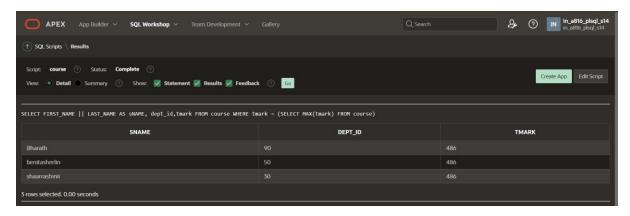
SELECT FIRST\_NAME || LAST\_NAME AS sNAME, dept\_id,tmark

FROM course

WHERE tmark = (SELECT MAX(tmark) FROM course);

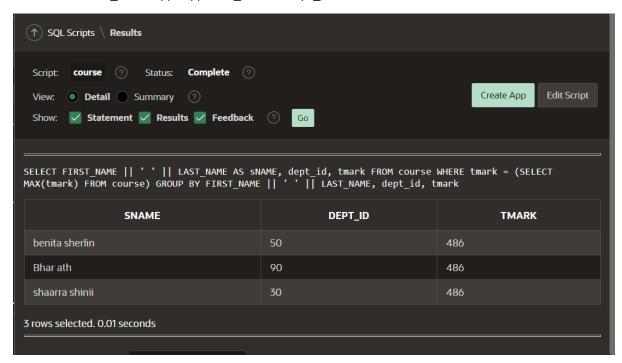


SELECT FIRST\_NAME | | ' ' | | LAST\_NAME AS sNAME, dept\_id, tmark

FROM course

WHERE tmark = (SELECT MAX(tmark) FROM course)

GROUP BY FIRST\_NAME | | ' ' | | LAST\_NAME, dept\_id, tmark;



SELECT FIRST\_NAME | | ' ' | | LAST\_NAME AS sNAME, dept\_id, MIN(tmark) AS min\_mark

FROM course

GROUP BY FIRST\_NAME, LAST\_NAME, dept\_id

HAVING MIN(tmark) = (SELECT MIN(tmark) FROM course);

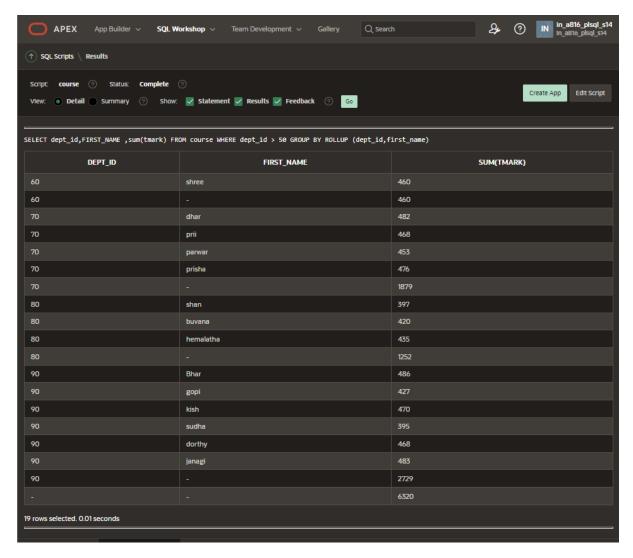


SELECT dept\_id,FIRST\_NAME ,sum(tmark)

FROM course

WHERE dept\_id > 50

GROUP BY ROLLUP (dept\_id,first\_name);



SELECT dept\_id,FIRST\_NAME ,sum(tmark)

FROM course

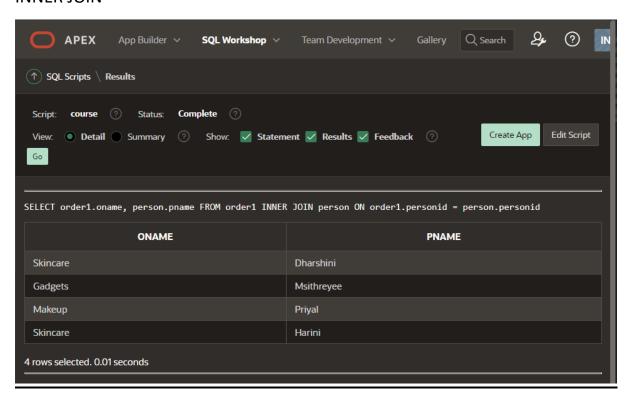
WHERE dept\_id > 50

GROUP BY CUBE (dept\_id,first\_name);



