**ASSIGNMENT - 2**

SQL> create table data(category\_id char(3),category char(20) UNIQUE,description varchar(100),PRIMARY KEY(category\_id));

Table created.

SQL> desc data

Name Null? Type

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

CATEGORY\_ID NOT NULL CHAR(3)

CATEGORY CHAR(20)

DESCRIPTION VARCHAR2(100)

SQL> create table data1(brand\_id char(3),brand\_name varchar(20),PRIMARY KEY(brand\_id));

Table created.

SQL> desc data1

Name Null? Type

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

BRAND\_ID NOT NULL CHAR(3)

BRAND\_NAME VARCHAR2(20)

SQL> alter table data1 modify(Brand\_name varchar2(20) UNIQUE);

Table altered.

SQL> create table data2(toy\_id char(3) PRIMARY KEY,toy\_name varchar(20),toy\_rate number(5,2),category\_id char(3),brand\_id char(3),toy\_qoh number(5),lower\_age number(4),upper\_age number(5),toy\_weight number(2));

Table created.

SQL> desc data2

Name Null? Type

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

TOY\_ID CHAR(3)

TOY\_NAME VARCHAR2(20)

TOY\_RATE NUMBER(5,2)

CATEGORY\_ID CHAR(3)

BRAND\_ID CHAR(3)

TOY\_QOH NUMBER(5)

LOWER\_AGE NUMBER(4)

UPPER\_AGE NUMBER(5)

TOY\_WEIGHT NUMBER(2)

SQL> alter table data2 modify(check(toy\_Qoh>0 and toy\_Qoh<200));

Table altered.

SQL> alter table data2 modify(lower\_age number(5) default 1);

Table altered.

SQL> alter table data2 modify(upper\_age number(5) default 1);

Table altered.

SQL> alter table data2 add(check(toy\_rate>0));

Table altered.

SQL> alter table data2 modify(toy\_weight number(2) default 1);

Table altered.

**ASSIGNMENT – 3**

SQL> select emp\_no,ename,job,hiredate from emp where dept\_no=10;

EMP\_NO ENAME JOB HIREDATE

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

7782 clark manager 09-JUL-81

7839 king president 17-NOV-81

7934 miller clerk 23-JAN-82

SQL> select ename,sal from emp where job='clerk';

ENAME SAL

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

smith 800

adams 1100

james 950

miller 1300

SQL> select ename,job,sal from emp where hiredate='17-dec-1980';

ENAME JOB SAL

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

smith clerk 800

SQL> select ename,sal from emp;

ENAME SAL

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

smith 800

allen 1600

ward 1250

jones 2975

martin 1250

blake 2850

clark 2450

scott 3000

king 5000

turner 1500

adams 1100

ENAME SAL

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

james 950

ford 3000

miller 1300

14 rows selected.

SQL> select dname,dept\_no from dept where dept\_no>20;

DNAME DEPT\_NO

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

sales 30

operations 40

SQL> select sal from emp where sal between 1000 and 2000;

SAL

----------

1600

1250

1250

1500

1100

1300

6 rows selected.

SQL> select ename,sal,comm from emp where comm>sal;

ENAME SAL COMM

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

martin 1250 1400

SQL> select ename,emp\_no from emp where sal>2600 and job='manager' ORDER BY ename asc;

ENAME EMP\_NO

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

blake 7698

jones 7566

SQL> select ename,sal as monthly,sal/22 as daily,sal/22/8 as hourly from emp;

ENAME MONTHLY DAILY HOURLY

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

smith 800 36.3636364 4.54545455

allen 1600 72.7272727 9.09090909

ward 1250 56.8181818 7.10227273

jones 2975 135.227273 16.9034091

martin 1250 56.8181818 7.10227273

blake 2850 129.545455 16.1931818

clark 2450 111.363636 13.9204545

scott 3000 136.363636 17.0454545

king 5000 227.272727 28.4090909

turner 1500 68.1818182 8.52272727

adams 1100 50 6.25

ENAME MONTHLY DAILY HOURLY

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

james 950 43.1818182 5.39772727

ford 3000 136.363636 17.0454545

miller 1300 59.0909091 7.38636364

14 rows selected.

SQL> select ename from emp where ename like '%th%' or ename like '%ll%';

ENAME

----------

smith

allen

miller

SQL> select ename from emp where ename not like '%s';

ENAME

----------

smith

allen

ward

martin

blake

clark

scott

king

turner

ford

miller

11 rows selected.

SQL> select ename from emp where ename like 'c%';

ENAME

----------

clark

SQL> select ename from empl where ename like 't%' and ename like '%r';

ENAME

----------

turner

SQL> select ename,job from empl where sal>1500 and job='manager' or job='salesman';

ENAME JOB

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

allen salesman

ward salesman

jones manager

martin salesman

turner salesman

blake manager

clark manager

7 rows selected.

SQL> select \* from empl where To\_char(hiredate,'YYYY') between 1982 and 1984;

EMP\_NO ENAME JOB MGR HIREDATE SAL COMM

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

DEPT\_NO

----------

7934 miller clerk 7782 23-01-82 1300

10

SQL> select length(ename) from empl;

LENGTH(ENAME)

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

5

5

4

5

6

6

5

5

5

4

5

LENGTH(ENAME)

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

5

4

6

14 rows selected.

SQL> select distinct length(ename) from empl;

LENGTH(ENAME)

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

6

5

4

SQL> select dept\_no,ename,hiredate from empl where dept\_no=20;

DEPT\_NO ENAME HIREDATE

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

20 smith 17-12-80

20 jones 02-04-81

20 martin 28-09-81

20 turner 08-09-81

20 scott 19-04-87

20 adams 23-05-87

20 ford 03-12-81

7 rows selected.

