**EX. NO: 01** **DDL & DML COMMANDS**

**DATE:**

---

**AIM:**

To implement the DDL & DML Commands in SQL.

**COMMANDS:**

**SQL**> connect

Enter user-name: system

Enter password:

Connected.

**SQL**> create table student1(stdname varchar(10),stdage number(5),stdadd varchar(10),stdcont number(10));

Table created.

**SQL**> desc student1;

| **Name** | **Null?** | **Type** |
|---|---|---|
| STDNAME | | VARCHAR2(10) |
| STDAGE | | NUMBER(5) |
| STDADD | | VARCHAR2(10) |
| STDCONT | | NUMBER(10) |

**SQL**> insert into student1 values ('&stdname',&stdage,'&stdadd',&stdcont);

Enter value for stdname: anitha

Enter value for stdage: 25

Enter value for stdadd: madurai

Enter value for stdcont: 9999999999

old 1: insert into student1 values ('&stdname',&stdage,'&stdadd',&stdcont)

new 1: insert into student1 values ('anitha',25,'madurai',9999999999)

1 row created.

**SQL> /**

Enter value for stdname: jey

Enter value for stdage: 23

Enter value for stdadd: chennai

Enter value for stdcont: 7777777777

old 1: insert into student1 values ('&stdname',&stdage,'&stdadd',&stdcont)

new 1: insert into student1 values ('jey',23,'chennai',7777777777)

1 row created.

**SQL> /**

Enter value for stdname: ramesh

Enter value for stdage: 30

Enter value for stdadd: mumbai

Enter value for stdcont: 6666666666

old 1: insert into student1 values ('&stdname',&stdage,'&stdadd',&stdcont)

new 1: insert into student1 values ('ramesh',30,'mumbai',6666666666)

1 row created.

**SQL> /**

Enter value for stdname: ram

Enter value for stdage: 27

Enter value for stdadd: vellore

Enter value for stdcont: 5555555555

old 1: insert into student1 values ('&stdname',&stdage,'&stdadd',&stdcont)

new 1: insert into student1 values ('ram',27,'vellore',5555555555)

1 row created.

**SQL>** select * from student1;

| **STDNAME** | **STDAGE** | **STDADD** | **STDCONT** |
|---|---|---|---|
| anitha | 25 | madurai | 9999999999 |
| jey | 23 | chennai | 7777777777 |
| ramesh | 30 | mumbai | 6666666666 |
| ram | 27 | vellore | 5555555555 |

**SQL**> alter table student1 add(stdid number(5));

Table altered.

**SQL**> desc student1;

| **Name** | **Null?** | **Type** |
|---|---|---|
| STDNAME | | VARCHAR2(10) |
| STDAGE | | NUMBER(5) |
| STDADD | | VARCHAR2(10) |
| STDCONT | | NUMBER(10) |
| STDID | | NUMBER(5) |

**SQL**> update student1 set stdname='swati' where stdname='jey';

1 row updated.

**SQL**> select * from student1;

| STDNAME | STDAGE | STDADD | STDCONT | STDID |
|---|---|---|---|---|
| anitha | 25 | madurai | 9999999999 | |
| swati | 23 | chennai | 7777777777 | |
| ramesh | 30 | mumbai | 6666666666 | |
| ram | 27 | vellore | 5555555555 | |

**SQL**> delete student1 where stdage=25;

1 row deleted.

**SQL**> select * from student1;

| **STDNAME** | **STDAGE** | **STDADD** | **STDCONT** | **STDID** |
|---|---|---|---|---|
| swati | 23 | chennai | 7777777777 | |
| ramesh | 30 | mumbai | 6666666666 | |
| ram | 27 | vellore | 5555555555 | |

**SQL**> truncate table student1;

Table truncated.

**SQL>** select * from student1;

no rows selected

**SQL**> desc student1;

| **Name** | **Null?** | **Type** |
|---|---|---|
| STDNAME | | VARCHAR2(10) |
| STDAGE | | NUMBER(5) |
| STDADD | | VARCHAR2(10) |
| STDCONT | | NUMBER(10) |
| STDID | | NUMBER(5) |

**SQL>** drop table student1;

Table dropped.

**SQL>** desc student1;

ERROR:

ORA-04043: object student1 does not exist

**RESULT:**

Thus the above all DDL & DML Commands are successfully executed and the output is verified

**EX NO: 02** **AGGREGATE FUNCTIONS**

**DATE :**

**AIM:**

To implement the aggregate functions using sql.

**COMMANDS:**

**SQL**> connect

Enter user-name: system

Enter password:

Connected.

**SQL>** create table emp8(emid number(5),emname varchar(20),emsal number(10),emadd varchar(20));

Table created.

**SQL>** desc emp8;

| **Name** | **Null?** | **Type** |
|---|---|---|
| EMID | | NUMBER(5) |
| EMNAME | | VARCHAR2(20) |
| EMSAL | | NUMBER(10) |
| EMADD | | VARCHAR2(20) |

**SQL**> insert into emp8 values(&emid,'&emname',&emsal,'&emadd');

Enter value for emid: 1

Enter value for emname: alagar

Enter value for emsal: 20000

Enter value for emadd: madurai

old 1: insert into emp8 values(&emid,'&emname',&emsal,'&emadd')

new 1: insert into emp8 values(1,'alagar',20000,'madurai')

1 row created.

**SQL> /**

Enter value for emid: 2

Enter value for emname: selva

Enter value for emsal: 10000

Enter value for emadd: viluppuram

old 1: insert into emp8 values(&emid,'&emname',&emsal,'&emadd')

new 1: insert into emp8 values(2,'selva',10000,'viluppuram')

1 row created.

**SQL> /**

Enter value for emid: 3

Enter value for emname: kumar

Enter value for emsal: 15000

Enter value for emadd: chennai

old 1: insert into emp8 values(&emid,'&emname',&emsal,'&emadd')

new 1: insert into emp8 values(3,'kumar',15000,'chennai')

1 row created.

