DATA BASE PROJECT

**ID:3075494**

**Sai Krishna Kovi**

**12 . VIEWS**

**12a.EMPLOYEE\_INFO**

**QUERY :**

CREATE OR REPLACE VIEW EMPLOYEE\_INFO AS

SELECT A.FIRST\_NAME||' '||A.MIDDLE\_NAME ||' '||A.LAST\_NAME AS EMPLOYEENAME,A.STREET\_ADDRESS ADDRESS,

A.HOME\_PHONE\_NUMBER HOMEPHONE,A.CELL\_PHONE\_NUMBER CELLPHONE,

A.ZIP\_CODE ZIPCODE,A.SSN SSN,A.SALARY SALARY,A.BIRTH\_DATE BDATE,

TRUNC(MONTHS\_BETWEEN(SYSDATE,A.BIRTH\_DATE)/12) AGE,

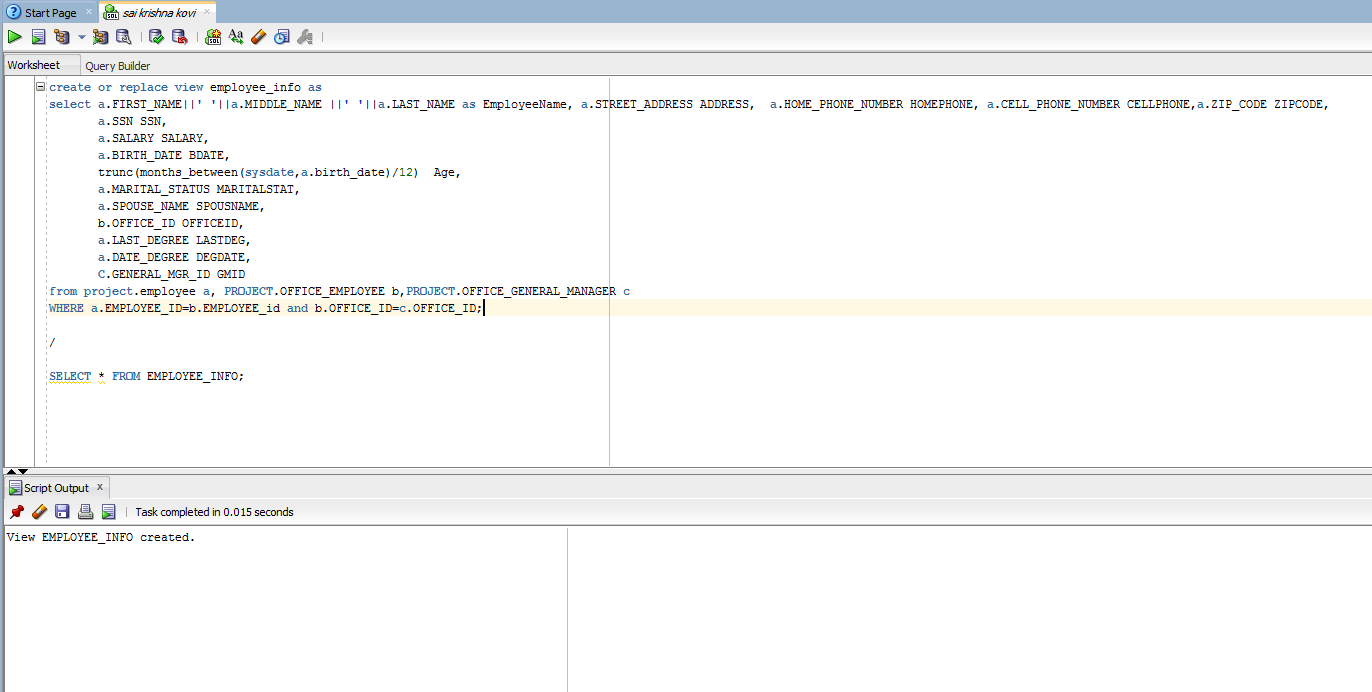
A.MARITAL\_STATUS MARITALSTAT,A.SPOUSE\_NAME SPOUSNAME,B.OFFICE\_ID OFFICEID,A.LAST\_DEGREE LASTDEG,A.DATE\_DEGREE DEGDATE,C.GENERAL\_MGR\_ID GMID

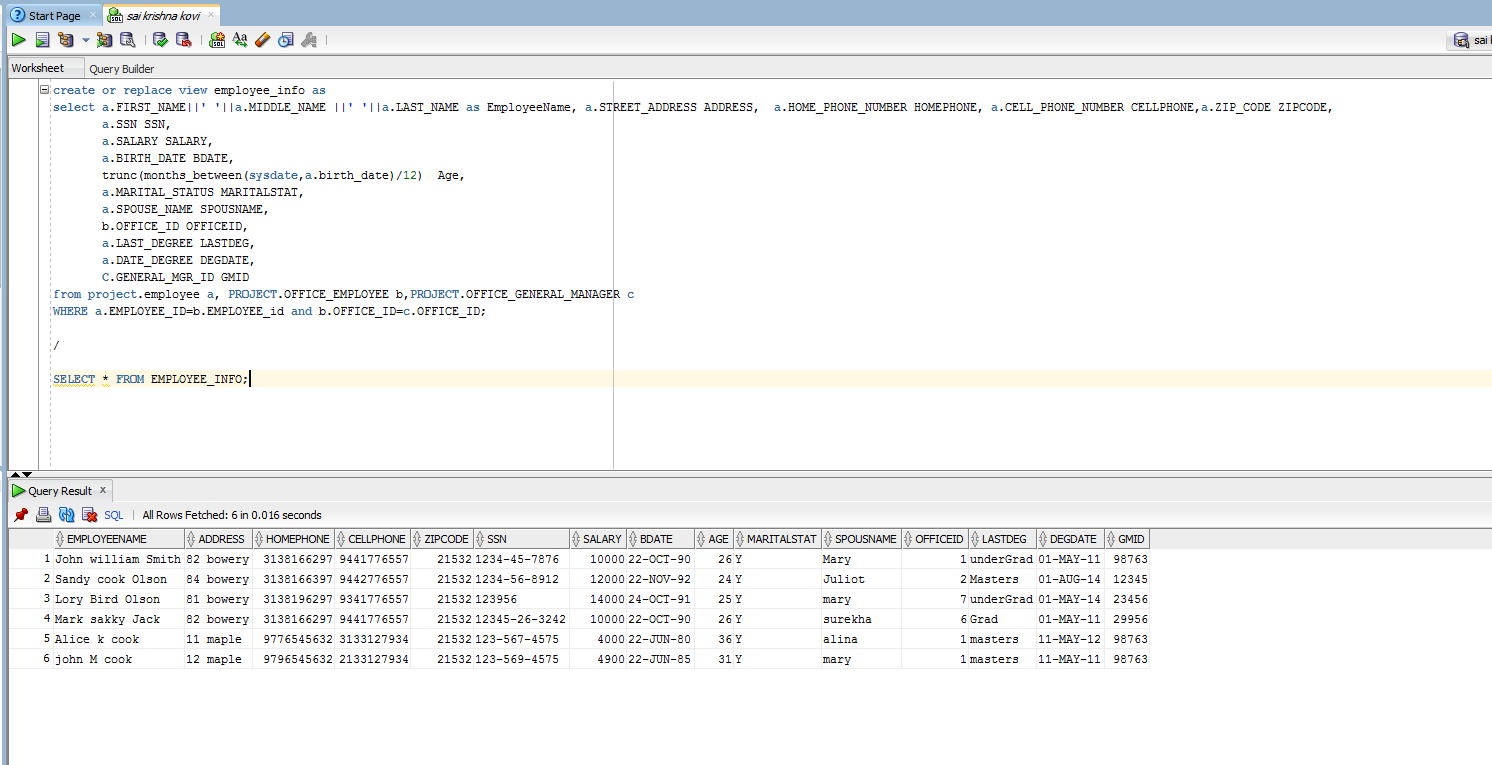
FROM PROJECT.EMPLOYEE A, PROJECT.OFFICE\_EMPLOYEE B,PROJECT.OFFICE\_GENERAL\_MANAGER CELLPHONEWHERE A.EMPLOYEE\_ID AND B.OFFICE\_ID=C.OFFICE\_ID

/

SELECT \*FROM EMPLOYEE\_INFO

**Output:**





**12b.EMPLOYEE\_SALARY**

**Query:**

**CREATE OR REPLACE VIEW EMPLOYEE\_SALARY AS**

**SELECT A.FIRST\_NAME,A.LAST\_NAME,A.SSN,A.STREET\_ADDRESS||' '||CITY||' '||STATE||' '||ZIP\_CODE AS ADDRESS,A.SALARY,A.TAX\_DEDUCTION,A.MARITAL\_STATUS,**

**B.OFFICE\_ID**

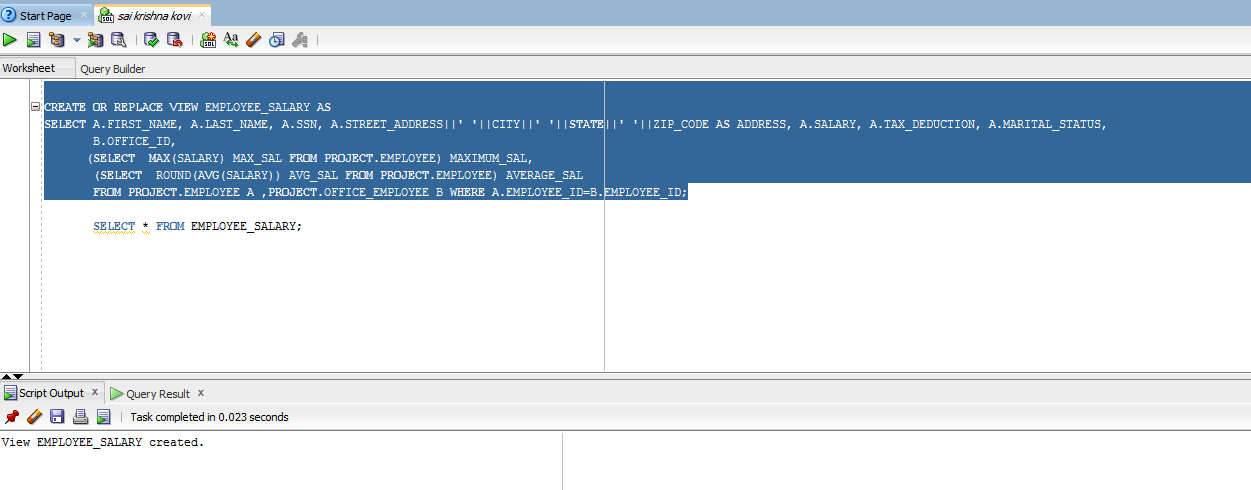
**(SELECT MAX(SALARY) MAX\_SAL FROM PROJECT.EMPLOYEE) MAXIMUM\_SAL,**

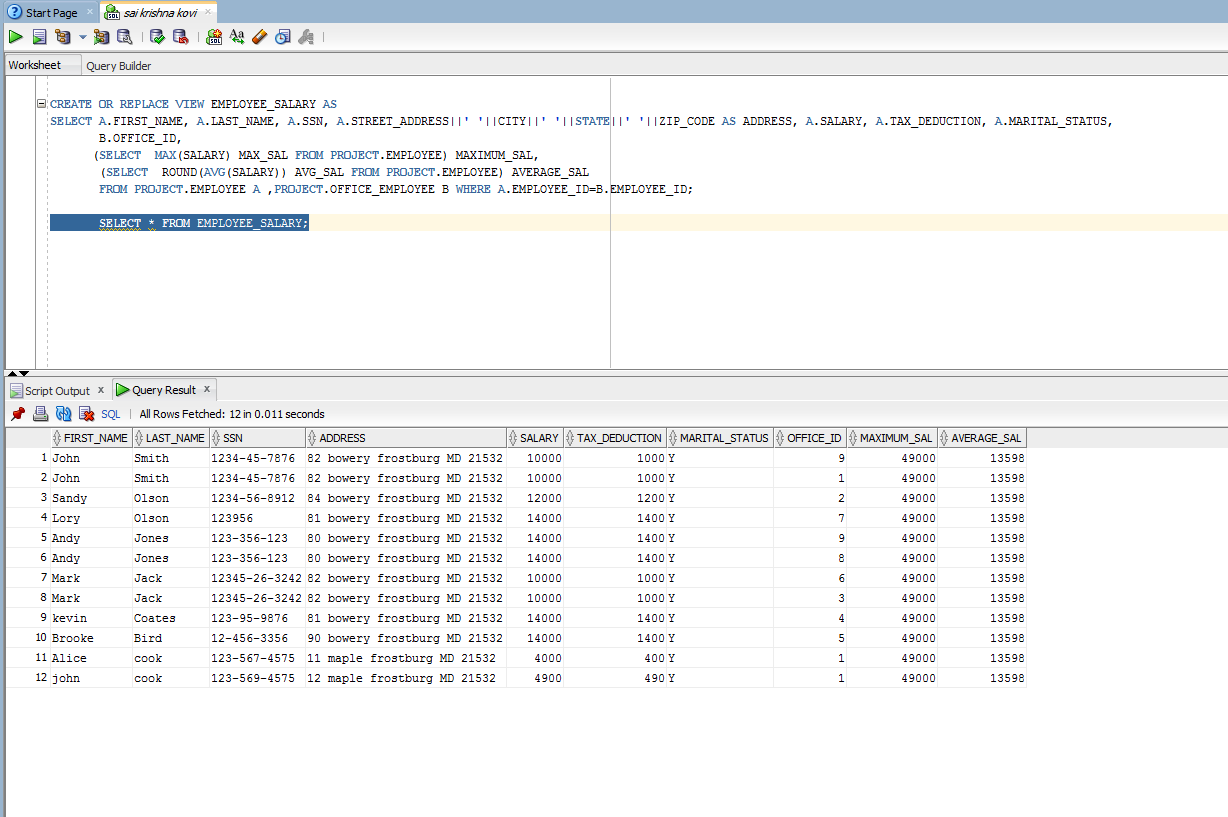
**(SELECT ROUND(AVG(SALARY)) AVG\_SAL FROM PROJECT.EMPLOYEE) AVERAGE\_SAL**

**FROM PROJECT.EMPLOYEE A ,PROJECT.OFFICE\_EMPLOYEE B WHERE A.EMPLOYEE\_ID=B.EMPLOYEE\_ID;**

**SELECT \*FROM EMPLOYEE\_SALARY;**

**Output:**





**12C BRANCH\_INFO**

**Query:**

**create or replace view branch\_info as**

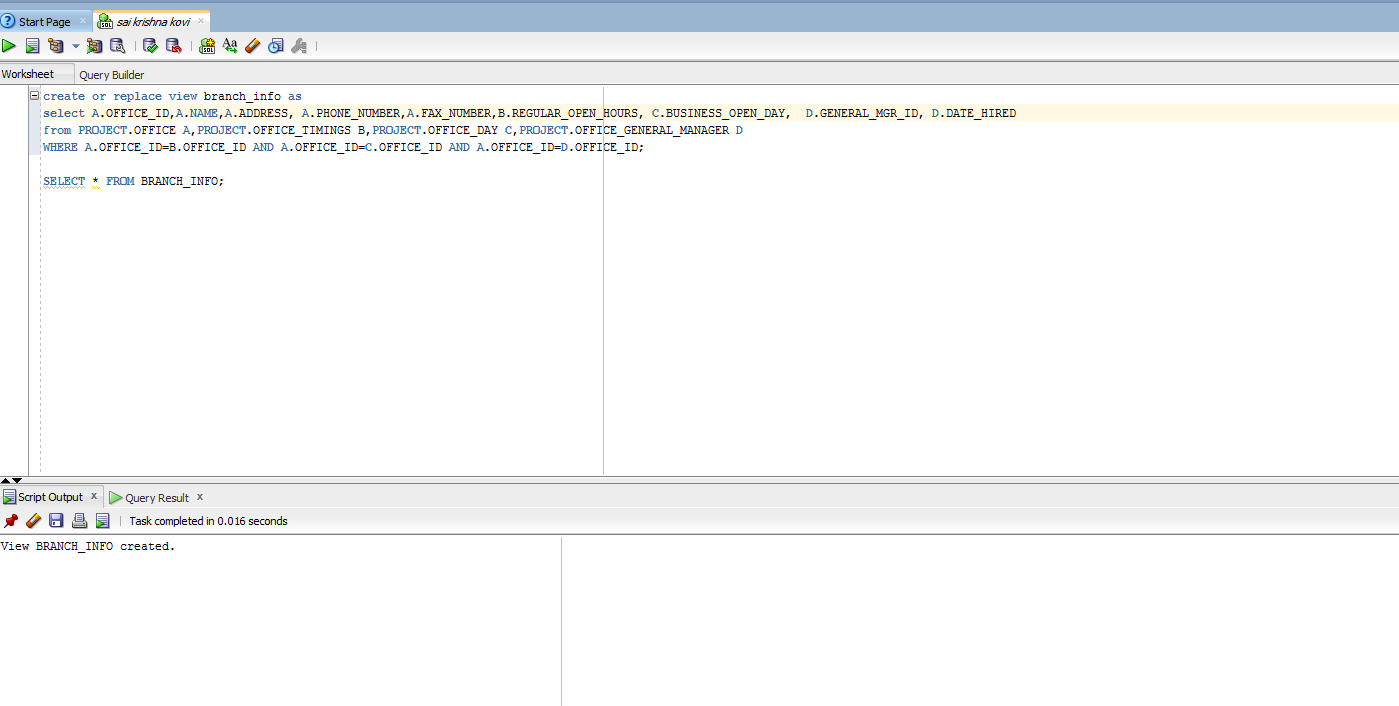
**select A.office\_id,A.ADDRESS,A.PHONE\_NUMBER,A.FAX\_NUMBER,B.REGULAR\_OPEN\_HOURS,C.BUSINESS\_OPEN\_DAY,D.GENERAL\_MANAGER, D.DATE\_HIRED**

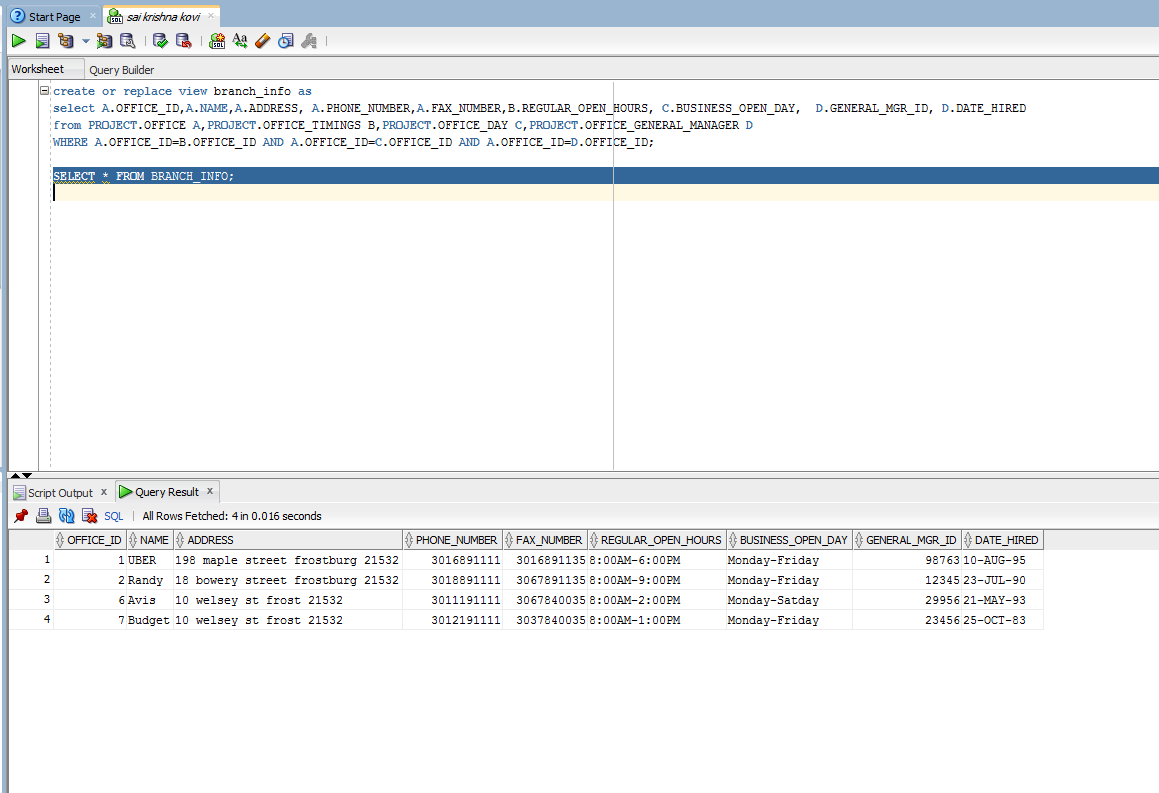
**from PROJECT.OFFICE A,PROJECT.OFFICE\_TIMINGS B,PROJECT.OFFICE\_DAY C,PROJECT.OFFICE\_GENERAL\_MANAGER D**

**WHERE A.OFFICE\_ID=B.OFFICE\_ID AND A.OFFICE\_IC.OFFICE\_ID AND A.OFFICE\_ID=D.OFFICE\_ID**

**SELECT \*FROM BRANCH\_INFO;**

**OUTPUT:**





**12D.VALUED\_CUSTOMER**

**Query:**

**CREATE OR REPLACE VIEW VALUED\_CUSTOMER AS**

**SELECT A.FIRST\_NAME||' 'A.LAST\_NAME AS NAME,A.STREET\_ADDRESS||' '||CITY||' '||STATE AS ADDRESS, To\_char(BIRTH\_DATE,'YYYY')AS AGE,**

