Practical-13

Date:__________

AIM: **The price of a product changes constantly. It is important to maintain the history of the prices of the products.Create a trigger to update the 'product_price_history' table when the price of the product is updated in the 'product' table.**

Input :-

i). Create the product and product_price_history table :-

```
// Product Table
CREATE TABLE product (
       product_id NUMBER PRIMARY KEY,
       product_name VARCHAR2(100),
       price NUMBER(10,2)
);
// Product_Price_History Table
CREATE TABLE product_price_history (
       history_id NUMBER PRIMARY KEY GENERATED BY DEFAULT AS
                                                IDENTITY,
       product_id NUMBER,
       old_price NUMBER (10,2),
       new_price NUMBER (10,2),
       change_date TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
       FOREIGN KEY (product_id) REFERENCES product(product_id)
);
```

ii). Create the Trigger :-

```
CREATE OR REPLACE TRIGGER trg_update_product_price
AFTER UPDATE OF price ON product
FOR EACH ROW
BEGIN
     INSERT INTO product_price_history (product_id, old_price,
                                        new_price)
     VALUES (:OLD.product_id, :OLD.price, :NEW.price);
END;
```

iii). Insert and fetch data :-

```
INSERT INTO product (product_id, product_name, price) VALUES
                                 (1, 'Product A', 100.00);
INSERT INTO product (product_id, product_name, price) VALUES
                                 (2, 'Product B', 150.00);

SELECT * FROM product ;
```

Output :-

```
| product_id | product_name | price  |
|------------|--------------|--------|
|     1      | Product A    | 100.00 |
|     2      | Product B    | 150.00 |
|            |              |        |
----------------------------------------
```

iv). Update and fetch data :-

```
UPDATE product
SET price = 120.00
WHERE product_id = 1 ;

SELECT * FROM product;
SELECT * FROM product_price_history ;
```

Output :-

```
// Product Table

| product_id | product_name | price  |
|------------|--------------|--------|
|     1      | Product A    | 120.00 |
|     2      | Product B    | 150.00 |
----------------------------------------
```

history_id	product_id	old_price	new_price	change_date
1	1	100.00	120.00	2024-10-13 14:30:00