**SQL> /**

Enter value for emid: 4

Enter value for emname: guru

Enter value for emsal: 50000

Enter value for emadd: apk

old 1: insert into emp8 values(&emid,'&emname',&emsal,'&emadd')

new 1: insert into emp8 values(4,'guru',50000,'apk')

1 row created.

**SQL> /**

Enter value for emid: 5

Enter value for emname: arul

Enter value for emsal: 9000

Enter value for emadd: kpt

old 1: insert into emp8 values(&emid,'&emname',&emsal,'&emadd')

new 1: insert into emp8 values(5,'arul',9000,'kpt')

1 row created.

**SQL>** select * from emp8;

| EMID | EMNAME | EMSAL | EMADD |
|---|---|---|---|
| 1 | alagar | 20000 | madurai |
| 2 | selva | 10000 | viluppuram |
| 3 | kumar | 15000 | chennai |

| | | | |
|---|---|---|---|
| 4 | guru | 50000 | apk |
| 5 | arul | 9000 | kpt |

**SQL**> select count(emsal) from emp8;

COUNT(EMSAL)

---

5

**SQL**> select sum(emsal) from emp8;

SUM(EMSAL)

---

104000

**SQL**> select avg(emsal) from emp8;

AVG(EMSAL

---

20800

**SQL**> select min(emsal) from emp8;

MIN(EMSAL)

---

9000

**SQL**> select max(emsal) from emp8;

MAX(EMSAL)

---

50000

**RESULT :**

Thus the above all aggregate functions are successfully executed and the output is verified.

**EX.NO: 03** **BOOLEAN OPERATIONS**

**DATE :**

**AIM:**

To implement the Boolean operations using sql.

**COMMANDS:**

**SQL>** connect

Enter user-name: system

Enter password:

Connected.

**SQL**> create table collage3(sid number(5),sname varchar(20),ssal number(20));

Table created.

**SQL>** desc collage3;

| **Name** | **Null?** | **Type** |
|---|---|---|
| SID | | NUMBER(5) |
| SNAME | | VARCHAR2(20) |
| SSAL | | NUMBER(20) |

**SQL>** insert into collage3 values(&sid,'&sname',&ssal);

Enter value for sid: 1

Enter value for sname: viji

Enter value for ssal:  10000

old   1: insert into collage3 values(&sid,'&sname',&ssal)

new   1: insert into collage3 values(1,'viji',10000)

1 row created.

**SQL> /**

Enter value for sid: 2

Enter value for sname: jeya

Enter value for ssal: 23000

old   1: insert into collage3 values(&sid,'&sname',&ssal)

new   1: insert into collage3 values(2,'jeya',23000)

1 row created.

**SQL**> /

Enter value for sid: 3

Enter value for sname: latha

Enter value for ssal: 20000

old   1: insert into collage3 values(&sid,'&sname',&ssal)

new   1: insert into collage3 values(3,'latha',20000)

1 row created.

**SQL> /**

Enter value for sid: 4

Enter value for sname: renu

Enter value for ssal: 25000

old   1: insert into collage3 values(&sid,'&sname',&ssal)

new 1: insert into collage3 values(4,'renu',25000)

1 row created.

**SQL> /**

Enter value for sid: 5

Enter value for sname: kalai

Enter value for ssal: 12000

old 1: insert into collage3 values(&sid,'&sname',&ssal)

new 1: insert into collage3 values(5,'kalai',12000)

1 row created.

**SQL>** select * from collage3;

| SID | SNAME | SSAL |
|---|---|---|
| 1 | viji | 10000 |
| 2 | jeya | 23000 |
| 3 | latha | 20000 |
| 4 | renu | 25000 |
| 5 | kalai | 12000 |

**SQL>** select sname from collage3 where sid>2 and ssal=25000;

**SNAME**

---

renu

**SQL**> select sname from collage3 where sid>2 or ssal=25000;

**SNAME**

---

latha

renu

kalai

**SQL>** select sname from collage3 where not ssal=25000;

**SNAME**

---

viji

jeya

latha

kalai

**SQL>** select sname from collage3 where ssal=25000;

**SNAME**

---

renu

**SQL>** select sname from collage3 where ssal<>'10000';

**SNAME**

---

jeya

latha

renu

kalai

**SQL**> select sname from collage3 where ssal<23000;

**SNAME**

---

viji

latha

kalai

**SQL>** select sname from collage3 where ssal<=23000;

**SNAME**

---

viji

jeya

latha

kalai

**RESULT:**

Thus the above all Boolean functions are successfully executed and the output is verified.

**EX.NO: 04** **COMPARISON OPERATION**

**DATE :**

**AIM:**

To implement the comparison operation using sql.

**COMMANDS:**

SQL> connect
Enter user-name: system
Enter password:
Connected.

**SQL**> create table student33(stuname varchar(10),sturollno number(10),studep varchar(10),stumark1 number(10),stdmark2 number(10),stumark3 number(10),stutotal number(10),stuavg number(10),sturesult varchar(10),stuclass varchar(10));
Table created.

**SQL>** desc student33;

| **Name** | **Null?** | **Type** |
|---|---|---|
| STUNAME | | VARCHAR2(10) |
| STUROLLNO | | NUMBER(10) |
| STUDEP | | VARCHAR2(10) |
| STUMARK1 | | NUMBER(10) |
| STDMARK2 | | NUMBER(10) |
| STUMARK3 | | NUMBER(10) |
| STUTOTAL | | NUMBER(10) |
| STUAVG | | NUMBER(10) |

| | |
|---|---|
| STURESULT | VARCHAR2(10) |
| STUCLASS | VARCHAR2(10) |

**SQL>** insert into student33values ('&stuname',&sturollno,'&studep',&stumark1,&stumark2,&stumark3,&stutotal,&stuavg,'&sturesult','&stuclass');

Enter value for stuname: hari

Enter value for sturollno: 1

Enter value for studep: cs

Enter value for stumark1: 100

Enter value for stumark2: 90

Enter value for stumark3: 80

Enter value for stutotal: 270

Enter value for stuavg: 90

Enter value for sturesult: pass

Enter value for stuclass: first

old 1: insert into student33 values('&stuname',&sturollno,'&studep',&stumark1,&stumark2,&stumark3,&stutotal,&stuavg,'&sturesult','&stuclass')

new 1: insert into student33 values('hari',1,'cs',100,90,80,270,90,'pass',' first')

1 row created.

