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SRM INSTITUTE OF SCIENCE AND TECHNOLOGY

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S.R.M. NAGAR, KATTANKULATHUR –603 203, KANCHEEPURAM DISTRICT

SCHOOL OF COMPUTING

DEPARTMENT OF DATA SCIENCE AND BUSINESS SYSTEMS

Course Code: 18CSC303J

Course Name: Database Management Systems

LAB REPORT

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REG. NO.: RA1911027010097
SECTION: N2
CSE – Big Data Analytics.

TABLE OF CONTENT

TITLE OF EXPERIMENT: Basic DDL Commands

DATE OF EXPERIMENT: 10-01-2022

EXPERIMENT NO. : 01

AIM: To perform basic Data Definition Language commands.

COMMANDS AND OUTPUTS:

Statement 1

Edit

```
create table student (regno number(5), sname varchar2(20),dept varchar2(10))
```

Table created.

Statement 2

Edit

```
desc student
```

TABLE STUDENT

Column	Null?	Type
REGNO	-	NUMBER(5,0)
SNAME	-	VARCHAR2(20)
DEPT	-	VARCHAR2(10)

Download CSV

3 rows selected.

Statement 3

Edit

```
alter table student add(CGPA number(5))
```

Table altered.

Statement 4

Edit

```
desc student
```

TABLE STUDENT

Column	Null?	Type
REGNO	-	NUMBER(5,0)
SNAME	-	VARCHAR2(20)
DEPT	-	VARCHAR2(10)
CGPA	-	NUMBER(5,0)

Download CSV

4 rows selected.

Statement 5

Edit

```
alter table student drop(CGPA)
```

Table altered.

Statement 6

Edit

```
desc student
```

TABLE STUDENT

Column	Null?	Type
REGNO	-	NUMBER(5,0)
SNAME	-	VARCHAR2(20)
DEPT	-	VARCHAR2(10)

Download CSV

3 rows selected.

Statement 7

Edit

```
alter table student modify(regno varchar2(15))
```

Table altered.

Statement 8

Edit

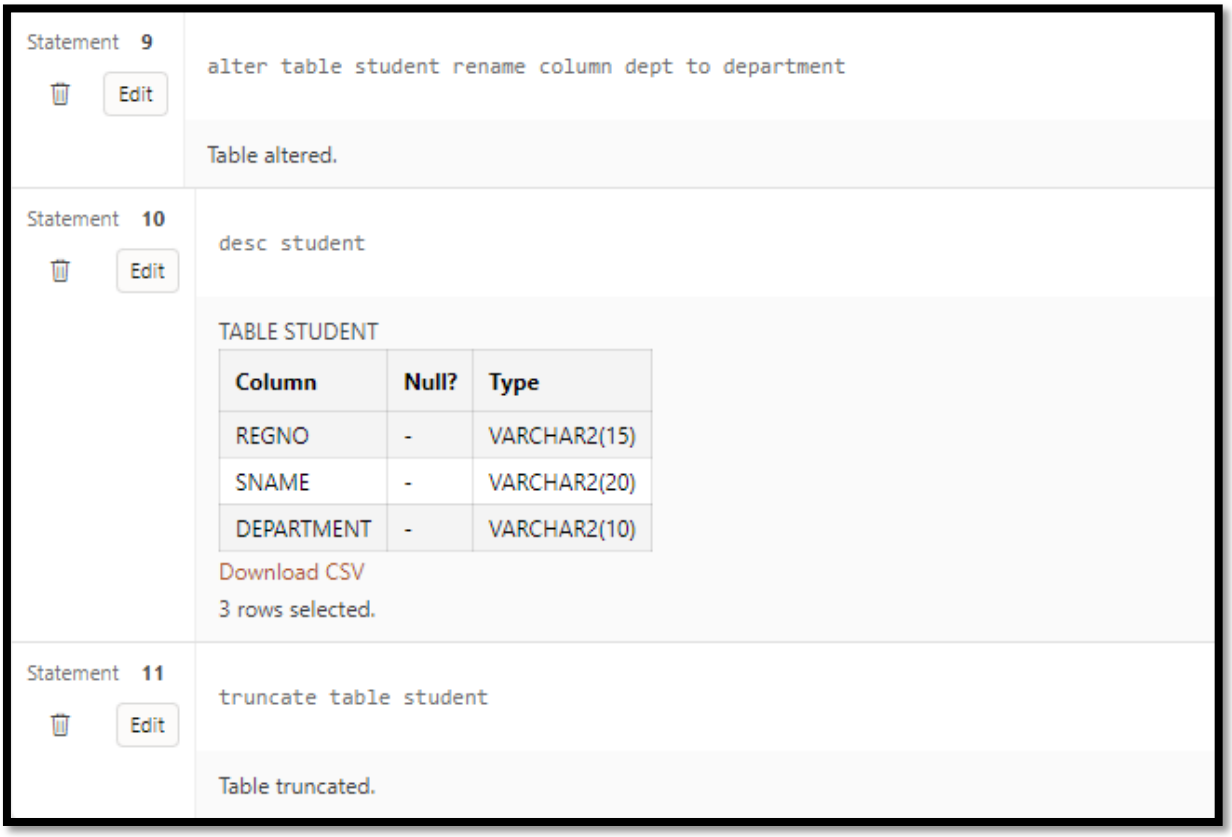
```
desc student
```

TABLE STUDENT

Column	Null?	Type
REGNO	-	VARCHAR2(15)
SNAME	-	VARCHAR2(20)
DEPT	-	VARCHAR2(10)

Download CSV

3 rows selected.