# **Joines**

### **INNER JOIN**



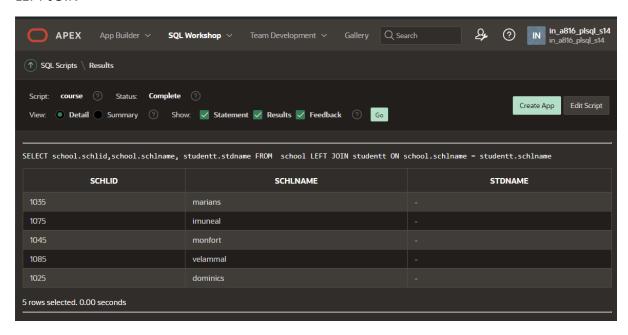
SELECT order1.oname, person.pname

FROM order1

**INNER JOIN person** 

ON order1.personid = person.personid;

### **LEFT JOIN**



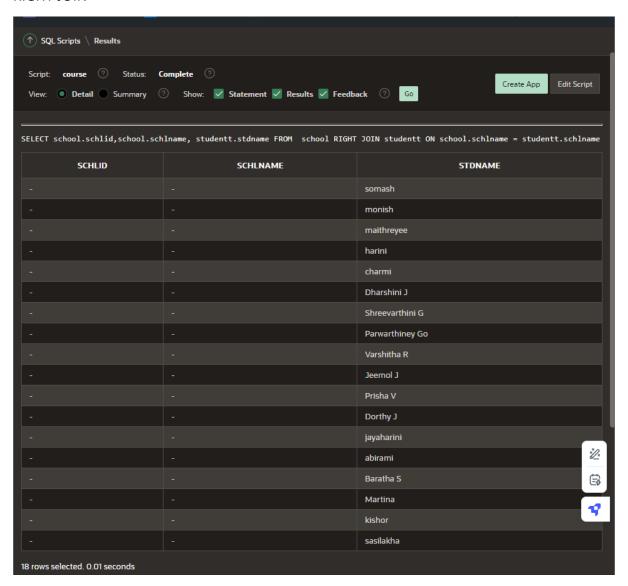
SELECT school.schlid,school.schlname, studentt.stdname

FROM school

LEFT JOIN studentt

ON school.schlname = studentt.schlname;

### **RIGHT JOIN**



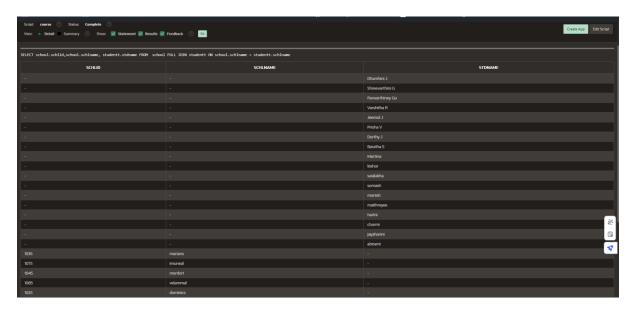
SELECT school.schlid,school.schlname, studentt.stdname

FROM school

**RIGHT JOIN studentt** 

ON school.schlname = studentt.schlname;