SQL> select ename from empl where to\_char(hiredate,'mm')=12;

ENAME

----------

smith

james

ford

SQL> select avg(sal),dept\_no from empl group by dept\_no;

AVG(SAL) DEPT\_NO

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

1662.5 30

1946.42857 20

2916.66667 10

SQL> select count(ename) from empl where dept\_no=30;

COUNT(ENAME)

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

4

SQL> select max(sal),min(sal),avg(sal),job from empl group by job having job='clerk' or job='manager';

MAX(SAL) MIN(SAL) AVG(SAL) JOB

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

1300 800 1037.5 clerk

2975 2450 2758.33333 manager

SQL> select count(ename),sum(sal) from empl group by dept\_no;

COUNT(ENAME) SUM(SAL)

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

4 6650

7 13625

3 8750

SQL> create or replace view sar as select emp\_no,ename,job,sal,dname,loc from empl e,dep d where e.dept\_no=d.dept\_no;

View created.

SQL> select \* from sar;

EMP\_NO ENAME JOB SAL DNAME LOC

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

7839 king president 5000 accounting newyork

7782 clark manager 2450 accounting newyork

7934 miller clerk 1300 accounting newyork

7566 jones manager 2975 research dallas

7884 turner salesman 1500 research dallas

7788 scott analyst 3000 research dallas

7876 adams clerk 1100 research dallas

7369 smith clerk 800 research dallas

7902 ford analyst 3000 research dallas

7654 martin salesman 1250 research dallas

7900 james clerk 950 sales chicago

EMP\_NO ENAME JOB SAL DNAME LOC

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

7521 ward salesman 1250 sales chicago

7499 allen salesman 1600 sales chicago

7698 blake manager 2850 sales chicago

14 rows selected.

SQL> select emp\_no,ename from empl inner join dep on empl.dept\_no=dep.dept\_no and loc='newyork';

EMP\_NO ENAME

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

7839 king

7782 clark

7934 miller

SQL> select count(ename) from empl inner join dep on empl.dept\_no=dep.dept\_no and loc='newyork';

COUNT(ENAME)

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

3

SQL> select job from empl where sal>=3000;

JOB

---------

analyst

president

analyst

**ASSIGNMENT – 4**

1. Select snum, sname, city, comm

from salespeople;

1001|Peel|London|0.12

1002|Serres|San Jose|0.13

1004|Motika|London|0.11

1007|Rafkin|Barcelona|0.15

1003|Alexrod|New York|0.1

2. Select distinct snum

from orders;

1007

1001

1004

1002

1003

3. Select sname,comm

from salespeople

where city = ‘London’;

Peel|0.12

Motika|0.11

4. Select \*

from cust

where rating = 100;

2001|Hoffman|London|100|1001

2004|Grass|Berlin|100|1002

2006|Pereira|Rome|100|1004a

5. Select ordno, amt, odate

from orders;

3001|18.69|03-OCT-94

3003|767.19|03-OCT-94

3002|1900.1|03-OCT-94

3005|5160.45|03-OCT-94

3006|1098.16|04-OCT-94

3009|1713.23|04-OCT-94

3007|75.75|05-OCT-94

3008|4723.0|05-OCT-94

3010|1309.95|06-OCT-94

3011|9891.88|06-OCT-94

6. select \*

from cust

where( city='San Jose' and rating>=200);

2003|Liu|San Jose|300|1002

7. select \*

from cust

where( city='San Jose' OR rating>=200);

2002|Giovanne|Rome|200|1003

2003|Liu|San Jose|300|1002

2006|Clemens|London|300|1007

8. Select \*

from orders

where amt > 1000;

3002|1900.1|03-OCT-94|2007|1004

3005|5160.45|03-OCT-94|2003|1002

3006|1098.16|04-OCT-94|2008|1007

3009|1713.23|04-OCT-94|2002|1003

3008|4723.0|05-OCT-94|2006|1001

3010|1309.95|06-OCT-94|2004|1002

3011|9891.88|06-OCT-94|2006|1001

9. Select sname, city

from salepeople

where comm > 0.10 and city = ‘London’;

Peel|London

Motika|London

10. Select cname

from cust

where rating <= 100 or city = ‘Rome’;

2002|Giovanne|Rome|200|1003

2003|Liu|San Jose|300|1002

2006|Clemens|London|300|1007

2006|Pereira|Rome|100|1004

11. Select sname, city

from salespeople

where city in (‘Barcelona’,’London’);

1001|Peel|London|0.12

1004|Motika|London|0.11

1007|Rafkin|Barcelona|0.15

12. Select sname, comm

from salespeople

where comm > 0.10 and comm < 0.12;

1004|Motika|London|0.11

13. Select cname

from cust

where city is null;

no row selected

14. select \*

from orders

where(odate>='03-OCT-94' and odate<='04-OCT-94');

3001|18.69|03-OCT-94|2008|1007

3003|767.19|03-OCT-94|2001|1001

3002|1900.1|03-OCT-94|2007|1004

3005|5160.45|03-OCT-94|2003|1002

3006|1098.16|04-OCT-94|2008|1007

3009|1713.23|04-OCT-94|2002|1003

15.Select cname

from cust, orders

where orders.cnum = cust.cnum and orders.snum in ( select snum

from salespeople

where sname in 'Peel','Motika'));

16.Select cname

from cust

where cname like ‘A%’ or cname like ‘B%’;

17.Select onum

from orders

where amt != 0 or amt is not null;

18. Select count(distinct snum)

from orders;