Statement 9

Edit

```
alter table student rename column dept to department
```

Table altered.

Statement 10

Edit

```
desc student
```

TABLE STUDENT

Column	Null?	Type
REGNO	-	VARCHAR2(15)
SNAME	-	VARCHAR2(20)
DEPARTMENT	-	VARCHAR2(10)

Download CSV

3 rows selected.

Statement 11

Edit

```
truncate table student
```

Table truncated.

RESULT:

All basic data definition commands executed successfully.

TITLE OF EXPERIMENT: Basic DML Commands

DATE OF EXPERIMENT: 10-01-2022

EXPERIMENT NO. : 02

AIM: To perform basic Data Manipulation Language commands.

COMMANDS AND OUTPUTS:

Statement 1

Edit

```
create table person(pname varchar2(30), age number(35), gender varchar2(10), city varchar2(20))
```

Table created.

Statement 2

Edit

```
Insert into PERSON(pname,age,gender,city) values('Harsh',20,'Male','Delhi')
```

1 row(s) inserted.

Statement 3

Edit

```
Insert into PERSON(pname,age,gender,city) values('Anurag',22,'Male','Bilwara')
```

1 row(s) inserted.

Statement 6

Edit

```
select * from person
```

PNAME	AGE	GENDER	CITY
Harsh	20	Male	Delhi
Anurag	22	Male	Bilwara
Ankita	17	Female	Mumbai
Harshita	15	Female	Indore

Download CSV

4 rows selected.

Statement 7

Edit

```
select pname,city from person
```

PNAME	CITY
Harsh	Delhi
Anurag	Bilwara
Ankita	Mumbai
Harshita	Indore

Download CSV

4 rows selected.

Statement 8

Edit

```
delete from person where pname = 'Harsh'
```

1 row(s) deleted.

Statement 9

Edit

```
select * from person
```

PNAME	AGE	GENDER	CITY
Anurag	22	Male	Bilwara
Ankita	17	Female	Mumbai
Harshita	15	Female	Indore

Download CSV

3 rows selected.

Statement 10

Edit

```
update person set age = 19 where pname = 'Harshita'
```

1 row(s) updated.

Statement 11

Edit

```
select * from person
```

PNAME	AGE	GENDER	CITY
Anurag	22	Male	Bilwara
Ankita	17	Female	Mumbai
Harshita	19	Female	Indore

Download CSV

3 rows selected.

RESULT:

All basic data manipulation language commands executed successfully.

TITLE OF EXPERIMENT: Sorting and Restricting

DATE OF EXPERIMENT: 27-01-2022

EXPERIMENT NO. : 03

AIM: To perform restricting and sorting commands.

COMMANDS AND OUTPUTS:

Statement 8

Edit

```
Select * from PERSON
```

PNAME	AGE	GENDER	CITY
Himanshu	25	Male	Surat
Harsh	20	Male	Delhi
Mohit	19	Male	Indore
Ankita	15	Female	Mumbai
Anurag	20	Male	Bilwara
Harshita	17	Female	Amritsar

Download CSV

6 rows selected.

Statement 9

Edit

```
Select * from person where age>=19
```

PNAME	AGE	GENDER	CITY
Himanshu	25	Male	Surat
Harsh	20	Male	Delhi
Mohit	19	Male	Indore
Anurag	20	Male	Bilwara

Download CSV

4 rows selected.

Statement 10

Edit

```
select pname,gender,age from person where age>=20 and pname='Himanshu'
```

PNAME	GENDER	AGE
Himanshu	Male	25

Download CSV

Statement 11

Edit

```
select * from person where age BETWEEN 20 AND 25
```

PNAME	AGE	GENDER	CITY
Himanshu	25	Male	Surat
Harsh	20	Male	Delhi
Anurag	20	Male	Bilwara

Download CSV

3 rows selected.

Statement 12

Edit

```
select pname,gender,city from person WHERE age>=20 OR pname='Ankita'
```

PNAME	GENDER	CITY
Himanshu	Male	Surat
Harsh	Male	Delhi
Ankita	Female	Mumbai
Anurag	Male	Bilwara

Download CSV

4 rows selected.

