

Name : Pratiksha P Patil

Roll no. : 19

Exp no. : 4

Exp name: Implement Synonyms, sequence, Triggers and Packages

1. Create a table student with attributes id, roll_no, name, address, contact

create table student

```
(  
    id int,  
    roll_no int,  
    name varchar (20),  
    address varchar (30),  
    contact int  
);
```

Table STUDENT created.

Elapsed: 00:00:00.010

2. Create a sequence to generate 'id' of a student automatically

create sequence stud_id

increment by 1

start with 1

nomaxvalue

nocycle;

Sequence STUD_ID created.

Elapsed: 00:00:00.008

3. Insert following values in 'Student' table.

id	roll_no	name	address	contact
Generated via a sequence	1	Ravi	Mumbai	9456723450
Generated via a sequence	2	Tina	Pune	8736492301
Generated via a sequence	3	Raj	Kolhapur	7829034658
Generated via a sequence	4	Madhuri	sangli	9959310832

```
INSERT INTO Student (id, roll_no, name, address, contact)
```

```
VALUES (stud_id.NEXTVAL, 1, 'Ravi', 'Mumbai', '9456723450');
```

```
INSERT INTO Student (id, roll_no, name, address, contact)
```

```
VALUES (stud_id.NEXTVAL, 2, 'Tina', 'Pune', '873692301');
```

```
INSERT INTO Student (id, roll_no, name, address, contact)
```

```
VALUES (stud_id.NEXTVAL, 3, 'Raj', 'Kolhapur', '7829034658');
```

```
INSERT INTO Student (id, roll_no, name, address, contact)
```

```
VALUES (stud_id.NEXTVAL, 4, 'Pratiksha', 'Sangli', '9959310832');
```

```
1 row inserted.
```

```
Elapsed: 00:00:00.097
```

```
1 row inserted.
```

```
Elapsed: 00:00:00.007
```

```
1 row inserted.
```

```
Elapsed: 00:00:00.002
```

```
1 row inserted.
```

```
Elapsed: 00:00:00.006
```

4. Create a trigger to prompt an error message when value entered for roll number is 0.

```
CREATE OR REPLACE TRIGGER check_roll_no
BEFORE INSERT OR UPDATE ON Student
FOR EACH ROW
BEGIN
    IF :NEW.roll_no = 0 THEN
        RAISE_APPLICATION_ERROR(-20001, 'Roll number cannot be 0.');
```

```
    END IF;
```

```
END;
```

```
/
```

```
Trigger CHECK_ROLL_NO compiled
```

```
Elapsed: 00:00:00.018
```

5. Instantiate the created trigger by passing roll number of a student as 0.

```
INSERT INTO Student (id, roll_no, name, address, contact)
VALUES (stud_id.NEXTVAL, 0, 'Pratiksha', 'belgav', '1234567890');
```

```
ORA-20001: Roll number cannot be 0.
```

```
ORA-06512: at "SQL_3VHH2ZI5ZOST8CEE903G5VH10A.CHECK_ROLL_NO", line 3
```

```
ORA-04088: error during execution of trigger 'SQL_3VHH2ZI5ZOST8CEE903G5VH10A.CHECK_ROLL_NO'
```

```
https://docs.oracle.com/error-help/db/ora-20001/
```

```
Error at Line: 4 Column: 0
```

6. Create a synonym 'Stud' for 'Student' table.

```
CREATE SYNONYM Stud FOR Student;
```

```
Synonym STUD created.
```

```
Elapsed: 00:00:00.011
```

7. Print the table 'Student' and 'Stud'.

```
SELECT * FROM Stud;
```

SELECT * FROM Student;

	ID	ROLL_NO	NAME	ADDRESS	CONTACT
1	22	3	Raj	Kolhapur	7829034658
2	1	1	Ravi	Mumbai	9456723450
3	21	2	Tina	Pune	873692301
4	2	4	Pratiksha	Sangli	9959310832

8. Create a package with following procedures:

a. Create a procedure to find name of the student if roll number is given.

b. Create a function to delete a student record if roll number is given

CREATE OR REPLACE PACKAGE Student_Package AS

PROCEDURE Find_Student_Name(roll_num IN INT);

FUNCTION Delete_Student(roll_num IN INT) RETURN VARCHAR2;

END Student_Package;

/

CREATE OR REPLACE PACKAGE BODY Student_Package AS

PROCEDURE Find_Student_Name(roll_num IN INT) IS

v_name VARCHAR2(20);

BEGIN

SELECT name INTO v_name FROM Student WHERE roll_no = roll_num;

DBMS_OUTPUT.PUT_LINE('Student Name: ' || v_name);

EXCEPTION

WHEN NO_DATA_FOUND THEN

DBMS_OUTPUT.PUT_LINE('No student found with roll number ' || roll_num);

END Find_Student_Name;

```

FUNCTION Delete_Student(roll_num IN INT) RETURN VARCHAR2 IS
BEGIN
    DELETE FROM Student WHERE roll_no = roll_num;
    IF SQL%ROWCOUNT > 0 THEN
        RETURN 'Student record deleted successfully.';
    ELSE
        RETURN 'No student found with the given roll number.';
    END IF;
END Delete_Student;

```

END Student_Package;

/

```
Package STUDENT_PACKAGE compiled
```

```
Elapsed: 00:00:00.012
```

```
Package Body STUDENT_PACKAGE compiled
```

```
Elapsed: 00:00:00.012
```

9. Find name of the student whose roll number is 2 using a function created in a package.

```

BEGIN
    Student_Package.Find_Student_Name(2);
END;

```

/

```
Student Name: Tina
```

```
PL/SQL procedure successfully completed.
```

```
Elapsed: 00:00:00.011
```

10. Delete a student record whose roll number is 4 using a procedure created in a package.

```
DECLARE
```

```
    result VARCHAR2(50);
```

```
BEGIN
```

```
    result := Student_Package.Delete_Student(4);
```

```
    DBMS_OUTPUT.PUT_LINE(result);
```

```
END;
```

```
/
```

```
Student record deleted successfully.
```

```
PL/SQL procedure successfully completed.
```

```
Elapsed: 00:00:00.030
```
