

TASK-7:- Triggers, views and exceptions

Objective:-

To understand and implement Triggers, views & Exceptions handling for performing and managing CRUD operations in an oracle database.

Part 1:- Implementing triggers.

1. prevent Insertion of underage students.

CREATE TABLE students (student ID NUMBER
PRIMARY KEY, NAME varchar(50), Age NUMBER,
Dept VARCHAR(20), MARKS NUMBER);

CREATE OR REPLACE TRIGGER PREVENT_underage_student
BEFORE INSERT ON students FOR EACH ROW

BEGIN

IF: NEW.Age < 18 THEN

Raise Application- ERROR(2000), 'Age must be 18
or above';

END IF;

END;

2. Create a Log Table:

CREATE TABLE student_log (Log ID NUMBER PRIMARY
KEY, student ID NUMBER, Action Type VARCHAR(20),
Action Date TIMESTAMP DEFAULT SYSTIME
STAMP);

PART 2:- creating views

1. View for TOP students:

CREATE OR REPLACE VIEW view_top_students AS

```
SELECT student-ID, name, marks FROM students  
WHERE marks > 80;
```

2. View for Department summary:-

```
CREATE OR REPLACE VIEW view_department_summary AS  
SELECT department, COUNT(*) AS Total  
students, ROUND(AVG(marks), 2) AS Average Marks  
FROM students GROUP BY department;
```

PART-3:- Exception Handling

1. Stored procedure with Exceptions handling for
Inserting student Records.

```
CREATE OR REPLACE PROCEDURE insert_student(p-student-ID IN NUMBER,
```

p-name IN VARCHAR2,

p-age IN NUMBER,

p-department IN VARCHAR2,

p-marks IN NUMBER)

IS

BEGIN

INSERT INTO students (student-ID, name, age,

department, marks)

VALUES (p-student-ID, p-name, p-age, p-depti
p-marks);

DBMS-output.put-Line('Record Inserted success
fully');

Exception

WHEN others then

DBMS-output.put-Line('Error: // SQLERRM');

2. Functions to Fetch student details with
error handling:-

```
CREATE OR REPLACE FUNCTION get_student_details  
(p-student-ID IN NUMBER) RETURN VARCHAR2  
IS  
student_info VARCHAR2(225);
```

```
BEGIN
```

```
SELECT 'Name: // Name // Age: // Department: // DEPT  
// marks: // Marks'
```

```
INTO student_info
```

```
FROM students
```

```
WHERE student-ID = p-student-ID;
```

```
RETURN student_info;
```

Exception

WHEN NO-DATE-FOUND THEN

```
RETURN 'Student NOT Found';
```

WHEN others THEN

```
RETURN 'Error: // SQLERRM';
```

```
END;
```

VELTECH	
EX No.	7
PERFORMANCE (1)	5
RESULT AND ANALYSIS (2)	2
VIVA VOCE (3)	2
RECORD (4)	4
TOTAL (15)	15
IN WITH DATE	8

Result:- Thus the study of triggers, views and
exceptions are successfully verified.