Statement 13

Edit

```
select * from person WHERE pname NOT IN 'Harsh'
```

PNAME	AGE	GENDER	CITY
Himanshu	25	Male	Surat
Mohit	19	Male	Indore
Ankita	15	Female	Mumbai
Anurag	20	Male	Bilwara
Harshita	17	Female	Amritsar

Download CSV

5 rows selected.

Statement 14

Edit

```
select * from person where pname LIKE '%a'
```

PNAME	AGE	GENDER	CITY
Ankita	15	Female	Mumbai
Harshita	17	Female	Amritsar

Download CSV

2 rows selected.

Statement 15

Edit

```
select * from person where pname LIKE 'H%'
```

PNAME	AGE	GENDER	CITY
Himanshu	25	Male	Surat
Harsh	20	Male	Delhi
Harshita	17	Female	Amritsar

Download CSV

3 rows selected.

Statement 16

Edit

```
select * from person ORDER BY age
```

PNAME	AGE	GENDER	CITY
Ankita	15	Female	Mumbai
Harshita	17	Female	Amritsar
Mohit	19	Male	Indore
Anurag	20	Male	Bilwara
Harsh	20	Male	Delhi
Himanshu	25	Male	Surat

Download CSV

6 rows selected.

Statement 17

Edit

```
select * from person ORDER BY age desc
```

PNAME	AGE	GENDER	CITY
Himanshu	25	Male	Surat
Harsh	20	Male	Delhi
Anurag	20	Male	Bilwara
Mohit	19	Male	Indore
Harshita	17	Female	Amritsar
Ankita	15	Female	Mumbai

Download CSV

6 rows selected.

Statement 6

Edit

```
Select * from employees
```

EID	ENAME	SALARY	DEPT
10	Mahima	15000	HR
20	Ankit	40000	IT
30	Gopal	10000	Marketting
40	Nidhi	19000	HR

Download CSV

4 rows selected.

Statement 7

Edit

```
Select dept,count(salary) from employees group by dept
```

DEPT	COUNT(SALARY)
Marketting	1
HR	2
IT	1

Download CSV

3 rows selected.

Statement 8

Edit

```
Select dept,count(salary) from employees group by dept having count(salary) > 1
```

DEPT	COUNT(SALARY)
HR	2

Download CSV

RESULT:

All basic restricting and sorting commands executed successfully.

TITLE OF EXPERIMENT: Advanced SQL and TCL

DATE OF EXPERIMENT: 03-02-2022

EXPERIMENT NO. : 04

AIM: To perform Advanced SQL statements and TCL commands.

COMMANDS AND OUTPUTS:

```
SQL> select * from person;

PNAME                                AGE GENDER     CITY
------------------------------ ---------- ---------- --------------------
Anurag                                23 Male       Chennai
Nidhi                                 17 Female     Surat
Ankita                                19 Female     Indore
Harsh                                 20 Male       Delhi

SQL> savepoint p1;

Savepoint created.

SQL> delete from person where pname='Ankita';

1 row deleted.
```

```
SQL> delete from person where pname='Ankita';

1 row deleted.

SQL> select * from person;

PNAME                               AGE GENDER     CITY
------------------------------ ---------- ---------- --------------------
Anurag                               23 Male       Chennai
Nidhi                                17 Female     Surat
Harsh                                20 Male       Delhi

SQL> rollback to savepoint p1;

Rollback complete.

SQL> select * from person;

PNAME                               AGE GENDER     CITY
------------------------------ ---------- ---------- --------------------
Anurag                               23 Male       Chennai
Nidhi                                17 Female     Surat
Ankita                               19 Female     Indore
Harsh                                20 Male       Delhi

SQL> Insert into person(pname,age,gender,city) values('Mohit',27,'Male','Mumbai');

1 row created.
```

```
SQL> select * from person;

PNAME                          AGE GENDER     CITY
------------------------------ --------- ---------- --------------------
Anurag                          23 Male       Chennai
Nidhi                           17 Female     Surat
Ankita                          19 Female     Indore
Harsh                           20 Male       Delhi
Mohit                           27 Male       Mumbai

SQL> savepoint p2;

Savepoint created.

SQL> delete from person where age=23;

1 row deleted.

SQL> select * from person;

PNAME                          AGE GENDER     CITY
------------------------------ --------- ---------- --------------------
Nidhi                           17 Female     Surat
Ankita                          19 Female     Indore
Harsh                           20 Male       Delhi
Mohit                           27 Male       Mumbai

SQL> commit;

Commit complete.
```

RESULT:

All advanced SQL statements and TCL commands executed successfully.

TITLE OF EXPERIMENT: Aggregate Functions

DATE OF EXPERIMENT: 10-02-2022

EXPERIMENT NO. : 05

AIM: To perform Aggregate functions commands.

COMMANDS AND OUTPUTS:

Statement 8

Edit

```
Select avg(salary) from employees
```

AVG(SALARY)
22800

Download CSV

Statement 9

Edit

```
Select dept,avg(salary) from employees group by dept
```

DEPT	AVG(SALARY)
Marketting	10000
HR	17000
IT	35000

Download CSV

3 rows selected.

