Task 6: Triggers, views and Exceptions

Aim: To implement triggers, views and exception on CRUD operation

Step 1: Create Patient Table

```
CREATE TABLE Patient (
    Patient_id NUMBER PRIMARY KEY,
    Patient_name VARCHAR2(50),
    age INT,
    status VARCHAR2(20)
);
```

Step 2: View for active patients

```
CREATE OR REPLACE VIEW active_Patients AS
SELECT Patient_id, Patient_name, age
FROM Patient
WHERE status = 'Admitted';
```

Execution:

```
INSERT INTO Patient VALUES(101, 'Rajer', 32, 'Admitted');
INSERT INTO Patient VALUES(102, 'Anita', 40, 'Discharged');
INSERT INTO Patient VALUES(103, 'suresh', 28, 'Admitted');

COMMIT;
SELECT* FROM active_Patients
```

output:

Patient_ID	Patient_name	Age
101	Rahul	32
102	Suresh	28

step3: Trigger to Restrict Deletion
of Admitted Patients

CREATE OR REPLACE TRIGGER
Prevent_admitted_delete
BEFORE DELETE ON Patient
FOR EACH ROW
BEGIN
    IF :OLD.status = 'Admitted' THEN
        RAISE_APPLICATION_ERROR
        ('2000_1' Cannot delete Admitted Patient')
END IF;
END;
/

Execution:
DELETE FROM Patient WHERE Patient_id=101

OUTPUT:
ORA_20001: Cannot delete Admitted Patient
ORA_06512: at "PREVENT_ADMITTED_DELETE"
line 3

Step 4: EXCEPTION Handling in UPDATE

```
DECLARE
    v_id. Patient_id%.TYPE := 200;
    v_name. Patient_name%.TYPE;
BEGIN
    UPDATE Patient
    SET Patient_name = 'meena'
    WHERE Patient_id = v_id;
    IF SQL%.ROW COUNT = 0 THEN
        RAISE_APPLICATION_ERROR(-20002,
            'No Patient found with ID'||v_id);
    END IF;
EXCEPTION
    WHEN OTHERS THEN
        dbms_output.put_line('ERROR:'||SQLERRM);
END;
```

OUTPUT:

ERROR: ORA-20002: No Patient found with ID 200

Step 5: After insert Trigger for Audit

```
CREATE TABLE Patient_audit (
    audit_id NUMBER GENERATED ALWAYS AS
IDENTITY
    Patient_id NUMBER,
    action VARCHAR2(20),
```

```
CREATE OR REPLACE TRIGGER
audit_patient_insert
AFTER INSERT ON patient
FOR EACH ROW
BEGIN
    INSERT INTO patient_audit (patient_id,
    action, action date )
    VALUES (: NEW.patient_id, 'INSERT'
            SYSDATE);
    END;
    /
```

Execution:

```
    INSERT INTO patients VALUES (104,
                            'meena', 25, 'admitted);
    SELECT * FROM patient_audit;
```

Output:

AUDIT_ID	Patient ID	Action	ACTION-DATE
1	104	INSERT	19-SEP-25

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Result:
Thus, the triggers, views and Exception were successfully executed.