**21.CREATE A USER-DEFINED RECORDS GENERATING CONSALIDATED MARKSHEET FROM STUDENT DETAIL (YOU CAN HAVE REQUISITE NUMBER OF TABLES ACCORDING TO YOUR USER DEFINED RECORDS AND REQUIREMENT APPLY INDEX BY TABLE OF RECORDS.**

**CREATE TABLE STUDENTS\_DETAIL(STU\_ID INT PRIMARY KEY,STU\_NAME VARCHAR(20),STU\_DEP VARCHAR(20),TOTAL\_MARK INT,STU\_GRADE VARCHAR(12));**

**INSERT INTO STUDENTS\_DETAIL VALUES(1,'Abhilaash','cse',410,'A');**

**INSERT INTO STUDENTS\_DETAIL VALUES(2,'Ajmal','AIDS',452,'S');**

**INSERT INTO STUDENTS\_DETAIL VALUES(3,'HARSHA','CSE',347,'B');**

**INSERT INTO STUDENTS\_DETAIL VALUES(4,'AADHARSH','AI&DS',386,'B');**

**INSERT INTO STUDENTS\_DETAIL VALUES(7,'PRANESH','ECE',478,'S');**

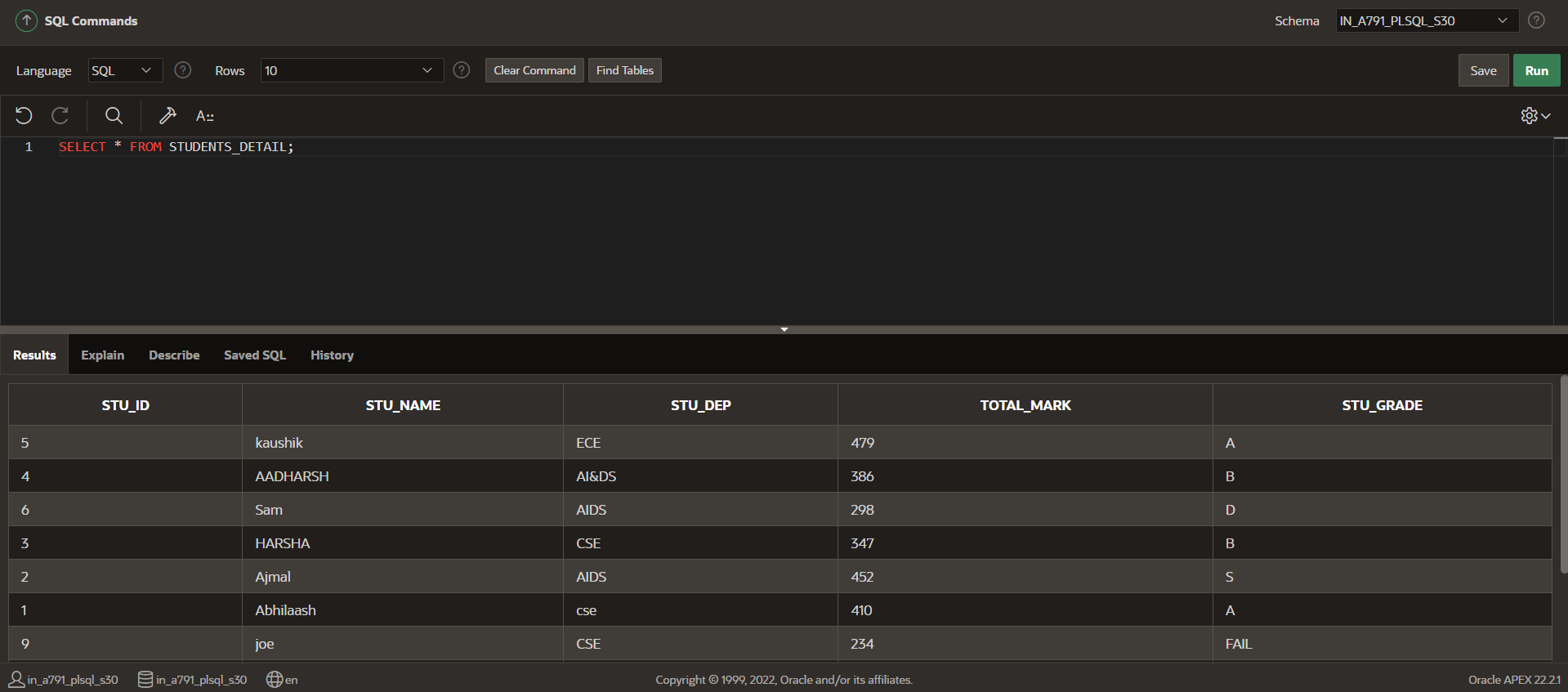
**INSERT INTO STUDENTS\_DETAIL VALUES(6,'Sam','AIDS',298,'D');**