Statement 10

Edit

```
Select avg(salary) as "Average Salary" from employees
```

Average Salary
22800

Download CSV

Statement 11

Edit

```
Select sum(salary) as "Sum of Salary" from employees
```

Sum of Salary
114000

Download CSV

Statement 12

Edit

```
Select min(salary) as "Minimum Salary" from employees
```

Minimum Salary
10000

Download CSV

Statement 13

Edit

```
Select max(salary) as "Maximum Salary" from employees
```

Maximum Salary
40000

Download CSV

Statement 14

Edit

```
Select count(*) from employees
```

COUNT(*)
5

Download CSV

Statement 15

Edit

```
Select count(*) from employees where dept='IT'
```

COUNT(*)
2

Download CSV

Statement 16

Edit

```
Select avg(salary),min(salary),max(salary),sum(salary) from employees
```

AVG(SALARY)	MIN(SALARY)	MAX(SALARY)	SUM(SALARY)
22800	10000	40000	114000

Download CSV

RESULT:

All Aggregate Function commands executed successfully.

TITLE OF EXPERIMENT: Integrity Constraints

DATE OF EXPERIMENT: 02-03-2022

EXPERIMENT NO. : 6(a)

AIM: To perform Integrity Constraints commands.

COMMANDS AND OUTPUTS:

Statement 1
Edit
```
Create table student1(s_id int NOT NULL, s_name varchar2(20), age int)
```
Table created.

Statement 2
Edit
```
Insert into student1 values(10,'Harsh',21)
```
1 row(s) inserted.

Statement 3
Edit
```
Insert into student1 values(NULL,'Harsh',21)
```
ORA-01400: cannot insert NULL into ("SQL_QFXMDJHZVATTFPWISCKOZVSHF"."STUDENT1"."S_ID") ORA-06512: at "SYS.DBMS_SQL", line 1721

Statement 4
Edit
```
Alter table student1 modify age int NOT NULL
```
Table altered.

Statement 5
Edit
```
Insert into student1 values(20,'Mohit',NULL)
```
ORA-01400: cannot insert NULL into ("SQL_QFXMDJHZVATTFPWISCKOZVSHF"."STUDENT1"."AGE") ORA-06512: at "SYS.DBMS_SQL", line 1721

Statement 6
Edit
```
Insert into student1 values(NULL,'Mohit',NULL)
```
ORA-01400: cannot insert NULL into ("SQL_QFXMDJHZVATTFPWISCKOZVSHF"."STUDENT1"."S_ID") ORA-06512: at "SYS.DBMS_SQL", line 1721

Statement 7
Edit
```
Create table employee1(e_id int UNIQUE, e_name varchar2(20), salary_id int, salary int)
```
Table created.

Statement 8
Edit
```
Insert into employee1 values(1001,'Mahesh',201,20000)
```
1 row(s) inserted.

Statement 9
Edit
```
Insert into employee1 values(1001,'Harsh',202,30000)
```
ORA-00001: unique constraint (SQL_QFXMDJHZVATTFPWISCKOZVSHF.SYS_C0081016437) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

Statement 10

```
Alter table employee1 modify salary_id int UNIQUE
```

Table altered.

Statement 11

```
Insert into employee1 values(1002,'Harsh',201,35000)
```

ORA-00001: unique constraint (SQL_QFXMDJHZVATTFPWISCKOZVSHF.SYS_C0081016438) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

Statement 12

```
Create table student2(s_id int PRIMARY KEY, s_name varchar2(20), age int)
```

Table created.

Statement 13

```
Insert into student2 values(1,'Harsh',20)
```

1 row(s) inserted.

Statement 14

```
Insert into student2 values(1,'Mohit',22)
```

ORA-00001: unique constraint (SQL_QFXMDJHZVATTFPWISCKOZVSHF.SYS_C0081016571) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

Statement 15

```
Insert into student2 values(2,'Mohit',22)
```

1 row(s) inserted.

Statement 16

```
Create table student3(s_id int, s_name varchar2(20), age int)
```

Table created.

Statement 17

```
Alter table student3 add PRIMARY KEY (s_id)
```

Table altered.

Statement 18

```
Create table dept(d_no int PRIMARY KEY, d_name varchar2(10))
```

Table created.

Statement 19

```
Create table emp(e_id int, d_no int, FOREIGN KEY (d_no) REFERENCES dept(d_no))
```

Table created.

Statement 28

```
ALTER TABLE emp1 ADD FOREIGN KEY (d_no) REFERENCES dept(d_no)
```

Table altered.

Statement 29

```
Insert into emp values(1001,10)
```

1 row(s) inserted.

Statement 30

```
Insert into emp values(1002,20)
```

1 row(s) inserted.