**A.CELL\_PHONE CL\_PHONE,**

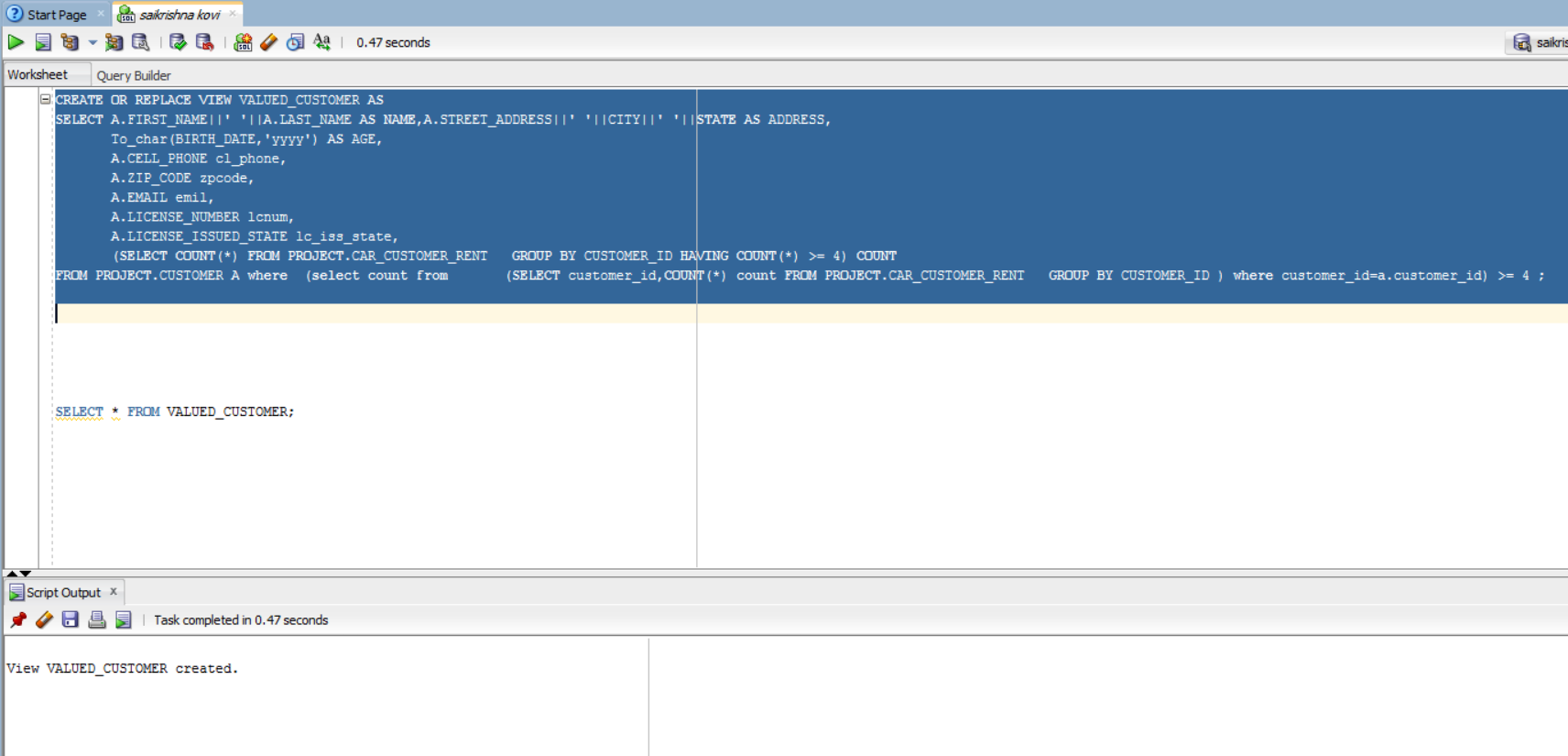
**A.ZIP\_CODE zpcode,**

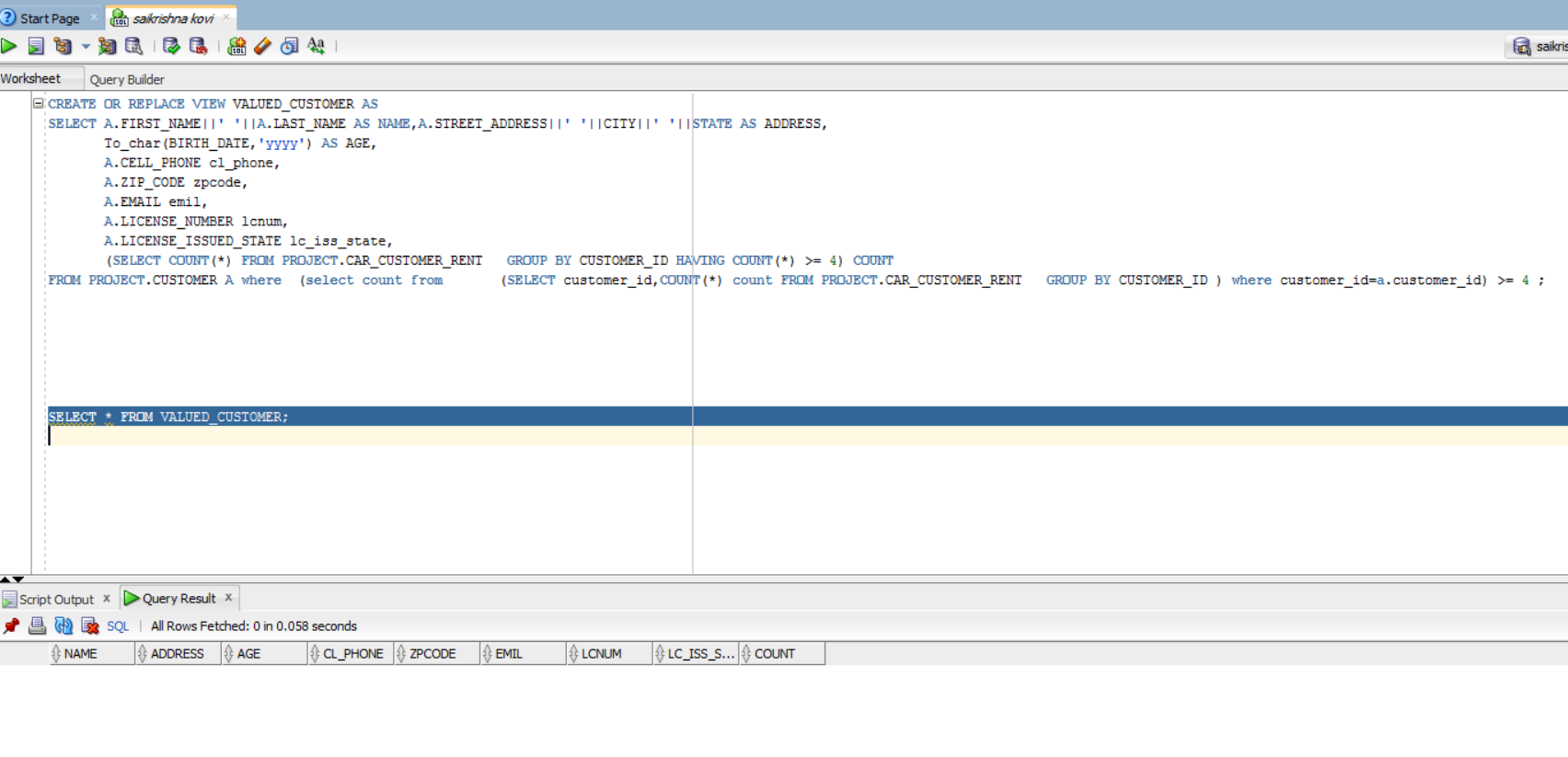
**A.EMAIL emil,A.LICENCE\_NUMBER LCNUM,A.LICENSE\_ISSUED\_STATE lc\_ISS\_STATE,**

**(SELECT COUNT(\*)FROM PROJECT.CAR\_CUSTOMER\_RENT GROUP BY CUSTOMER\_ID HAVING COUNT(\*) >=4)COUNTFROM PROJECT.CUSTOMER A WHERE (select count from(SELECT customer\_id,count(\*) count FROM PROJECT.CAR\_CUSTOMER\_RENT GROUP BY CUSTOMER\_ID )where customer\_id=a.customer\_id)>=4**

**select \*from valued\_customer;**

**Output:**





**12E.LIST\_OF\_CARS**

**Query:**

**create or replace vieew LIST\_OF\_CARS as**

**select a.CAR\_ID C\_ID,a.CAR\_PLATE\_NO CRPNO,a.CAR\_STATE\_REGISTERATION CAR\_S\_REGSTRATN,a.YEAR YEAR,b.CLIENT\_ID CL\_ID,a.CLASS CLS,c.DATE\_OF\_RENT RENTDATE,a.MAKE MAKE,a.COLOR CLR,**

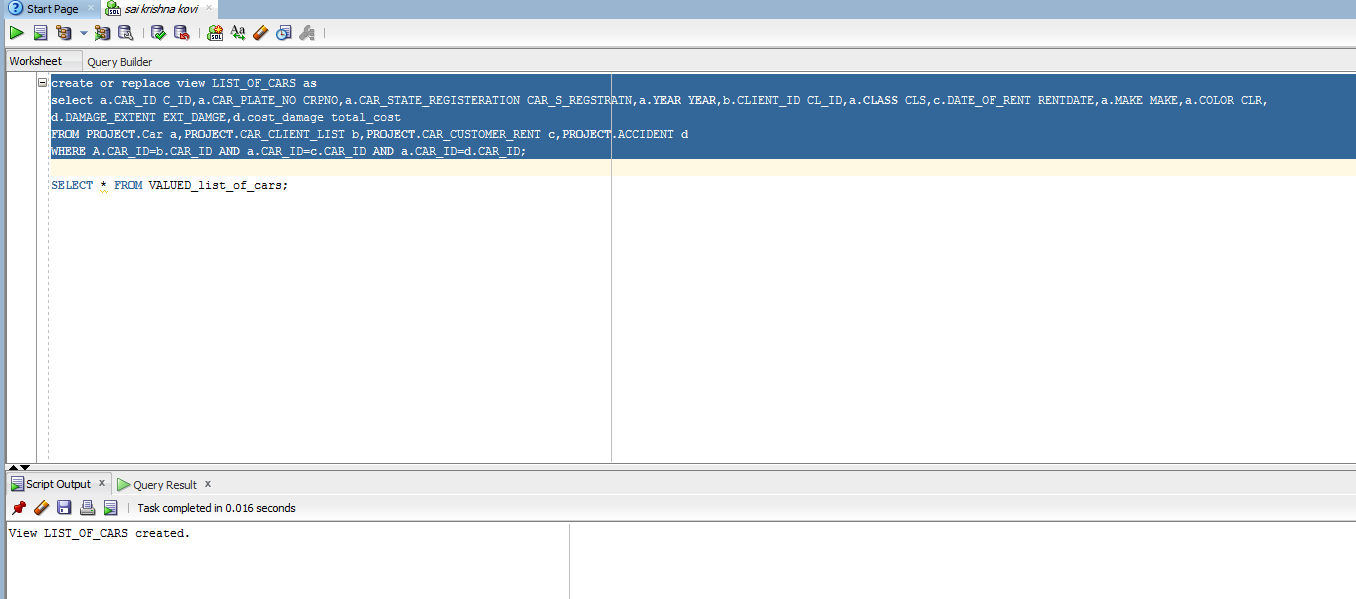
**d.DAMAGE\_EXTENT EXT\_DAMAGE,d.COST\_DAMAGE total\_cost**

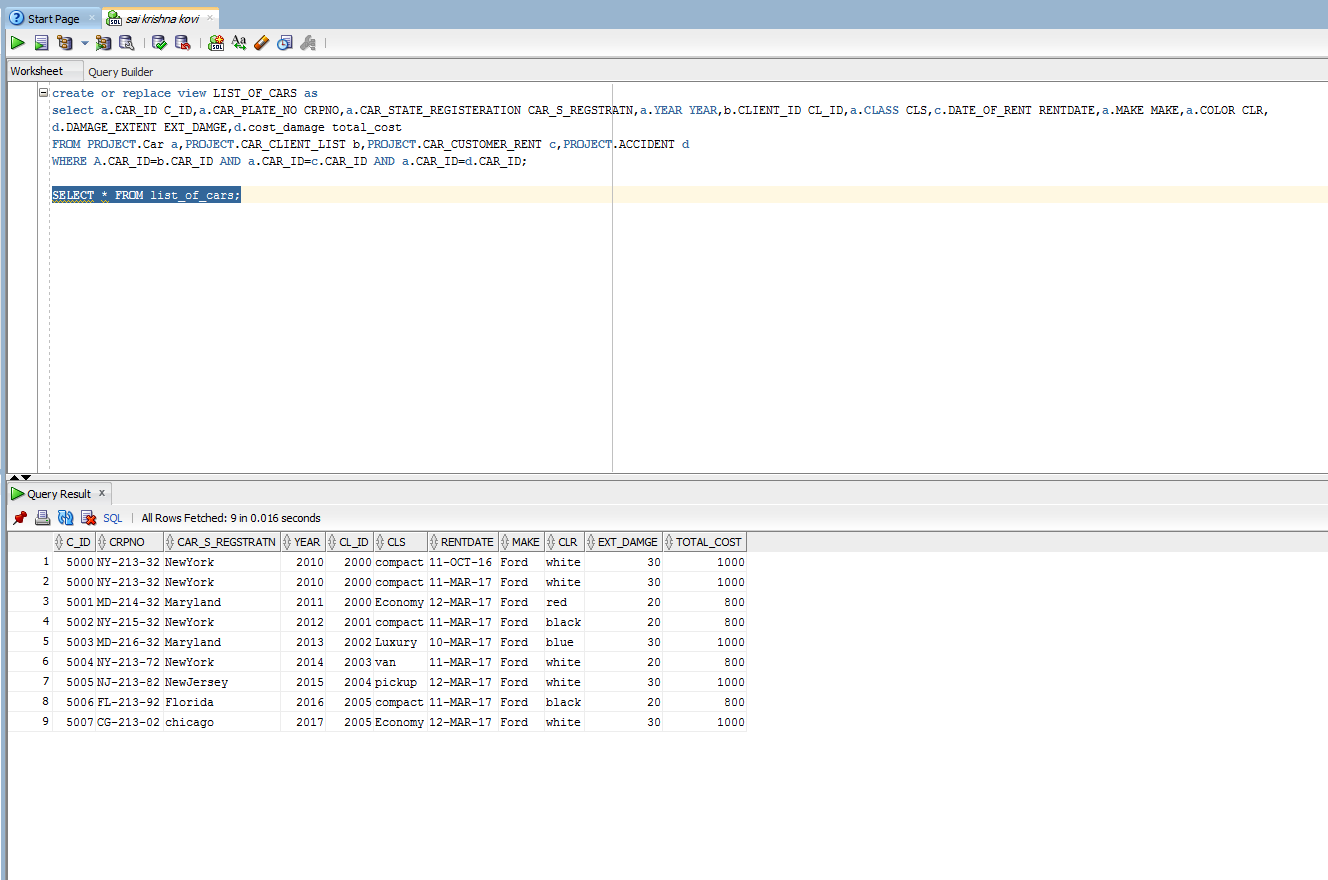
**FROM PROJECT.CAR a,PROJECT.CAR\_CLIENT\_LIST b,PROJECT.CAR\_CUSTOMER\_RENT c,PROJECT.ACCIDENT d**

**WHERE A.CAR\_ID=b\_CAR\_ID AND a.CAR\_ID=C.CAR\_ID=c.CAR\_ID AND a.CAR\_ID=d.CAR\_ID;**

**SELECT \* FROM list\_of\_cars;**

**Output:**





**12f.List\_of\_transactions**

**Query:**

**create or replace view list\_of\_transaction as**

**select total\_costoftransaction,priceper\_day,price\_per\_week,price\_per\_month,locationof\_return,employeename\_worked\_on\_car**

**from**

**(select a.client\_id,b.car\_id,b.payment\_amount as total\_cost\_transaction,1\*b.payment\_amount as price\_per\_day,**

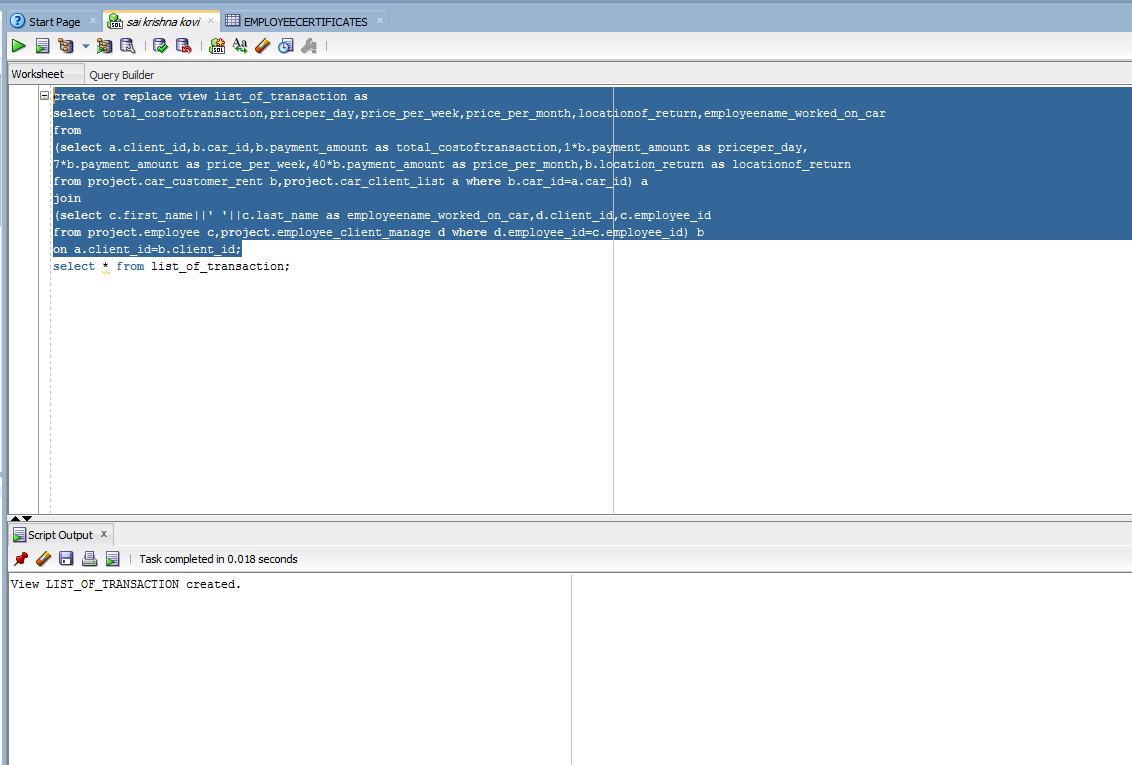
**7\*b.payment\_amount as price\_per\_week,40\*b.payment\_amount as price\_per\_month,b.location\_return as location\_of\_return**

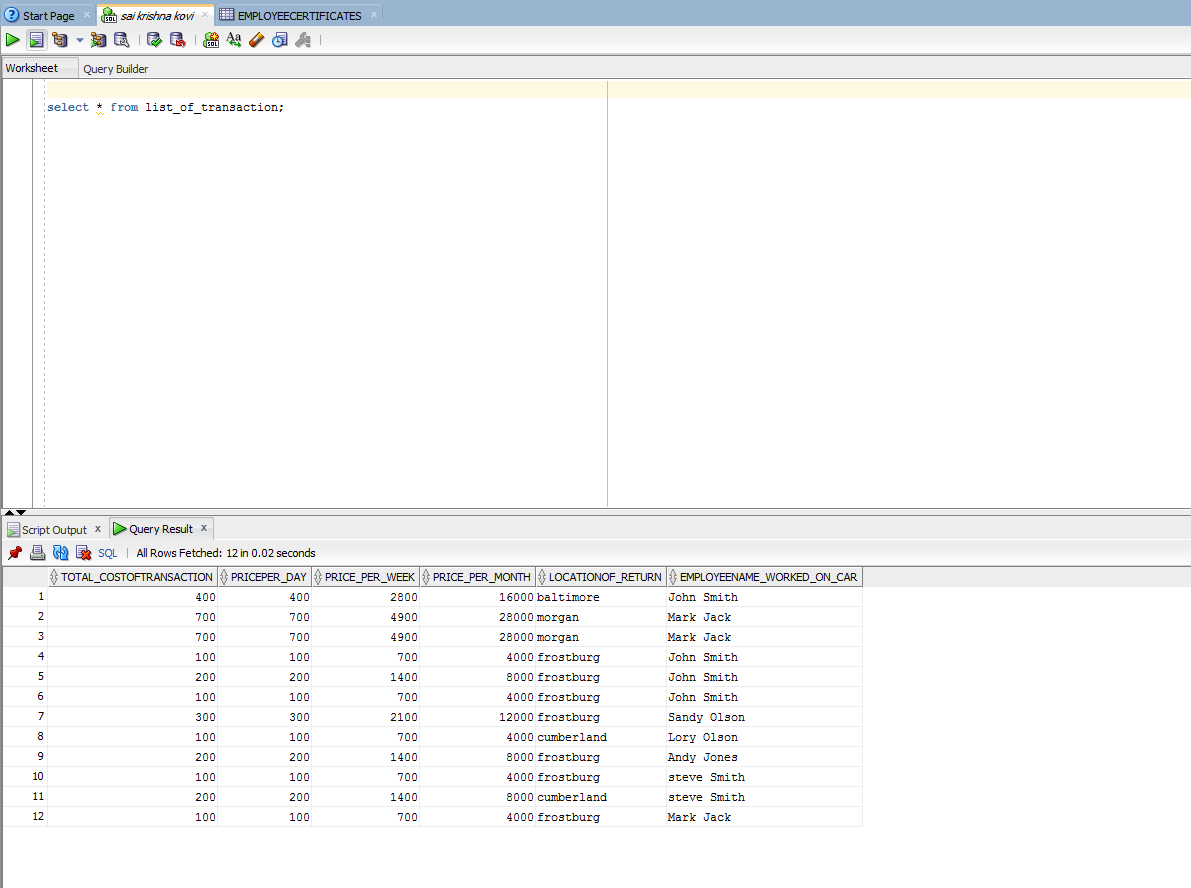
**from project.car\_customer\_rent b,project.car\_client\_list a where b.car\_id=a.car\_id) a join (select c.first\_name||' '||c.last\_name as employee\_name\_worked\_on\_car,d.client\_id,c.employee\_id**