## **FULL JOIN**



SELECT school.schlid,school.schlname, studentt.stdname

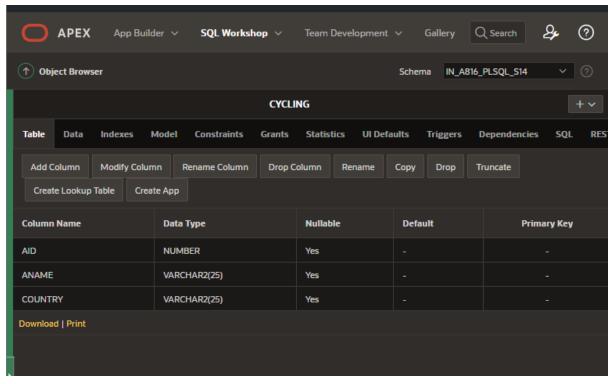
FROM school

**FULL JOIN studentt** 

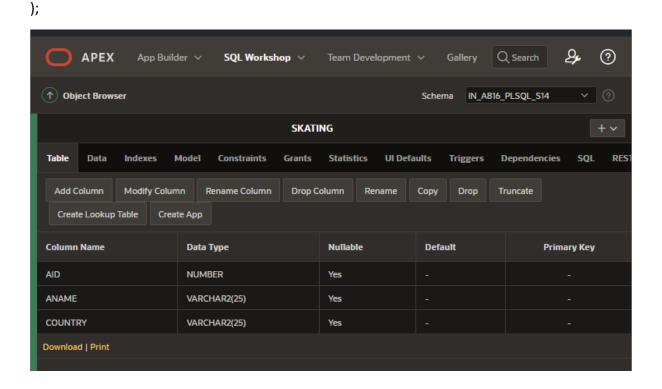
ON school.schlname = studentt.schlname;

# **SETS**

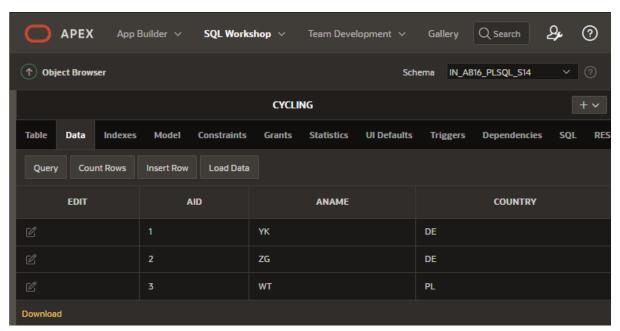
```
create table cycling (
    aid numeric,
    aname varchar(25),
    country varchar(25)
);
```



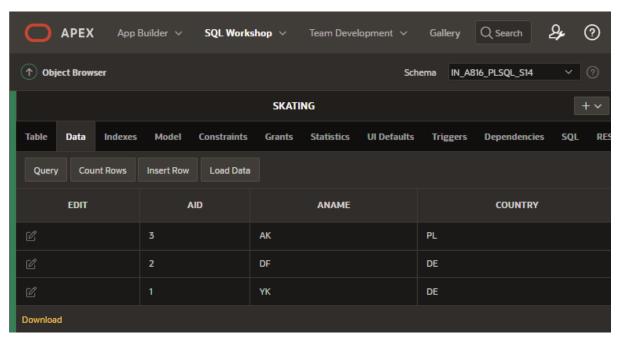
create table skating (
aid numeric,
aname varchar(25),
country varchar(25)



insert into cycling values (1,'YK','DE');
insert into cycling values (2,'ZG','DE');
insert into cycling values (3,'WT','PL');



insert into skating values (1,'YK','DE');
insert into skating values (2,'DF','DE');
insert into skating values (3,'AK','PL');



SELECT aid, aname

FROM cycling

WHERE country ='DE'

UNION

SELECT aid, aname

FROM skating

WHERE country ='DE';

SELECT aid, aname FROM cycling WHERE country ='DE' UNION SELECT aid, aname FROM skating WHERE country ='DE'			
ANAME			
YK			
DF			
ZG			
3 rows selected. 0.00 seconds			

SELECT aid, aname

FROM cycling

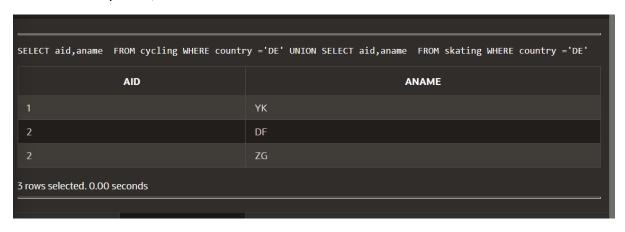
WHERE country ='DE'