Statement 31

```
Insert into emp values(1003,50)
```

ORA-02291: integrity constraint (SQL_QFXMDJHZVATTFPWISCKOZVSHF.SYS_C0081016917) violated - parent key not found ORA-06512: at "SYS.DBMS_SQL", line 1721

Statement 33

```
Create table student4(s_id int check(s_id > 10), s_name varchar2(20), age int)
```

Table created.

Statement 34

```
Insert into student4 values(8,'Harsh',20)
```

ORA-02290: check constraint (SQL_QFXMDJHZVATTFPWISCKOZVSHF.SYS_C0081017362) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

Statement 35

```
Create table student5(s_id int , s_name varchar2(20), age int)
```

Table created.

Statement 36

```
ALTER TABLE student5 ADD CHECK (s_id > 10)
```

Table altered.

Statement 37

```
Insert into student5 values(8,'Harsh',20)
```

ORA-02290: check constraint (SQL_QFXMDJHZVATTFPWISCKOZVSHF.SYS_C0081017737) violated ORA-06512: at "SYS.DBMS_SQL", line 1721

Statement 38

```
Create table person(pname varchar2(20), age int, city varchar2(30) DEFAULT 'Delhi')
```

Table created.

Statement 39

```
Insert into person values('Harsh', 20, 'Mumbai')
```

1 row(s) inserted.

Statement 40

```
Insert into person values('Harsh', 20, '')
```

1 row(s) inserted.

Statement 41

```
Insert into person(pname,age) values('Mohit', 22)
```

1 row(s) inserted.

Statement 42

Edit

```
Select * from person
```

PNAME	AGE	CITY
Harsh	20	Mumbai
Harsh	20	-
Mohit	22	Delhi

Download CSV

3 rows selected.

Statement 43

Edit

```
Create table person1(pname varchar2(20), age int, city varchar2(30))
```

Table created.

Statement 44

Edit

```
Insert into person1(pname,age) values('Mohit', 22)
```

1 row(s) inserted.

Statement 45

Edit

```
Insert into person1(pname,age) values('Mohit', 22)
```

Statement 46

Edit

```
ALTER TABLE person1 MODIFY city DEFAULT 'Delhi'
```

Table altered.

Statement 47

Edit

```
Insert into person1(pname,age) values('Harsh', 19)
```

1 row(s) inserted.

Statement 48

Edit

```
Select * from person1
```

PNAME	AGE	CITY
Mohit	22	-
Mohit	22	-
Harsh	19	Delhi

Download CSV

3 rows selected.

RESULT:

All Integrity constraints commands executed successfully.

TITLE OF EXPERIMENT: Inbuilt Functions

DATE OF EXPERIMENT: 09-03-2022

EXPERIMENT NO. : 6(b)

AIM: To perform Inbuilt Functions commands.

COMMANDS AND OUTPUTS:

