

```

CREATE OR REPLACE TRIGGER display_price_changes
BEFORE DELETE OR INSERT OR UPDATE ON Menu_items
FOR EACH ROW
WHEN (NEW.Item_code > 0)
DECLARE
    price_diff number;
BEGIN
    price_diff := :NEW.price - :OLD.price;
    dbms_output.put_line('Old price: ' || :OLD.price);
    dbms_output.put_line('New price: ' || :NEW.price);
    dbms_output.put_line('Price difference: ' || price_diff);
END;
/

```



SQL Worksheet

```

1 CREATE OR REPLACE TRIGGER display_price_changes
2 BEFORE DELETE OR INSERT OR UPDATE ON Menu_items
3 FOR EACH ROW
4 WHEN (NEW.Item_code > 0)
5 DECLARE
6     price_diff number;
7 BEGIN
8     price_diff := :NEW.price - :OLD.price;
9     dbms_output.put_line('Old price: ' || :OLD.price);
10    dbms_output.put_line('New price: ' || :NEW.price);
11    dbms_output.put_line('Price difference: ' || price_diff);
12 END;
13 /
14
15
16

```

Trigger created.



SQL Worksheet

```

1 UPDATE MENU_ITEMS SET Price = 200 where Item_code = 301;
2
3
4

```

1 row(s) updated.
 Old price: 230
 New price: 200
 Price difference: -30

2.

```

CREATE OR REPLACE TRIGGER display_rating_changes
BEFORE DELETE OR INSERT OR UPDATE ON Rating
FOR EACH ROW
WHEN (NEW.restaurant_id > 0)
DECLARE
    rating_diff number;
BEGIN
    rating_diff := :NEW.ratings - :OLD.ratings;
    dbms_output.put_line('Old rating: ' || :OLD.ratings);
    dbms_output.put_line('New rating: ' || :NEW.ratings);
    dbms_output.put_line('Rating difference: ' || rating_diff);
END;
/

```



SQL Worksheet

```

1 CREATE OR REPLACE TRIGGER display_rating_changes
2 BEFORE DELETE OR INSERT OR UPDATE ON Rating
3 FOR EACH ROW
4 WHEN (NEW.restaurant_id > 0)
5 DECLARE
6     rating_diff number;
7 BEGIN
8     rating_diff := :NEW.ratings - :OLD.ratings;
9     dbms_output.put_line('Old rating: ' || :OLD.ratings);
10    dbms_output.put_line('New rating: ' || :NEW.ratings);
11    dbms_output.put_line('Rating difference: ' || rating_diff);
12 END;
13 /
14

```



SQL Worksheet

Trigger created.

```

1 UPDATE Rating SET Ratings = 4 where Customer_id = 103;
2
3

```

1 row(s) updated.
 Old rating: 2
 New rating: 4
 Rating difference: 2

1. To display details of customer

declare

C_Id customer.customer_id%type;

C_Fname customer.customer_firstname%type;

C_Lname customer.customer_lastname%type;

C_Pass customer.customer_password%type;

C_Phone customer.customer_phoneno%type;

C_Add customer.customer_address%type;

C_Email customer.customer_email%type;

Cursor x IS select customer_id, customer_firstname, customer_lastname,
customer_password, customer_phoneno, customer_address, customer_email from customer;

begin

open x;

loop

fetch x into C_Id, C_Fname, C_Lname, C_Pass, C_Phone, C_Add, C_Email;

exit when x%NOTFOUND;

dbms_output.put_line(C_Id||' '||C_Fname||' '||C_Lname||' '||C_Pass||' '||C_Phone||' '||C_Add||'
'||C_Email);

end loop;

close x;

end;