**SQL> /**

Enter value for stuname: jeeva

Enter value for sturollno: 2

Enter value for studep: tamil

Enter value for stumark1: 90

Enter value for stumark2: 70

Enter value for stumark3: 60

Enter value for stutotal: 220

Enter value for stuavg: 73.333

Enter value for sturesult: pass

Enter value for stuclass: first

old 1: insert into student33
values('&stuname',&sturollno,'&studep',&stumark1,&stumark2,&stumark3,&stutotal,&stuav
g,'&sturesult','&stuclass')

new 1: insert into student33 values('jeeva',2,'tamil',90,70,60,220,73.333,'pass','first')

1 row created.

**SQL> /**

Enter value for stuname: ajith

Enter value for sturollno: 3

Enter value for studep: english

Enter value for stumark1: 30

Enter value for stumark2: 20

Enter value for stumark3: 10

Enter value for stutotal: 60

Enter value for stuavg: 20

Enter value for sturesult: fail

Enter value for stuclass: third

old 1: insert into student33
values('&stuname',&sturollno,'&studep',&stumark1,&stumark2,&stumark3,&stutotal,&stuav
g,'&sturesult','&stuclass')

new 1: insert into student33 values('ajith',3,'english',30,20,10,60,20,'fail','third')

1 row created.

SQL> /

Enter value for stuname: aadhi

Enter value for sturollno: 4

Enter value for studep: maths

Enter value for stumark1: 60

Enter value for stumark2: 50

Enter value for stumark3: 40

Enter value for stutotal: 130

Enter value for stuavg: 43.333

Enter value for sturesult: pass

Enter value for stuclass: second

old 1: insert into student33
values('&stuname',&sturollno,'&studep',&stumark1,&stumark2,&stumark3,&stutotal,&stuav
g,'&sturesult','&stuclass')

new 1: insert into student33 values('aadhi',4,'maths',60,50,40,130,43.333,'pass','second')

1 row created.

**SQL> /**

Enter value for stuname: swati

Enter value for sturollno: 5

Enter value for studep: b.com

Enter value for stumark1: 100

Enter value for stumark2: 100

Enter value for stumark3: 100

Enter value for stutotal: 300

Enter value for stuavg: 100

Enter value for sturesult pass

Enter value for stuclass: first

old 1: insert into student33
values('&stuname',&sturollno,'&studep',&stumark1,&stumark2,&stumark3,&stutotal,&stuav
g,'&sturesult','&stuclass')

new 1: insert into student33 values('swati',5,'bcom',100,100,100,300,100,'pass','first')

1 row created.

**SQL**> select * from student33;

STUNAME STUROLLNO STUDEP STUMARK1 STDMARK2
STUMARK3

---------- ---------- ---------- ---------- ---------- ----
----------

STUTOTAL STUAVG STURESULT STUCLASS

---------- ---------- ---------- ----------

| | | | | | |
|---|---|---|---|---|---|
| hari | 1 | cs | 100 | 90 | 80 |
| 270 | 90 | pass | first | | |
| jeeva | 2 | tamil | `90 | 70 | 60 |
| 220 | 73 | pass | first | | |
| ajith | 3 | english | 30 | 20 | 10 |
| 60 | 20 | fail | third | | |
| aadhi | 4 | maths | 60 | 50 | 40 |
| 130 | 43 | pass | second | | |
| swati | 5 | b.com | 100 | 100 | 100 |
| 300 | 100 | pass | first | | |

**SQL>** select stuname,sturollno,stumark1,stdmark2,stumark3 from student33 where stuavg>70;

| STUNAME | STUROLLNO | STUMARK1 | STDMARK2 | STUMARK3 |
|---|---|---|---|---|
| hari | 1 | 100 | 90 | 80 |
| jeeva | 2 | 90 | 70 | 60 |
| swati | 5 | 100 | 100 | 100 |

**SQL>** select stuname from student33 where studep='cs';

**STUNAME**

---

hari

**SQL>** select stuname from student33 where studep='english' and stuavg<70;

**STUNAME**

---

ajith

**RESULT:**

Thus the above commands are successfully executed and the output is verified.

**EX.NO:5** **Usage of Select Command**

**DATE :**

---

**Aim:**

To Implement the Select Command using SQL.

**COMMAND:**

SQL> connect

Enter user-name: system

Enter password:

**Connected.**

**SQL>** create table flims(fname varchar(10),fprodname varchar(10),freleyear number(8),fdirname varchar(10),fstarrate number(9),ftotalcopies number(9),favgcopies number(10),flangname varchar(10));

Table created.

**SQL>** desc flims;

| **Name** | **Null?** | **Type** |
|---|---|---|
| FNAME | | VARCHAR2(10) |
| FPRODNAME | | VARCHAR2(10) |
| FRELEYEAR | | NUMBER(8) |
| FDIRNAME | | VARCHAR2(10) |

| | |
|---|---|
| FSTARRATE | NUMBER(9) |
| FTOTALCOPIES | NUMBER(9) |
| FAVGCOPIES | NUMBER(10) |
| FLANGNAME | VARCHAR2(10) |

**SQL>** insert into flims
values('&fname','&fprodname',&freleyear,'&fdirname',&fstarrate,&ftotalcopies,&favgcopies,'&flangname');

Enter value for fname: gilli

Enter value for fprodname: mani

Enter value for freleyear: 2000

Enter value for fdirname: sankar

Enter value for fstarrate: 4

Enter value for ftotalcopies: 6

Enter value for favgcopies: 8

Enter value for flangname: tamil

old 1: insert into flims
values('&fname','&fprodname',&freleyear,'&fdirname',&fstarrate,&ftotalcopies,&favgcopies,'&flangname')

new 1: insert into flims values('gilli','mani',2000,'sankar',4,6,8,'tamil')

1 row created.