**from project.employee c,project.employee\_client\_manage d where d.employee\_id=c.employee\_id) b on a.client\_id=b.client\_id;**

**select \* from list\_of\_transaction;**

**Output:**





**12G.STATISTICS\_BY\_BRANCH YEAR**

**Query:**

**CREATE OR REPLACE VIEW Statistics\_By\_Branch\_YEAR AS**

**SELECT a.OFFICE\_id,**

**b.first\_name||' '||b.middle\_initial||' '||b.last\_name owner\_name,**

**c.first\_name||' '||c.middle\_initial||' '||c.last\_name customer\_name,**

**extract(YEAR fROM h.date\_of\_rent) office\_year, count(c.client\_id) total\_num\_cars, sum(h.payment\_amount) total\_mony\_received**

**fROM office a,**

**employee\_customer b,employee\_client\_manage ,employee d,**

**customer c,**

**client b,**

**office\_employee g,**

**car\_customer\_rent h**

**WHeRe b.employee\_id=c.employee\_id**

**AND c.employee\_id=d.employee\_id**

**AND b.customer\_id=c.customer\_id**

**AND c.client\_id=b.client\_id**

**AND a.office\_id=g.office\_id**

**AND h.customer\_id=c.customer\_id**

**GROUP BY a.office\_id,**

**b.First\_name,**

**b.middle\_initial,**

**b.last\_name,**

**c.first\_name,**

**c.middle\_initial,**

**c.last\_name,**

**h.date\_oF\_rent,**

**c.client\_id,**

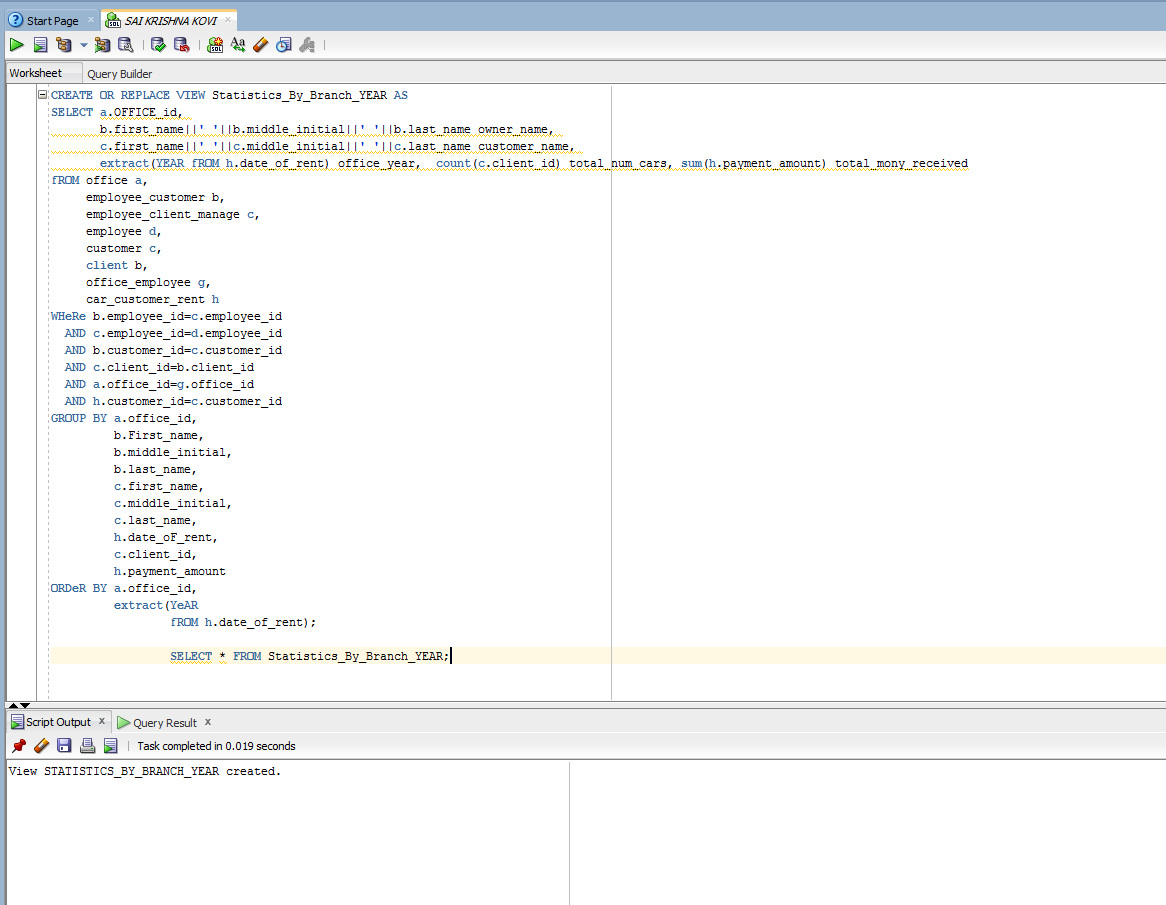
**h.payment\_amount**

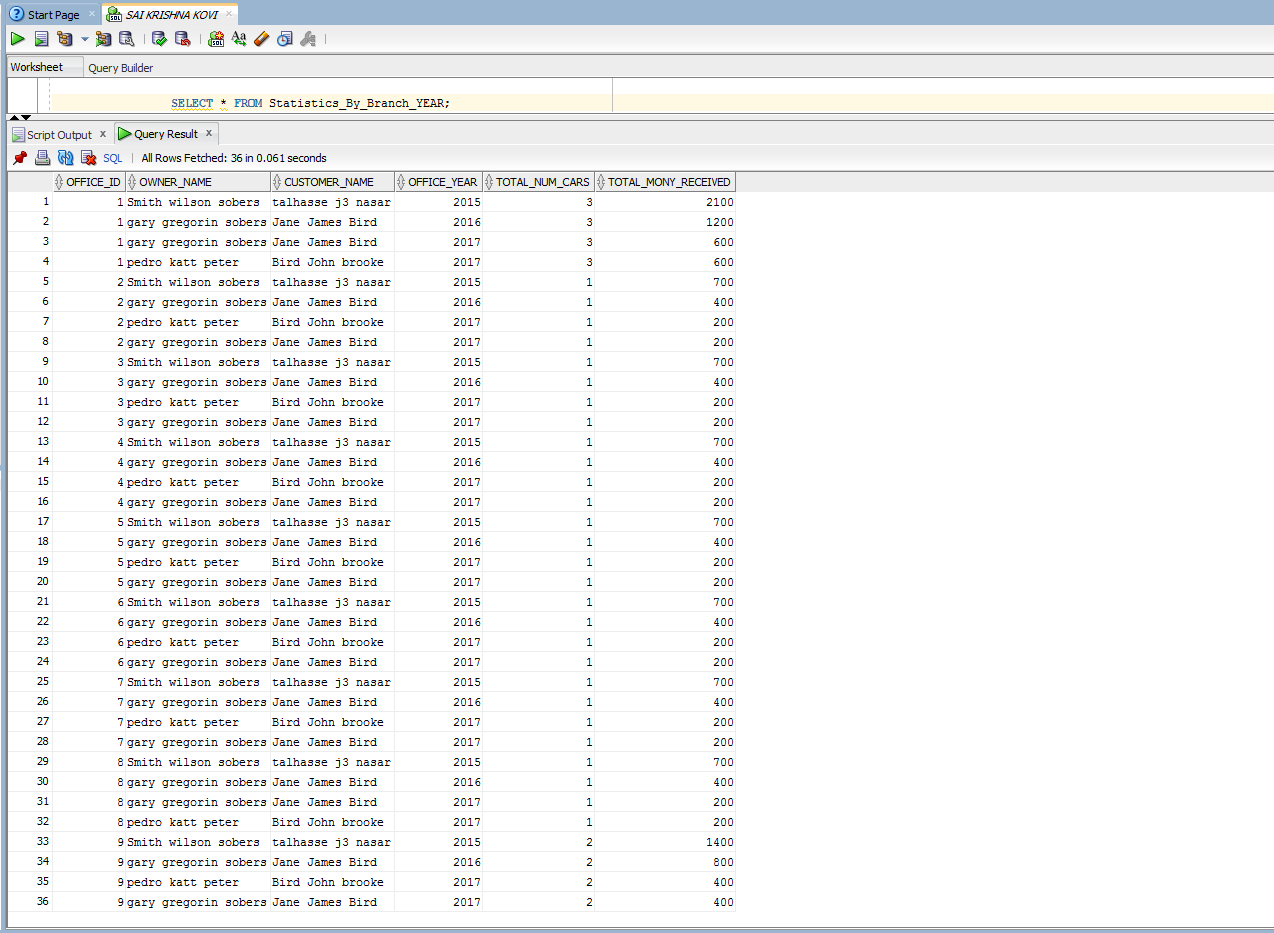
**ORDeR BY a.office\_id,**

**extract(YeAR**

**fROM h.date\_of\_rent);**

**OUTPUT:**





**12H.LAST\_EMPLOYEE\_BRANCH**

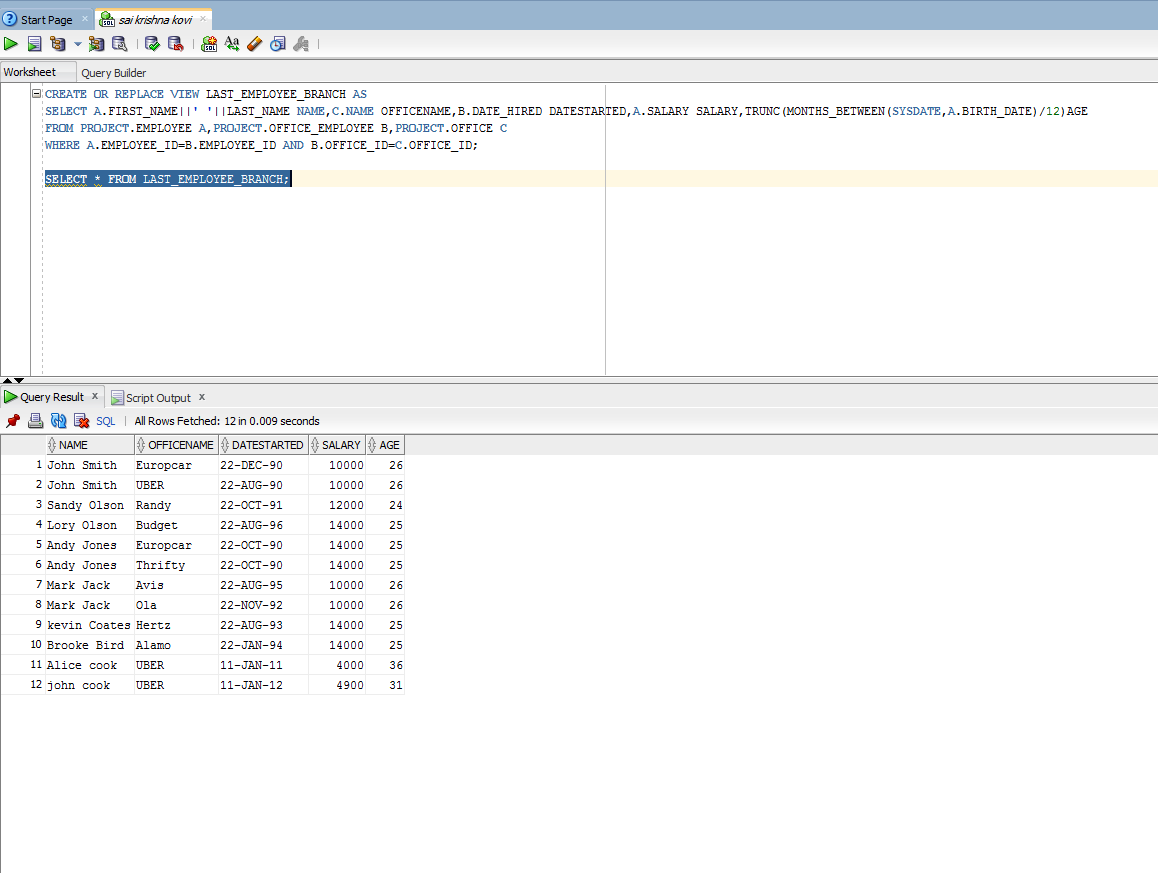
CREATE OR REPLACE VIEW LAST\_EMPLOYEE\_BRANCH AS

SELECT A.FIRST\_NAME||' '||LAST\_NAME NAME,C.NAME OFFICENAME,B.DATE\_HIRED DATESTARTED,A.SALARY SALARY,TRUNC(MONTHS\_BETWEEN(SYSDATE,A.BIRTH\_DATE)/12)AGE

FROM PROJECT.EMPLOYEE A,PROJECT.OFFICE\_EMPLOYEE B,PROJECT.OFFICE C

WHERE A.EMPLOYEE\_ID=B.EMPLOYEE\_ID AND B.OFFICE\_ID=C.OFFICE\_ID;

SELECT \* FROM LAST\_EMPLOYEE\_BRANCH;



**12i. view manager**

**Query:**

**CREATE OR REPLACE FORCE VIEW MANAGERS AS**

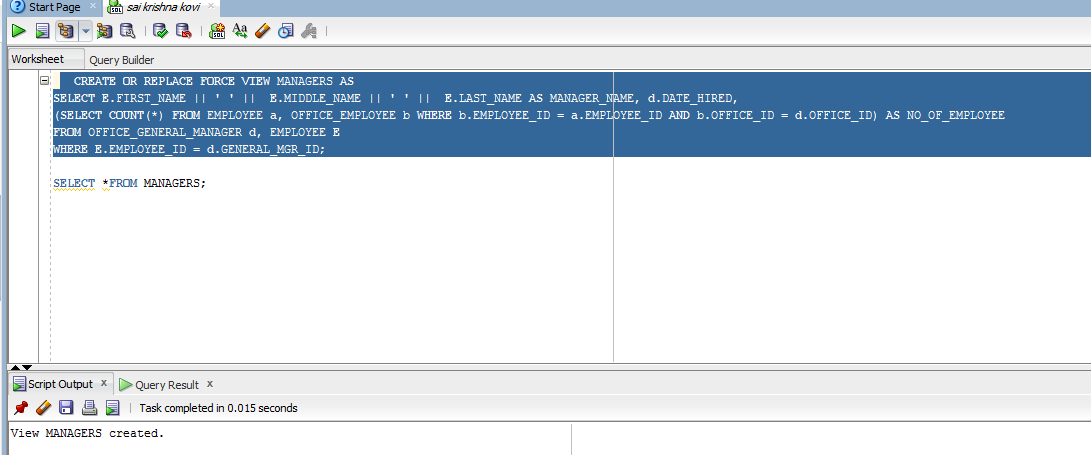
**SELECT E.FIRST\_NAME || ' ' || E.MIDDLE\_NAME || ' ' || E.LAST\_NAME AS MANAGER\_NAME, d.DATE\_HIRED,**

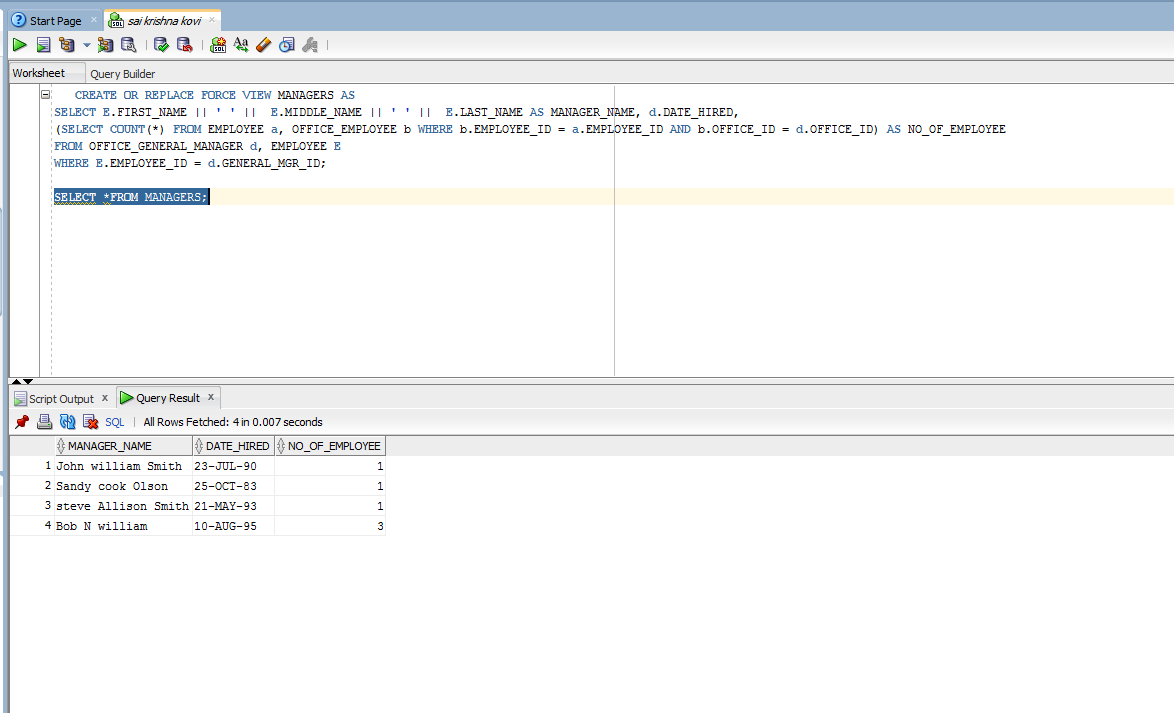
**(SELECT COUNT(\*) FROM EMPLOYEE a, OFFICE\_EMPLOYEE b WHERE b.EMPLOYEE\_ID = a.EMPLOYEE\_ID AND b.OFFICE\_ID = d.OFFICE\_ID) AS NO\_OF\_EMPLOYEE**

**FROM OFFICE\_GENERAL\_MANAGER d, EMPLOYEE E**

**WHERE E.EMPLOYEE\_ID = d.GENERAL\_MGR\_ID**

**select \* from MANAGERS;**





**12j.VIEW CUSTOMER\_ACCIDENT**

**QUERY:**

**CREATE VIEW CUSTOMER\_ACCIDENT**

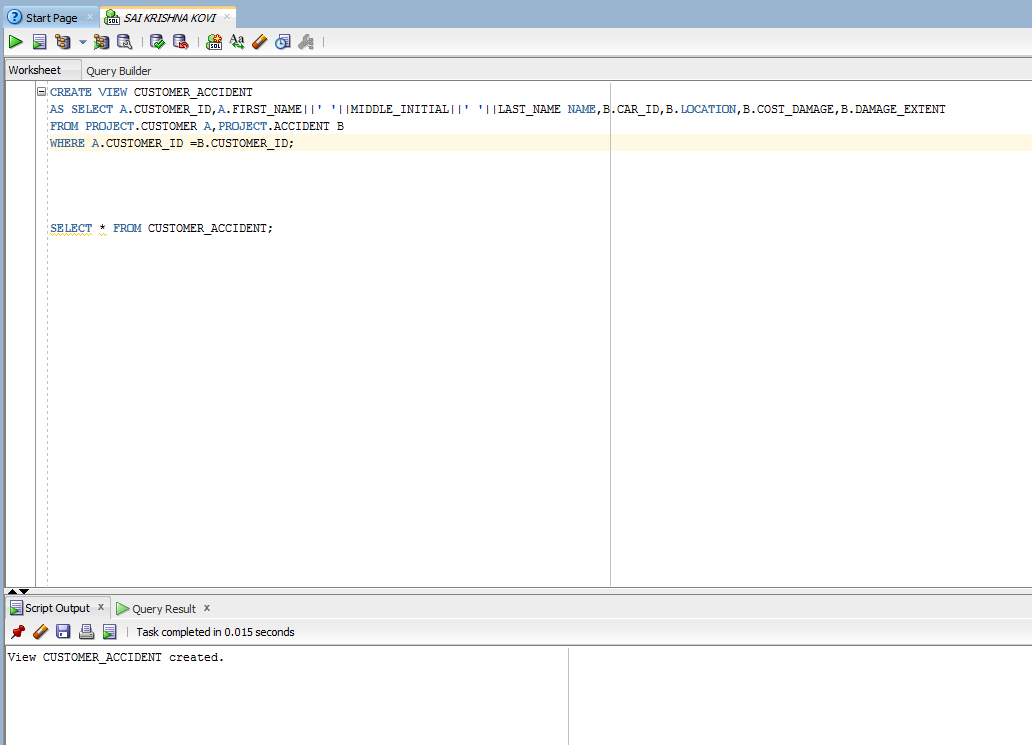
**AS SELECT A.CUSTOMER\_ID,A.FIRST\_NAME||' '||MIDDLE\_INITIAL||' '||LAST\_NAME NAME,B.CAR\_ID,B.LOCATION,B.COST\_DAMAGE,B.DAMAGE\_EXTENT**