19.Select odate, snum, max(amt)

from orders

group by odate, snum

order by odate,snum;

20. Select odate, snum, max(amt)

from orders

where amt > 3000

group by odate, snum

order by odate,snum;

21. Select odate, amt, snum, cnum

from orders

where amt = (select max(amt)

from orders);

22.Select count(\*)

from orders

where odate = ‘03-OCT-94’;

23. Select count(distinct city)

from cust;

24. Select cnum, min(amt)

from orders

group by cnum;

25. Select min(cname)

from cust

where cname like ‘G%’;

26. Select 'For ' || to\_char(odate,'dd/mm/yy') || ' there are '||

count(\*) || ' Orders'

from orders

group by odate;

27. Select onum, snum, amt, amt \* 0.12

from orders

order by snum;

28. Select 'For the city (' || city || '), the highest rating is : (' ||max(rating) || ')'

from cust

group by city;

29.Select odate, count(onum)

from orders

group by odate

order by count(onum);

30. Select sname, cname

from salespeople, cust

where salespeople.city = cust.city;

31. Select cname, sname

from cust, salespeople

where cust.snum = salespeople.snum;

32. Select onum, cname

from orders, cust

where orders.cnum = cust.cnum;

33. Select onum, sname, cname

from orders, cust, salespeople

where orders.cnum = cust.cnum and orders.snum = salespeople.snum;

34. Select cname, sname, comm

from cust, salespeople

where comm > 0.12 and cust.snum = salespeople.snum;

35. Select sname, amt \* comm

from orders, cust, salespeople

where rating > 100 and salespeople.snum = cust.snum and salespeople.snum = orders.snum and cust.cnum = orders.cnum;

36. Select a.cname, b.cname,a.rating

from cust a, cust b

where a.rating = b.rating and a.cnum != b.cnum;

37. Select a.cname, b.cname,a.rating

from cust a, cust b

where a.rating = b.rating and a.cnum != b.cnum and a.cnum < b.cnum;

38. Select cname, sname

from salespeople, cust

where sname in ( select sname

from salespeople

where rownum <= 3)

order by cname;

39. Select cname

from cust

where city = ( select city

from cust, salespeople

where cust.snum = salespeople.snum and sname = 'Serres');

40. Select cname from cust

where snum in (select snum from cust

group by snum

having count(snum) > 1);

41. Select a.sname, b.sname

from salespeople a, salespeople b

where a.snum > b.snum and a.city = b.city;

42. Select c.cname, a.onum, b.onum

from orders a, orders b, cust c

where a.cnum = b.cnum and a.onum > b.onum and c.cnum = a.cnum;

43. Select cname, city

from cust

where rating = (select rating

from cust

where cname = 'Hoffman') and cname != 'Hoffman';

44.Select Onum

from orders

where snum = ( select snum

from salespeople

where sname = ‘Motika’);

45.Select onum, sname, cname, amt

from orders a, salespeople b, cust c

where a.snum = b.snum and a.cnum = c.cnum and a.snum = ( select snum

from orders

where cnum = ( select cnum

from cust

where cname = 'Hoffman'));

46. Select \*

from orders

where amt > ( select avg(amt)

from orders

where odate = '03-OCT-94');

47. Select avg(comm)

from salespeople

where city = ‘London’;

48.Select snum, cnum

from orders

where cnum in (select cnum

from cust

where city = 'London');

49.Select comm

from salespeople

where snum in (select snum

from cust

where city = ‘London’);

50. Select cnum, cname from cust

where cnum > ( select snum+1000

from salespeople

where sname = 'Serres');

51. Select cnum, rating

from cust

where rating > ( select avg(rating)

from cust

where city = 'San Jose');

52. Select onum, odate

from orders

where cnum = ( select cnum

from cust

where cname = ‘Cisnerous’);

53.Select max(b.cname), max(b.rating), a.cnum

from orders a, cust b

where a.cnum = b.cnum

group by a.cnum

having count(a.cnum) > ( select avg(count(cnum))

from orders

group by cnum);

54. Select snum,sum(amt)

from orders

group by snum

having sum(amt) > ( select max(amt)

from orders);

55. Select cname

from cust a, orders b

where a.cnum = b.cnum and odate = ‘03-OCT-94’;

56. Select sname, snum

from salespeople

where snum in ( select snum

from cust

group by snum

having count(snum) > 1 );

57. Select onum, a.cnum, a.snum, b.snum

from orders a, cust b

where a.cnum = b.cnum and a.snum != b.snum;

58. Select onum, cnum, amt

from orders a

where amt > ( select avg(amt)

from orders b

where a.cnum = b.cnum

group by cnum);

59. Select odate, sum(amt)

from orders a

group by odate

having sum(amt) > ( select max(amt)

from orders b

where a.odate = b.odate

group by odate);

60. Select a.cnum, a.cname

from cust a

where a.rating = ( select max(rating)

from cust b

where a.city = b.city);

61. Select distinct cname

from cust a, salespeople b

where a.city = b.city and a.snum != b.snum;

62. Select \* from cust

where 2 < (select count(\*)

from cust

where city = 'San Jose');

63. Select snum

from cust

group by snum

having count(\*) > 1;

64. Select snum, sname, city

from salespeople

where snum in ( select snum

from cust

group by snum

having count(\*) > 1);

65.Select snum

from cust

group by snum

having count(\*) = 1;

66. Select snum, count(snum)

from orders

group by snum

having count(snum) > 1;

67. Select a.snum

from salespeople a

where exists ( select b.snum

from cust b

where b.rating = 300 and

a.snum = b.snum);

68. Select a.snum

from salespeople a, cust b

where b.rating = 300 and a.snum = b.snum;