**UNION ALL** 

SELECT aid, aname

FROM skating

WHERE country ='DE';



SELECT aid, aname

FROM cycling

WHERE country ='DE'

**INTERSECT** 

SELECT aid, aname

FROM skating

WHERE country ='DE';

SELECT aid,aname FROM cycling WHERE country ='DE' INTERSECT SELECT aid,aname FROM skating WHERE country ='DE'				
AID	ANAME			
1	YK			
Statement processed. 0.00 seconds				

SELECT aid, aname

FROM cycling

WHERE country ='DE'

**MINUS** 

SELECT aid, aname

FROM skating

WHERE country ='DE';



SELECT aid, aname

FROM cycling

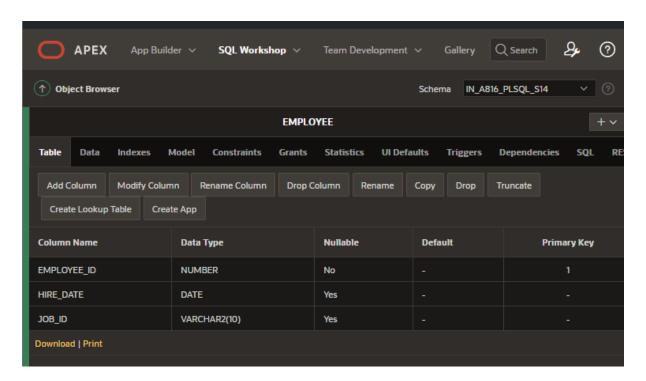
**MINUS** 

SELECT aid, aname

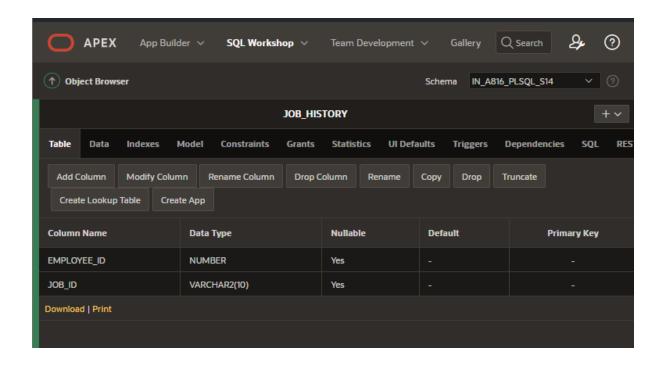
FROM skating



```
CREATE TABLE employee (
hire_date DATE,
employee_id NUMBER PRIMARY KEY,
job_id VARCHAR2(10)
);
```



```
CREATE TABLE job_history (
employee_id NUMBER,
job_id VARCHAR2(10)
);
```