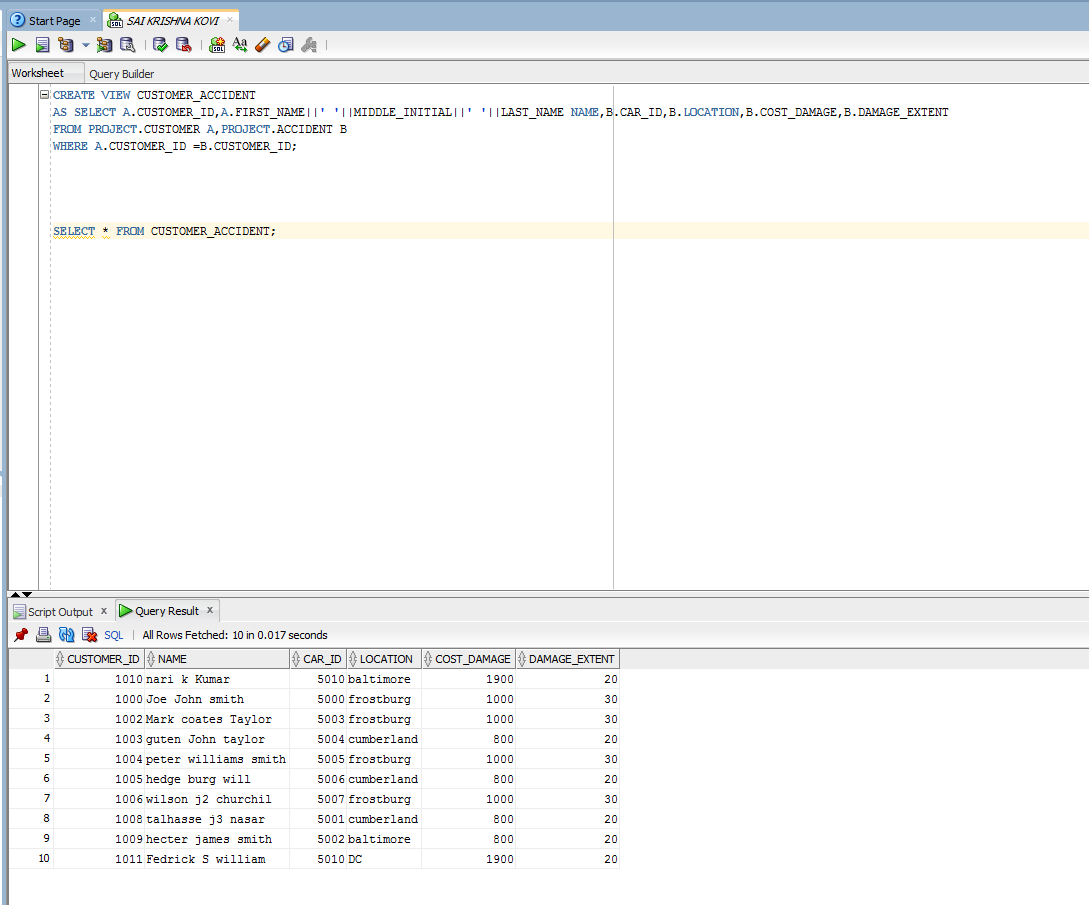
**FROM PROJECT.CUSTOMER A,PROJECT.ACCIDENT B**

**WHERE A.CUSTOMER\_ID =B.CUSTOMER\_ID;**

**SELECT \* FROM CUSTOMER\_ACCIDENT;**

**OUTPUT:**





**12k. view customer\_client\_car**

**QUERY:**

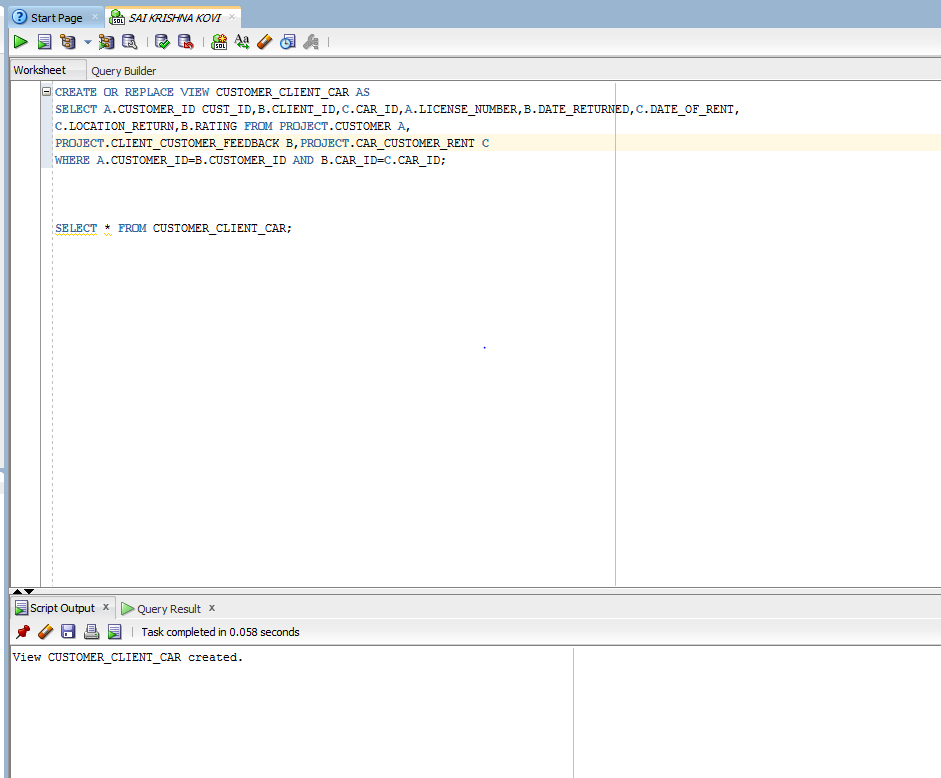
**CREATE OR REPLACE VIEW CUSTOMER\_CLIENT\_CAR AS**

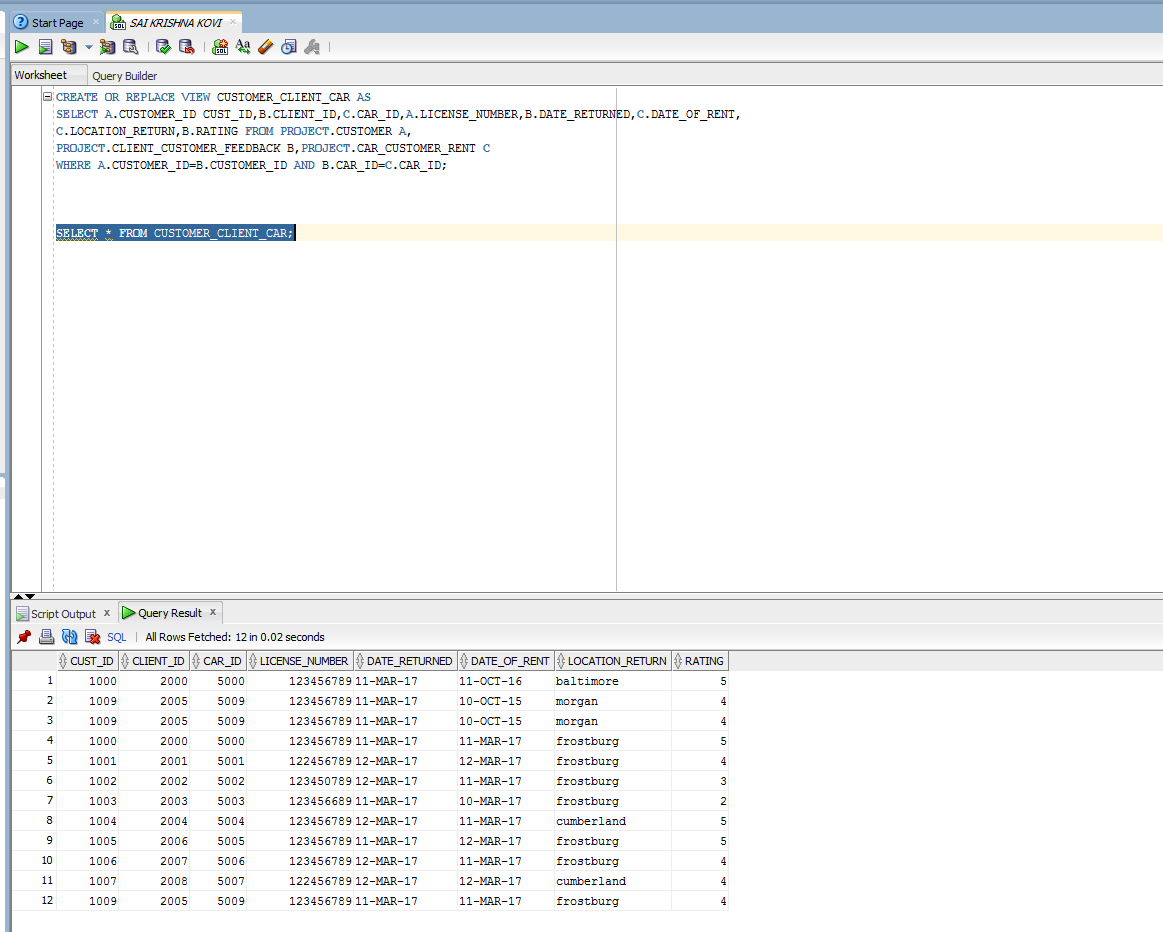
**SELECT A.CUSTOMER\_ID CUST\_ID,B.CLIENT\_ID,C.CAR\_ID,A.LICENSE\_NUMBER,B.DATE\_RETURNED,C.DATE\_OF\_RENT,C.LOCATION\_RETURN,B.RATING FROM PROJECT.CUSTOMER A,PROJECT.CLIENT\_CUSTOMER\_FEEDBACK B,PROJECT.CAR\_CUSTOMER\_RENT C**

**WHERE A.CUSTOMER\_ID=B.CUSTOMER\_ID AND B.CAR\_ID=C.CAR\_ID;**

**SELECT \* FROM CUSTOMER\_CLIENT\_CAR;**

**OUTPUT:**





**13. INDEXES**

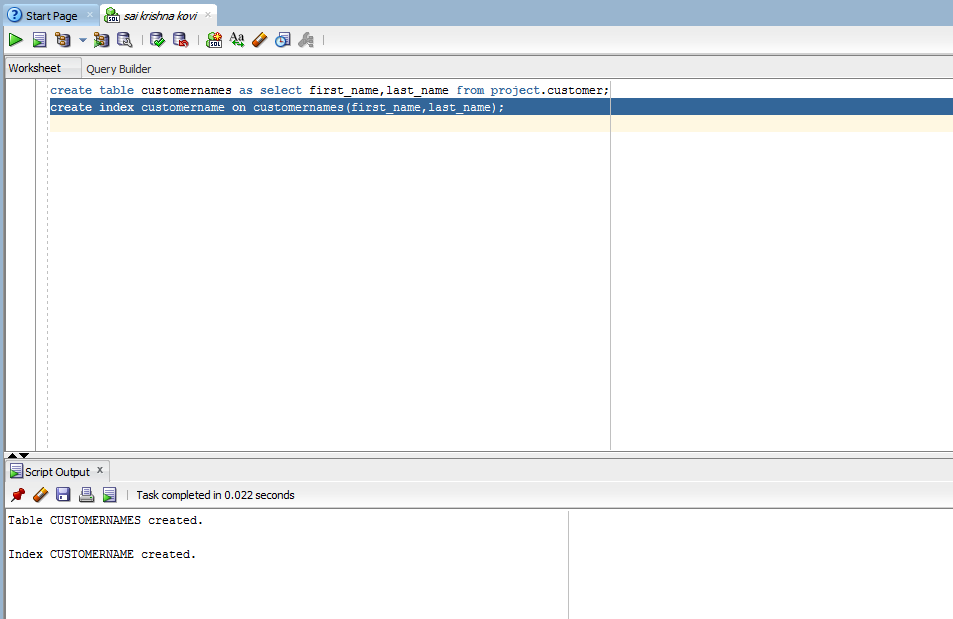
**13a. index on first and last name of customer**

**Query:**

**Create table customernames as select first\_name,last\_name from project.customer;**

**Create index customername on customernames(first\_name,last\_name);**

**Output:**

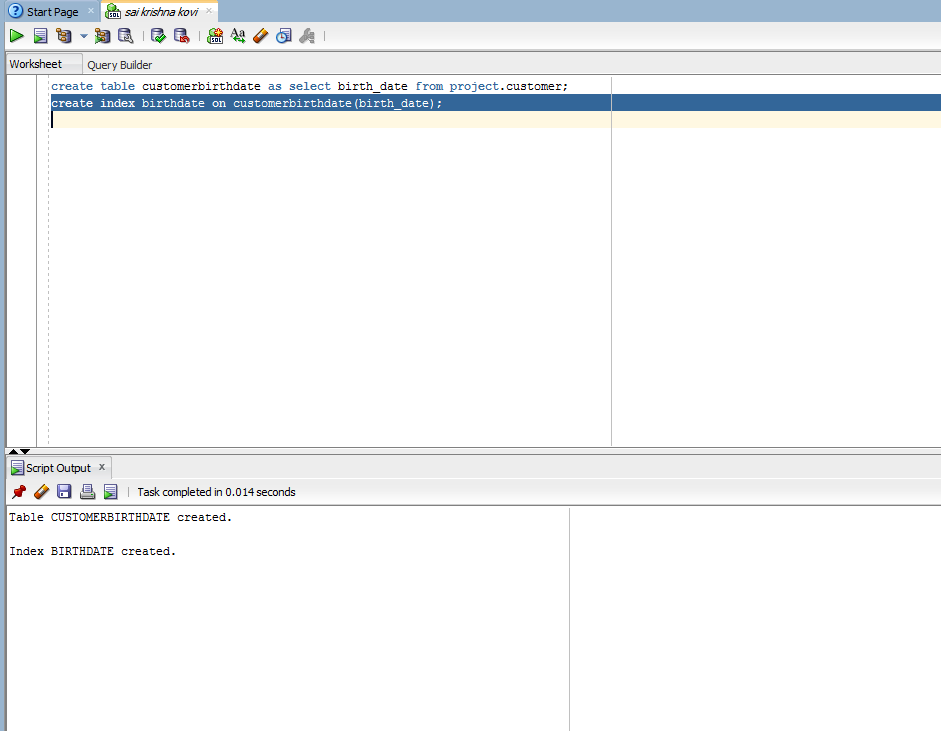


**13b.Index on birthdate of customer**

**Query:**

create table customerbirthdate as select birth\_datefrom project.customer;

create index birthdate on customerbirthdate(birth\_date);



**14.SEQUENCES**

**14a. SEQUENCE ID\_GENERATOR**

**Query:**

**create sequence ID\_GENERATOR**

**minvalue 1**

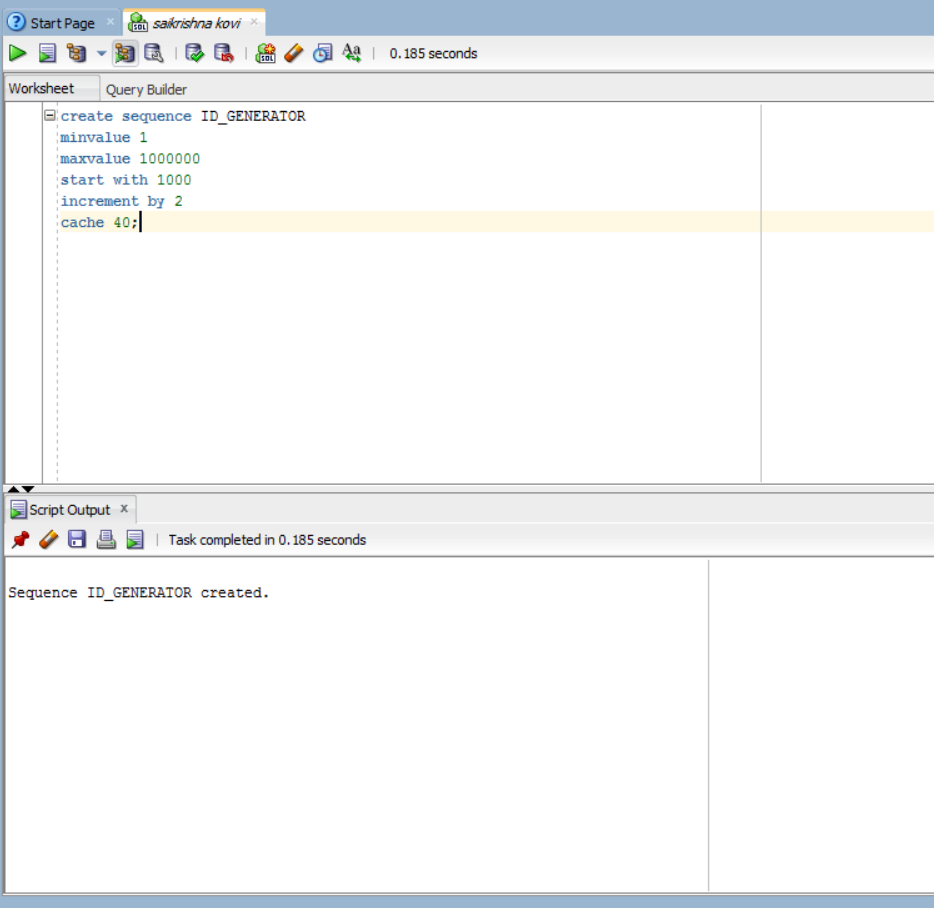
**maxvalue 1000000**

**Start with 1000**

**Increment by 2**

**Cache 40;**

**Output:**



**14 b. SEQUENCE ID\_TRANS\_GENERATOR**

**Query:**

**Create Sequence ID\_TRANS\_GENERATOR**

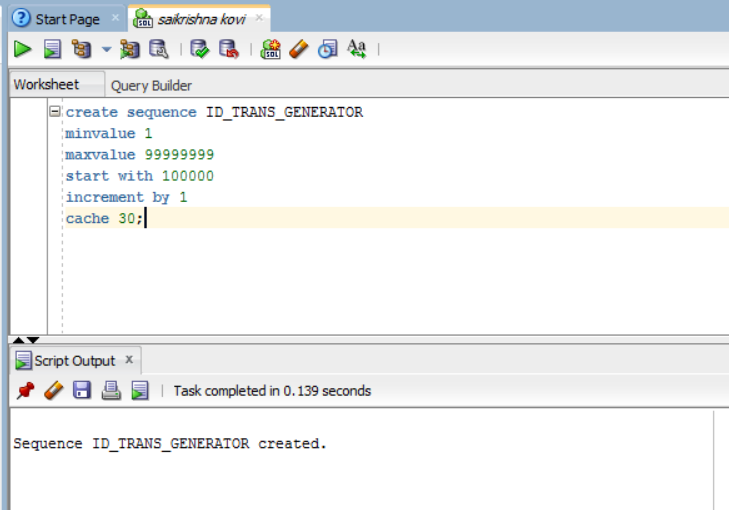
**Minvalue 1**

**Maxvalue 99999999**

**Start with 100000**

**Increment by 1**

**Cache 30;**



**14 c. sequence track\_number**

**Query:**

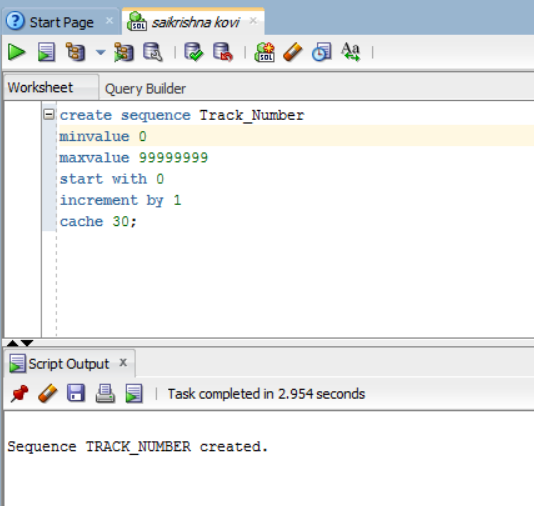
**create sequence Track\_Number**

**minvalue 0 maxvalue 99999999**

**start with 0**

**increment by 1**

**cache 30;**



**14 d. TABLE CUSTOMER INQUIRIES**

CREATE TABLE CUSTOMER\_INQUIRIES (INQUIRY\_NUMBER NUMBER(10),INQUIRY\_DATE DATE,TYPEOF\_REQUEST VARCHAR2(40),NAME\_OF\_PERSON VARCHAR2(20),EMAIL\_ID VARCHAR2(20));

INSERT INTO CUSTOMER\_INQUIRIES VALUES (MYSEQ.NEXTVAL,TO\_DATE('2017-08-14','YYYY-MM-DD'),'REQUEST FORINFORMATION','SAIKRISHNA','[SAIKOVI@GMAIL.COM](mailto:SAIKOVI@GMAIL.COM)');

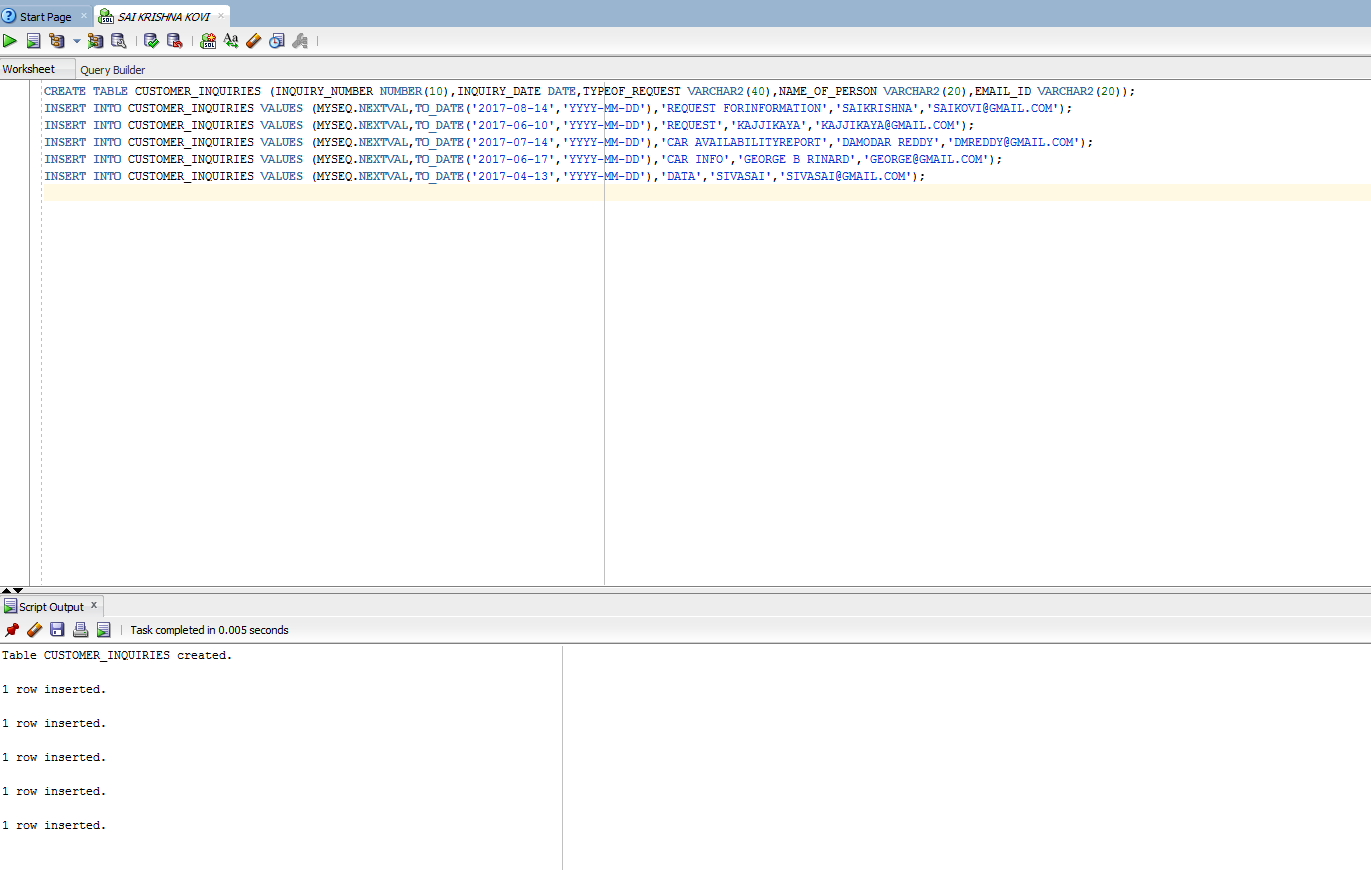
INSERT INTO CUSTOMER\_INQUIRIES VALUES (MYSEQ.NEXTVAL,TO\_DATE('2017-06-10','YYYY-MM-DD'),'REQUEST','KAJJIKAYA','[KAJJIKAYA@GMAIL.COM](mailto:KAJJIKAYA@GMAIL.COM)');