SQL Worksheet

```
1 declare
2 C_Id customer.customer_id%type;
3 C_Fname customer.customer_firstname%type;
4 C_Lname customer.customer_lastname%type;
5 C_Pass customer.customer_password%type;
6 C_Phone customer.customer_phoneno%type;
7 C_Add customer.customer_address%type;
8 C_Email customer.customer_email%type;
9 Cursor x IS select customer_id, customer_firstname, customer_lastname, customer_password, customer_phoneno, customer_address, customer_email from customer;
10 begin
11 open x;
12 loop
13 fetch x into C_Id, C_Fname, C_Lname, C_Pass, C_Phone, C_Add, C_Email;
14 exit when x%NOTFOUND;
15 dbms_output.put_line(C_Id||' '||C_Fname||' '||C_Lname||' '||C_Pass||' '||C_Phone||' '||C_Add||' '||C_Email);
16 end loop;
17 close x;
18 end;
```

Statement processed.

```
101 Harsh Mehta harsh@123 7435068222 1st Cross,Rammurthy nagar,Bangalore harsh19@gmail.com
102 Jainam Shah Jainu@123 9924567892 117, Examiner Road, Fort,Mumbai, Maharashtra lainam33@gmail.com1
103 Aman Pandya Aman@123 7834578923 L 69 Sector 11,Delhi,Uttar Pradesh-201301 aman@gmail.com
104 Heer Madia Her@123 8902345789 Bee H-138, Kodambakkam Road,Chennai, Tamil Nadu heer1723@gmail.com
105 Akanksha Yadav Akayad@123 9934654001 295 AjRoad:10, West Hydrebad, Andhra Pradesh akuu@gmail.com
106 Karan Punjabi karpun@123 9934688001 Nirmal House Opp Jain Mandir ,Jalandhar,Punjab karan12@gmail.com
107 Diya Mulchandnr divmul@123 9874688001 A/3, Tejpal Indl Estate,Andheri (west),Maharashtra div3421@gmail.com
108 Celia Anthony Celia@123 7834654881 134,14,Nagarathpet Main Road,Banglore,Karnataka Celia44@gmail.com
109 Johnson Thomas Jthomas@123 9931888912 A/108 Paldi,Ahmedabad,Gujrat lthomas550@gmail.com
110 Dhara Mohan BhatrDhara@1231 9875678001 66 Sector 24 Mujessar,Ram Colony,Delhi,Haryana dbhatt45@gmail.com
```

2. To display details of customer with order amount equal to 300

declare

C_Id customer.customer_id%type;

C_Fname customer.customer_firstname%type;

C_Lname customer.customer_lastname%type;

C_Pass customer.customer_password%type;

C_Phone customer.customer_phoneno%type;

C_Add customer.customer_address%type;

C_Email customer.customer_email%type;

O_Amt Order_details.Order_amount%type;

Cursor x IS select C.customer_id, C.customer_firstname, C.customer_lastname,
C.customer_password, C.customer_phoneno, C.customer_address, C.customer_email,
O.Order_amount from customer C, Order_details O where O.Order_amount=300;

begin

open x;

loop

fetch x into C_Id, C_Fname, C_Lname, C_Pass, C_Phone, C_Add, C_Email, O_Amt;

exit when x%NOTFOUND;

dbms_output.put_line(C_Id||' '||C_Fname||' '||C_Lname||' '||C_Pass||' '||C_Phone||' '||C_Add||'
'||C_Email||' '||O_Amt);

end loop;

close x;

end;

SQL Worksheet

Clear

```
1 declare
2 C_Id customer.customer_id%type;
3 C_Fname customer.customer_firstname%type;
4 C_Lname customer.customer_lastname%type;
5 C_Pass customer.customer_password%type;
6 C_Phone customer.customer_phoneno%type;
7 C_Add customer.customer_address%type;
8 C_Email customer.customer_email%type;
9 O_Amt Order_details.Order_amount%type;
10 Cursor x IS select C.customer_id, C.customer_firstname, C.customer_lastname, C.customer_password, C.customer_phoneno, C.customer_address, C.customer_email, O.Order_amount
11 From customer C, Order_details O where O.Order_amount=300;
12 begin
13 open x;
14 loop
15 fetch x into C_Id, C_Fname, C_Lname, C_Pass, C_Phone, C_Add, C_Email, O_Amt;
16 exit when x%NOTFOUND;
17 dbms_output.put_line(C_Id||' '||C_Fname||' '||C_Lname||' '||C_Pass||' '||C_Phone||' '||C_Add||' '||C_Email||' '||O_Amt);
18 end loop;
19 close x;
20 end;
```