Statement 7

Edit

```
Select RTRIM('    Hello World    ') from dual
```

RTRIM('HELLOWORLD')
Hello World

Download CSV

Statement 8

Edit

```
Select CONCAT('Jai','Hind') from dual
```

CONCAT('JAI','HIND')
JaiHind

Download CSV

Statement 9

Edit

```
Select Length('Harsh') from dual
```

LENGTH('HARSH')
5

Download CSV

Statement 10

Edit

```
Select Replace('Harsh Kumar','Kumar','Sharma') from dual
```

REPLACE('HARSHKUMAR','KUMAR','SHARMA')
Harsh Sharma

Download CSV

Statement 11

Edit

```
Select Substr('Hello Everyone',5,4) from dual
```

SUBSTR('HELLOEVERYONE',5,4)
o Ev

Download CSV

Statement 12

Edit

```
Select Round(7.5628) from dual
```

ROUND(7.5628)
8

Download CSV

Statement 13

Edit

```
Select Ceil(7.5628) from dual
```

CEIL(7.5628)
8

Download CSV

Statement 14

Edit

```
Select Floor(7.5628) from dual
```

FLOOR(7.5628)
7

Download CSV

Statement 15

Edit

```
Select Trunc(7.5628) from dual
```

TRUNC(7.5628)
7

Download CSV

Statement 16

Edit

```
Select Sign(7.5628) from dual
```

SIGN(7.5628)
1

Download CSV

Statement 17

Edit

```
Select Sign(-7.5628) from dual
```

SIGN(-7.5628)
-1

Download CSV

Statement 18

Edit

```
Select Abs(-7.5628) from dual
```

ABS(-7.5628)
7.5628

Download CSV

Statement 19

Edit

```
Select sysdate from dual
```

SYSDATE
22-MAR-22

Download CSV

Statement 20

Edit

```
Select round(sysdate) from dual
```

ROUND(SYSDATE)
23-MAR-22

Download CSV

Statement 21

Edit

```
Select add_months(sysdate,5) from dual
```

ADD_MONTHS(SYSDATE,5)
22-AUG-22

Download CSV

Statement 22

Edit

```
Select last_day(sysdate) from dual
```

LAST_DAY(SYSDATE)
31-MAR-22

Download CSV

Statement 23

Edit

```
Select sysdate+2 from dual
```

SYSDATE+2
24-MAR-22

Download CSV

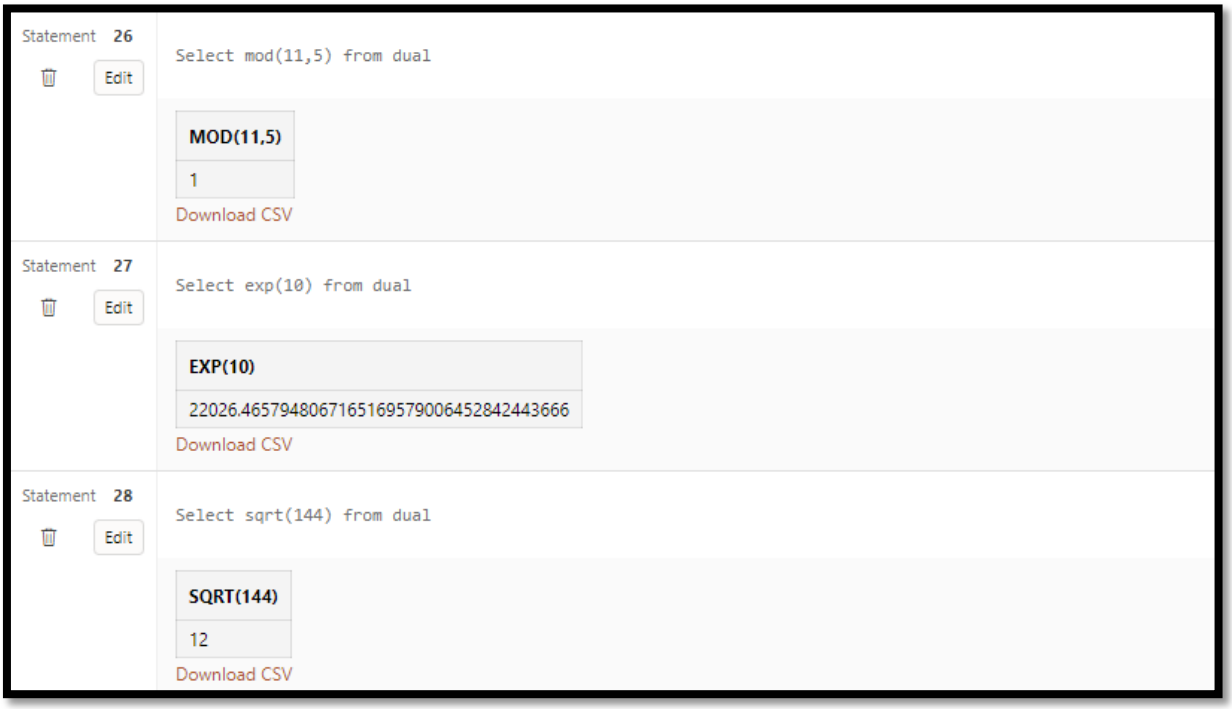
Statement 24

Edit

```
Select next_day(sysdate,'Tuesday') from dual
```

NEXT_DAY(SYSDATE,'TUESDAY')
29-MAR-22

Download CSV



RESULT:

All Integrity constraints commands executed successfully.

TITLE OF EXPERIMENT: Subqueries

DATE OF EXPERIMENT: 16-03-2022

EXPERIMENT NO. : 07

AIM: To perform Subqueries commands.

COMMANDS AND OUTPUTS:

Statement 7

Edit

```
Select * from employee
```

EID	ENAME	DEPT	SALARY
101	Harsh	HR	10000
103	Himanshu	Accounts	10000
104	Ankita	Accounts	60000
102	Mohit	IT	50000
105	Monica	IT	10000

Download CSV

5 rows selected.

Statement 8

Edit

```
SELECT ename, salary, dept FROM employee
WHERE salary = (SELECT MIN (salary) FROM employee)
```

ENAME	SALARY	DEPT
Harsh	10000	HR
Himanshu	10000	Accounts
Monica	10000	IT

Download CSV

3 rows selected.

Statement 9

Edit

```
SELECT * FROM employee WHERE dept IN (SELECT dept FROM employee WHERE dept = 'HR')
```

EID	ENAME	DEPT	SALARY
101	Harsh	HR	10000

Download CSV

Statement 10

Edit

```
SELECT * FROM employee WHERE dept IN (SELECT dept FROM employee WHERE dept = 'IT')
```

EID	ENAME	DEPT	SALARY
102	Mohit	IT	50000
105	Monica	IT	10000

Download CSV

2 rows selected.

RESULT:

All subqueries commands executed successfully.

TITLE OF EXPERIMENT: Joins

DATE OF EXPERIMENT: 23-03-2022

EXPERIMENT NO. : 08

AIM: To perform Joins commands.

