COFFEE SHOP DATABASE MANAGEMENT

This system provides client service, order, and employee performance at the coffee shop.Also helps to find a quick access to any information such as clients,employees,menu,etc.It shows the step from the client's visit to the client's payment of the bill.

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Aknur Satybay,Nuray Zhumabay,Ali Maksotov

ERD

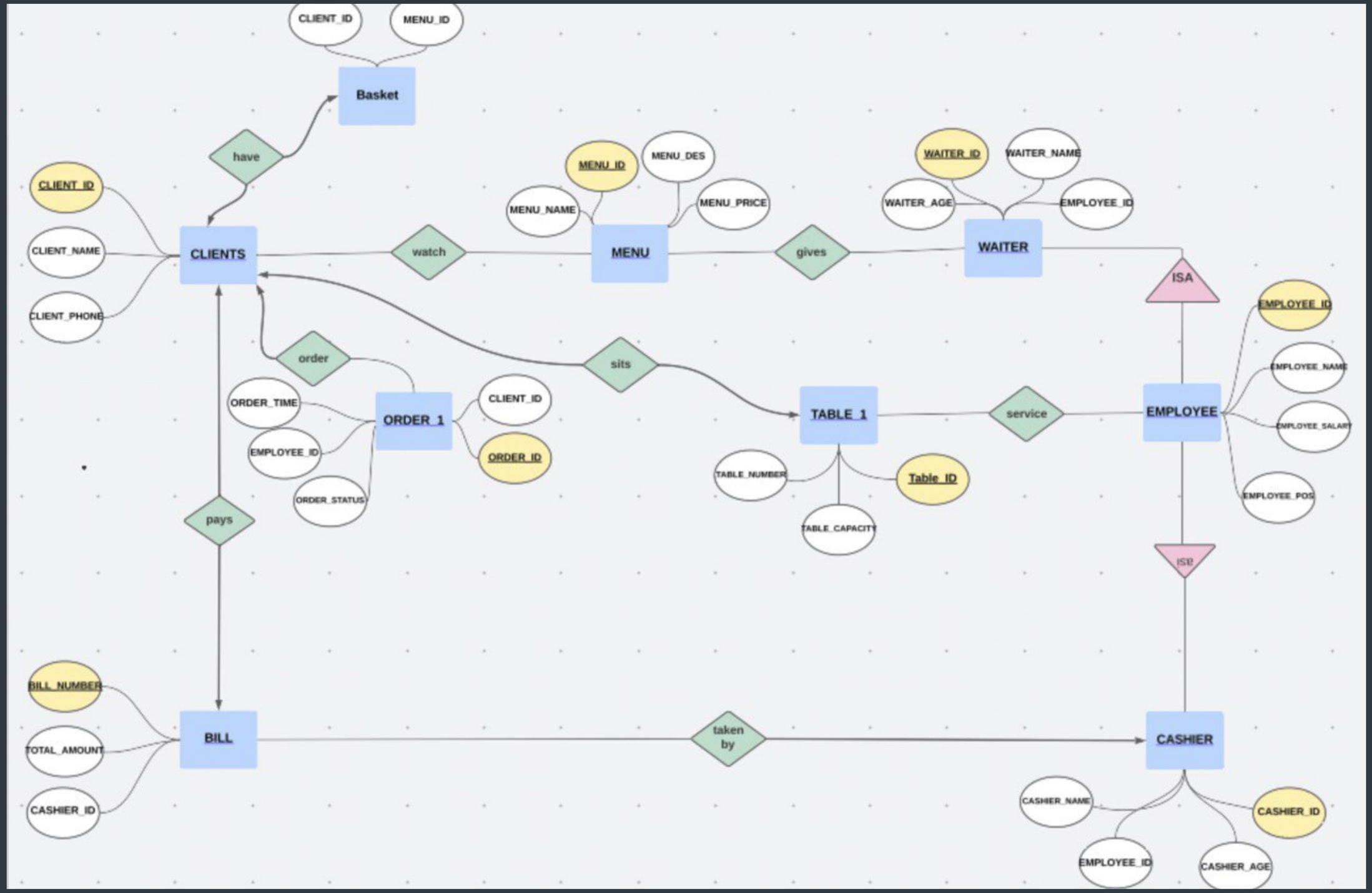
CLIENT_ID
MENU_ID
Basket
have
CLIENT_ID
CLIENT_NAME
CLIENT_PHONE
CLIENTS
watch
MENU_ID
MENU_DES
MENU_NAME
MENU_PRICE
MENU
gives
WAITER_ID
WAITER_NAME
WAITER_AGE
EMPLOYEE_ID
WAITER
ISA
EMPLOYEE_ID
EMPLOYEE_NAME
EMPLOYEE_SALARY
EMPLOYEE_POS
EMPLOYEE
order
sits
ORDER_TIME
EMPLOYEE_ID
ORDER_STATUS
ORDER_1
CLIENT_ID
ORDER_ID
TABLE_1
service
TABLE_NUMBER
Table_ID
TABLE_CAPACITY
pays
ISA
BILL_NUMBER
TOTAL_AMOUNT
CASHIER_ID
BILL
taken by
CASHIER
CASHIER_NAME
CASHIER_ID
EMPLOYEE_ID
CASHIER_AGE