**SQL> /**

Enter value for fname: thuppaki

Enter value for fprodname: mugi

Enter value for freleyear: 2002

Enter value for fdirname: pugal

Enter value for fstarrate: 5

Enter value for ftotalcopies: 7

Enter value for favgcopies: 9

Enter value for flangname: eng

old 1: insert into flims
values('&fname','&fprodname',&freleyear,'&fdirname',&fstarrate,&ftotalcopies,&favgcopies,'
&flangname')

new 1: insert into flims values('thuppaki','mugi',2002,'pugal',5,7,9,'eng')

1 row created.

**SQL> /**

Enter value for fname: kushi

Enter value for fprodname: kali

Enter value for freleyear: 2008

Enter value for fdirname: bala

Enter value for fstarrate: 7

Enter value for ftotalcopies: 3

Enter value for favgcopies: 5

Enter value for flangname: hindi

old 1: insert into flims
values('&fname','&fprodname',&freleyear,'&fdirname',&fstarrate,&ftotalcopies,&favgcopies,'
&flangname')

new 1: insert into flims values('kushi','kali',2008,'bala',7,3,5,'hindi')

1 row created.

**SQL> /**

Enter value for fname: jilla

Enter value for fprodname: malai

Enter value for freleyear: 2006

Enter value for fdirname: alagu

Enter value for fstarrate: 8

Enter value for ftotalcopies: 3

Enter value for favgcopies: 2

Enter value for flangname: telungu

old 1: insert into flims
values('&fname','&fprodname',&freleyear,'&fdirname',&fstarrate,&ftotalcopies,&favgcopies,'
&flangname')

new 1: insert into flims values('jilla','malai',2006,'alagu',8,3,2,'telungu')

1 row created.

**SQL> /**

Enter value for fname: kutty

Enter value for fprodname: mathan

Enter value for freleyear: 2010

Enter value for fdirname: ravi

Enter value for fstarrate: 9

Enter value for ftotalcopies: 6

Enter value for favgcopies: 7

Enter value for flangname: tamil

old 1: insert into flims
values('&fname','&fprodname',&freleyear,'&fdirname',&fstarrate,&ftotalcopies,&favgcopies,'
&flangname')

new 1: insert into flims values('kutty','mathan',2010,'ravi',9,6,7,'tamil')

1 row created.

**SQL> /**

Enter value for fname: three

Enter value for fprodname: vijay

Enter value for freleyear: 2006

Enter value for fdirname: pavin

Enter value for fstarrate: 8

Enter value for ftotalcopies: 9

Enter value for favgcopies: 4

Enter value for flangname: tamil

old 1: insert into flims
values('&fname','&fprodname',&freleyear,'&fdirname',&fstarrate,&ftotalcopies,&favgcopies,'
&flangname')

new 1: insert into flims values('three','vijay',2006,'pavin',8,9,4,'tamil')

1 row created.

**SQL>** select * from flims;

| FNAME | FPRODNAME | FRELEYEAR | FDIRNAME |
|---|---|---|---|
| **FSTARRATE** | **FTOTALCOPIES** | **FAVGCOPIES** | **FLANGNAME** |
| gilli | mani | 2000 | sankar |
| 4 | 6 | 8 | tamil |
| thuppaki | mugi | 2002 | pugal |
| 5 | 7 | 9 | eng |
| kushi | kali | 2008 | bala |
| 7 | 3 | 5 | hindi |
| jilla | malai | 2006 | alagu |
| 8 | 3 | 2 | telungu |
| kutty | mathan | 2010 | ravi |
| 9 | 6 | 7 | tamil |
| three | vijay | 2006 | pavin |
| 8 | 9 | 4 | tamil |

6 rows selected.

**SQL>** select fname,fprodname,fdirname from flims where flangname='tamil';

| FNAME | FPRODNAME | FDIRNAME |
|---|---|---|
| gilli | mani | sankar |
| kutty | mathan | ravi |
| three | vijay | pavin |

**SQL**> select fname from flims where freleyear='2002';

| FNAME |
|---|
| Thuppaki |

**SQL>** select fname from flims where freleyear>='2002';

| FNAME |
|---|
| thuppaki |
| kushi |
| jilla |
| kutty |
| three |

**SQL>** select fname from flims where freleyear<='2002';

| FNAME |
|---|
| gilli |
| thuppaki |

**SQL>** select fname from flims where freleyear<>'2002';

**FNAME**

---

gilli

kushi

jilla

kutty

three

**RESULT:**

Thus the above commands are successfully executed and the output is verified.

**EX.NO: 06** **JOINS**

**DATE :**

**AIM:**

To implement the different joins using sql.

**COMMAND:**

**SQL**> connect

Enter user-name: system

Enter password:

Connected.

**SQL>** create table books1(bookname varchar(20),bookid number(10),bookautname varchar(15),bookprize number(12));

Table created.

**SQL>** desc books1;

| Name | Null? | Type |
|---|---|---|
| BOOKNAME | | VARCHAR2(20) |
| BOOKID | | NUMBER(10) |
| BOOKAUTNAME | | VARCHAR2(15) |
| BOOKPRIZE | | NUMBER(12) |

**SQL**> insert into books1 values('&bookname',&bookid,'&bookautname',&bookprize);

Enter value for bookname: gk

Enter value for bookid: 1

Enter value for bookautname: bharath

Enter value for bookprize: 50

old 1: insert into books1 values('&bookname',&bookid,'&bookautname',&bookprize)

new 1: insert into books1 values('gk',1,'bharath',50)

1 row created.

**SQL> /**

Enter value for bookname: malar

Enter value for bookid: 2

Enter value for bookautname: raju

Enter value for bookprize: 60

old 1: insert into books1 values('&bookname',&bookid,'&bookautname',&bookprize)

new 1: insert into books1 values('malar',2,'raju',60)

1 row created.