69. Select snum, sname

from salespeople

where exists ( select cnum

from cust

where salespeople.city = cust.city and salespeople.snum != cust.snum);

70. Select a.cnum, max(c.cname)

from orders a, cust c

where a.cnum = c.cnum

group by a.cnum,a.snum

having count(\*) < ( select count(\*)

from orders b

where a.snum = b.snum)

order by a.cnum;

71. Select sname

from salespeople

where snum in ( select snum from cust

where salespeople.city = cust.city and

salespeople.snum = cust.snum);

72. Select sname

from salespeople

where sname < any ( select cname

from cust

where salespeople.snum = cust.snum);

73. Select a.cname

from cust a

where city = 'Rome' and rating > ( select max(rating)

from cust

where city != 'Rome');

74. Select onum, amt

from orders

where odate != '06-oct-94' and amt > ( select min(amt)

from orders

where odate = '06-oct-94');

75. Select onum, amt

from orders

where amt < any ( select amt

from orders, cust

where city = 'San Jose' and

orders.cnum = cust.cnum);

76.Select \* from cust

where rating > any (select rating from cust

where city = 'Paris');

77. Select cname, sname

from cust, salespeople

where rating >= any ( select rating

from cust

where snum = (select snum

from salespeople

where sname = 'Serres')) and sname != 'Serres' and salespeople.snum(+) = cust.snum;

78. Select sname

from salespeople

where snum in ( select snum

from cust

where salespeople.city != cust.city and

salespeople.snum = cust.snum);

79.Select onum, amt

from orders

where amt > any ( select amt

from orders, cust

where city = ‘London’ and orders.cnum = cust.cnum);

80. Select sname, cname

from cust, salespeople

where cust.city = 'London' and salespeople.city = 'London' and cust.snum = salespeople.snum;

81. Select a.amt, a.odate, b.amt, b.odate

from orders a, orders b

where (a.amt, b.amt) in (select max(amt), min(amt)

from orders

group by snum);

82. Select snum, city, 'Customer Present'

from salespeople a

where exists ( select snum from cust

where a.snum = cust.snum and a.city = cust.city)

UNION

select snum, city, 'Customer Not Present'

from salespeople a

where exists ( select snum from cust c

where a.snum = c.snum and

a.city != c.city and

c.snum not in ( select snum

from cust

where a.snum = cust.snum and a.city = cust.city));

83. Select a.cname, decode(a.city,b.city,'Matched','Not Matched')

from cust a, salespeople b

where a.snum = b.snum;

84. Select cname, cities, rating, ‘Higher Rating’

from cust

where rating >= 200

UNION

Select cname, cities, rating, ‘Lower Rating’

from cust

where rating < 200;

85. Select 'Customer Number ' || cnum "Code ",count(\*)

from orders

group by cnum

having count(\*) > 1

UNION

select 'Salesperson Number '||snum,count(\*)

from orders

group by snum

having count(\*) > 1;

86. Select 'Customer Number ' || cnum "Code "

from cust

where city = 'San Jose'

UNION

select 'Salesperson Number '||snum

from salespeople

where city = 'San Jose'

UNION ALL

select 'Order Number '|| onum

from Orders

where odate = '03-OCT-94';

87. Select snum, sname

from salespeople

where snum in ( select snum

from cust

where cust.snum = salespeople.snum and cust.city = 'London') and city = ‘London’;

88. Select snum, sname

from salespeople

where snum in ( select snum

from cust

where cust.snum = salespeople.snum and cust.city = 'London') and city = 'London';

**ASSIGNMENT – 5**

create table borrower(rollno number(5),name varchar2(20),issuedate date,bookname varchar2(20),status char);

create table fine(rollno number(5),rdate date,amount number(5));

select \* from borrower;

select \* from fine;

insert into borrower(rollno,name,issuedate,bookname,status) values(56,'Stark','27-JUN-2019','TOC','I');

create procedure libr(roll IN number, book IN varchar2)

IS

idate date;

fineamt number(5);

days number(3);

bname varchar2(20);

BEGIN

select issuedate into idate from borrower where rollno=roll and bookname=book;

select name into bname from borrower where rollno=roll and bookname=book;

dbms\_output.put\_line('Issue date is : '||idate);

dbms\_output.put\_line('Name of borrower is : '||bname);

select trunc(sysdate-idate)into days from dual;

if days>=15 and days<=30 then

fineamt:=(days-15)\*5;

dbms\_output.put\_line('Fine amount is : '||fineamt);

elsif days>30 then

fineamt:=(days-30)\*50;

dbms\_output.put\_line('Fine amount is : '||fineamt);

end if;

UPDATE borrower set status='R' where rollno=roll and bookname=book;

if fineamt>0 then

insert into fine(rollno,rdate,amount)values(roll,sysdate,fineamt);

end if;

exception

when no\_data\_found then

dbms\_output.put\_line('NO DATA FOUND');

when others then

dbms\_output.put\_line('EXCEPTION OCCUR');

END;

/

\*\*\*output\*\*\*\*\*;

SQL> select \* from borrower;

ROLLNO NAME ISSUEDAT BOOKNAME S

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

38 Wood 01-08-19 ISEE I

4 Jones 04-07-19 DBMS I

23 Warner 09-07-19 CN I

45 Root 29-07-19 SEPM I

33 Maxwell 12-06-19 SEPM I

16 Stokes 01-06-19 TOC I

56 Stark 27-06-19 TOC I

SQL> exec libr(16,'TOC');

Issue date is : 01-06-19

Name of borrower is : Stokes

Fine amount is : 1600

SQL> exec libr(33,'SEPM');

Issue date is : 12-06-19

Name of borrower is : Maxwell

Fine amount is : 1050

PL/SQL procedure successfully completed.