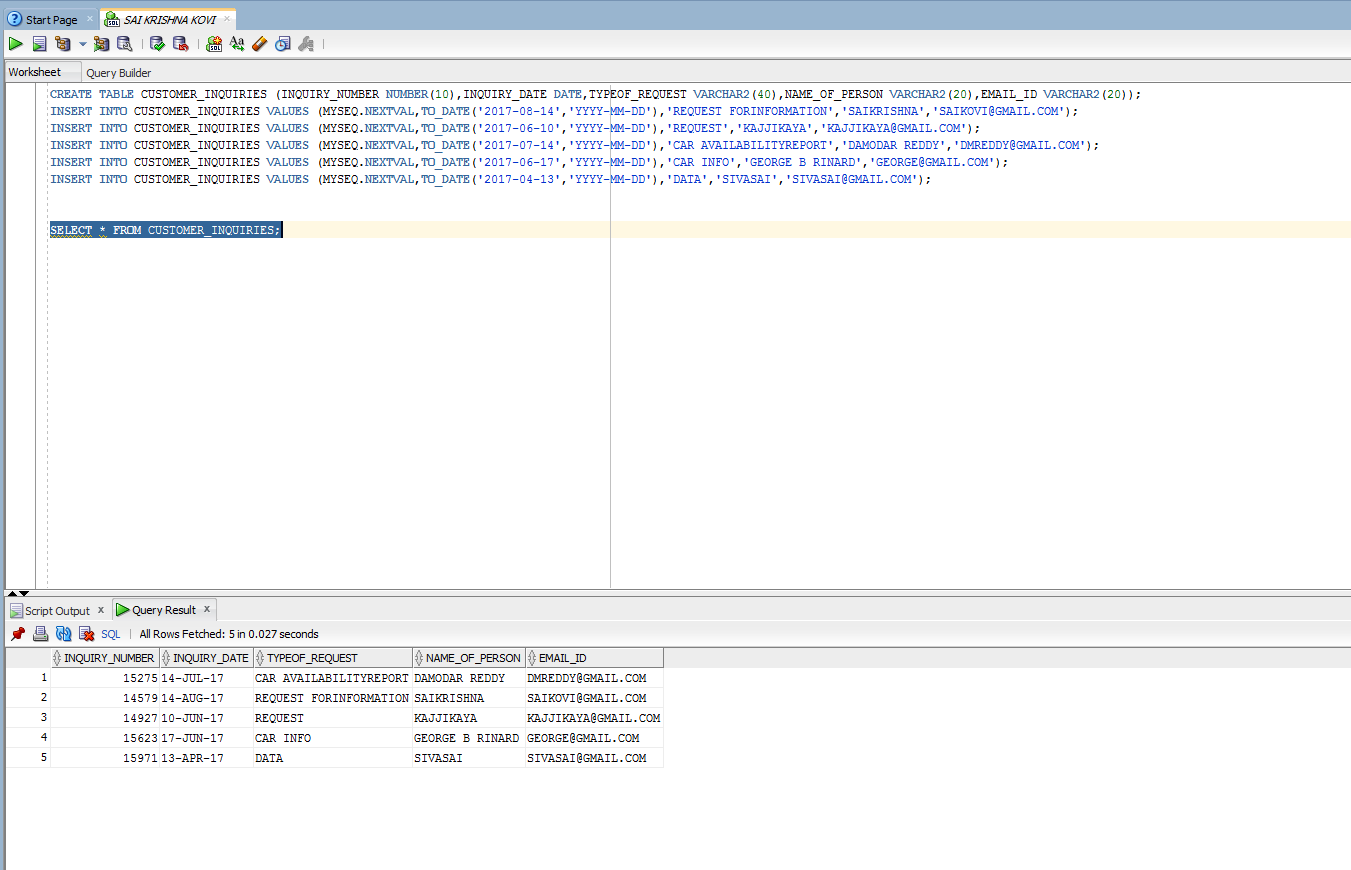
INSERT INTO CUSTOMER\_INQUIRIES VALUES (MYSEQ.NEXTVAL,TO\_DATE('2017-07-14','YYYY-MM-DD'),'CAR AVAILABILITYREPORT','DAMODAR REDDY','[DMREDDY@GMAIL.COM](mailto:DMREDDY@GMAIL.COM)');

INSERT INTO CUSTOMER\_INQUIRIES VALUES (MYSEQ.NEXTVAL,TO\_DATE('2017-06-17','YYYY-MM-DD'),'CAR INFO','GEORGE B RINARD','[GEORGE@GMAIL.COM](mailto:JHON@GMAIL.COM)');

INSERT INTO CUSTOMER\_INQUIRIES VALUES (MYSEQ.NEXTVAL,TO\_DATE('2017-04-13','YYYY-MM-DD'),'DATA','SIVASAI','[SIVASAI@GMAIL.COM](mailto:RAM@GMAIL.COM)');

SELECT \* FROM CUSTOMER\_INQUIRIES





**SUB PROGRAMMS**

**15A. PACKAGE EMPINSERT\_PKG**

**QUERY:**

**CREATE OR REPLACE PACKAGE EMPINSERT\_PKG AS**

**PROCEDURE INSERT\_DATA**

**(s\_EMP\_ID EMPLOYEE.EMPLOYEE\_ID%TYPE,**

**s\_FNAME EMPLOYEE.FIRST\_NAME%TYPE,**

**s\_MNAME EMPLOYEE.MIDDLE\_NAME%TYPE,**

**s\_LNAME EMPLOYEE.LAST\_NAME%TYPE,**

**s\_GENDER EMPLOYEE.GENDER%TYPE,**

**s\_STREETADDRESS EMPLOYEE.STREET\_ADDRESS%TYPE,**

**s\_CITY EMPLOYEE.CITY%TYPE,**

**s\_STATE EMPLOYEE.STATE%TYPE,**

**s\_ZIPCODE EMPLOYEE.ZIP\_CODE%TYPE,**

**s\_SSN EMPLOYEE.SSN%TYPE,**

**s\_SALARY EMPLOYEE.SALARY%TYPE,**

**s\_TAX\_DEDUCTION EMPLOYEE.TAX\_DEDUCTION%TYPE,**

**s\_BIRTH\_DATE EMPLOYEE.BIRTH\_DATE%TYPE,**

**s\_MARITAL\_STATUS EMPLOYEE.MARITAL\_STATUS%TYPE,**

**s\_SPOUSE\_NAME EMPLOYEE.SPOUSE\_NAME%TYPE,**

**s\_LAST\_DEGREE EMPLOYEE.LAST\_DEGREE%TYPE,**

**s\_DATE\_DEGREE EMPLOYEE.DATE\_DEGREE%TYPE,**

**s\_NO\_OF\_DEPENDENTS EMPLOYEE.NO\_OF\_DEPENDENTS%TYPE,**

**s\_HOME\_PHONE\_NUMBER EMPLOYEE.HOME\_PHONE\_NUMBER%TYPE,**

**s\_CELL\_PHONE\_NUMBER EMPLOYEE.CELL\_PHONE\_NUMBER%TYPE);**

**PROCEDURE MARITAL\_STATUS\_UPDATE(B\_EMP IN EMPLOYEE.EMPLOYEE\_ID%TYPE,B\_MARITAL\_STATUS EMPLOYEE.MARITAL\_STATUS%TYPE);**

**PROCEDURE LAST\_DEGREE\_UPDATE(B\_EMP EMPLOYEE.EMPLOYEE\_ID%TYPE,B\_LAST\_DEGREE EMPLOYEE.LAST\_DEGREE%TYPE);**

**PROCEDURE CERTIFICATE\_UPDATE(B\_EMP EMPLOYEE\_CERTIFICATES.EMPLOYEE\_ID%TYPE,B\_CERTIFICATE EMPLOYEE\_CERTIFICATES.LIST\_OF\_CERTIFICATES%TYPE);**

**PROCEDURE MANAGER\_UPDATE(MANAGER\_ID OFFICE\_GENERAL\_MANAGER.GENERAL\_MGR\_ID%TYPE,B\_EMP EMPLOYEE.EMPLOYEE\_ID%TYPE);**

**END EMPINSERT\_PKG;**

**/**

**SET SERVEROUTPUT ON;**

**CREATE OR REPLACE PACKAGE BODY EMPINSERT\_PKG AS**

**PROCEDURE INSERT\_DATA**

**(s\_EMP\_ID EMPLOYEE.EMPLOYEE\_ID%TYPE,**

**s\_FNAME EMPLOYEE.FIRST\_NAME%TYPE,**

**s\_MNAME EMPLOYEE.MIDDLE\_NAME%TYPE,**

**s\_LNAME EMPLOYEE.LAST\_NAME%TYPE,**

**s\_GENDER EMPLOYEE.GENDER%TYPE,**

**s\_STREETADDRESS EMPLOYEE.STREET\_ADDRESS%TYPE,**

**s\_CITY EMPLOYEE.CITY%TYPE,**

**s\_STATE EMPLOYEE.STATE%TYPE,**

**s\_ZIPCODE EMPLOYEE.ZIP\_CODE%TYPE,**

**s\_SSN EMPLOYEE.SSN%TYPE,**

**s\_SALARY EMPLOYEE.SALARY%TYPE,**

**s\_TAX\_DEDUCTION EMPLOYEE.TAX\_DEDUCTION%TYPE,**

**s\_BIRTH\_DATE EMPLOYEE.BIRTH\_DATE%TYPE,**

**s\_MARITAL\_STATUS EMPLOYEE.MARITAL\_STATUS%TYPE,**

**s\_SPOUSE\_NAME EMPLOYEE.SPOUSE\_NAME%TYPE,**

**s\_LAST\_DEGREE EMPLOYEE.LAST\_DEGREE%TYPE,**

**s\_DATE\_DEGREE EMPLOYEE.DATE\_DEGREE%TYPE,**

**s\_NO\_OF\_DEPENDENTS EMPLOYEE.NO\_OF\_DEPENDENTS%TYPE,**

**s\_HOME\_PHONE\_NUMBER EMPLOYEE.HOME\_PHONE\_NUMBER%TYPE,**

**s\_CELL\_PHONE\_NUMBER EMPLOYEE.CELL\_PHONE\_NUMBER%TYPE)AS**

**BEGIN**

**INSERT INTO EMPLOYEE (EMPLOYEE\_ID,FIRST\_NAME,MIDDLE\_NAME,LAST\_NAME,GENDER,STREET\_ADDRESS,CITY,STATE,ZIP\_CODE,SSN,SALARY,TAX\_DEDUCTION,BIRTH\_DATE,MARITAL\_STATUS,**

**SPOUSE\_NAME,LAST\_DEGREE,DATE\_DEGREE,NO\_OF\_DEPENDENTS,HOME\_PHONE\_NUMBER,CELL\_PHONE\_NUMBER)**

**VALUES(s\_EMP\_ID,s\_FNAME,s\_MNAME,s\_LNAME,s\_GENDER,s\_STREETADDRESS,s\_CITY,s\_STATE,s\_ZIPCODE,s\_SSN,s\_SALARY,s\_TAX\_DEDUCTION,s\_BIRTH\_DATE,S\_MARITAL\_STATUS,**

**s\_SPOUSE\_NAME,s\_LAST\_DEGREE,s\_DATE\_DEGREE,s\_NO\_OF\_DEPENDENTS,s\_HOME\_PHONE\_NUMBER,s\_CELL\_PHONE\_NUMBER);**

**DBMS\_OUTPUT.PUT\_LINE('EMPLOYEE TABLE UPDATED');**

**END;**

**PROCEDURE MARITAL\_STATUS\_UPDATE(B\_EMP IN EMPLOYEE.EMPLOYEE\_ID%TYPE,B\_MARITAL\_STATUS EMPLOYEE.MARITAL\_STATUS%TYPE) AS**

**BEGIN**

**UPDATE EMPLOYEE SET MARITAL\_STATUS = B\_MARITAL\_STATUS WHERE EMPLOYEE\_ID=B\_EMP;**

**DBMS\_OUTPUT.PUT\_LINE('MARITAL STATUS UPDATED');**

**END;**

**PROCEDURE LAST\_DEGREE\_UPDATE(B\_EMP EMPLOYEE.EMPLOYEE\_ID%TYPE,B\_LAST\_DEGREE EMPLOYEE.LAST\_DEGREE%TYPE) AS**

**BEGIN**

**UPDATE EMPLOYEE SET LAST\_DEGREE = B\_LAST\_DEGREE WHERE EMPLOYEE\_ID=B\_EMP;**

**DBMS\_OUTPUT.PUT\_LINE('LAST DEGREE UPDATED');**

**END;**

**PROCEDURE CERTIFICATE\_UPDATE(B\_EMP EMPLOYEE\_CERTIFICATES.EMPLOYEE\_ID%TYPE,B\_CERTIFICATE EMPLOYEE\_CERTIFICATES.LIST\_OF\_CERTIFICATES%TYPE) AS**

**BEGIN**

**UPDATE EMPLOYEE\_CERTIFICATES SET LIST\_OF\_CERTIFICATES = B\_CERTIFICATE WHERE EMPLOYEE\_ID=B\_EMP;**

**DBMS\_OUTPUT.PUT\_LINE('EMPLOYEE CERTIFICATE UPDATED');**

**END;**

**PROCEDURE MANAGER\_UPDATE(MANAGER\_ID OFFICE\_GENERAL\_MANAGER.GENERAL\_MGR\_ID%TYPE,B\_EMP EMPLOYEE.EMPLOYEE\_ID%TYPE) AS**

**BEGIN**

**UPDATE OFFICE\_GENERAL\_MANAGER SET GENERAL\_MGR\_ID = B\_EMP WHERE GENERAL\_MGR\_ID = MANAGER\_ID;**

**DBMS\_OUTPUT.PUT\_LINE('EMPLOYEE MANAGER UPDATED');**

**EXCEPTION**

**WHEN NO\_DATA\_FOUND THEN**

**DBMS\_OUTPUT.PUT\_LINE('NO DATA FOUND');**

**WHEN TOO\_MANY\_ROWS THEN**

**DBMS\_OUTPUT.PUT\_LINE('TOO MANY ROWS');**

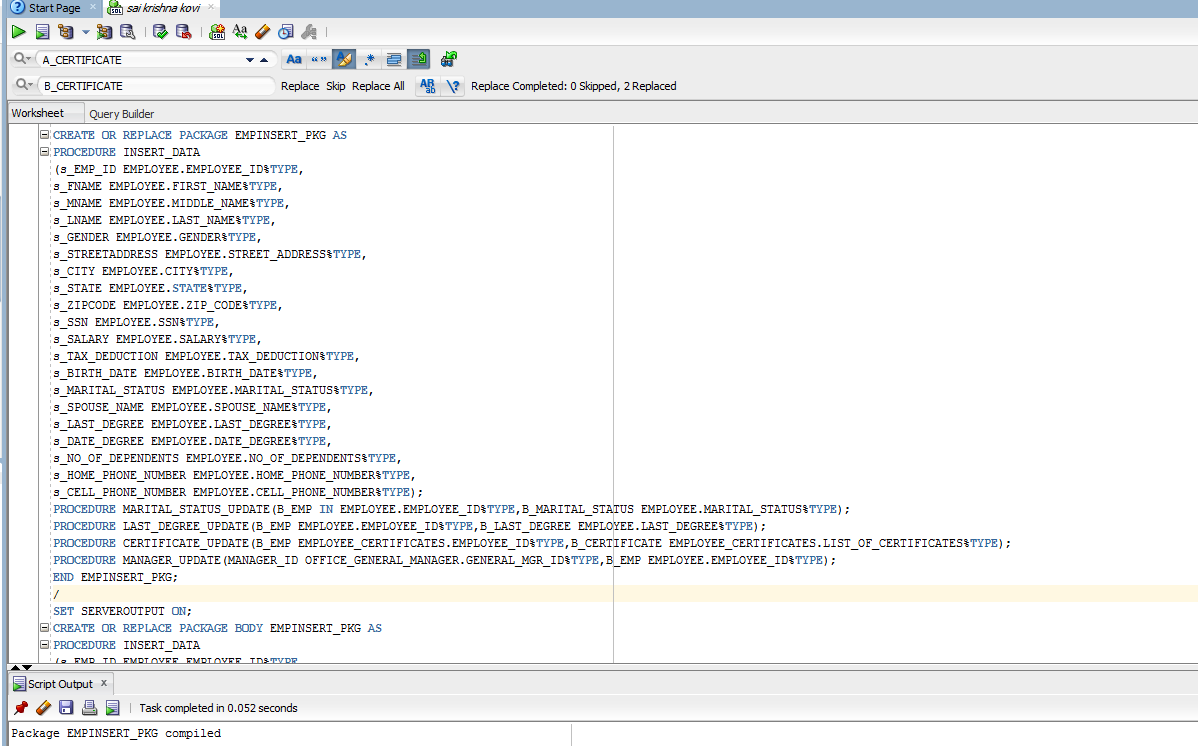
**WHEN OTHERS THEN**

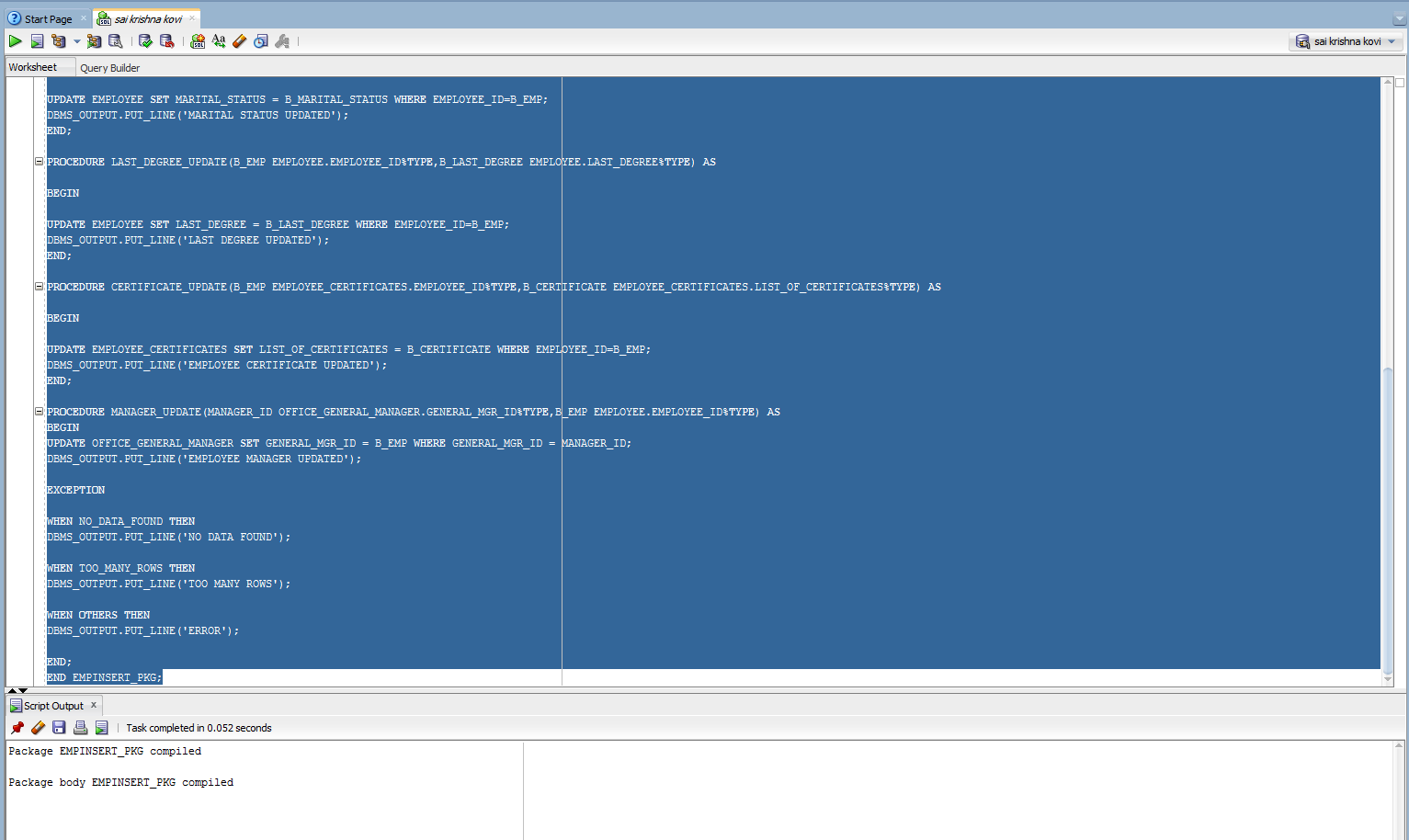
**DBMS\_OUTPUT.PUT\_LINE('ERROR');**

**END;**

**END EMPINSERT\_PKG;**

**Output:**





**15b. insert\_pkg**

**Query:**

**CREATE OR REPLACE PACKAGE INSERT\_PKG AS**

**PROCEDURE INSERT\_DATA\_1**

**(CUSTOMERID CUSTOMER.CUSTOMER\_ID%TYPE,**

**F\_NAME CUSTOMER.FIRST\_NAME%TYPE,**

**M\_NAME CUSTOMER.MIDDLE\_INITIAL%TYPE,**

**L\_NAME CUSTOMER.LAST\_NAME%TYPE,**

**ST\_ADDRESS CUSTOMER.STREET\_ADDRESS%TYPE,**

**CITY CUSTOMER.CITY%TYPE,**

**STATE CUSTOMER.STATE%TYPE,**

**ZIP CUSTOMER.ZIP\_CODE%TYPE,**

**B\_DATE CUSTOMER.BIRTH\_DATE%TYPE,**

**EMAIL CUSTOMER.EMAIL%TYPE,**

**LICENSEISS\_STATE CUSTOMER.LICENSE\_ISSUED\_STATE%TYPE,**

**LICENSE\_NUM CUSTOMER.LICENSE\_NUMBER%TYPE,**

**CREDIT\_CARD\_NUM CUSTOMER.CREDIT\_CARD\_NUMBER%TYPE,**

**EXPIRATION\_DT CUSTOMER.EXPIRATION\_DATE%TYPE,**

**CELL\_PHONENO CUSTOMER.CELL\_PHONE%TYPE);**

**PROCEDURE INSERT\_NEW\_CAR\_OWNER(CAR\_ID CAR\_CLIENT\_LIST.CAR\_ID%TYPE,CLIENT\_ID CAR\_CLIENT\_LIST.CLIENT\_ID%TYPE,**