**SQL> /**

Enter value for bookname: time

Enter value for bookid: 3

Enter value for bookautname: louis

Enter value for bookprize: 40

old 1: insert into books1 values('&bookname',&bookid,'&bookautname',&bookprize)

new 1: insert into books1 values('time',3,'louis',40)

1 row created.

**SQL**> create table library0(bookname varchar(20),bookid number(12),bookautname varchar(15),bookreleyr number(10));

Table created.

**SQL**> desc library0;

| **Name** | **Null?** | **Type** |
|---|---|---|
| BOOKNAME | | VARCHAR2(20) |
| BOOKID | | NUMBER(12) |
| BOOKAUTNAME | | VARCHAR2(15) |
| BOOKRELEYR | | NUMBER(10) |

**SQL**> insert into library0 values('&bookname',&bookid,'&bookautname',&bookreleyr);

Enter value for bookname: gk

Enter value for bookid: 1

Enter value for bookautname: bharath

Enter value for bookreleyr: 2002

old 1: insert into library0 values('&bookname',&bookid,'&bookautname',&bookreleyr)

new 1: insert into library0 values('gk',1,'bharath',2002)

1 row created.

**SQL> /**

Enter value for bookname: eng

Enter value for bookid: 4

Enter value for bookautname: mani

Enter value for bookreleyr: 2003

old 1: insert into library0 values('&bookname',&bookid,'&bookautname',&bookreleyr)

new 1: insert into library0 values('eng',4,'mani',2003)

1 row created.

**SQL> /**

Enter value for bookname: phy

Enter value for bookid: 6

Enter value for bookautname: sankar

Enter value for bookreleyr: 2006

old 1: insert into library0 values('&bookname',&bookid,'&bookautname',&bookreleyr)

new 1: insert into library0 values('phy',6,'sankar',2006)

1 row created.

**SQL>** select * from books1;

| **BOOKNAME** | **BOOKID** | **BOOKAUTNAME** | **BOOKPRIZE** |
|---|---|---|---|
| gk | 1 | bharath | 50 |
| malar | 2 | raju | 60 |
| time | 3 | louis | 40 |

**SQL>** select * from library0;

| **BOOKNAME** | **BOOKID** | **BOOKAUTNAME** | **BOOKRELEYR** |
|---|---|---|---|
| eng | 4 | mani | 2002 |
| tamil | 5 | bala | 2007 |
| phy | 6 | sankar | 2006 |
| gk | 1 | bharath | 2002 |
| eng | 4 | mani | 2003 |
| phy | 6 | sankar | 2006 |

6 rows selected.

**SQL>** select books1.bookname,library0.bookautname from books1 inner join library0 on books1.bookid=library0.bookid;

| **BOOKNAME** | **BOOKAUTNAME** |
|---|---|
| gk | bharath |

**SQL>** select books1.bookname,library0.bookautname from books1 left join library0 on books1.bookid=library0.bookid;

| **BOOKNAME** | **BOOKAUTNAME** |
|---|---|
| gk | bharath |
| time | |
| malar | |

**SQL>** select books1.bookname,library0.bookautname from books1 right join library0 on books1.bookid=library0.bookid;

| **BOOKNAME** | **BOOKAUTNAME** |
|---|---|
| gk | bharath |
| | sankar |
| | sankar |
| | mani |
| | bala |
| | mani |

6 rows selected.

**SQL**> select books1.bookname,library0.bookautname from books1 full outer join library0 on books1.bookid=library0.bookid;

| **BOOKNAME** | **BOOKAUTNAME** |
|---|---|
| gk | bharath |
| malar | sankar |
| | sankar |
| | mani |
| | bala |
| | mani |

8 rows selected.

**RESULT:**

Thus the above queries are successfully executed and the output is verified.

**EX.NO:7** **CHARACTER FUNCTION**

**DATE :**

**AIM:**

To Implement the character function using sql.

**COMMANDS:**

**SQL>** connect

Enter user-name: system

Enter password:

Connected.

**SQL>** create table emp5(empname varchar(10),empsal number(8),empadd varchar(10));

Table created.

**SQL>** desc emp5;

| **Name** | **Null?** | **Type** |
|---|---|---|
| EMPNAME | | VARCHAR2(10) |
| EMPSAL | | NUMBER(8) |
| EMPADD | | VARCHAR2(10) |

**SQL>** insert into emp5 values('&empname',&empsal,'&empadd');

Enter value for empname: swty

Enter value for empsal: 10000

Enter value for empadd: Chennai

old 1: insert into emp5 values('&empname',&empsal,'&empadd')

new 1: insert into emp5 values('swty',10000,'chennai')

1 row created.

**SQL> /**

Enter value for empname: sri

Enter value for empsal: 20000

Enter value for empadd: Madurai

old 1: insert into emp5 values('&empname',&empsal,'&empadd')

new 1: insert into emp5 values('sri',20000,'madurai')

1 row created.

**SQL> /**

Enter value for empname: nila

Enter value for empsal: 30000

Enter value for empadd: kovai

old 1: insert into emp5 values('&empname',&empsal,'&empadd')

new 1: insert into emp5 values('nila',30000,'kovai')

1 row created.

**SQL**> select * from emp5;

| **EMPNAME** | **EMPSAL** | **EMPADD** |
|---|---|---|
| swty | 10000 | chennai |
| sri | 20000 | madurai |
| nila | 30000 | kovai |

**SQL>** select empname,upper(empname)from emp5;

| **EMPNAME** | **UPPER** |
|---|---|
| swty | SWTY |
| sri | SRI |
| nila | NILA |

**SQL**> select empname,lower(empname)from emp5;

| **EMPNAME** | **LOWER** |
|---|---|
| swty | swty |
| sri | sri |
| nila | nila |

**SQL**> select empname,initcap(empname)from emp5;

| **EMPNAME** | **INITCAP** |
|---|---|
| swty | Swty |
| sri | Sri |
| nila | Nila |

**SQL**> select empname,replace(empname,'a','e')from emp5;

| **EMPNAME** | **REPLACE** |
|---|---|
| swty | swty |
| sri | sri |
| nila | nile |

**SQL**> select empname,length(empname)from emp5;

| **EMPNAME** | **LENGTH(EMPNAME)** |
|---|---|
| swty | 4 |
| sri | 3 |
| nila | 4 |

**SQL>** select empname,substr(empname,'1','3')from emp5;

| **EMPNAME** | **SUB** |
|---|---|
| swty | swt |
| sri | sri |
| nila | nil |

**RESULT:**

Thus the above character functions are successfully executed and the output is verified.