COMMANDS AND OUTPUTS:

Statement 9

Edit

```
Select * from emp
```

EID	ENAME	SAL
101	Harsh	10000
102	Ankita	16000
103	Mohit	5000

Download CSV

3 rows selected.

Statement 10

Edit

```
Select * from dept
```

EID	DNAME
101	HR
102	IT
103	Accounts

Download CSV

3 rows selected.

Statement 11

Edit

```
Select e.eid,d.dname,e.ename from emp e, dept d where e.eid = d.eid
```

EID	DNAME	ENAME
101	HR	Harsh
102	IT	Ankita
103	Accounts	Mohit

Download CSV

3 rows selected.

Statement 12

Edit

```
Select d.dname,e.ename from emp e join dept d using(eid)
```

DNAME	ENAME
HR	Harsh
IT	Ankita
Accounts	Mohit

Download CSV

3 rows selected.

Statement 13

Edit

```
Select e.ename,e.sal from emp e join dept d on e.sal < 10000
```

ENAME	SAL
Mohit	5000
Mohit	5000
Mohit	5000

Download CSV

3 rows selected.

Statement 14

Edit

```
Select e.ename,e.eid from emp e inner join dept d on e.eid = d.eid
```

ENAME	EID
Harsh	101
Ankita	102
Mohit	103

Download CSV

3 rows selected.

Statement 15

Edit

```
Select * from emp CROSS JOIN dept
```

EID	ENAME	SAL	EID	DNAME
101	Harsh	10000	101	HR
101	Harsh	10000	102	IT
101	Harsh	10000	103	Accounts
102	Ankita	16000	101	HR
102	Ankita	16000	102	IT
102	Ankita	16000	103	Accounts
103	Mohit	5000	101	HR
103	Mohit	5000	102	IT
103	Mohit	5000	103	Accounts

Download CSV

9 rows selected.

Statement 16

Edit

```
Select * from emp e,dept d where e.eid = d.eid (+)
```

EID	ENAME	SAL	EID	DNAME
101	Harsh	10000	101	HR
102	Ankita	16000	102	IT
103	Mohit	5000	103	Accounts

Download CSV

Statement 17

Edit

```
Select * from emp e LEFT JOIN dept d on e.eid = d.eid
```

EID	ENAME	SAL	EID	DNAME
101	Harsh	10000	101	HR
102	Ankita	16000	102	IT
103	Mohit	5000	103	Accounts

Download CSV

3 rows selected.

Statement 18

Edit

```
Select * from emp e RIGHT JOIN dept d on e.eid = d.eid
```

EID	ENAME	SAL	EID	DNAME
101	Harsh	10000	101	HR
102	Ankita	16000	102	IT
103	Mohit	5000	103	Accounts

Download CSV

3 rows selected.

Statement 20

Edit

```
Select * from emp e RIGHT JOIN dept d on e.eid = d.eid where e.eid = 101
```

EID	ENAME	SAL	EID	DNAME
101	Harsh	10000	101	HR

Download CSV

Statement 21

Edit

```
Select * from emp e FULL OUTER JOIN dept d on e.eid = d.eid
```

EID	ENAME	SAL	EID	DNAME
101	Harsh	10000	101	HR
102	Ankita	16000	102	IT
103	Mohit	5000	103	Accounts

Download CSV

3 rows selected.

RESULT:

All Joins commands are executed successfully.

TITLE OF EXPERIMENT: Set Operators

DATE OF EXPERIMENT: 30-03-2022

EXPERIMENT NO. : 9(a)

AIM: To perform Set operators commands.

COMMANDS AND OUTPUTS:

Statement 11

Edit

```
Select * from emp1 union select * from emp2
```

EID	ENAME
101	Harsh
102	Mohit
103	Ankita
104	Riya
105	Harsh
106	Abhishek
107	Ankita
108	Megha

Download CSV

8 rows selected.

Statement 13

Edit

```
Select ename from emp1 union all select ename from emp2
```

ENAME
Harsh
Mohit
Ankita
Riya
Harsh
Abhishek
Ankita
Megha

Download CSV

8 rows selected.

Statement 14

Edit

```
Select ename from emp1 intersect select ename from emp2
```

ENAME
Ankita
Harsh

Download CSV

2 rows selected.

Statement 15

Edit

```
Select ename from emp1 minus select ename from emp2
```

ENAME
Mohit
Riya

Download CSV

2 rows selected.

Statement 16

Edit

```
Select * from emp1
```

EID	ENAME
101	Harsh
102	Mohit
103	Ankita
104	Riya

Download CSV

4 rows selected.

Statement 17

Edit

```
Select * from emp2
```

EID	ENAME
105	Harsh
106	Abhishek
107	Ankita
108	Megha

Download CSV

4 rows selected.

RESULT:

All Set operators commands are executed successfully.

TITLE OF EXPERIMENT: Views

DATE OF EXPERIMENT: 30-03-2022

EXPERIMENT NO. : 9(b)

AIM: To perform View commands.