SQL> select \* from fine;

ROLLNO RDATE AMOUNT

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

16 02-08-19 1600

33 02-08-19 1050

SQL> exec libr(5,'CN');

NO DATA FOUND

PL/SQL procedure successfully completed.

SQL> exec libr(23,'CN');

Issue date is : 09-07-19

Name of borrower is : Warner

Fine amount is : 45

PL/SQL procedure successfully completed.

SQL> exec libr(56,'TOC');

Issue date is : 27-06-19

Name of borrower is : Stark

Fine amount is : 300

PL/SQL procedure successfully completed.

SQL> select \* from fine;

ROLLNO RDATE AMOUNT

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

16 02-08-19 1600

33 02-08-19 1050

23 02-08-19 45

56 02-08-19 300

SQL> select \* from borrower;

ROLLNO NAME ISSUEDAT BOOKNAME S

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

38 Wood 01-08-19 ISEE I

4 Jones 04-07-19 DBMS I

23 Warner 09-07-19 CN R

45 Root 29-07-19 SEPM I

33 Maxwell 12-06-19 SEPM R

16 Stokes 01-06-19 TOC R

56 Stark 27-06-19 TOC R

7 rows selected.

**ASSIGNMENT – 6**

* **IMPLICIT CURSOR**

create table imp\_cur(id number(4),name varchar2(20),address varchar2(20),salary number(4,2));

insert into imp\_cur values(5,'Smith','Africa',4554.99);

SQL> select \* from imp\_cur;

ID NAME ADDRESS SALARY

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

1 Ramesh Pune 4500

2 Suresh Mumbai 3958

3 Ganesh Nagpur 5628

4 Martin America 7004

5 Smith Africa 5055

declare

rows number(4);

Begin

UPDATE imp\_cur SET salary=salary+500 where salary<5000.00;

if SQL%NOTFOUND THEN

dbms\_output.put\_line('no record is selected');

elsif SQL%FOUND THEN

rows:= SQL% ROWCOUNT;

dbms\_output.put\_line(rows|| ' records selected');

END if;

END;

/

SQL> select \* from imp\_cur;

ID NAME ADDRESS SALARY

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

1 Ramesh Pune 5000

2 Suresh Mumba 4458

3 Ganesh Nagpur 5628

4 Martin America 7004

5 Smith Africa 5055

* **EXPLICIT CURSOR**

create table student(rollno number(5),name varchar2(20),marks number(5));

create table newstud(rollno number(5),name varchar2(20),marks number(5));

select \* from student;

select \* from newstud;

insert into newstud(rollno,name,marks) values(7,'Miller',50);

SQL> select \* from student;

ROLLNO NAME MARKS

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

9 King 80

10 Allen 70

8 Blake 67

5 Turner 82

SQL> select \* from newstud;

ROLLNO NAME MARKS

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

6 Ward 90

7 Miller 50

9 King 80

10 Allen 70

8 Blake 67

5 Turner 82

6 rows selected.

declare

cursor old\_c is select \* from student;

cursor new\_c(newroll number)is select \* from newstud where rollno=newroll;

newrec newstud%rowtype;

BEGIN

for studrec in old\_c

LOOP

open new\_c(studrec.rollno);

fetch new\_c into newrec;

if new\_c%NOTFOUND then

insert into newstud(rollno,name,marks) values(studrec.rollno,studrec.name,studrec.marks);

end if;

close new\_c;

end LOOP;

END;

/

SQL> select \* from newstud;

ROLLNO NAME MARKS

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

9 King 80

10 Allen 70

8 Blake 67

5 Turner 82

**ASSIGNMENT – 7**

* **FUNCTION**

create table result(roll number(5),name varchar2(20),class varchar2(20));

create table stud(name varchar2(20),tot\_marks number(5),roll number(5));

SQL> select \* from stud;

NAME TOT\_MARKS ROLLNO

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

King 970 5

Clark 1400 4

Martin 1500 6

Smith 800 7

James 700 9

Allen 880 1

6 rows selected.

create or replace function func\_grade(p\_roll IN number)

RETURN number is

p\_name varchar2(20);

marks number(5);

grade varchar2(20);

begin

select name into p\_name from stud where rollno=p\_roll;

select tot\_marks into marks from stud where rollno=p\_roll;

if marks<=1500 and marks>=990 then

grade:='destinction';

insert into result(roll,name,class) values(p\_roll,p\_name,grade);

elsif marks<=989 and marks>=900 then

grade:='first\_class';

insert into result(roll,name,class) values(p\_roll,p\_name,grade);

elsif marks<=899 and marks>=800 then

grade:='second\_class';

insert into result(roll,name,class) values(p\_roll,p\_name,grade);

else

grade:='Fail';

insert into result(roll,name,class) values(p\_roll,p\_name,grade);

end if;

RETURN p\_roll;

end;

/

\*\*\* Function call \*\*\*

declare

x number;

BEGIN

x:=func\_grade(7);

END;

/

SQL> select \* from result;

ROLL NAME CLASS

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

9 James Fail

1 Allen second\_class

5 King first\_class

4 Clark destinction

6 Martin destinction

7 Smith second\_class

6 rows selected.

\*\*\* Function call \*\*\*

declare

x number;

BEGIN

x:=func\_grade(9);

END;

/

SQL> select \* from result;

ROLL NAME CLASS

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

9 James Fail

1 row selected.

\*\*\* Function call \*\*\*

declare

x number;

BEGIN

x:=func\_grade(1);

END;

/

SQL> select \* from result;

ROLL NAME CLASS

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

9 James Fail

1 Allen second\_class

2 rows selected.