**AVAILABLE\_HRS CAR\_CLIENT\_LIST.AVAILABLE\_HRS%TYPE,START\_DATE CAR\_CLIENT\_LIST.START\_DATE%TYPE,**

**END\_DATE CAR\_CLIENT\_LIST.END\_DATE%TYPE);**

**PROCEDURE INFO\_UPDATE\_CUSTOMER(CUST\_ID CUSTOMER.CUSTOMER\_ID%TYPE,STREET CUSTOMER.STREET\_ADDRESS%TYPE);**

**PROCEDURE INFO\_UPDATE\_CAROWNER(EXISTING\_CAR\_ID CAR\_CLIENT\_LIST.CAR\_ID%TYPE,NEW\_CLIENT\_ID CAR\_CLIENT\_LIST.CLIENT\_ID%TYPE);**

**PROCEDURE INSERT\_ACCIDENT(CUSTOMER\_ID ACCIDENT.CUSTOMER\_ID%TYPE,CAR\_ID ACCIDENT.CAR\_ID%TYPE,DATE\_TIME ACCIDENT.DATE\_TIME%TYPE,**

**LOCATION\_1 ACCIDENT.LOCATION%TYPE,DAMAGE\_EXTENT ACCIDENT.DAMAGE\_EXTENT%TYPE,COST\_DAMAGE ACCIDENT.COST\_DAMAGE%TYPE,**

**POLICE\_REPORT ACCIDENT.POLICE\_REPORT%TYPE,SUMMARY\_1 ACCIDENT.SUMMARY\_POLICE\_REPORT%TYPE);**

**END INSERT\_PKG;**

**/**

**SET SERVEROUTPUT ON;**

**CREATE OR REPLACE PACKAGE BODY INSERT\_PKG AS**

**PROCEDURE INSERT\_DATA\_1**

**(CUSTOMERID CUSTOMER.CUSTOMER\_ID%TYPE,**

**F\_NAME CUSTOMER.FIRST\_NAME%TYPE,**

**M\_NAME CUSTOMER.MIDDLE\_INITIAL%TYPE,**

**L\_NAME CUSTOMER.LAST\_NAME%TYPE,**

**ST\_ADDRESS CUSTOMER.STREET\_ADDRESS%TYPE,**

**CITY CUSTOMER.CITY%TYPE,**

**STATE CUSTOMER.STATE%TYPE,**

**ZIP CUSTOMER.ZIP\_CODE%TYPE,**

**B\_DATE CUSTOMER.BIRTH\_DATE%TYPE,**

**EMAIL CUSTOMER.EMAIL%TYPE,**

**LICENSEISS\_STATE CUSTOMER.LICENSE\_ISSUED\_STATE%TYPE,**

**LICENSE\_NUM CUSTOMER.LICENSE\_NUMBER%TYPE,**

**CREDIT\_CARD\_NUM CUSTOMER.CREDIT\_CARD\_NUMBER%TYPE,**

**EXPIRATION\_DT CUSTOMER.EXPIRATION\_DATE%TYPE,**

**CELL\_PHONENO CUSTOMER.CELL\_PHONE%TYPE) AS**

**BEGIN**

**INSERT INTO CUSTOMER (CUSTOMER\_ID,FIRST\_NAME,MIDDLE\_INITIAL,LAST\_NAME,STREET\_ADDRESS,CITY,STATE,ZIP\_CODE,BIRTH\_DATE,EMAIL,LICENSE\_ISSUED\_STATE,LICENSE\_NUMBER,CREDIT\_CARD\_NUMBER,EXPIRATION\_DATE,CELL\_PHONE)**

**VALUES(CUSTOMERID,F\_NAME,M\_NAME,L\_NAME,ST\_ADDRESS,CITY,STATE,ZIP,B\_DATE,EMAIL,LICENSEISS\_STATE,LICENSE\_NUM,CREDIT\_CARD\_NUM,EXPIRATION\_DT,CELL\_PHONENO);**

**DBMS\_OUTPUT.PUT\_LINE('CUSTOMER TABLE UPDATED');**

**END;**

**PROCEDURE INSERT\_NEW\_CAR\_OWNER(CAR\_ID CAR\_CLIENT\_LIST.CAR\_ID%TYPE,CLIENT\_ID CAR\_CLIENT\_LIST.CLIENT\_ID%TYPE,**

**AVAILABLE\_HRS CAR\_CLIENT\_LIST.AVAILABLE\_HRS%TYPE,START\_DATE CAR\_CLIENT\_LIST.START\_DATE%TYPE,**

**END\_DATE CAR\_CLIENT\_LIST.END\_DATE%TYPE) AS**

**BEGIN**

**INSERT INTO CAR\_CLIENT\_LIST(CAR\_ID,CLIENT\_ID,AVAILABLE\_HRS,START\_DATE,END\_DATE)**

**VALUES(CAR\_ID,CLIENT\_ID,AVAILABLE\_HRS,START\_DATE,END\_DATE);**

**DBMS\_OUTPUT.PUT\_LINE('NEW CAR OWNER INFORMATIONUPDATED');**

**END;**

**PROCEDURE INFO\_UPDATE\_CUSTOMER(CUST\_ID CUSTOMER.CUSTOMER\_ID%TYPE,STREET CUSTOMER.STREET\_ADDRESS%TYPE) AS**

**BEGIN**

**UPDATE CUSTOMER SET STREET\_ADDRESS = STREET WHERE CUSTOMER\_ID = CUST\_ID;**

**DBMS\_OUTPUT.PUT\_LINE('CUSTOMER INFORMATION UPDATED');**

**END;**

**PROCEDURE INFO\_UPDATE\_CAROWNER(EXISTING\_CAR\_ID CAR\_CLIENT\_LIST.CAR\_ID%TYPE,NEW\_CLIENT\_ID CAR\_CLIENT\_LIST.CLIENT\_ID%TYPE) AS**

**BEGIN**

**UPDATE CAR\_CLIENT\_LIST SET CLIENT\_ID = NEW\_CLIENT\_ID WHERE CAR\_ID = EXISTING\_CAR\_ID;**

**DBMS\_OUTPUT.PUT\_LINE('CAROWNER INFORMATION UPDATED');**

**END;**

**PROCEDURE INSERT\_ACCIDENT(CUSTOMER\_ID ACCIDENT.CUSTOMER\_ID%TYPE,CAR\_ID ACCIDENT.CAR\_ID%TYPE,DATE\_TIME ACCIDENT.DATE\_TIME%TYPE,**

**LOCATION\_1 ACCIDENT.LOCATION%TYPE,DAMAGE\_EXTENT ACCIDENT.DAMAGE\_EXTENT%TYPE,COST\_DAMAGE ACCIDENT.COST\_DAMAGE%TYPE,**

**POLICE\_REPORT ACCIDENT.POLICE\_REPORT%TYPE,SUMMARY\_1 ACCIDENT.SUMMARY\_POLICE\_REPORT%TYPE) AS**

**BEGIN**

**INSERT INTO ACCIDENT(CUSTOMER\_ID,CAR\_ID,DATE\_TIME,LOCATION,DAMAGE\_EXTENT,COST\_DAMAGE,POLICE\_REPORT,SUMMARY\_POLICE\_REPORT)**

**VALUES (CUSTOMER\_ID,CAR\_ID,DATE\_TIME,LOCATION\_1,DAMAGE\_EXTENT,COST\_DAMAGE,POLICE\_REPORT,SUMMARY\_1);**

**DBMS\_OUTPUT.PUT\_LINE('NEW ACCIDENT RECORD HAS BEEN UPDATED');**

**EXCEPTION**

**WHEN NO\_DATA\_FOUND THEN**

**DBMS\_OUTPUT.PUT\_LINE('NO DATA IS FOUND');**

**WHEN TOO\_MANY\_ROWS THEN**

**DBMS\_OUTPUT.PUT\_LINE('TOO MANY ROWS');**

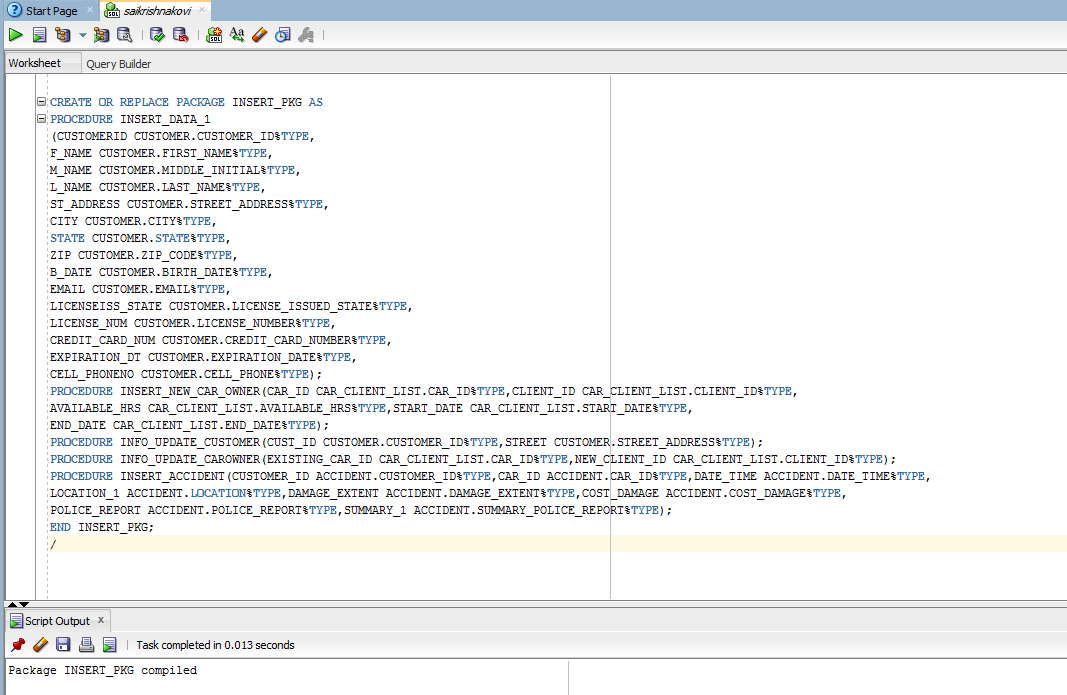
**WHEN OTHERS THEN**

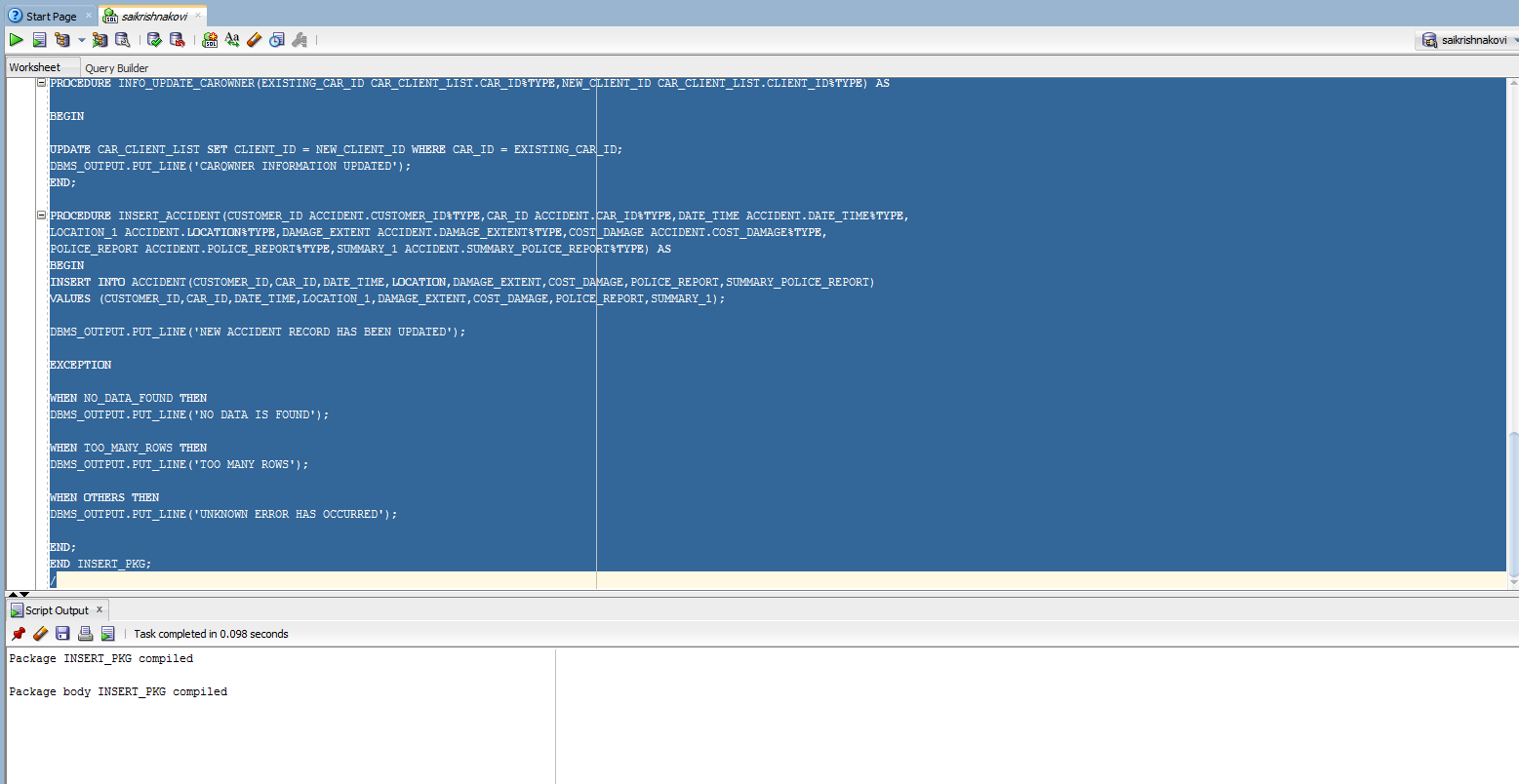
**DBMS\_OUTPUT.PUT\_LINE('UNKNOWN ERROR HAS OCCURRED');**

**END;**

**END INSERT\_PKG;**

**Output:**





**15C. VEHICLE\_PKG**

**QUERY:**

**CREATE OR REPLACE PACKAGE VEHICLE\_PKG AS**

**PROCEDURE CAR\_INFORMATION\_UPDATE**

**(S\_VEHICLEID IN CAR.CAR\_ID%TYPE,**

**S\_PLATE\_NO OUT CAR.CAR\_PLATE\_NO%TYPE,**

**S\_STATE OUT CAR.CAR\_STATE\_REGISTERATION%TYPE,**

**S\_YEAR OUT CAR.YEAR%TYPE,**

**S\_CURRENT\_MILEAGE OUT CAR.CURRENT\_MILEAGE%TYPE,**

**S\_CLASS OUT CAR.CLASS%TYPE,**

**S\_FEATURES OUT CAR.FEATURES%TYPE,**

**S\_MAKE OUT CAR.MAKE%TYPE,**

**S\_COLOR OUT CAR.COLOR%TYPE);**

**PROCEDURE CAR\_OWNER(S\_SSN IN CLIENT.SSN%TYPE,S\_CAR\_ID OUT CAR.CAR\_ID%TYPE,S\_PLATE\_NO OUT CAR.CAR\_PLATE\_NO%TYPE,**

**S\_SSN\_OWNER OUT CLIENT.SSN%TYPE,S\_NAME\_OWNER OUT CLIENT.FIRST\_NAME%TYPE,S\_NO\_TIME\_RENTED OUT NUMBER,S\_NO\_TIME\_ACCIDENT OUT NUMBER);**

**PROCEDURE CAR\_RENTED(S\_CAR\_ID IN CAR.CAR\_ID%TYPE,S\_CUSTOMERS OUT CLIENT.FIRST\_NAME%TYPE);**

**PROCEDURE CAR\_RENTED(S\_SSN IN CLIENT.SSN%TYPE,S\_CAR\_ID OUT CAR.CAR\_ID%TYPE);**

**END VEHICLE\_PKG;**

**/**

**CREATE OR REPLACE PACKAGE BODY VEHICLE\_PKG AS**

**PROCEDURE CAR\_INFORMATION\_UPDATE**

**(S\_VEHICLEID IN CAR.CAR\_ID%TYPE,**

**S\_PLATE\_NO OUT CAR.CAR\_PLATE\_NO%TYPE,**

**S\_STATE OUT CAR.CAR\_STATE\_REGISTERATION%TYPE,**

**S\_YEAR OUT CAR.YEAR%TYPE,**

**S\_CURRENT\_MILEAGE OUT CAR.CURRENT\_MILEAGE%TYPE,**

**S\_CLASS OUT CAR.CLASS%TYPE,**

**S\_FEATURES OUT CAR.FEATURES%TYPE,**

**S\_MAKE OUT CAR.MAKE%TYPE,**

**S\_COLOR OUT CAR.COLOR%TYPE) AS**

**BEGIN**

**SELECT CAR\_PLATE\_NO,CAR\_STATE\_REGISTERATION,YEAR,CURRENT\_MILEAGE,CLASS,FEATURES,MAKE,COLOR INTO S\_PLATE\_NO,S\_STATE,S\_YEAR,S\_CURRENT\_MILEAGE,S\_CLASS,S\_FEATURES,S\_MAKE,S\_COLOR FROM CAR WHERE CAR\_ID=S\_VEHICLEID;**

**END CAR\_INFORMATION\_UPDATE;**

**PROCEDURE CAR\_OWNER(S\_SSN IN CLIENT.SSN%TYPE,S\_CAR\_ID OUT CAR.CAR\_ID%TYPE,S\_PLATE\_NO OUT CAR.CAR\_PLATE\_NO%TYPE,**

**S\_SSN\_OWNER OUT CLIENT.SSN%TYPE,S\_NAME\_OWNER OUT CLIENT.FIRST\_NAME%TYPE,S\_NO\_TIME\_RENTED OUT NUMBER,S\_NO\_TIME\_ACCIDENT OUT NUMBER) AS**

**BEGIN**

**SELECT A.CAR\_ID,CAR\_PLATE\_NO,B.SSN,B.FIRST\_NAME|| ' ' ||LAST\_NAME AS NAME INTO S\_CAR\_ID,S\_PLATE\_NO,S\_SSN\_OWNER,S\_NAME\_OWNER FROM CLIENT B**

**JOIN CAR\_CLIENT\_LIST A ON B.CLIENT\_ID=A.CLIENT\_ID JOIN CAR C ON C.CAR\_ID=A.CAR\_ID WHERE B.SSN=SSN;**

**SELECT COUNT1 INTO S\_NO\_TIME\_RENTED FROM (SELECT D.CAR\_ID,D.CUSTOMER\_ID, COUNT(\*) COUNT1 FROM CAR\_CUSTOMER\_RENT D JOIN CAR C ON D.CAR\_ID=C.CAR\_ID GROUP BY D.CAR\_ID,D.CUSTOMER\_ID);**

**SELECT DAMAGE\_EXTENT INTO S\_NO\_TIME\_ACCIDENT FROM ACCIDENT ;**

**END CAR\_OWNER;**

**PROCEDURE CAR\_RENTED(S\_CAR\_ID IN CAR.CAR\_ID%TYPE,S\_CUSTOMERS OUT CLIENT.FIRST\_NAME%TYPE) AS**

**BEGIN**

**SELECT A.FIRST\_NAME||' '||LAST\_NAME INTO S\_CUSTOMERS FROM CUSTOMER A,CAR B,CAR\_CUSTOMER\_RENT C WHERE A.CUSTOMER\_ID=C.CUSTOMER\_ID AND B.CAR\_ID=C.CAR\_ID;**

