DAY3 LEARNING

Group By, Having Clause & Group Functions in SQL

1. GROUP BY AND COUNT

```
SELECT DNO, COUNT(*) FROM EMPL GROUP BY DNO;
```

Results Explain Describe Saved SQL History

DNO	COUNT(*)
30	2
20	2
10	2

3 rows returned in 0.00 seconds Download

2. SUM, AVERAGE, MINIMUM AND MAXIMUM

```
SELECT DNO, COUNT(*), SUM(ESALARY), AVG(ESALARY), MIN(ESALARY), MAX(ESALARY) FROM EMPL GROUP BY DNO;
```

Results Explain Describe Saved SQL History

DNO	COUNT(*)	SUM(ESALARY)	AVG(ESALARY)	MIN(ESALARY)	MAX(ESALARY)
30	2	9000	4500	3000	6000
20	2	9000	4500	4000	5000
10	2	10000	5000	3000	7000

3 rows returned in 0.00 seconds Download

3. OR

```
SELECT DNO, COUNT(*), SUM(ESALARY), AVG(ESALARY), MIN(ESALARY), MAX(ESALARY) FROM EMPL GROUP BY DNO ORDER BY DNO;
```

Results Explain Describe Saved SQL History

DNO	COUNT(*)	SUM(ESALARY)	AVG(ESALARY)	MIN(ESALARY)	MAX(ESALARY)
10	2	10000	5000	3000	7000
20	2	9000	4500	4000	5000
30	2	9000	4500	3000	6000

3 rows returned in 0.00 seconds Download

4. HAVING

```
SELECT DNO, COUNT(*), SUM(ESALARY), AVG(ESALARY), MIN(ESALARY), MAX(ESALARY) FROM EMPL GROUP BY DNO HAVING MAX(ESALARY) > 5000 ORDER BY DNO;
```

Results Explain Describe Saved SQL History

DNO	COUNT(*)	SUM(ESALARY)	AVG(ESALARY)	MIN(ESALARY)	MAX(ESALARY)
10	2	10000	5000	3000	7000
30	2	9000	4500	3000	6000

2 rows returned in 0.00 seconds Download

CONSTRAINTS IN SQL

1. CREATE TABLE USING CONSTRAINTS

```
CREATE TABLE STUDENT(REG_NO NUMBER(5) PRIMARY KEY,STUDENT_NAME VARCHAR2(20) NOT NULL, STUDENT_EMAIL VARCHAR2(20) UNIQUE,
 STUDENT_AGE NUMBER(3) CHECK (STUDENT_AGE > 0), STUDENT_LOCATION VARCHAR2(20) DEFAULT 'ERODE');
```

Results Explain Describe Saved SQL History

```
Table created.

0.02 seconds
```

2. DEFAULT

```
INSERT INTO STUDENT (REG_NO,STUDENT_NAME,STUDENT_EMAIL,STUDENT_AGE) VALUES (1,'CRISTIANO', 'CRISRO@GMAIL.COM', 9);

SELECT * FROM STUDENT;
```

Results Explain Describe Saved SQL History

REG_NO	STUDENT_NAME	STUDENT_EMAIL	STUDENT_AGE	STUDENT_LOCATION
1	CRISTIANO	CRISRO@GMAIL.COM	9	ERODE

1 rows returned in 0.01 seconds Download

3. UNIQUE

```
INSERT INTO STUDENT (REG_NO,STUDENT_NAME,STUDENT_EMAIL,STUDENT_AGE) VALUES (2,'MESSI', 'CRISRO@GMAIL.COM', 7);
SELECT * FROM STUDENT;
```

Results Explain Describe Saved SQL History

```
ORA-00001: unique constraint (CLIENT_MASTER.SYS_C007101) violated
```

0.01 seconds

4. NOT NULL

```
INSERT INTO STUDENT (REG_NO,STUDENT_EMAIL,STUDENT_AGE,STUDENT_LOCATION) VALUES (2,'MESS@GMAIL.COM', 7, 'CHENNAI');
```