\*\*\* Function call \*\*\*

declare

x number;

BEGIN

x:=func\_grade(5);

END;

/

SQL> select \* from result;

ROLL NAME CLASS

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

9 James Fail

1 Allen second\_class

5 King first\_class

3 rows selected.

\*\*\* Function call \*\*\*

declare

x number;

BEGIN

x:=func\_grade(4);

END;

/

SQL> select \* from result;

ROLL NAME CLASS

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

9 James Fail

1 Allen second\_class

5 King first\_class

4 Clark destinction

4 rows selected.

SQL> select \* from result;

ROLL NAME CLASS

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

9 James Fail

1 Allen second\_class

5 King first\_class

4 Clark destinction

6 Martin destinction

7 Smith second\_class

6 rows selected.

* **PROCEDURE**

create table result(roll number(5),name varchar2(20),class varchar2(20));

create table stud(name varchar2(20),tot\_marks number(5),roll number(5));

create or replace procedure proc\_grade(p\_roll IN number)

is

p\_name varchar2(20);

marks number(5);

grade varchar2(20);

begin

select name into p\_name from stud where rollno=p\_roll;

select tot\_marks into marks from stud where rollno=p\_roll;

if marks<=1500 and marks>=990 then

grade:='destinction';

insert into result(roll,name,class) values(p\_roll,p\_name,grade);

elsif marks<=989 and marks>=900 then

grade:='first\_class';

insert into result(roll,name,class) values(p\_roll,p\_name,grade);

elsif marks<=899 and marks>=800 then

grade:='second\_class';

insert into result(roll,name,class) values(p\_roll,p\_name,grade);

else

grade:='Fail';

insert into result(roll,name,class) values(p\_roll,p\_name,grade);

end if;

end;

/

\*\*\*\*output:\*\*\*\*\*

SQL> exec proc\_grade(9);

PL/SQL procedure successfully completed.

ROLL NAME CLASS

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

9 James Fail

SQL> exec proc\_grade(7);

PL/SQL procedure successfully completed.

ROLL NAME CLASS

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

7 Smith Second\_class

SQL> exec proc\_grade(4);

PL/SQL procedure successfully completed.

SQL> exec proc\_grade(5);

PL/SQL procedure successfully completed.

SQL> exec proc\_grade(6);

PL/SQL procedure successfully completed.

SQL> select \* from result;

ROLL NAME CLASS

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

9 James Fail

7 Smith second\_class

4 Clark destinction

5 King first\_class

6 Martin destinction

SQL> exec proc\_grade(1);

PL/SQL procedure successfully completed.

SQL> select \* from result;

ROLL NAME CLASS

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

9 James Fail

7 Smith second\_class

4 Clark destinction

5 King first\_class

6 Martin destinction

1 Allen second\_class

6 rows selected.

**ASSIGNMENT – 8**

* **ROW LEVEL**

create table library(book\_no number(5),book\_name varchar2(20),issuedate date,author varchar2(20));

create table lib\_audit(book\_no number(5),author varchar2(20),issuedate date,newdate date);

SQL> select \* from lib\_audit;

no rows selected

create or replace trigger lib

before update or delete on library

for each row

begin

insert into lib\_audit(book\_no,author,issuedate,newdate)values(:new.book\_no,:new.author,:old.issuedate,:new.issuedate);

end;

/

SQL> select \* from library;

BOOK\_NO BOOK\_NAME ISSUEDAT AUTHOR

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

4 TOC 07-06-19 G.H.ALLEN

2 DBMS 07-05-19 S.K.SMITH

45 CN 19-07-19 S.S.WOOD

23 ISEE 31-07-19 L.K.JAMES

53 SEPM 06-07-19 D.F.JONES

SQL> update library set issuedate='1-08-2019' where book\_no=23;

1 row updated.

SQL> select \* from lib\_audit;

BOOK\_NO AUTHOR ISSUEDAT NEWDATE

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

23 L.K.JAMES 31-07-19 01-08-19

SQL> select \* from library;

BOOK\_NO BOOK\_NAME ISSUEDAT AUTHOR

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

4 TOC 07-06-19 G.H.ALLEN

2 DBMS 07-05-19 S.K.SMITH

45 CN 19-07-19 S.S.WOOD

23 ISEE 01-08-19 L.K.JAMES

53 SEPM 06-07-19 D.F.JONES

SQL> update library set author='C.N.WARD' where book\_no=53;

1 row updated.

SQL> select \* from lib\_audit;

BOOK\_NO AUTHOR ISSUEDAT NEWDATE

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

23 L.K.JAMES 31-07-19 01-08-19

53 C.N.WARD 06-07-19 06-07-19

SQL> delete from library where book\_no=2;

1 row deleted.