**EX.NO: 08 RELATIONAL ALGEBRA OPERATIONS**

**DATE :**

---

**AIM:**

To implement the Relational Algebra Operation using sql.

**COMMANDS:**

SQL> connect

Enter user-name: system

Enter password:

Connected.

**SQL>** create table library5(bid number(10),bname varchar(20),bauthname varchar(20),brelyr number(8));

Table created.

**SQL**> desc library5;

| **Name** | **Null?** | **Type** |
|---|---|---|
| BID | | NUMBER(10) |
| BNAME | | VARCHAR2(20) |
| BAUTHNAME | | VARCHAR2(20) |
| BRELYR | | NUMBER(8) |

**SQL**> insert into library5 values(&bid,'&bname','&bauthname',&brelyr);

Enter value for bid: 1

Enter value for bname: illakkiyam

Enter value for bauthname: selva

Enter value for brelyr: 2000

old 1: insert into library5 values(&bid,'&bname','&bauthname',&brelyr)

new 1: insert into library5 values(1,'illakkiyam','selva',2000)

1 row created.

**SQL> /**

Enter value for bid: 2

Enter value for bname: kethai

Enter value for bauthname: alagar

Enter value for brelyr: 1998

old 1: insert into library5 values(&bid,'&bname','&bauthname',&brelyr)

new 1: insert into library5 values(2,'kethai','alagar',1998)

1 row created.

**SQL> /**

Enter value for bid: 3

Enter value for bname: vinayaga

Enter value for bauthname: murugan

Enter value for brelyr: 1990

old 1: insert into library5 values(&bid,'&bname','&bauthname',&brelyr)

new 1: insert into library5 values(3,'vinayaga','murugan',1990)

1 row created.

**SQL> /**

Enter value for bid: 4

Enter value for bname: tamil

Enter value for bauthname: arun

Enter value for brelyr: 2002

old 1: insert into library5 values(&bid,'&bname','&bauthname',&brelyr)

new 1: insert into library5 values(4,'tamil','arun',2002)

1 row created.

**SQL> /**

Enter value for bid: 5

Enter value for bname: science

Enter value for bauthname: guru

Enter value for brelyr: 2005

old 1: insert into library5 values(&bid,'&bname','&bauthname',&brelyr)

new 1: insert into library5 values(5,'science','guru',2005)

1 row created.

**SQL>** create table study3(bid number(10),bname varchar(20));

Table created.

**SQL>** desc study3;

| **Name** | **Null?** | **Type** |
|---|---|---|
| BID | | NUMBER(10) |
| BNAME | | VARCHAR2(20) |

**SQL>** insert into study3 values(&bid,'&bname');

Enter value for bid: 2

Enter value for bname: kethai

old 1: insert into study3 values(&bid,'&bname')

new 1: insert into study3 values(2,'kethai')

1 row created.

**SQL> /**

Enter value for bid: 3

Enter value for bname: vinayaga

old 1: insert into study3 values(&bid,'&bname')

new 1: insert into study3 values(3,'vinayaga')

1 row created.

**SQL> /**

Enter value for bid: 4

Enter value for bname: tamil

old 1: insert into study3 values(&bid,'&bname')

new 1: insert into study3 values(4,'tamil')

1 row created.

**SQL> /**

Enter value for bid: 6

Enter value for bname: kadahi

old 1: insert into study3 values(&bid,'&bname')

new 1: insert into study3 values(6,'kadahi')

1 row created.

**SQL> /**

Enter value for bid: 7

Enter value for bname: maths

old 1: insert into study3 values(&bid,'&bname')

new 1: insert into study3 values(7,'maths')

1 row created.

**SQL>** select * from study3;

| **BID** | **BNAME** |
|---|---|
| 2 | kethai |
| 3 | vinayaga |
| 4 | tamil |
| 6 | kadahi |
| 7 | maths |

**SQL>** select * from library5;

| BID | BNAME | BAUTHNAME | BRELYR |
|---|---|---|---|
| 1 | illakkiyam | selva | 2000 |
| 2 | kethai | alagar | 1998 |
| 3 | vinayaga | murugan | 1990 |
| 4 | tamil | arun | 2002 |
| 5 | science | guru | 2005 |

**SQL>** select bname from library5 union select bname from study3;

**BNAME**

---

illakkiyam

kadahi

kethai

maths

science

tamil

vinayaga

7 rows selected.

**SQL>** select bname from library5 union all select bname from study3;

**BNAME**

---

illakkiyam

kethai

vinayaga

tamil

science

kethai

vinayaga

tamil

kadahi

maths

10 rows selected.

**SQL>** select bname from library5 minus select bname from study3;

**BNAME**

---

illakkiyam

science

**SQL>** select bname from library5 intersect select bname from study3;

**BNAME**

---

kethai

tamil

vinayaga

**RESULT:**

Thus the above all relational algebra operations are successfully executed and the output is verified.

**EX.NO:09** **VIEWS**

**DATE :**

**AIM:**

To implement the different views in sql.

**CODINGS:**

**SQL>** connect

Enter user-name: system

Enter password:

Connected.

**SQL>** create table student12(stuname varchar(10),stureg number(5),stumark number(5));

Table created.

**SQL>** insert into student12 values('&stuname',&stureg,&stumark);

Enter value for stuname: ranji

Enter value for stureg: 6

Enter value for stumark: 87

old 1: insert into student12 values('&stuname',&stureg,&stumark)

new 1: insert into student12 values('ranji',6,87)

1 row created.