INSERT INTO employee VALUES (TO\_DATE('17-Jun-1987', 'DD-Mon-YYYY'), 100, 'AD\_PRES');
INSERT INTO employee VALUES (TO\_DATE('17-Sep-1987', 'DD-Mon-YYYY'), 200, 'AD\_ASST');
INSERT INTO employee VALUES (TO\_DATE('21-Sep-1989', 'DD-Mon-YYYY'), 101, 'AD\_VP');
INSERT INTO employee VALUES (TO\_DATE('03-Jan-1990', 'DD-Mon-YYYY'), 103, 'IT\_PROG');
INSERT INTO employee VALUES (TO\_DATE('21-May-1991', 'DD-Mon-YYYY'), 104, 'IT\_PROG');

```
INSERT INTO employee VALUES (TO DATE('13-Jan-1993', 'DD-Mon-YYYY'), 102, 'AD_VP');
INSERT INTO employee VALUES (TO DATE('07-Jun-1994', 'DD-Mon-YYYY'), 205, 'AC MGR');
INSERT INTO employee VALUES (TO DATE('07-Jun-1994', 'DD-Mon-YYYY'), 206,
'AC_ACCOUNT');
INSERT INTO employee VALUES (TO_DATE('17-Oct-1995', 'DD-Mon-YYYY'), 141, 'ST_CLERK');
INSERT INTO employee VALUES (TO_DATE('17-Feb-1996', 'DD-Mon-YYYY'), 201, 'MK_MAN');
INSERT INTO employee VALUES (TO DATE('11-May-1996', 'DD-Mon-YYYY'), 174, 'SA REP');
INSERT INTO employee VALUES (TO DATE('29-Jan-1997', 'DD-Mon-YYYY'), 142, 'ST CLERK');
INSERT INTO employee VALUES (TO_DATE('17-Aug-1997', 'DD-Mon-YYYY'), 202, 'MK REP');
INSERT INTO employee VALUES (TO DATE('15-Mar-1998', 'DD-Mon-YYYY'), 143, 'ST CLERK');
INSERT INTO employee VALUES (TO DATE('24-Mar-1998', 'DD-Mon-YYYY'), 176, 'SA REP');
INSERT INTO employee VALUES (TO DATE('09-Jul-1998', 'DD-Mon-YYYY'), 144, 'ST CLERK');
INSERT INTO employee VALUES (TO DATE('07-Feb-1999', 'DD-Mon-YYYY'), 107, 'IT PROG');
INSERT INTO employee VALUES (TO DATE('24-May-1999', 'DD-Mon-YYYY'), 178, 'SA REP');
INSERT INTO employee VALUES (TO DATE('16-Nov-1999', 'DD-Mon-YYYY'), 124, 'ST MAN');
INSERT INTO employee VALUES (TO DATE('29-Jan-2000', 'DD-Mon-YYYY'), 149, 'SA MAN');
```

```
INSERT INTO job_history VALUES (101, 'AC_ACCOUNT');
INSERT INTO job_history VALUES (101, 'AC_MGR');
INSERT INTO job_history VALUES (102, 'IT_PROG');
INSERT INTO job_history VALUES (114, 'ST_CLERK');
INSERT INTO job_history VALUES (122, 'ST_CLERK');
INSERT INTO job_history VALUES (176, 'SA_MAN');
INSERT INTO job_history VALUES (176, 'SA_REP');
INSERT INTO job_history VALUES (200, 'AC_ACCOUNT');
INSERT INTO job_history VALUES (200, 'AD_ASST');
INSERT INTO job_history VALUES (201, 'MK_REP');
```

UNION

SELECT hire\_date, employee\_id, job\_id

FROM employee

UNION

SELECT TO\_DATE(NULL),employee\_id,job\_id

FROM job\_history;

- SELECT hire_date, employee_id, job_id FROM employee_UNION SELECT TO_DATE(NULL),employee_id,job_id FROM job_history			
HIRE_DATE	EMPLOYEE_ID	JO8_ID	
17-Jun-1987	100	AD_PRES	
17-Sep-1987	200	AD_ASST	
21-Sep-1989		AD_VP	
03-Jan-1990	103	IT_PROG	
21-May-1991	104	IT_PROG	
13-Jan-1993	102	AD_VP	
07-Jun-1994	205	AC_MGR	
07-Jun-1994	206	AC_ACCOUNT	
17-Oct-1995	141	ST_CLERK	
17-Feb-1996	201	MK_MAN	
11-May-1996	174	SA_REP	
29-Jan-1997	142	ST_CLERK	
17-Aug-1997	202	MK_REP	
15-Mar-1998	145	ST_CLERK	
24-Mar-1998	176	SA_REP	
09-Jul-1998	144	ST_CLERK	
07-Feb-1999	107	IT_PROG	
24-May-1999	178	SA_REP	
16-Nov-1999	124	ST_MAN	
29-Jan-2000	149	SA_MAN	
		AC_ACCOUNT	
	101	AC_MGR	
	102	IT_PROG	
	114	ST_CLERK	
	122	ST_CLERK	
	176	SA_MAN	
	176	SA_REP	
	200	AC_ACCOUNT	
	200	AD_ASST	
	201	MK_REP	
30 rows selected. 0.02 seconds			
in By IN_A816_PLSQL_S14			