**END CAR\_RENTED;**

**PROCEDURE CAR\_RENTED(S\_SSN IN CLIENT.SSN%TYPE,S\_CAR\_ID OUT CAR.CAR\_ID%TYPE) AS**

**BEGIN**

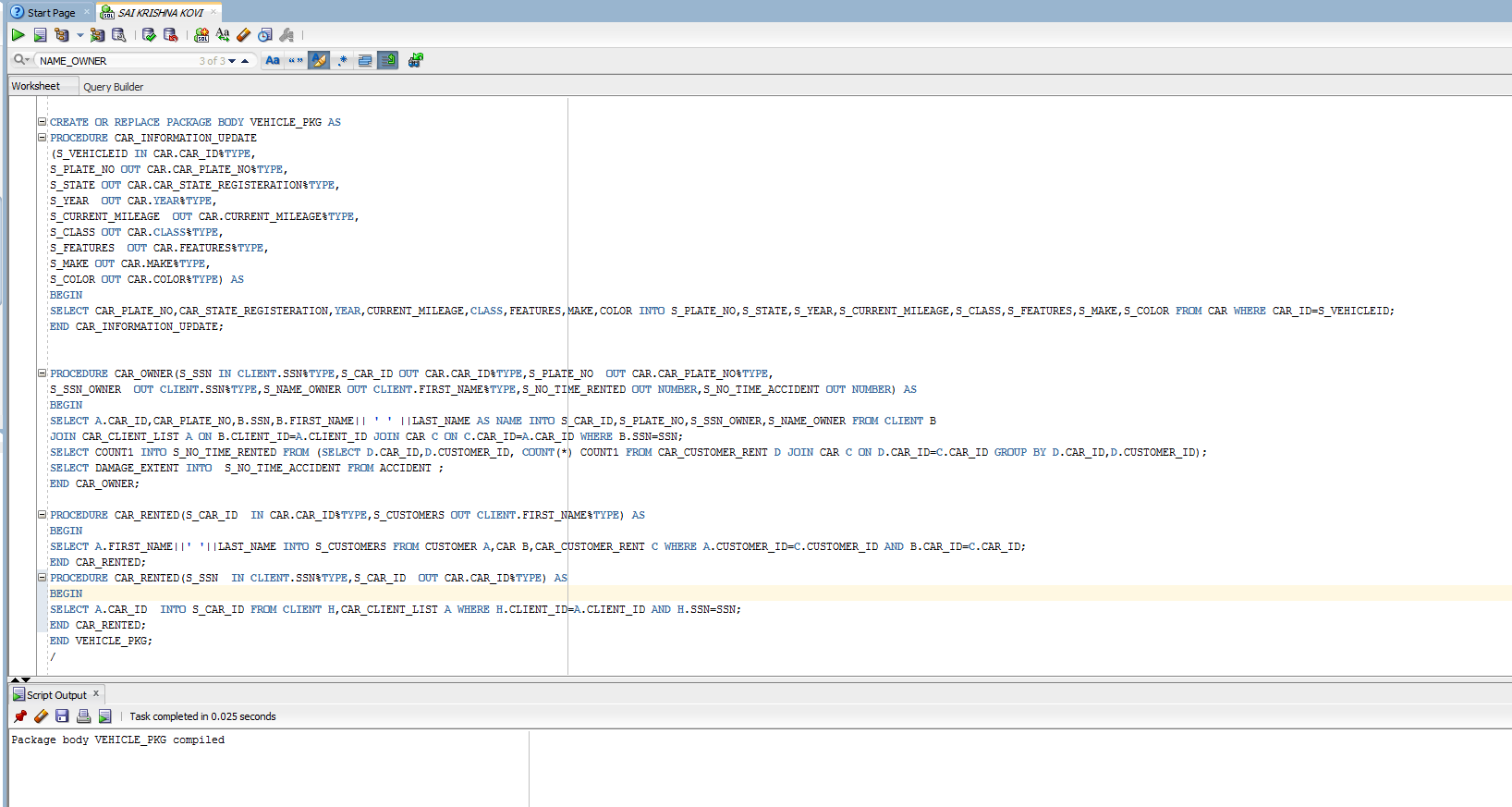
**SELECT A.CAR\_ID INTO S\_CAR\_ID FROM CLIENT H,CAR\_CLIENT\_LIST A WHERE H.CLIENT\_ID=A.CLIENT\_ID AND H.SSN=SSN;**

**END CAR\_RENTED;**

**END VEHICLE\_PKG;**

**/**

**OUTPUT:**



**15D. PACKAGE ACCIDENT\_PKG**

**QUERY:**

**CREATE OR REPLACE PACKAGE ACCIDENT\_PKG AS**

**PROCEDURE CAR\_ACCIDENT\_UPDATE(S\_CAR\_ID IN CAR.CAR\_ID%TYPE,S\_CUSTOMER\_NAME OUT CUSTOMER.FIRST\_NAME%TYPE,S\_CUSTOMER\_ADDRESS OUT CUSTOMER.STREET\_ADDRESS%TYPE,**

**S\_CUSTOMER\_PHONE OUT CUSTOMER.CELL\_PHONE%TYPE,S\_DATE\_AND\_TIME OUT ACCIDENT.DATE\_TIME%TYPE,S\_LOCATION\_ACCIDENT OUT ACCIDENT.LOCATION%TYPE, S\_EXTENT\_OF\_DAMAGE OUT ACCIDENT.DAMAGE\_EXTENT%TYPE,**

**S\_COST\_OF\_DAMAGE OUT ACCIDENT.COST\_DAMAGE%TYPE);**

**PROCEDURE CUSTOMER\_ACCIDENT\_UPDATE(S\_SSN IN CUSTOMER.SSN%TYPE,S\_ACCIDENT\_REPORT OUT ACCIDENT.POLICE\_REPORT%TYPE,S\_SUMMARY\_ACCIDENT OUT ACCIDENT.SUMMARY\_POLICE\_REPORT%TYPE);**

**END ACCIDENT\_PKG;**

**/**

**SET SERVEROUTPUT ON;**

**CREATE OR REPLACE PACKAGE BODY ACCIDENT\_PKG AS**

**PROCEDURE CAR\_ACCIDENT\_UPDATE(S\_CAR\_ID IN CAR.CAR\_ID%TYPE,S\_CUSTOMER\_NAME OUT CUSTOMER.FIRST\_NAME%TYPE,S\_CUSTOMER\_ADDRESS OUT CUSTOMER.STREET\_ADDRESS%TYPE,**

**S\_CUSTOMER\_PHONE OUT CUSTOMER.CELL\_PHONE%TYPE,S\_DATE\_AND\_TIME OUT ACCIDENT.DATE\_TIME%TYPE,S\_LOCATION\_ACCIDENT OUT ACCIDENT.LOCATION%TYPE, S\_EXTENT\_OF\_DAMAGE OUT ACCIDENT.DAMAGE\_EXTENT%TYPE,**

**S\_COST\_OF\_DAMAGE OUT ACCIDENT.COST\_DAMAGE%TYPE) AS**

**BEGIN**

**SELECT A.FIRST\_NAME||' '||LAST\_NAME,A.STREET\_ADDRESS,A.CELL\_PHONE,B.DATE\_TIME,B.LOCATION,B.DAMAGE\_EXTENT,B.COST\_DAMAGE INTO S\_CUSTOMER\_NAME,S\_CUSTOMER\_ADDRESS,S\_CUSTOMER\_PHONE,S\_DATE\_AND\_TIME,S\_LOCATION\_ACCIDENT,**

**S\_EXTENT\_OF\_DAMAGE,S\_COST\_OF\_DAMAGE FROM CUSTOMER A,ACCIDENT B WHERE A.CUSTOMER\_ID=B.CUSTOMER\_ID AND CAR\_ID=CAR\_ID;**

**END CAR\_ACCIDENT\_UPDATE;**

**PROCEDURE CUSTOMER\_ACCIDENT\_UPDATE(S\_SSN IN CUSTOMER.SSN%TYPE,S\_ACCIDENT\_REPORT OUT ACCIDENT.POLICE\_REPORT%TYPE,S\_SUMMARY\_ACCIDENT OUT ACCIDENT.SUMMARY\_POLICE\_REPORT%TYPE) AS**

**BEGIN**

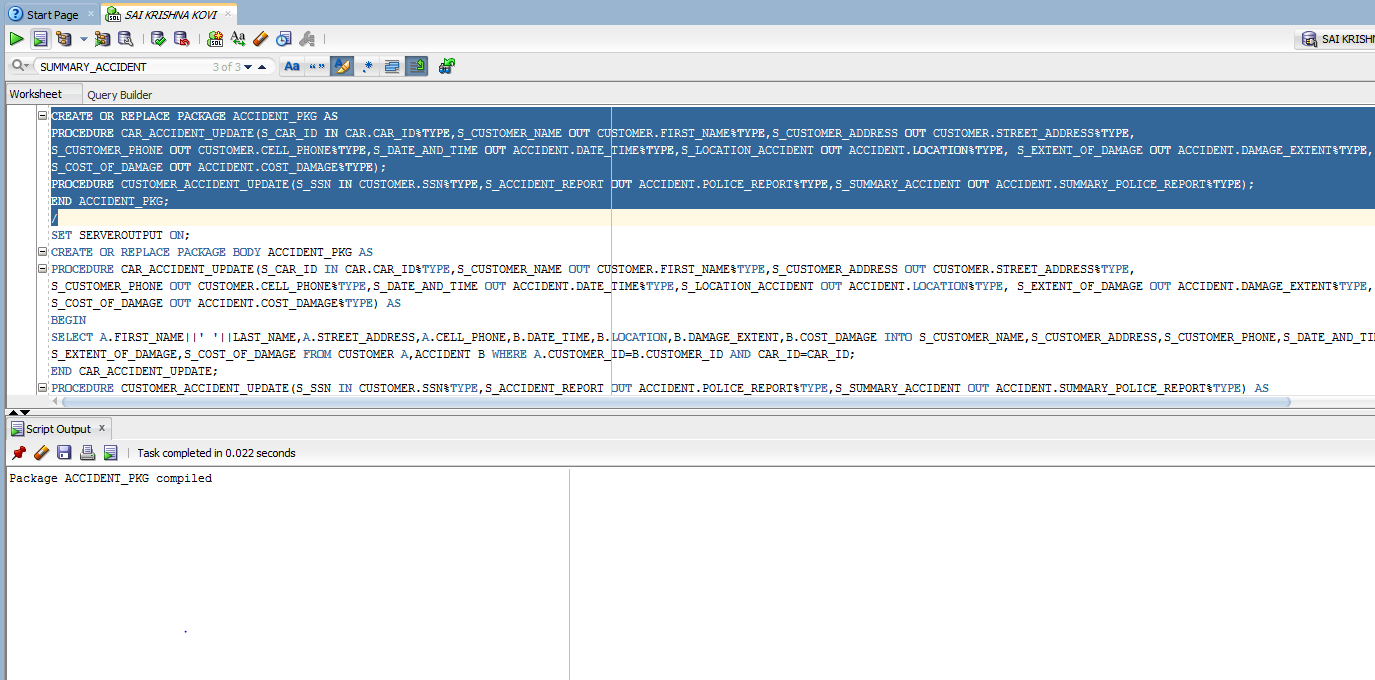
**SELECT A.POLICE\_REPORT,A.SUMMARY\_POLICE\_REPORT INTO S\_ACCIDENT\_REPORT,S\_SUMMARY\_ACCIDENT FROM ACCIDENT A, CUSTOMER B WHERE B.SSN=SSN;**

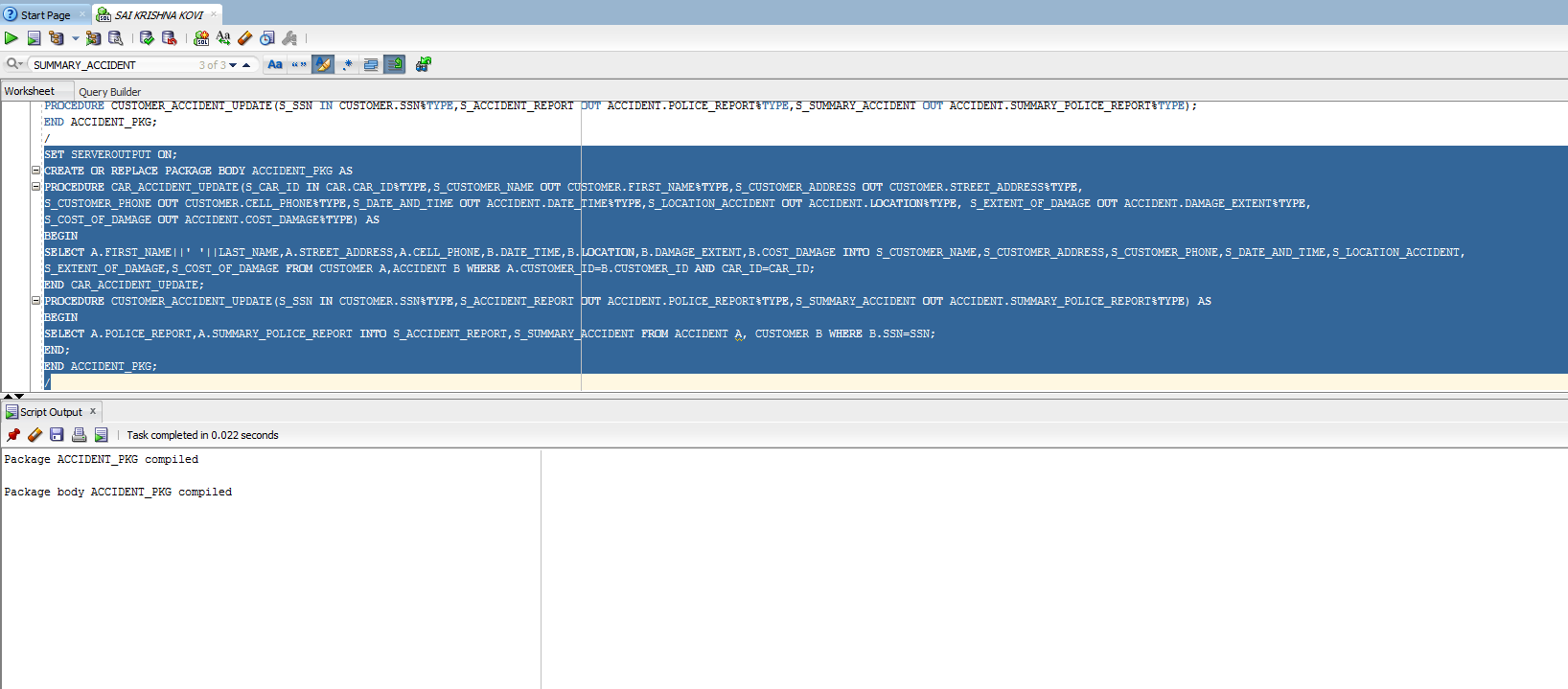
**END;**

**END ACCIDENT\_PKG;**

**/**

**Output:**





**15F GEN\_MANAGER**

**QUERY:**

**CREATE OR REPLACE PROCEDURE GEN\_MANAGER AS**

**S\_BRANCH\_ID NUMBER(10);**

**S\_BRANCH\_NAME VARCHAR2(15);**

**S\_MANAGER\_NAME VARCHAR2(20);**

**S\_MANAGER\_HIRED DATE;**

**CURSOR BRANCH\_CURSOR IS**

**SELECT OFFICE\_ID,NAME,GENERAL\_MGR\_ID,DATE\_HIRED FROM BRANCH\_INFO;**

**BEGIN**

**OPEN BRANCH\_CURSOR;**

**LOOP**

**FETCH BRANCH\_CURSOR INTO S\_BRANCH\_ID,S\_BRANCH\_NAME,S\_MANAGER\_NAME,S\_MANAGER\_HIRED;**

**EXIT WHEN BRANCH\_CURSOR%NOTFOUND;**

**DBMS\_OUTPUT.PUT\_LINE('BRANCH\_ID COMES AS :'||S\_BRANCH\_ID);**

**DBMS\_OUTPUT.PUT\_LINE('BRANCH\_OFFICE COMES AS:'||S\_BRANCH\_NAME);**

**DBMS\_OUTPUT.PUT\_LINE('GENERALMANAGER\_NAME COMES AS:'||S\_MANAGER\_NAME);**

**DBMS\_OUTPUT.PUT\_LINE('MANAGER\_HIRED COMES AS:'||S\_MANAGER\_HIRED);**

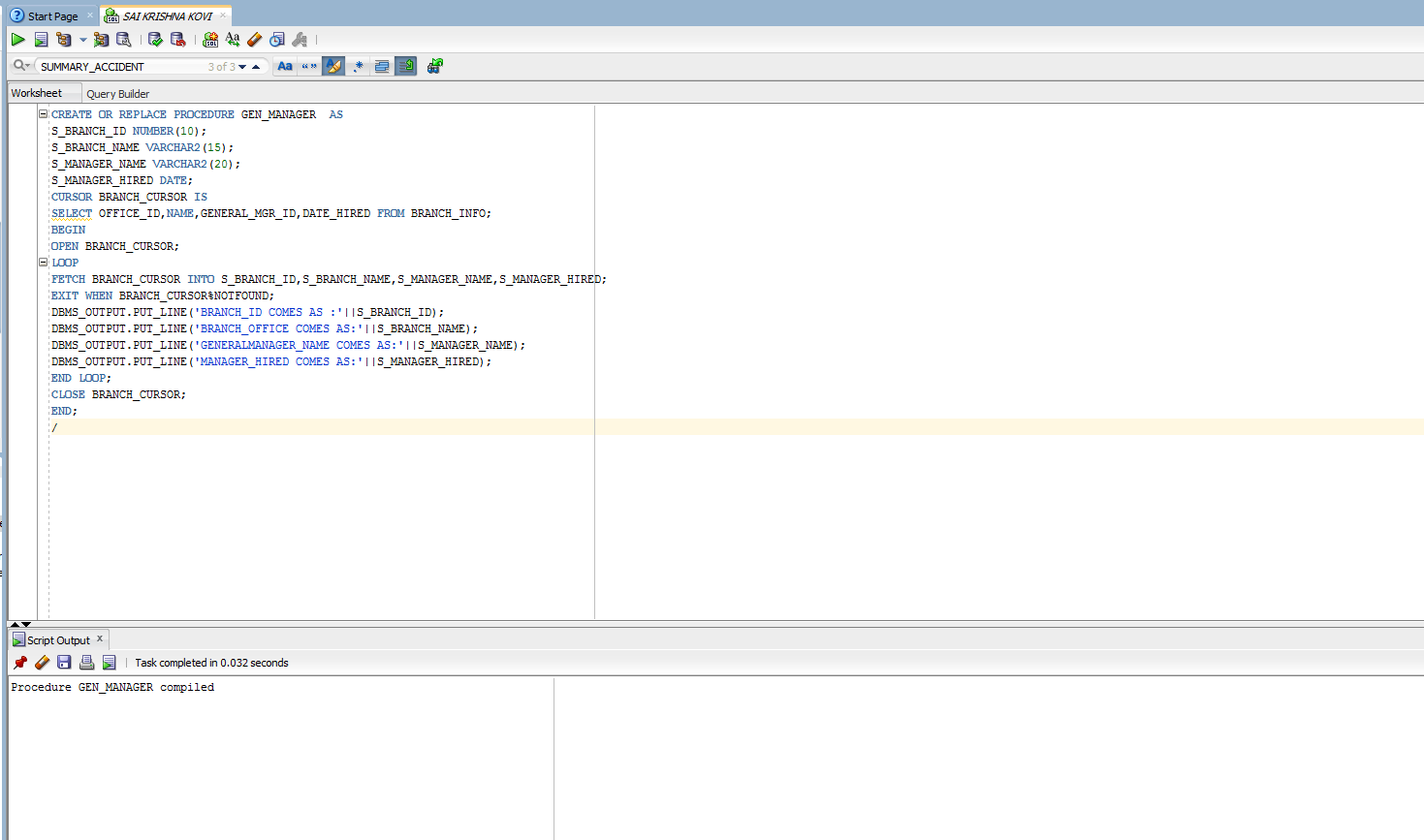
**END LOOP;**

**CLOSE BRANCH\_CURSOR;**

**END;**

**/**

**OUTPUT:**



**16.TRIGGERS**

**16G. EMPLOYEE\_HISTORY:**

**QUERY:**

**CREATE TABLE EMPLOYEE\_HISTORY AS SELECT \* FROM PROJECT.EMPLOYEE;**

**CREATE OR REPLACE TRIGGER EMPLOYEE\_HISTORY**

**AFTER DELETE ON EMPLOYEE**

**for each row**

**BEGIN**

**INSERT INTO EMPLOYEE\_HISTORY(EMPLOYEE\_ID,FIRST\_NAME,LAST\_NAME,MIDDLE\_NAME,STREET\_ADDRESS,CITY,STATE,ZIP\_CODE,SSN,SALARY,TAX\_DEDUCTION,BIRTH\_DATE,GENDER,MARITAL\_STATUS,**

**SPOUSE\_NAME,LAST\_DEGREE,DATE\_DEGREE,NO\_OF\_DEPENDENTS,HOME\_PHONE\_NUMBER,CELL\_PHONE\_NUMBER)**

**VALUES(:old.EMPLOYEE\_ID,:OLD.FIRST\_NAME,:OLD.LAST\_NAME,:OLD.MIDDLE\_NAME,:OLD.STREET\_ADDRESS,:old.CITY,:old.STATE,:OLD.ZIP\_CODE,:old.SSN,:OLD.SALARY,:OLD.TAX\_DEDUCTION,**