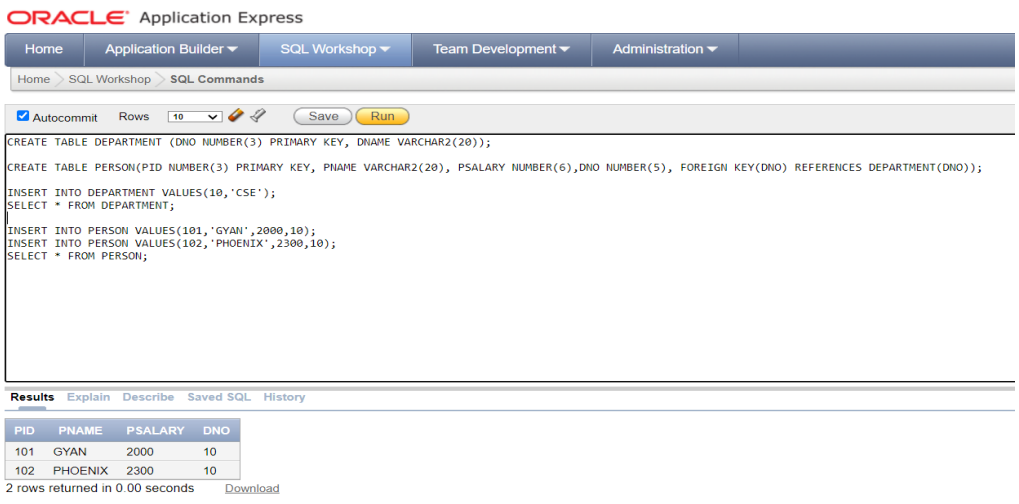
Results Explain Describe Saved SQL History

```
ORA-01400: cannot insert NULL into ("CLIENT_MASTER"."STUDENT"."STUDENT_NAME")
```

0.00 seconds

PRIMARY AND FOREIGN KEY

1. CREATING AND INSERTING THE DATA BY USING PRIMARY AND FOREIGN KEY



VIEW

1. CREATE VIEW

```
CREATE VIEW FIRST_VIEW AS SELECT * FROM EMPL WHERE ESALARY > 5000;
```

Results Explain Describe Saved SQL History

View created.

0.03 seconds

2. DISPLAY TABLE BASED ON CONDITION

```
SELECT * FROM FIRST_VIEW;
```

Results Explain Describe Saved SQL History

EID	ENAME	ESALARY	DNO
101	AAAA	7000	10
105	EEEE	6000	30

2 rows returned in 0.01 seconds Download

3. UPDATE ON VIEW (If any Update is done in the view it will reflect to the base table)

```
SELECT * FROM FIRST_VIEW;
UPDATE FIRST_VIEW SET ESALARY = 6000 WHERE EID = 101;
```

Results Explain Describe Saved SQL History

EID	ENAME	ESALARY	DNO
101	AAAA	6000	10
105	EEEE	6000	30

2 rows returned in 0.00 seconds Download

4. DELETE ON VIEW (If Deletion is done in the view it will reflect to the base table)

```
DELETE FROM FIRST_VIEW WHERE EID = 105;
SELECT * FROM FIRST_VIEW;
```

Results Explain Describe Saved SQL History

EID	ENAME	ESALARY	DNO
101	AAAA	6000	10

1 rows returned in 0.00 seconds Download

5. DROP VIEW

```
DROP VIEW FIRST_VIEW;
```

Results Explain Describe Saved

```
View dropped.

0.05 seconds
```

ALIAS

1. RENAME EID AS E_ID BY ALIAS

```
select EID AS "E_ID",ENAME,ESALARY from empl;
```

Results Explain Describe Saved SQL History

E_ID	ENAME	ESALARY
101	AAAA	6000
102	BBBB	3000
103	CCCC	4000
104	DDDD	5000
106	-	3000

5 rows returned in 0.00 seconds Download