('Indus University', 'DE', 'BT')
from dual;

- Inbus Univtrsity
- This function is used to replace a single or more than one char of a given string.
- In this example char 'D' is replace with char 'B' & char 'E' replace with 'T'

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DBMS - Lab.

Joins.

a. Inner
b Outer
  - Left
  - Right
c Full off outer join
d sdf join
e Cross.

- In SQL language it is require to find out multiple records from various tables then single SQL sentences is used which is consider as the join statement.
- Always join is apply on those columns where datatype & size are same in both the tables.

Tbl_stud

| Rollno | Name | City |
|---|---|---|
| 101 | Raj | A'bad |
| 102 | Mukesh | Delhi |
| 103 | Riya | Surat |
| 104 | Rooja | A'bad |
| 105 | Jiyan | Delhi |
| 106 | Kiyan | Surat |

Tbl_stdj

| S_code | S_name | Type |
|---|---|---|
| S1 | FODBMS | TP |
| S2 | MAGT | T |
| S3 | CPS | T |
| S4 | CO | T |
| S5 | LBT | TP |
| S6 | DM | T |

Tbl_exam

| RollNo | S.code |
|---|---|
| 101 | S1 |
| 101 | S3 |
| 102 | S5 |
| 102 | S3 |
| 102 | S1 |
| 103 | S4 |
| 103 | S2 |
| 104 | S1 |
| 105 | S2 |
| 105 | S3 |
| 105 | S4 |

Q Find ~~some~~ stu-name who has given exam.

- Whenever we want to find out the records using the combination of two or more than two table in a single SQL statement & column name is same in both the tables, so there will be ambiguity problem which need to be solve using an Alias of the table in the from clause.

- Select name from tbl_stud s, tbl_exam e where s.Rollno = e.Rollno ; → Equi Join

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- select name from tbl-stud
where Rollno in (Select Rollno from tbl-exam);
P.K F.K

(Nested Query) / (Sub-query)

→

Q Find subj-name
- select Sname from tbl-subj su, tbl-exame
where ~~S-code~~ su.s-code != e.s-code ;

Notes
- Whenever equi join is used in SQL statement the equal '=' sign is used in where clause to check the value of foreign key with the value of P.K.
- The same query we can implement using nested query or sub query.

Q. Find stud with the subj who has given exam of T & P both.
Select Name, Sname from tbl-stud, tbl-subj, tbl-exam
where tbl-stud.Rollno = tbl-exam.Rollno and tbl-subj.S-code = tbl-exam.S-code and Type = 'TP';

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Self Join

- In oracle it is necessary to join a table to itself.
- It is refered as self join because joining will be applied on same table by creating two different ~~alias~~ alias.

Q. Find stud who are living in same city.

```
- Select S1.Name , S2.Name from tbl-stud S1,
                                tbl-stud S2
  where
  where S1.city = S2 city and
        S1. name > S2. name ;
```