Date: 15/09/25 Task 6

# Triggers, Views and Exceptions

AIM: To implement triggers, views and exceptions in SQL.

PROCEDURE:

1. Create customer table
2. Insert the values
3. Perform trigger operation
4. Puform view operation
5. Perform exception Handling

1. Implementing Triggers.

```
CREATE TABLE Customer (
    customer ID INT PRIMARY KEY,
    Name VARCHAR (50),
    Age INT,
    Phone VARCHAR (15),
    Gmail VARCHAR (50)

);
CREATE OR REPLACE TRIGGER prevent_underage_customers.
BEFORE INSERT ON Customer
FOR EACH ROW
BEGIN
    IF NEW.Age < 18 THEN
        RAISE_APPLICATION_ERROR (-20001, 'customer age must
                                    be 18 or above');

    END IF;

END;
```

2. Creat a Log Table for customa Actions.

```
CREATE TABLE customaLog (
    Log ID NUMBER PRIMARY KEY,
    customa ID INT,
    Action Type VARCHAR(20),
    Action Date TIMESTAMP DEFAULT SYSTEM STAMP
);
```

2. Creating Views

View for customer contact information

```
CREATE OR REPLACE VIEW View_customa Contacts AS
SELECT customa ID, Name, Phone, Email
FROM customa;
CREATE OR REPLACE VIEW view_customa Age category AS
SELECT
    customa ID,
    Name
    CASE
      WHEN Age BETWEEN 18 and 25 THEN 'YOUNG'
      WHEN Age BETWEEN 26 and 45 THEN 'Adult'
      WHEN Age BETWEEN 46 and 65 THEN 'Middle Age'
      ELSE Senior
    END AS Age category
FROM customa;
```

3. Exception Handling

Stored Procedure with Exception Handling for Inserting Customer Records

```
CREATE OR REPLACE PROCEDURE Insert_customer(
    P_CustomerID IN INT,
    P_name IN VARCHAR,
    P_Age IN INT,
    P_Phone IN VARCHAR
    P_Email IN VARCHAR
)
IS
BEGIN
    INSERT INTO customer (CustomerID, Name, Age, Phone, Email)
    VALUES (P_CustomerID, P_name, P_Age, P_phone, P_Email);
    DBMS_OUTPUT.PUTLINE ('ERROR: ' || SQLERRM);
END;
```

Function to Fetch Customer Details with Error Handling

```
CREATE OR REPLACE FUNCTION Get_CustomerDetails
(P_customerID IN NUMBER)
RETURN VARCHAR
IS
  Customer_Info VARCHAR(200);
BEGIN
  SELECT 'Name:' || Name || ', Age:' || Age || ', Phone:' || Phone ||
  INTO Customer_Info                    'Email:' || Email
  FROM Customer
  WHERE CustomerID = P_CustomerID;
  RETURN Customer_Info;
```

```
EXCEPTION
    WHEN NO_DATA_FOUND THEN
    RETURN 'Customer Not Found';
WHEN OTHERS THEN
    RETURN 'Error!'
END;
```

| VELTECH | |
|---|---|
| EX No. | 6 |
| PERFORMANCE (5) | 5 |
| RESULT AND ANALYSIS (5) | 5 |
| VIVA VOCE (5) | 5 |
| RECORD (5) | |
| TOTAL (20) | 15 |
| SIGN WITH DATE | 6/5/25 |

Result: Thus, the Implementation of triggers, views and exceptions in SQL are executed successfully.