SELECT hire\_date, employee\_id, job\_id

FROM employee

UNION

SELECT TO\_DATE(NULL),employee\_id, job\_id

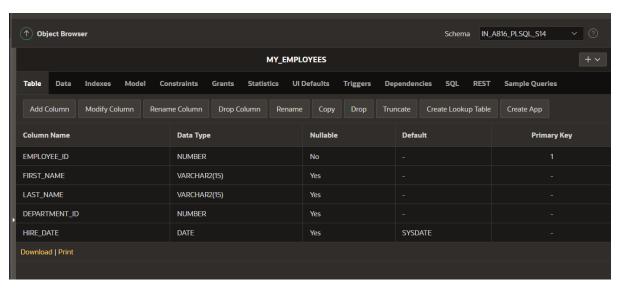
FROM job\_history

ORDER BY employee\_id;

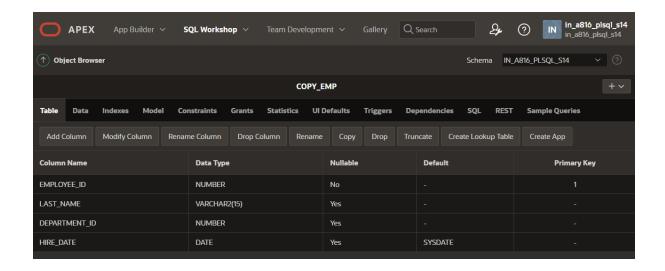
SELECT hire\_date, employee\_id, job\_id FROM employee UNION SELECT TO\_DATE(NULL),employee\_id, job\_id FROM job\_histor ORDER BY employee\_id

HIRE_DATE	EMPLOYEE_ID	JOB_ID
17-Jun-1987	100	AD_PRES
21-Sep-1989	101	AD_VP
	101	AC_ACCOUNT
	101	AC_MGR
13-Jan-1993	102	AD_VP
	102	IT_PROG
03-Jan-1990	103	IT_PROG
21-May-1991	104	IT_PROG
07-Feb-1999	107	IT_PROG
	114	ST_CLERK
	122	ST_CLERK
16-Nov-1999	124	ST_MAN
17-Oct-1995	141	ST_CLERK
29-Jan-1997	142	ST_CLERK
15-Mar-1998	143	ST_CLERK
09-Jul-1998	144	ST_CLERK

```
CREATE TABLE my_employees (
employee_id NUMBER PRIMARY KEY,
first_name VARCHAR2(15),
last_name VARCHAR2(15),
department_id NUMBER,
hire_date DATE DEFAULT SYSDATE
);
```



```
CREATE TABLE copy_emp (
employee_id NUMBER PRIMARY KEY,
last_name VARCHAR2(15),
department_id NUMBER,
hire_date DATE DEFAULT SYSDATE
);
```



INSERT INTO my\_employees VALUES (1, 'John', 'Doe', 10, TO\_DATE('01-JAN-2020', 'DD-MON-YYYY'));

INSERT INTO my\_employees VALUES (2, 'Jane', 'Smith', 20, TO\_DATE('15-FEB-2020', 'DD-MON-YYYY'));

INSERT INTO my\_employees VALUES (3, 'Jim', 'Brown', 30, TO\_DATE('01-MAR-2020', 'DD-MON-YYYY'));

INSERT INTO my\_employees VALUES (4, 'Jake', 'White', 40, TO\_DATE('01-APR-2020', 'DD-MON-YYYY'));

INSERT INTO my\_employees VALUES (5, 'Jill', 'Black', 50, TO\_DATE('01-MAY-2020', 'DD-MON-YYYY'));

EDIT	EMPLOYEE_ID	FIRST_NAME	LAST_NAME	DEPARTMENT_ID	HIRE_DATE
ď		John	Doe	10	01-Jan-2020
ď		Jane	Smith	20	15-Feb-2020
ď		Jim	Brown	30	01-Mar-2020
ď	4	Jake	White	40	01-Apr-2020
ď		Jill	Black	50	01-May-2020