COMMANDS AND OUTPUTS:

Statement 9

Edit

```
CREATE VIEW details AS
SELECT s_name, city FROM student WHERE s_id >= 4
```

View created.

Statement 10

Edit

```
SELECT * FROM details
```

S_NAME	CITY
Ankita	Mumbai
Mohit	Gaziabad
Megha	Chennai

Download CSV

3 rows selected.

Statement 11

Edit

```
INSERT INTO details VALUES('Shahid','Faridabad')
```

1 row(s) inserted.

Statement 12

Edit

```
UPDATE details SET s_name = 'Harsh' WHERE city = 'Gaziabad'
```

1 row(s) updated.

Statement 13

Edit

```
SELECT * from details
```

S_NAME	CITY
Ankita	Mumbai
Harsh	Gaziabad
Megha	Chennai

Download CSV

3 rows selected.

Statement 14

Edit

```
Drop view details
```

View dropped.

RESULT:

All view commands are executed successfully.

TITLE OF EXPERIMENT: PL/SQL

DATE OF EXPERIMENT: 06-04-2022

EXPERIMENT NO. : 10

AIM: To perform different PL/SQL questions.

COMMANDS AND OUTPUTS:

Statement 1

Edit

```
begin
    dbms_output.put_line('Hello World');
end;
```

Statement processed.
Hello World

Statement 2

Edit

```
DECLARE
        a NUMBER := 46;
        b NUMBER := 67;
        c NUMBER := 21;
BEGIN
        IF a > b
        AND a > c THEN
        dbms_output.Put_line('Greatest number is '||a);
        ELSIF b > a
                AND b > c THEN
        dbms_output.Put_line('Greatest number is '||b);
        ELSE
        dbms_output.Put_line('Greatest number is '||c);
        END IF;
END;
```

Statement processed.
Greatest number is 67

Statement 3

Edit

```
DECLARE
        n NUMBER := 164;
        r NUMBER;
BEGIN
        r := MOD(n, 2);

        IF r = 0 THEN
        dbms_output.Put_line('Even');
        ELSE
        dbms_output.Put_line('Odd');
        END IF;
END;
```

Statement processed.
Even

Statement 4

Edit

```
DECLARE
        n NUMBER := 161;
        r NUMBER;
BEGIN
        r := MOD(n, 2);

        IF r = 0 THEN
        dbms_output.Put_line('Even');
        ELSE
        dbms_output.Put_line('Odd');
        END IF;
END;
```

Statement processed.
Odd

Statement 5

Edit

```
declare

num number := 6;
fact number := 1;
temp number;

begin

temp :=num;

while( temp>0 )
loop
fact := fact*temp;
temp := temp-1;

end loop;

dbms_output.put_line('factorial of '|| num || ' is ' || fact);

end;
```

Statement processed.
factorial of 6 is 720

Statement 6

Edit

```
declare
type namesarray is varray(10) of varchar2(20);
type grades is varray(10) of integer;
names namesarray;
marks grades;
total integer;
begin
names:=namesarray('Vikas','Ranjeet','Harsh','Mohit','Manish');
marks:=grades(88,87,86,70,75);
total:=names.count;
dbms_output.put_line('Total '|| total || ' Students');
for i in 1 .. total loop
 dbms_output.put_line('Student: ' || names(i) || '
      Marks: ' || marks(i));
   END LOOP;
end;
```

```
Statement processed.
Total 5 Students
Student: Vikas Marks: 88
Student: Ranjeet Marks: 87
Student: Harsh Marks: 86
Student: Mohit Marks: 70
Student: Manish Marks: 75
```

RESULT:

All PL/SQL questions are executed successfully.

TITLE OF EXPERIMENT: Triggers

DATE OF EXPERIMENT: 13-04-2022

EXPERIMENT NO. : 11

AIM: To perform Triggers.

COMMANDS AND OUTPUTS:

Statement 7

Edit

```
Select * from employee
```

E_ID	E_NAME	CITY	E_SALARY
101	Harsh	Delhi	2000
102	Himanshi	Mumbai	3000
103	Mohit	Chandigarh	1500
104	Abhishek	Indore	6000
105	Ankita	Bhopal	3000

Download CSV

5 rows selected.

Statement 8

Edit

```
CREATE OR REPLACE TRIGGER display_salary_changes
BEFORE DELETE OR INSERT OR UPDATE ON employee
FOR EACH ROW
WHEN (NEW.e_id > 0)
DECLARE
   sal_diff number;
BEGIN
   sal_diff := :NEW.e_salary  - :OLD.e_salary;
   dbms_output.put_line('Old salary: ' || :OLD.e_salary);
   dbms_output.put_line('New salary: ' || :NEW.e_salary);
   dbms_output.put_line('Salary difference: ' || sal_diff);
END;
```

Trigger created.

RESULT:

Given Triggers question is executed successfully.