Table Client
{Client_id}->{Client_name},{Client_phone}
Client_id->p key

CLIENT_ID	CLIENT_NAME	CLIENT_PHONE
2	Remy	248-647-8968
4	Debby	412-139-2609
5	Kelcy	304-774-0196

Table Employee
{Employee_id}->{Employee_name},{Employee_pos},
{Employee_salary}
Employee_id->p key

EMPLOYEE_ID	EMPLOYEE_NAME	EMPLOYEE_POS	EMPLOYEE_SALARY
1	Rogers	chef	110000
25	Glynn	chef	110000
26	Damita	chef	110000
15	Aisha	waiter	110000

Table Waiter(subclass of Employee)
{Waiter_id},{Emp_id}->{Waiter_name},
{Waiter_age}
Waiter_id->p key
Emp_id->foreign key

WAITER_ID	WAITER_NAME	WAITER_AGE	EMPLOYEE_ID
20	Aisha	30	15
21	Aisha	18	16
22	Akhan	22	17
23	Alisher	19	18

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Table Cashier(subclass of Employee)
{Cashier_id},{Emp_id}->{Cashier_name},{Cashier_age}
Cashier_id->p key
Emp_id->foreign key

CASHIER_ID	CASHIER_NAME	CASHIER_AGE	EMPLOYEE_ID
200	Nana	18	30
2	Boysey	24	2
3	Karel	31	3
202	Sabrina	20	32

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Table Bill

- **Bill_number, Cashier_id, Client_id -> Total_amount**
- **Bill_number, Cashier_id, Client_id -> Payment_method**

BILL_NUMBER	TOTAL_AMOUNT	CASHIER_ID	CLIENT_ID	PAYMENT_METHOD
70	1300	200	1	CARD
71	11000	201	2	CASH
72	20000	202	3	CARD

MENU_ID	MENU_DESCRIPTION	MENU_NAME	MENU_PRICE
2	boloneze	pasta	1790
3	ice limonade	moxito	1790
4	classic	black tea	690
5	with meat	pelmeni	1490

Table Menu
{Menu_id}->{Menu_name},
{Menu_description,Menu_price}
Menu_id->p key

Table Order_1(subclass of Employee,Clients)
{Order_id},{Emp_id},{Client_id}->
{Order_time},{Order_status}
Waiter_id->p key
Emp_id,Client_id->foreign keys

Results | Explain | Describe | Saved SQL | History

ORDER_ID	ORDER_STATUS	ORDER_TIME	CLIENT_ID	TABLE_ID	EMPLOYEE_ID
51	reservation	0:16	99	60	8
59	runout	12:00	7	68	1
40	ready	12:00	1	60	1

Table Table_1
{Table_id}->{Table_number},
{Table_capacity}
Table_id->p key

Results | Explain | Describe | Saved SQL | History

TABLE_ID	TABLE_NUMBER	TABLE_CAPACITY
60	1	15
61	2	10
62	3	15
63	4	20
64	5	5

Table Basket
Client_id,Menu_ID->foreign key

Results | Explain | Describe | Saved SQL | History

CLIENT_ID	MENU_ID
1	2
1	5
1	2

FUNCTION

creating a function which calculates total amount of food that client ordered

```
create or replace function f3 return VARCHAR2 is
TOTAL integer := 0;
t varchar(32767);
tt integer := 0;
total_clients integer;
i integer := 1;
b boolean := FALSE;
cursor c is
select CLIENT_ID, MENU_ID
from basket;
begin
    select count(*) into total_clients
    from clients;
    while i <= total_clients loop
        b := FALSE;
        for row in c loop
            if row.CLIENT_ID = i then
                b := TRUE;
            end if;
        end loop;
        if b = TRUE then
            for row in c loop
                if row.CLIENT_ID = i then
                    select MENU_PRICE into tt from menu where menu_id = row.MENU_ID;
                    TOTAL := TOTAL + tt;
                end if;
            end loop;
            t := t  CHR(10)  ' Client ID is '  i   ' and his total is ' || TOTAL;
            TOTAL := 0;
            tt := 0;
        end if;
        i := i + 1;
    end loop;
    return t;
end;

DECLARE
 n varchar2(32767);
BEGIN
 n:=f3() ;
 dbms_output.put_line(n);
END;
```

Results | Explain | Describe | Saved SQL | History

```
Client ID is 1 and his total is 5070
Client ID is 3 and his total is 1790
```

FUNCTION 2

```
1   CREATE OR REPLACE FUNCTION cashierAge
2   RETURN NUMBER IS
3    counts number(20):=0;
4
5   begin
6     SELECT count(*) into counts FROM CASHIER WHERE CASHIER_AGE<18 ;
7     RETURN counts;
8
9    EXCEPTION
10    WHEN NO_DATA_FOUND
11    THEN
12     RETURN 0;
13    WHEN OTHERS
14    THEN
15     RETURN -1;
16   END;
17
18  DECLARE
19     n number(20);
20  BEGIN
21     n := cashierAge();
22     dbms_output.put_line('Total number of cashiers who are under 18 is ' || n);
23  END;
24
```