**SQL> /**

Enter value for stuname: divya

Enter value for stureg: 7

Enter value for stumark: 88

old 1: insert into student12 values('&stuname',&stureg,&stumark)

new 1: insert into student12 values('divya',7,88)

1 row created.

**SQL> /**

Enter value for stuname: anu

Enter value for stureg: 8

Enter value for stumark: 89

old 1: insert into student12 values('&stuname',&stureg,&stumark)

new 1: insert into student12 values('anu',8,89)

1 row created.

**SQL**> create view ranji as select stuname,stureg from student12 where stumark<89;

View created.

**SQL>** select * from ranji;

| STUNAME | STUREG |
|---|---|
| ranji | 6 |
| divya | 7 |

**SQL>** create table student14(stuname varchar(10),stureg number(5),stumark number(5),stuadd varchar(10));

Table created.

**SQL>** insert into student14 values('&stuname',&stureg,&stumark,'&stuadd');

Enter value for stuname: ranji

Enter value for stureg: 6

Enter value for stumark: 87

Enter value for stuadd: kariapatti

old 1: insert into student14 values('&stuname',&stureg,&stumark,'&stuadd')

new 1: insert into student14 values('ranji',6,87,'kariapatti')

1 row created.

**SQL> /**

Enter value for stuname: divya

Enter value for stureg: 7

Enter value for stumark: 88

Enter value for stuadd: madurai

old 1: insert into student14 values('&stuname',&stureg,&stumark,'&stuadd')

new 1: insert into student14 values('divya',7,88,'madurai')

1 row created.

**SQL> /**

Enter value for stuname: anu

Enter value for stureg: 4

Enter value for stumark: 56

Enter value for stuadd: chennai

old 1: insert into student14 values('&stuname',&stureg,&stumark,'&stuadd')

new 1: insert into student14 values('anu',4,56,'chennai')

1 row created.

**SQL>** create view dora as select student12.stuname,student12.stumark,student14.st

uadd from student12,student14 where student12.stuname=student14.stuname;

View created.

**SQL>** select * from dora;

| STUNAME | STUMARK | STUADD |
|---|---|---|
| ranji | 87 | kariapatti |
| divya | 88 | madurai |
| anu | 89 | chennai |

**SQL>** update ranji set stureg=12 where stuname='divya';

1 row updated.

**SQL**> select * from ranji;

**STUNAME** **STUREG**

---------- ----------

ranji 6

divya 12

**SQL>** delete from ranji where stureg=12;

1 row deleted.

SQL> select * from ranji;

**STUNAME** **STUREG**

---------- ----------

ranji 6

**SQL**> drop view ranji;

View dropped.

**SQL>** select * from ranji;

**ERROR at line 1**:

**ORA-00942**: table or view does not exist

**RESULT:**

Thus the above queries are successfully executed and output was verified

**EX NO:10** **TRIGGER**

**DATE :**

**AIM:**

To implement the Trigger using SQL.

**CODINGS:**

**SQL>** connect
Enter user-name: system
Enter password:
Connected.

**SQL>** create table employee13(empid number(10),empnamevarchar(10),empsal number(10),empaddvarchar(10));
Table created.

**SQL>** insert into employee13 values(&empid,'&empname',&empsal,'&empadd');
Enter value for empid: 1
Enter value for empname: meenu
Enter value for empsal: 1000
Enter value for empadd: madurai
old 1: insert into employee13 values(&empid,'&empname',&empsal,'&empadd')
new 1: insert into employee13 values(1,'meenu',1000,'madurai')
1 row created.
**SQL> /**
Enter value for empid: 2
Enter value for empname: divya
Enter value for empsal: 1500
Enter value for empadd: ooty
old 1: insert into employee13 values(&empid,'&empname',&empsal,'&empadd')
new 1: insert into employee13 values(2,'divya',1500,'ooty')
1 row created.

**SQL> /**

Enter value for empid: 3

Enter value for empname: ranji

Enter value for empsal: 2000

Enter value for empadd: chennai

old 1: insert into employee13 values(&empid,'&empname',&empsal,'&empadd')

new 1: insert into employee13 values(3,'ranji',2000,'chennai')

1 row created.

**SQL**> select * from employee13;

| EMPID | EMPNAME | EMPSAL | EMPADD |
|---|---|---|---|
| 1 | meenu | 1000 | madurai |
| 2 | divya | 1500 | ooty |
| 3 | ranji | 2000 | chennai |

**SQL**>ed meena

```
create or replace trigger pandi
before delete or insert or update on employee13
for each row
when(new.empid>0)
declare
s number;
begin
s:=:new.empsal -:old.empsal;
dbms_output.put_line('old salary:'||:old.empsal);
dbms_output.put_line('new salary:'||:new.empsal);
dbms_output.put_line('salary difference:'||s);
end;
/
```

**SQL**> @ D:\meenu\ss.sql
Trigger created.

**SQL>** set serveroutput on

**SQL**> insert into employee13 values(&empid,'&empname',&empsal,'&empadd');

Enter value for empid: 4
Enter value for empname: pandi
Enter value for empsal: 2300
Enter value for empadd: kpt
old 1: insert into employee13 values(&empid,'&empname',&empsal,'&empadd')
new 1: insert into employee13 values(4,'pandi',2300,'kpt')
old salary:
new salary:2300
salary difference:
1 row created.

**SQL> /**
Enter value for empid: 5
Enter value for empname: kutty
Enter value for empsal: 3000
Enter value for empadd: mdu
old 1: insert into employee13 values(&empid,'&empname',&empsal,'&empadd')
new 1: insert into employee13 values(5,'kutty',3000,'mdu')
old salary:
new salary:3000
salary difference:
1 row created.

**SQL>** update employee13 set empsal=5000 where empname='kutty';

old salary:3000
new salary:5000
salary difference:2000

1 row updated.

**RESULT:**

Thus the above program was successfully executed and the output is verified..

**EX NO: 11** **DATABASE CREATION**

**DATE :**

**AIM:**

To write a PL/SQL procedure for update the database created by the SQL.