Statement processed.

```
101 Harsh Mehta harsh@123 7435068222 1st Cross,Rammurthy nagar,Bangalore harsh19@gmail.com 300
102 Jainam Shah Jainu@123 9924567892 117, Examiner Road, Fort,Mumbai, Maharashtra lainam33@gmail.com 300
103 Aman Pandya Aman@123 7834578923 L 69 Sector 11,Delhi,Uttar Pradesh-201301 aman@gmail.com 300
104 Heer Madia Her@123 8902345789 Bee H-138, Kodambakkam Road,Chennai, Tamil Nadu heer1723@gmail.com 300
105 Akanksha Yadav Akayad@123 9934654001 295 AjRoad:10, West Hydrebad, Andhra Pradesh akuu@gmail.com 300
106 Karan Punjabi karpun@123 9934688001 Nirmal House Opp Jain Mandir ,Jalandhar,Punjab karan12@gmail.com 300
107 Divya Mulchandnr divmul@123 9874688001 A/3, Tejpal Indl Estate,Andheri (west),Maharashtra div3421@gmail.com 300
108 Celia Anthony Celias@123 7834654881 134,14,Nagarathpet Main Road,Banglore,Karnataka Celias44@gmail.com 300
109 Johnson Thomas Jthomas@123 9931888912 A/108 Paldi,Ahmedabad,Gujrat ithomas550@gmail.com 300
110 Dhara Mohan BhatrDhara@1231 9875678001 66 Sector 24 Mujessar,Ram Colony,Delhi,Haryana dbhatt45@gmail.com 300
```

3. To display details of customer with rating more than 3

```
declare
C_Id customer.customer_id%type;
C_Fname customer.customer_firstname%type;
C_Lname customer.customer_lastname%type;
C_Pass customer.customer_password%type;
C_Phone customer.customer_phoneno%type;
C_Add customer.customer_address%type;
C_Email customer.customer_email%type;
R_Rat Rating.ratings%type;
Cursor x IS select C.customer_id, C.customer_firstname, C.customer_lastname,
C.customer_password, C.customer_phoneno, C.customer_address, C.customer_email,
R.ratings from customer C, Rating R where R.ratings > 3;
begin
open x;
loop
fetch x into C_Id, C_Fname, C_Lname, C_Pass, C_Phone, C_Add, C_Email, R_Rat;
exit when x%NOTFOUND;
dbms_output.put_line(C_Id||' '||C_Fname||' '||C_Lname||' '||C_Pass||' '||C_Phone||' '||C_Add||'
' ||C_Email||' '||R_Rat);
end loop;
close x;
end;
```

#

EXCEPTION HANDLING

1.

DECLARE

temp varchar(20);

BEGIN

SELECT payment_timestamp into temp from payment_details where
payment_mode='PayTM';

exception

WHEN no_data_found THEN

dbms_output.put_line('ERROR');

dbms_output.put_line('there is no payment_mode as PayTM in Payment_details table');

end;

Live SQL

SQL Worksheet

```
1 DECLARE
2     temp varchar(20);
3
4 BEGIN
5     SELECT payment_timestamp into temp from payment_details where payment_mode='PayTM';
6
7 exception
8     WHEN no_data_found THEN
9         dbms_output.put_line('ERROR');
10        dbms_output.put_line('there is no payment_mode as PayTM in Payment_details table');
11 end;
```

Statement processed.

ERROR

there is no payment_mode as PayTM in Payment_details table

2.

DECLARE

myexception EXCEPTION;

order NUMBER (8);

BEGIN

SELECT Order_ID into order from Order_details where Order_status = "Delivered";

IF order > 605 THEN

RAISE myexception;

END IF;

END LOOP;

EXCEPTION

WHEN myexception THEN

RAISE_APPLICATION_ERROR(-20015, 'Order has been delivered,
cashback has been initiated');

END;