INSERT INTO copy emp VALUES

(1, 'Jones', 15, TO DATE('01-JAN-2020', 'DD-MON-YYYY'));

INSERT INTO copy\_emp VALUES

(2, 'Doe', 25, TO DATE('15-FEB-2020', 'DD-MON-YYYY'));

INSERT INTO copy\_emp VALUES

(6, 'Smith', 55, TO\_DATE('01-JUN-2020', 'DD-MON-YYYY'));

INSERT INTO copy\_emp VALUES

(7, 'Taylor', 65, TO\_DATE('01-JUL-2020', 'DD-MON-YYYY'));

INSERT INTO copy\_emp VALUES

(8, 'Anderson', 75, TO\_DATE('01-AUG-2020', 'DD-MON-YYYY'));

EDIT	EMPLOYEE_ID	LAST_NAME	DEPARTMENT_ID	HIRE_DATE
ď	1	Jones	15	01-Jan-2020
ď	2	Doe	25	15-Feb-2020
ď	6	Smith	55	01-Jun-2020
ď	7	Taylor	65	01-Jul-2020
ď	8	Anderson	75	01-Aug-2020

MERGE INTO copy\_emp c

USING my\_employees e

ON (c.employee\_id = e.employee\_id)

WHEN MATCHED THEN

**UPDATE SET** 

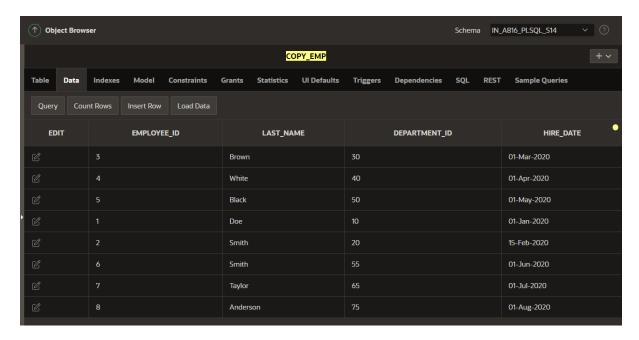
` c.last\_name = e.last\_name,

c.department\_id = e.depa`rtment\_id

WHEN NOT MATCHED THEN

INSERT (employee\_id, last\_name, department\_id, hire\_date)

VALUES (e.employee\_id, e.last\_name, e.department\_id, e.hire\_date);



#### **SEQUENCE**

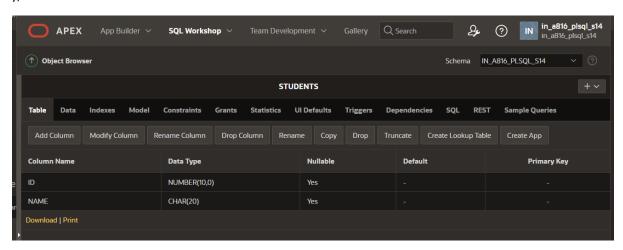
### **CREATE TABLE students**

(

ID number(10),

NAME char(20)

);



## CREATE SEQUENCE sequence\_1

**INCREMENT BY 1** 

START WITH 1

**MAXVALUE 50000** 

**NOCACHE** 

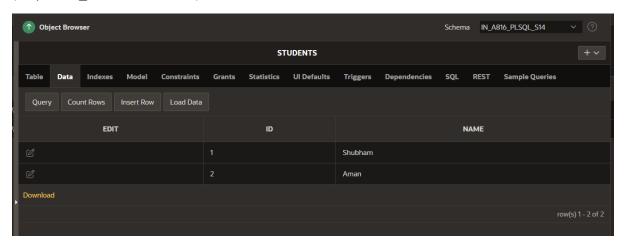
### NOCYCLE;

**INSERT into students VALUES** 

(sequence\_1.nextval,'Shubham');

**INSERT into students VALUES** 

(sequence\_1.nextval,'Aman');



SELECT sequence\_name, min\_value, max\_value, increment\_by,

last\_number

FROM user\_sequences;

