**Name: Kartikay Agrawal**

**Reg. No.: 2148064 MDS 171 – Database Technologies**

**Demonstration of SET operators and Sub Queries in SQL.**

CREATE TABLE ART\_FORM

(A\_NAME VARCHAR(20) NOT NULL CHECK(A\_NAME='JAMPADS' OR A\_NAME='PHOTOSHOOT' OR A\_NAME='STUDIO'),

A\_CODE NUMBER(1) UNIQUE);

CREATE TABLE STUDIO

(S\_CODE VARCHAR(4) PRIMARY KEY,

S\_NAME VARCHAR(20),

S\_LOCATION VARCHAR(50),

S\_DURATION NUMBER(3) CHECK(S\_DURATION BETWEEN 30 AND 120),

S\_RATING NUMBER(2,1));

CREATE TABLE CUSTOMER

(C\_ID VARCHAR(4) PRIMARY KEY,

C\_NAME VARCHAR(20),

C\_EXPEREIENCE VARCHAR(10) DEFAULT 'GOOD',

STUDIO\_CODE VARCHAR(20),

FOREIGN KEY(STUDIO\_CODE) REFERENCES STUDIO(S\_CODE));

INSERT INTO ART\_FORM(A\_NAME,A\_CODE) VALUES ('JAMPADS',1);

INSERT INTO ART\_FORM(A\_NAME,A\_CODE) VALUES ('PHOTOSHOOT',2);

INSERT INTO ART\_FORM(A\_NAME,A\_CODE) VALUES ('STUDIO',3);

INSERT INTO STUDIO(S\_CODE,S\_NAME,S\_LOCATION,S\_DURATION,S\_RATING) VALUES (1432,'RocknRoll','Noida',45,4.5);

INSERT INTO STUDIO(S\_CODE,S\_NAME,S\_LOCATION,S\_DURATION,S\_RATING) VALUES (2146,'BeautynBeast','Surat',30,4);

INSERT INTO STUDIO(S\_CODE,S\_NAME,S\_LOCATION,S\_DURATION,S\_RATING) VALUES (1643,'LightsCamAction','Gurgaon',120,4.8);

INSERT INTO CUSTOMER(C\_ID,C\_NAME,C\_EXPEREIENCE,STUDIO\_CODE) VALUES ('J123','Pankaj','Excellent',1432);

INSERT INTO CUSTOMER(C\_ID,C\_NAME,C\_EXPEREIENCE,STUDIO\_CODE) VALUES ('P342','Uday','Bad',2146);

INSERT INTO CUSTOMER(C\_ID,C\_NAME,STUDIO\_CODE) VALUES ('S143','Shrey',1643);

**Q1. Write compound SQL statements to demonstrate the following SET operations on the tables created for your Application domain. (UNION, UNION ALL, INTERSECT and MINUS).**

**a. The Operations should be performed on tables with logical sense and mention**

**valid justification.**

**UNION:** In this case, the query gives the list of all the studios which are good or located in Noida.

**UNION ALL:** In this case, the query gives the list of all the studios which are good or having more than 4 rating with repetition.

**INTERSECT:** In this case, the query gives the list of all the studios which are good and located in Noida.

**MINUS:**I In this case, the query gives the list of all the studios which are not good.

**Union:**

SELECT S\_CODE

FROM STUDIO WHERE S\_LOCATION='NOIDA'

UNION

SELECT STUDIO\_CODE

FROM CUSTOMER WHERE C\_EXPEREIENCE='GOOD';



**Union all:**

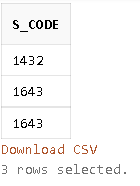
SELECT S\_CODE

FROM STUDIO WHERE S\_RATING>4

UNION ALL

SELECT STUDIO\_CODE

FROM CUSTOMER WHERE C\_EXPEREIENCE='GOOD';



**Intersect:**

SELECT S\_CODE

FROM STUDIO WHERE S\_LOCATION='NOIDA'

INTERSECT

SELECT STUDIO\_CODE

FROM CUSTOMER WHERE C\_EXPEREIENCE='GOOD';



**Minus:**

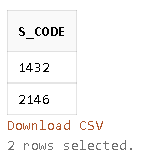
SELECT S\_CODE

FROM STUDIO

MINUS

SELECT STUDIO\_CODE

FROM CUSTOMER WHERE C\_EXPEREIENCE='GOOD';



**b. What is the difference between UNION and UNION ALL?**

The only difference between Union and Union All is that Union extracts the rows that are being specified in the query while Union All extracts all the rows including the duplicates (repeated values) from both the queries.

**c. Show how to sort the result set of a compound query which performs SET**

**operations.**

SELECT S\_CODE

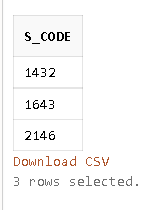
FROM STUDIO

UNION

SELECT STUDIO\_CODE

FROM CUSTOMER WHERE C\_EXPEREIENCE='GOOD'

ORDER BY S\_CODE;



**d. Mention the difference between Sub queries and Set operations used in SQL**

A subquery is a SELECT statement that is embedded in the clause of another SELECT statement.

Set operators are used to combine the results of two or more component queries into one result. Queries containing set operators are called compound queries.

**Q2. Perform the different operations on the tables created for your Application domain using different sub queries options.**

SELECT \* FROM STUDIO WHERE S\_CODE IN(

SELECT STUDIO\_CODE FROM CUSTOMER WHERE C\_NAME LIKE 'Shrey');



CREATE TABLE CUSTOMER\_OLD(CUS\_ID REFERENCES CUSTOMER(C\_ID), CUS\_NAME VARCHAR(30) );

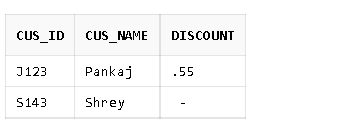
INSERT INTO CUSTOMER\_OLD

SELECT C\_ID,C\_NAME FROM CUSTOMER

WHERE C\_ID IN (SELECT C\_ID

FROM CUSTOMER) ;

SELECT \* FROM CUSTOMER\_OLD;

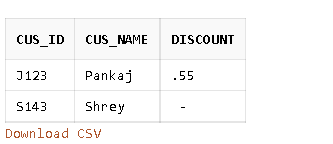


ALTER TABLE CUSTOMER\_OLD ADD DISCOUNT NUMERIC(2,2);

UPDATE CUSTOMER\_OLD SET DISCOUNT=.55 WHERE CUS\_ID IN (SELECT C\_ID

FROM CUSTOMER WHERE STUDIO\_CODE=1432);

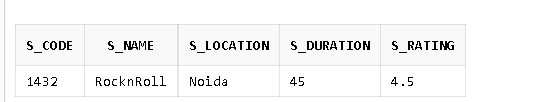
SELECT \* FROM CUSTOMER\_OLD;



SELECT \* FROM STUDIO WHERE S\_CODE IN(

SELECT STUDIO\_CODE FROM CUSTOMER WHERE C\_ID IN (SELECT CUS\_ID

FROM CUSTOMER\_OLD WHERE DISCOUNT=.55));



DELETE FROM CUSTOMER\_OLD WHERE CUS\_ID IN (SELECT C\_ID

FROM CUSTOMER WHERE STUDIO\_CODE=2146);

1 row(s) deleted.