**CODINGS :**

SQL> connect

Enter user-name: system

Enter password:

Connected.

**SQL>** create table student9(stuname varchar(10),sturegno number(3),stumark1 number(3),stumark2 number(3),stumark3 number(3),stutot number(3),stuavg number(3));

Table created.

**SQL>** desc student9;

| **Name** | **Null?** | **Type** |
|---|---|---|
| STUNAME | | VARCHAR2(10) |
| STUREGNO | | NUMBER(3) |
| STUMARK1 | | NUMBER(3) |
| STUMARK2 | | NUMBER(3) |
| STUMARK3 | | NUMBER(3) |
| STUTOT | | NUMBER(3) |
| STUAVG | | NUMBER(3) |

**SQL**> insert into student9
values('&stuname',&sturegno,&stumark1,&stumark2,&stumark3,&stutot,&stuavg);

Enter value for stuname: eswar

Enter value for sturegno: 101

Enter value for stumark1: 98

Enter value for stumark2: 95

Enter value for stumark3: 96

Enter value for stutot: 00

Enter value for stuavg: 00

old 1: insert into student9
values('&stuname',&sturegno,&stumark1,&stumark2,&stumark3,&stutot,&stuavg)

new 1: insert into student9 values('eswar',101,98,95,96,00,00)

1 row created.

**SQL> /**

Enter value for stuname: ajith

Enter value for sturegno: 102

Enter value for stumark1: 96

Enter value for stumark2: 95

Enter value for stumark3: 93

Enter value for stutot: 00

Enter value for stuavg: 00

old 1: insert into student9
values('&stuname',&sturegno,&stumark1,&stumark2,&stumark3,&stutot,&stuavg)

new 1: insert into student9 values('ajith',102,96,95,93,00,00)

1 row created.

**SQL>** select * from student9;

| STUNAME | STUREGNO | STUMARK1 | STUMARK2 | STUMARK3 | STUTOT | STUAVG |
|---|---|---|---|---|---|---|
| eswar | 101 | 98 | 95 | 96 | 0 | 0 |
| ajith | 102 | 96 | 95 | 93 | 0 | 0 |

**SQL**> @ D:\aadhi\mn.sql

Procedure created.

**SQL**> set serveroutput on;

**SQL>** exec mn(101);

**PL/SQL** procedure successfully completed.

**SQL>** select * from student9;

| STUNAME | STUREGNO | STUMARK1 | STUMARK2 | STUMARK3 | STUTOT | STUAVG |
|---|---|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| eswar | 101 | 98 | 95 | 96 |
| 289 | 96 | | | |
| ajith | 102 | 96 | 95 | 93 |
| 0 | 0 | | | |

**SQL>** exec mn(102);

**PL/SQL** procedure successfully completed.

**SQL>** select * from student9;

| **STUNAME** | **STUREGNO** | **STUMARK1** | **STUMARK2** | **STUMARK3** |
|---|---|---|---|---|
| **STUTOT** | **STUAVG** | | | |
| eswar | 101 | 98 | 95 | 96 |
| 289 | 96 | | | |
| ajith | 102 | 96 | 95 | 93 |
| 284 | 95 | | | |

**RESULT:**

Thus the above program was successfully executed and the output is verified.

**EX.NO: 12** **FIBONACCI SERIES**

**DATE :**

---

**AIM:**

To write a PL/SQL program for generate the Fibonacci series of the given input.

**CODING:**

**SQL**> ed geetha

```
declare
n number:=&n;
t1 number:=0;
t2 number:=1;
t3 number;
begin
dbms_output.put_line(t1);
dbms_output.put_line(t2);
for i in 3.. n loop
t3:=t1+t2;
dbms_output.put_line(t3);
t1:=t2;
t2:=t3;
end loop;
end;
```

**SQL**> @D:\go\ii.sql

16 /

Enter value for n: 7

old 2: n number:=&n;

new 2: n number:=7;

**PL/SQL** procedure successfully completed.

**SQL>** set serveroutput on

**SQL**> /

Enter value for n: 7

old 2: n number:=&n;

new 2: n number:=7;

0

1

1

2

3

5

8

**PL/SQL** procedure successfully completed.

**RESULT:**

Thus the above program was successfully executed and the output is verified.

**EXNO :13** **FACTORIAL CALCULATION**

**DATE :**

---

**AIM:**

To write a PL/SQL program for find the factorial value of the given number.

**CODING:**

**SQL**> ed ad

```
declare
n number(3);
i number(3):=1;
f number(3):=1;
begin
n:=&n;
dbms_output.put_line('no is:'||n);
while(i<=n)
loop
f:=f*i;
i:=i+1;
end loop;
dbms_output.put_line('factorial number is:'||f);
end;
/
```

**SQL>** @E:\trigger\fact.sql

Enter value for n: 5

old 6: n:=&n;

new 6: n:=5;

**PL/SQL** procedure successfully completed.

**SQL>** set serveroutput on

**SQL> /**

Enter value for n: 5

old 6: n:=&n;

new 6: n:=5;

no is:5

factorial number is:120

**PL/SQL** procedure successfully completed.

**RESULT:**

Thus the above program was successfully executed and the output is verified.

**EX NO:14** **ODD OR EVEN NUMBER CHECKING**

**DATE :**

**AIM:**

To write a PL/SQL program for find the given number is odd or even.

**CODING:**

```
SQL> ed ms
declare
n number(3);
begin
n:=&n;
dbms_output.put_line('no is:'||n);
if(n mod 2=0)then
dbms_output.put_line('even');
else
dbms_output.put_line('odd');
end if;
end;
/
```

**SQL>** @D:\sangee\odd.sql

**SQL**> set serveroutput on

**SQL> /**

Enter value for n: 6

old 4: n:=&n;

new 4: n:=6;

no is:6

even

**PL/SQL** procedure successfully completed.

**SQL> /**

Enter value for n: 7

old 4: n:=&n;

new 4: n:=7;

no is:7

odd

**PL/SQL** procedure successfully completed.

**RESULT:**

Thus the above program was successfully executed and the output is verified.