SQL> select \* from lib\_audit;

BOOK\_NO AUTHOR ISSUEDAT NEWDATE

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

23 L.K.JAMES 31-07-19 01-08-19

53 C.N.WARD 06-07-19 06-07-19

07-05-19

* **STATEMENT LEVEL**

SQL> select \* from imp\_cur;

ID NAME ADDRESS SALARY

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

1 Ramesh Pune 5000

2 Suresh Mumbai 4458

3 Ganesh Nagpur 6628

4 Martin America 7004

5 Smith Africa 5055

create or replace trigger sal

AFTER delete or update or insert ON imp\_cur

Begin

delete from imp\_cur where id=2;

END;

/

SQL> select \* from imp\_cur;

ID NAME ADDRESS SALARY

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

1 Ramesh Pune 5000

3 Ganesh Nagpur 6628

4 Martin America 7004

5 Smith Africa 5055

**ASSIGNMENT – 10**

db.fb.insert({name:'sarvesh',likes:50,posts:100,views:80})

WriteResult({ "nInserted" : 1 })

> db.fb.insert({name:'shubham',likes:60,posts:120,views:90})

WriteResult({ "nInserted" : 1 })

> db.fb.insert({name:'kunal',likes:40,posts:90,views:60})

WriteResult({ "nInserted" : 1 })

> db.fb.save({name:'yash',likes:70,posts:150,views:100})

WriteResult({ "nInserted" : 1 })

> db.fb.save({name:'atharva',likes:137,posts:200,views:150})

WriteResult({ "nInserted" : 1 })

> db.fb.save({name:'abhijeet',likes:110,posts:78,views:124})

WriteResult({ "nInserted" : 1 })

> db.fb.find().pretty()

{

"\_id" : ObjectId("5d819d99775559a1cf55ad0f"),

"name" : "sarvesh",

"likes" : 50,

"posts" : 100,

"views" : 80

}

{

"\_id" : ObjectId("5d819db2775559a1cf55ad10"),

"name" : "shubham",

"likes" : 60,

"posts" : 120,

"views" : 90

}

{

"\_id" : ObjectId("5d819dc5775559a1cf55ad11"),

"name" : "kunal",

"likes" : 40,

"posts" : 90,

"views" : 60

}

{

"\_id" : ObjectId("5d819deb775559a1cf55ad12"),

"name" : "yash",

"likes" : 70,

"posts" : 150,

"views" : 100

}

{

"\_id" : ObjectId("5d819e0a775559a1cf55ad13"),

"name" : "atharva",

"likes" : 137,

"posts" : 200,

"views" : 150

}

{

"\_id" : ObjectId("5d819e3d775559a1cf55ad14"),

"name" : "abhijeet",

"likes" : 110,

"posts" : 78,

"views" : 124

}

> db.fb.find({"likes":{$gt:100}}).pretty()

{

"\_id" : ObjectId("5d819e0a775559a1cf55ad13"),

"name" : "atharva",

"likes" : 137,

"posts" : 200,

"views" : 150

}

{

"\_id" : ObjectId("5d819e3d775559a1cf55ad14"),

"name" : "abhijeet",

"likes" : 110,

"posts" : 78,

"views" : 124

}

> db.fb.find({"name":"sarvesh"}).pretty()

{

"\_id" : ObjectId("5d819d99775559a1cf55ad0f"),

"name" : "sarvesh",

"likes" : 50,

"posts" : 100,

"views" : 80

}

> db.fb.find({"name":"atharva"}).pretty()

{

"\_id" : ObjectId("5d819e0a775559a1cf55ad13"),

"name" : "atharva",

"likes" : 137,

"posts" : 200,

"views" : 150

**ASSIGNMENT – 11**

> use library

switched to db library

> db.createCollection("lib");

{ "ok" : 1 }

> db.lib.insert({bname:'DBMS',title:'aggregation',author:'K.M.James',followers:50,likes:40});

WriteResult({ "nInserted" : 1 })

> db.lib.insert({bname:'CN',title:'OSI',author:'J.K.Smith',followers:70,likes:60});

WriteResult({ "nInserted" : 1 })

> db.lib.insert({bname:'TOC',title:'Turing Machine',author:'S.K.John',followers:90,likes:80});

WriteResult({ "nInserted" : 1 })

> db.lib.insert({bname:'ISEE',title:'Economics',author:'R.M.King',followers:90,likes:100});

WriteResult({ "nInserted" : 1 })

> db.lib.insert({bname:'SEPM',title:'Projrct M',author:'R.M.Root',followers:60,likes:100});

WriteResult({ "nInserted" : 1 })

> db.lib.insert({bname:'CG',title:'graphics',author:'R.M.Root',followers:80,likes:100});

WriteResult({ "nInserted" : 1 })

> db.lib.insert({bname:'MP',title:'Microprocessor',author:'K.M.James',followers:80,likes:70});

WriteResult({ "nInserted" : 1 })

> db.lib.find().pretty();

{

"\_id" : ObjectId("5d8ace465c9c7a5db03a2f8a"),

"bname" : "DBMS",

"title" : "aggregation",

"author" : "K.M.James",

"followers" : 50,

"likes" : 40

}

{

"\_id" : ObjectId("5d8ace7a5c9c7a5db03a2f8b"),

"bname" : "CN",

"title" : "OSI",

"author" : "J.K.Smith",

"followers" : 70,

"likes" : 60

}

{

"\_id" : ObjectId("5d8acebb5c9c7a5db03a2f8c"),

"bname" : "TOC",

"title" : "Turing Machine",

"author" : "S.K.John",

"followers" : 90,

"likes" : 80

}

{

"\_id" : ObjectId("5d8acef55c9c7a5db03a2f8d"),

"bname" : "ISEE",

"title" : "Economics",

"author" : "R.M.King",

"followers" : 90,

"likes" : 100

}

{

"\_id" : ObjectId("5d8acf1b5c9c7a5db03a2f8e"),

"bname" : "SEPM",

"title" : "Projrct M",

"author" : "R.M.Root",

"followers" : 60,

"likes" : 100

}

{

"\_id" : ObjectId("5d8ad1005c9c7a5db03a2f8f"),

"bname" : "CG",

"title" : "graphics",

"author" : "R.M.Root",

"followers" : 80,

"likes" : 100

}

{

"\_id" : ObjectId("5d8ad6f45c9c7a5db03a2f90"),

"bname" : "MP",

"title" : "Microprocessor",

"author" : "K.M.James",

"followers" : 80,

"likes" : 70

}

> db.lib.aggregate([{$group:{\_id:0,likes:{$avg:"$likes"}}}]);