**INSERT INTO STUDENTS\_DETAIL VALUES(8,'ajith','EEE',369,'B');**

**INSERT INTO STUDENTS\_DETAIL VALUES(9,'joe','CSE',234,'FAIL');**

**INSERT INTO STUDENTS\_DETAIL VALUES(5,'kaushik','ECE',479,'A');**

**SELECT \* FROM STUDENTS\_DETAIL;**

****

**USER DEFINED FUNCTION**

**DECLARE**

**TYPE STUDENT\_DETAILS IS RECORD**

**(**

**STU\_ID STUDENTS\_DETAIL.STU\_ID%TYPE,**

**STU\_NAME STUDENTS\_DETAIL.STU\_NAME%TYPE,**

**TOTAL\_MARK STUDENTS\_DETAIL.TOTAL\_MARK%TYPE,**

**STU\_GRADE STUDENTS\_DETAIL.STU\_GRADE%TYPE**

**);**

**v\_person\_student\_details STUDENT\_DETAILS;**

**BEGIN**

**SELECT STU\_ID,STU\_NAME,TOTAL\_MARK,STU\_GRADE**

**INTO v\_person\_student\_details**

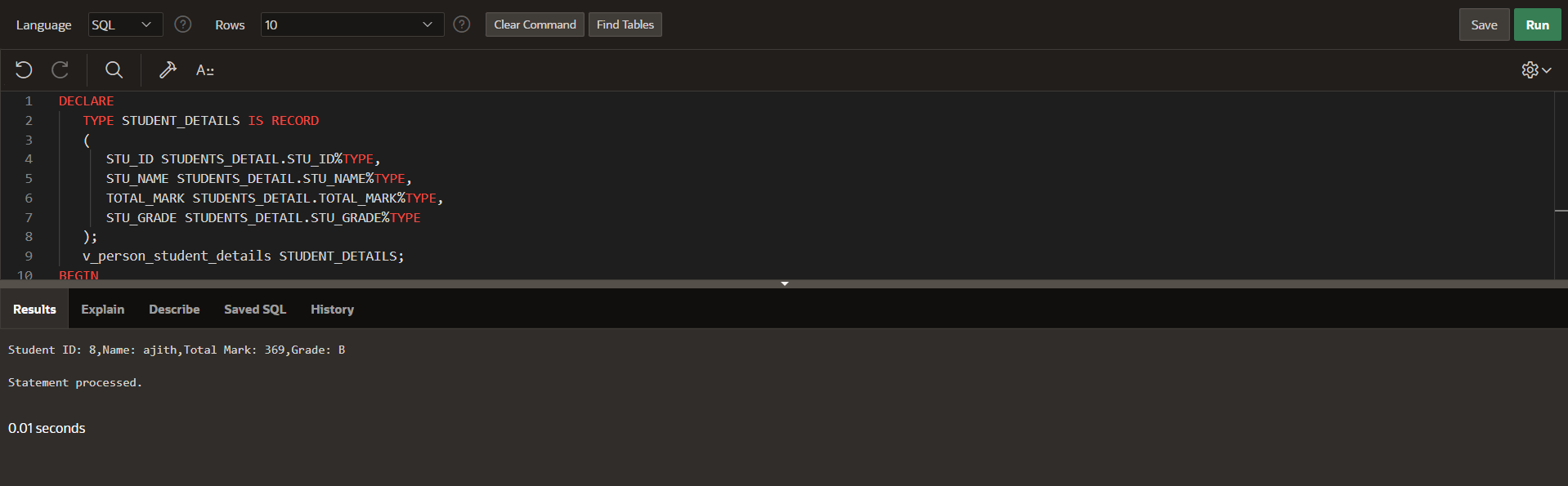
**FROM STUDENTS\_DETAIL**

**WHERE STU\_ID = 8;**

**DBMS\_OUTPUT.PUT\_LINE('Student ID: '|| v\_person\_student\_details.STU\_ID || ',Name: ' || v\_person\_student\_details.STU\_NAME || ',Total Mark: ' || v\_person\_student\_details.TOTAL\_MARK || ',Grade: ' || v\_person\_student\_details.STU\_GRADE);**

**END;**

**/**

****

**Index by table**

DECLARE

TYPE t\_hire\_date IS TABLE OF STUDENTS\_DETAIL.STU\_GRADE%TYPE

INDEX BY VARCHAR(20);

v\_hire\_date\_tab t\_hire\_date;

v\_hire\_date\_count VARCHAR(20);

BEGIN

FOR stu\_rec IN (SELECT STU\_GRADE FROM STUDENTS\_DETAIL)

LOOP

v\_hire\_date\_tab(stu\_rec.STU\_GRADE):=stu\_rec.STU\_GRADE;

END LOOP;

DBMS\_OUTPUT.PUT\_LINE(v\_hire\_date\_tab.COUNT);

END;