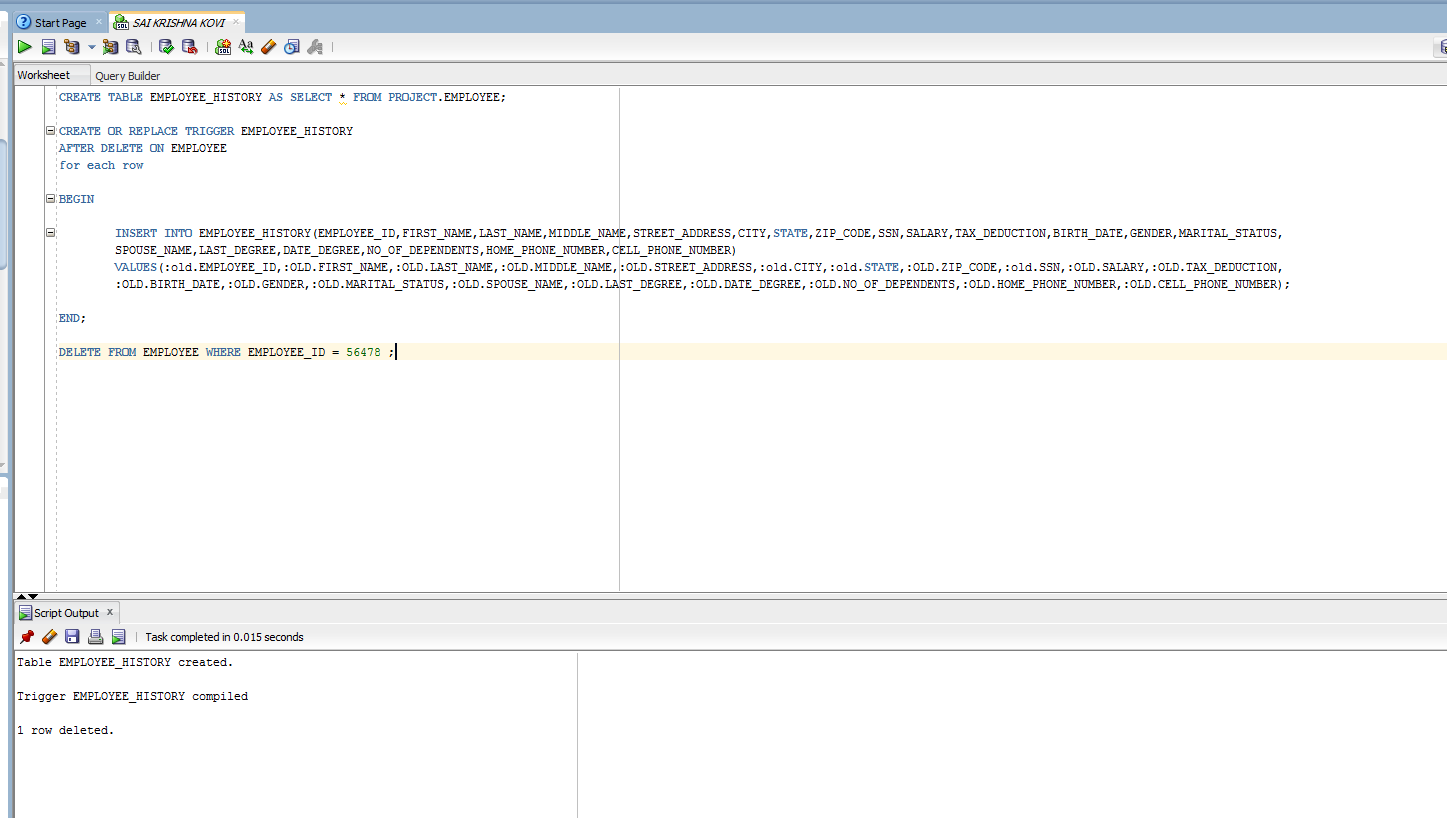
**:OLD.BIRTH\_DATE,:OLD.GENDER,:OLD.MARITAL\_STATUS,:OLD.SPOUSE\_NAME,:OLD.LAST\_DEGREE,:OLD.DATE\_DEGREE,:OLD.NO\_OF\_DEPENDENTS,:OLD.HOME\_PHONE\_NUMBER,:OLD.CELL\_PHONE\_NUMBER);**

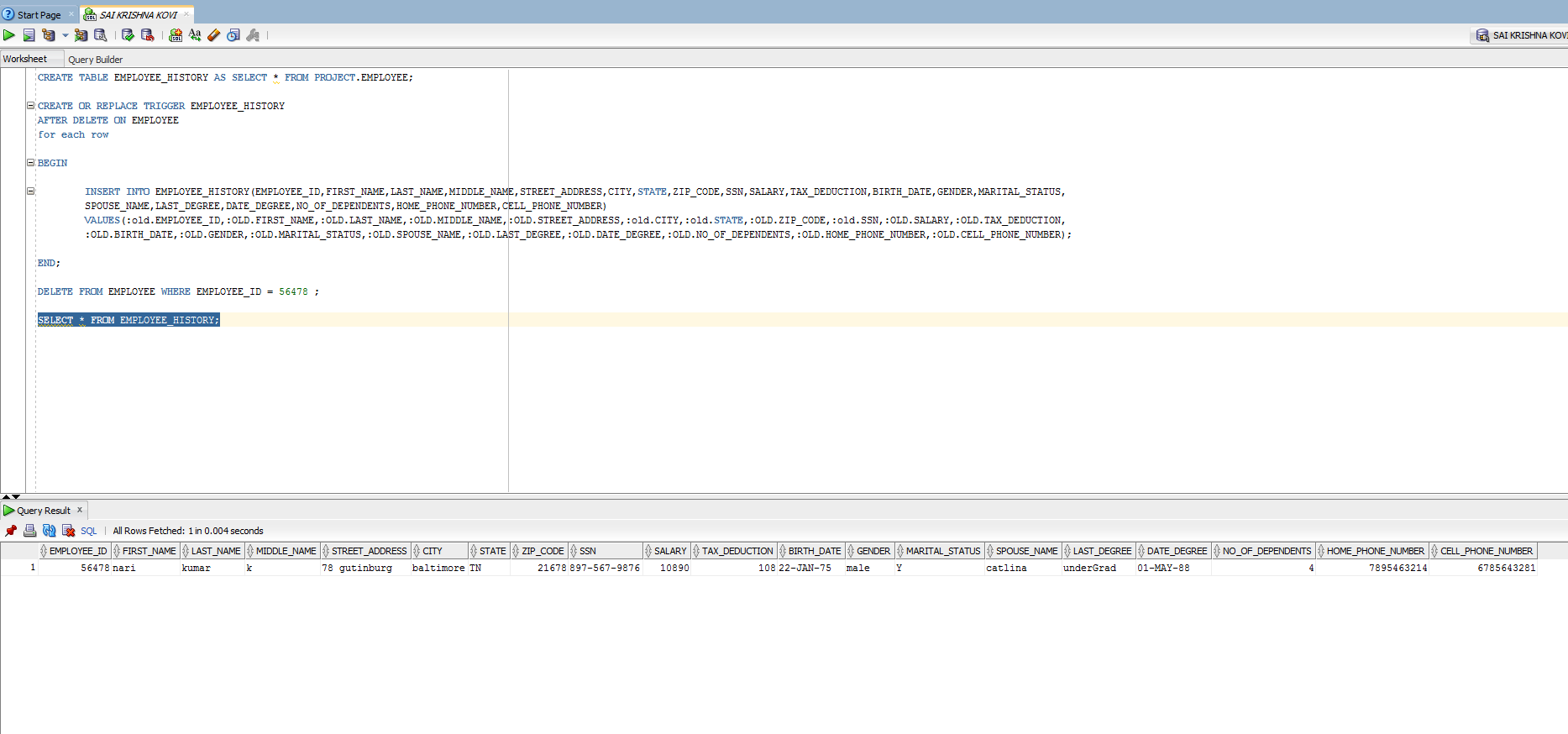
**END;**

**DELETE FROM EMPLOYEE WHERE EMPLOYEE\_ID = 56478 ;**

**SELECT \* FROM EMPLOYEE\_HISTORY;**

**OUTPUT:**





**16H.TRIGGERS CUSTOMER\_LOG:**

**QUERY:**

**CREATE TABLE CUSTOMER\_LOG AS SELECT \* FROM PROJECT.CUSTOMER;**

**CREATE OR REPLACE TRIGGER CUSTOMER\_LOG**

**AFTER UPDATE ON CUSTOMER**

**for each row**

**BEGIN**

**INSERT INTO CUSTOMER\_LOG(CUSTOMER\_ID,FIRST\_NAME,LAST\_NAME,MIDDLE\_INITIAL,BIRTH\_DATE,cell\_phone,**

**STREET\_ADDRESS,CITY,STATE,ZIP\_CODE,EMAIL,LICENSE\_ISSUED\_STATE,**

**LICENSE\_NUMBER,CREDIT\_CARD\_NUMBER,EXPIRATION\_DATE,SSN)**

**VALUES(:OLD.CUSTOMER\_ID,:OLD.FIRST\_NAME,:OLD.LAST\_NAME,:OLD.MIDDLE\_INITIAL,:OLD.BIRTH\_DATE,:OLD.CELL\_PHONE,**

**:OLD.STREET\_ADDRESS,:OLD.CITY,:OLD.STATE,:OLD.ZIP\_CODE,:OLD.EMAIL,:OLD.LICENSE\_ISSUED\_STATE,**

**:OLD.LICENSE\_NUMBER,:OLD.CREDIT\_CARD\_NUMBER,:OLD.EXPIRATION\_DATE,:OLD.SSN);**

**INSERT INTO CUSTOMER\_LOG(CUSTOMER\_ID,FIRST\_NAME,LAST\_NAME,MIDDLE\_INITIAL,CELL\_PHONE,BIRTH\_DATE,**

**STREET\_ADDRESS,CITY,STATE,ZIP\_CODE,EMAIL,LICENSE\_ISSUED\_STATE,**

**LICENSE\_NUMBER,CREDIT\_CARD\_NUMBER,EXPIRATION\_DATE,SSN)**

**VALUES(:NEW.CUSTOMER\_ID,:NEW.FIRST\_NAME,:NEW.LAST\_NAME,:NEW.MIDDLE\_INITIAL,:NEW.CELL\_PHONE,:NEW.BIRTH\_DATE,**

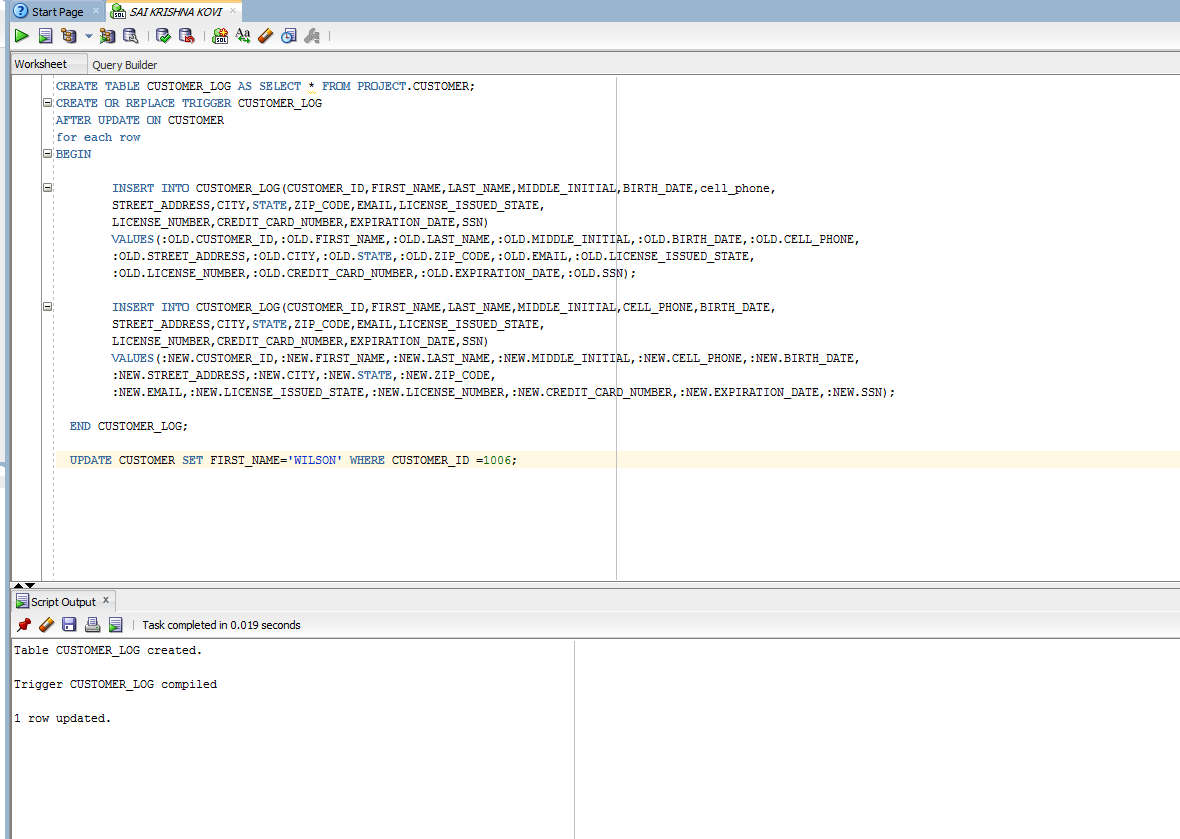
**:NEW.STREET\_ADDRESS,:NEW.CITY,:NEW.STATE,:NEW.ZIP\_CODE,**

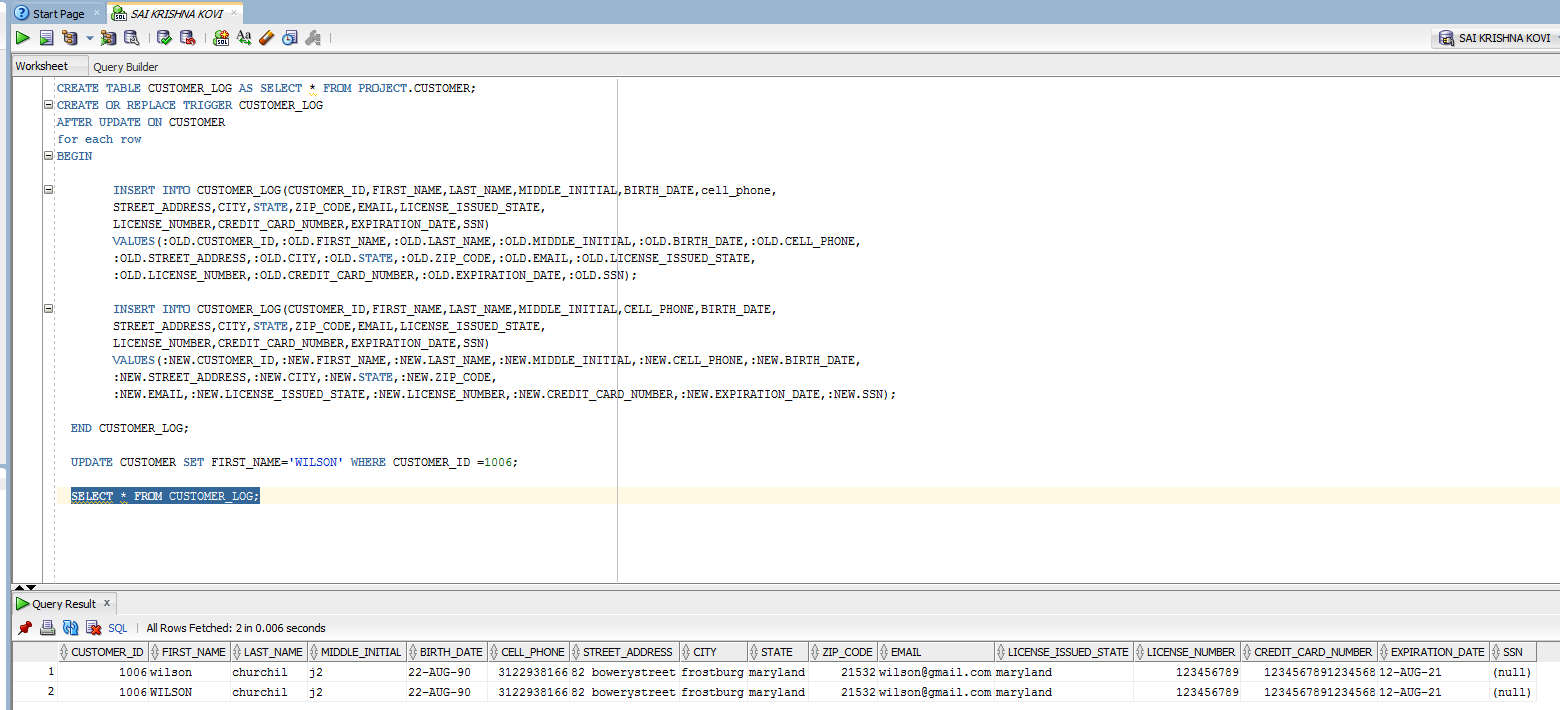
**:NEW.EMAIL,:NEW.LICENSE\_ISSUED\_STATE,:NEW.LICENSE\_NUMBER,:NEW.CREDIT\_CARD\_NUMBER,:NEW.EXPIRATION\_DATE,:NEW.SSN);**

**END CUSTOMER\_LOG;**

**UPDATE CUSTOMER SET FIRST\_NAME='WILSON' WHERE CUSTOMER\_ID =1006;**

**OUTPUT:**





**16i.ACCIDENT\_LOG:**

**Query:**

**CREATE TABLE ACCIDENT\_LOG (EMP\_NAME VARCHAR2(25),CUSTOMER\_NAME VARCHAR(20),ACCIDENT\_DATE TIMESTAMP);**

**CREATE OR REPLACE TRIGGER ACCIDENT\_LOG AFTER INSERT ON ACCIDENT FOR EACH ROW**

**DECLARE**

**V\_EMP\_NAME NUMBER;**

**V\_CUST\_NAME VARCHAR2(20);**

**BEGIN**

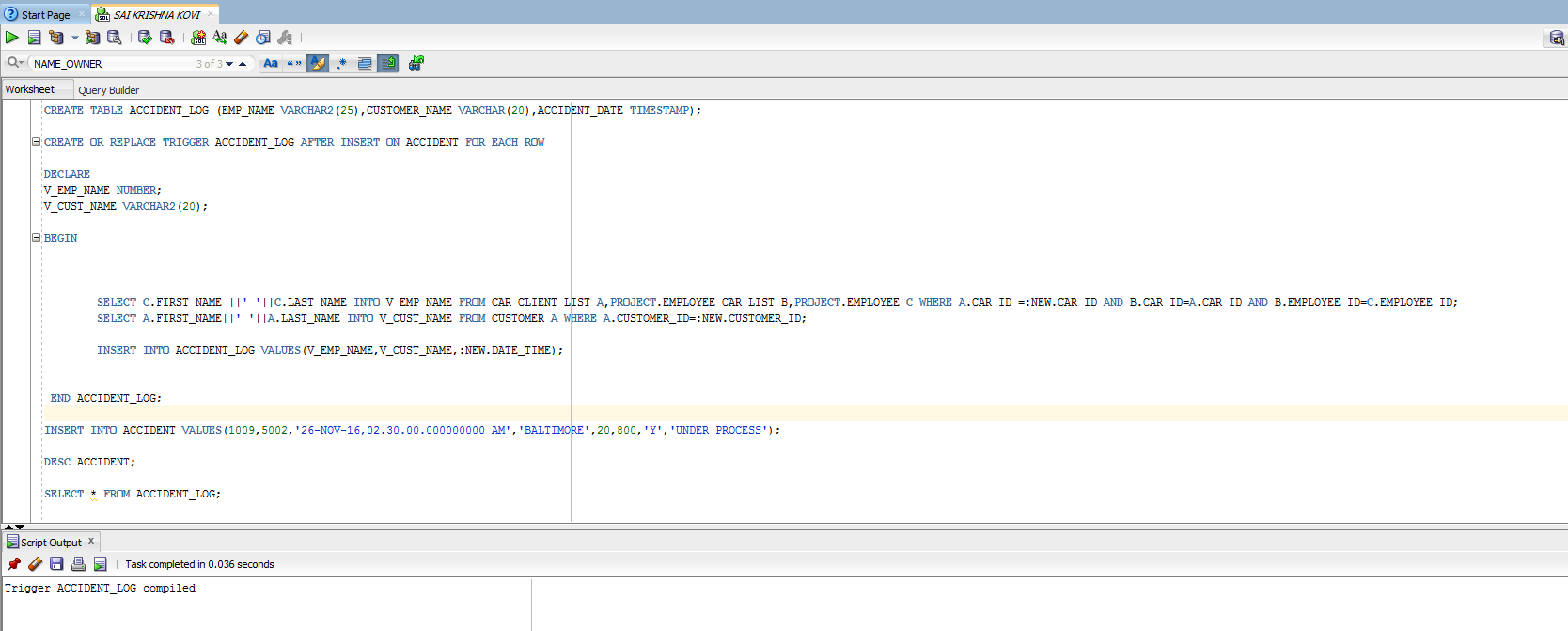
**SELECT C.FIRST\_NAME ||' '||C.LAST\_NAME INTO V\_EMP\_NAME FROM CAR\_CLIENT\_LIST A,PROJECT.EMPLOYEE\_CAR\_LIST B,PROJECT.EMPLOYEE C WHERE A.CAR\_ID =:NEW.CAR\_ID AND B.CAR\_ID=A.CAR\_ID AND B.EMPLOYEE\_ID=C.EMPLOYEE\_ID;**

**SELECT A.FIRST\_NAME||' '||A.LAST\_NAME INTO V\_CUST\_NAME FROM CUSTOMER A WHERE A.CUSTOMER\_ID=:NEW.CUSTOMER\_ID;**

**INSERT INTO ACCIDENT\_LOG VALUES(V\_EMP\_NAME,V\_CUST\_NAME,:NEW.DATE\_TIME);**

**END ACCIDENT\_LOG;**

**Output:**



**17.TABLE ERROR\_LOG**

**OUTPUT:**

**Create table ERROR\_LOG**

**(**

**TABLE\_NAME VARCHAR2(30),**

**TRIGGER\_NAME VARCHAR2(40),**

**ERROR\_DATE TIMESTAMP(6),**

**TRIGGER\_EVENT VARCHAR2(60),**

**TRIGGER\_TYPE VARCHAR2(25)**

**);**

**SELECT \*FROM ERROR\_LOG;**

**Output:**