{ "\_id" : 0, "likes" : 76 }

> db.lib.aggregate([{$group:{\_id:0,first\_url:{$first:"$bname"}}}]);

{ "\_id" : 0, "first\_url" : "DBMS" }

> db.lib.aggregate([{$group:{\_id:0,last\_url:{$last:"$bname"}}}]);

{ "\_id" : 0, "last\_url" : "MP" }

> db.lib.aggregate([{$group:{\_id:0,likes:{$min:"$likes"}}}]);

{ "\_id" : 0, "likes" : 40 }

> db.lib.aggregate([{$group:{\_id:0,likes:{$max:"$likes"}}}]);

{ "\_id" : 0, "likes" : 100 }

> db.lib.aggregate([{$match:{"author":"R.M.Root"}},{$group:{\_id:0,author:{$sum:1}}}]);

{ "\_id" : 0, "author" : 2 }

> db.lib.aggregate([{$match:{"author":"K.M.James"}},{$group:{\_id:0,likes:{$avg:"$likes"}}}]);

{ "\_id" : 0, "likes" : 55 }

> db.lib.aggregate([{$match:{"author":"R.M.Root"}},{$group:{\_id:0,total:{$sum:"$likes"}}}]);

{ "\_id" : 0, "total" : 200 }

> db.lib.aggregate([{$match:{"author":"K.M.James"}},{$group:{\_id:0,total:{$sum:"$followers"}}}]);

{ "\_id" : 0, "total" : 130 }

> db.lib.createIndex({"bname":1},{unique:true})

{

"createdCollectionAutomatically" : false,

"numIndexesBefore" : 1,

"numIndexesAfter" : 2,

"ok" : 1

}

> db.lib.insert({bname:'ISEE',title:'IS',author:'L.K.Rock',followers:70,likes:60});

WriteResult({

"nInserted" : 0,

"writeError" : {

"code" : 11000,

"errmsg" : "E11000 duplicate key error collection: library.lib index: bname\_1 dup key: { : \"ISEE\" }"

}

})

**ASSIGNMENT – 12**

> db.mr.find();

{ "\_id" : ObjectId("5d9c2ec662dda7f6aa374da4"), "roll" : 1, "name" : "King", "DBMS" : 20, "CN" : 24, "SEPM" : 23, "ISEE" : 25, "TOC" : 20 }

{ "\_id" : ObjectId("5d9c2ee062dda7f6aa374da5"), "roll" : 2, "name" : "Martin", "DBMS" : 25, "CN" : 23, "SEPM" : 22, "ISEE" : 21, "TOC" : 19 }

{ "\_id" : ObjectId("5d9c2ef562dda7f6aa374da6"), "roll" : 3, "name" : "John", "DBMS" : 20, "CN" : 19, "SEPM" : 22, "ISEE" : 21, "TOC" : 13 }

{ "\_id" : ObjectId("5d9c2f0d62dda7f6aa374da7"), "roll" : 4, "name" : "James", "DBMS" : 27, "CN" : 24, "SEPM" : 25, "ISEE" : 20, "TOC" : 25 }

{ "\_id" : ObjectId("5d9c2f2162dda7f6aa374da8"), "roll" : 5, "name" : "Rock", "DBMS" : 29, "CN" : 24, "SEPM" : 24, "ISEE" : 25, "TOC" : 25 }

{ "\_id" : ObjectId("5d9c30c662dda7f6aa374dac"), "roll" : 6, "name" : "James", "DBMS" : 19, "CN" : 20, "SEPM" : 20, "ISEE" : 21, "TOC" : 12 }

> db.mr.mapReduce( function(){emit(this.DBMS,1);}, function(key,values){return Array.sum(values)},{ query:{DBMS:{$gt:20}}, out:"result" } ).find();

{ "\_id" : 25, "value" : 1 }

{ "\_id" : 27, "value" : 1 }

{ "\_id" : 29, "value" : 1 }

> db.mr.mapReduce( function(){emit(this.TOC,1);}, function(key,values){return Array.sum(values)},{ query:{TOC:{$gt:20}}, out:"result" } ).find();

{ "\_id" : 25, "value" : 2 }

> db.mr.mapReduce( function(){emit(this.TOC,1);}, function(key,values){return Array.sum(values)},{ query:{TOC:{$lt:20}}, out:"result" } ).find();

{ "\_id" : 12, "value" : 1 }

{ "\_id" : 13, "value" : 1 }

{ "\_id" : 19, "value" : 1 }

> db.mr.mapReduce( function(){emit(this.TOC,1);}, function(key,values){return Array.avg(values)},{out:"result" } ).find();

{ "\_id" : 12, "value" : 1 }

{ "\_id" : 13, "value" : 1 }

{ "\_id" : 19, "value" : 1 }

{ "\_id" : 20, "value" : 1 }

{ "\_id" : 25, "value" : 1 }

> db.mr.mapReduce( function(){emit(this.CN,1);}, function(key,values){return Array.avg(values)},{out:"result" } ).find();

{ "\_id" : 19, "value" : 1 }

{ "\_id" : 20, "value" : 1 }

{ "\_id" : 23, "value" : 1 }

{ "\_id" : 24, "value" : 1 }

> db.mr.mapReduce( function(){emit(this.SEPM,1);}, function(key,values){return Array.avg(values)},{query:{name:'James'},out:"result" } ).find();

{ "\_id" : 20, "value" : 1 }

{ "\_id" : 25, "value" : 1 }