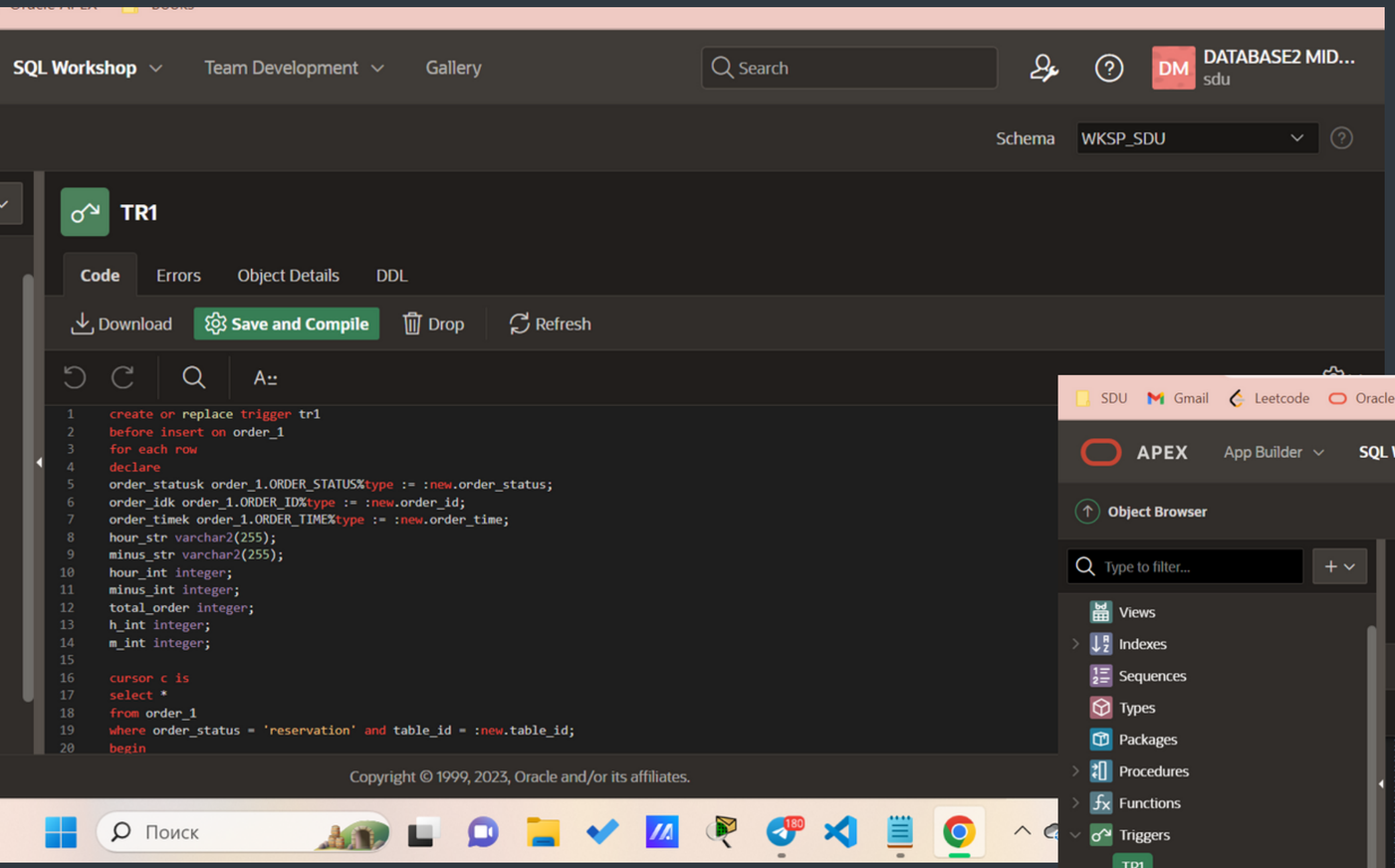
Results | Explain | Describe | Saved SQL | History

```
Total number of cashiers who are under 18 is 2

Statement processed.
```

CREATING A FUNCTION WHICH SHOWS NUMBER OF CASHIERS WHO ARE UNDER 18

Trigger 1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create or replace trigger tr1
before insert on order_1
for each row
declare
order_statusk order_1.ORDER_STATUS%type := :new.order_status;
order_idk order_1.ORDER_ID%type := :new.order_id;
order_timek order_1.ORDER_TIME%type := :new.order_time;
hour_str varchar2(255);
minus_str varchar2(255);
hour_int integer;
minus_int integer;
total_order integer;
h_int integer;
m_int integer;
cursor c is
select *
from order_1
where order_status = 'reservation' and table_id = :new.table_id;
begin
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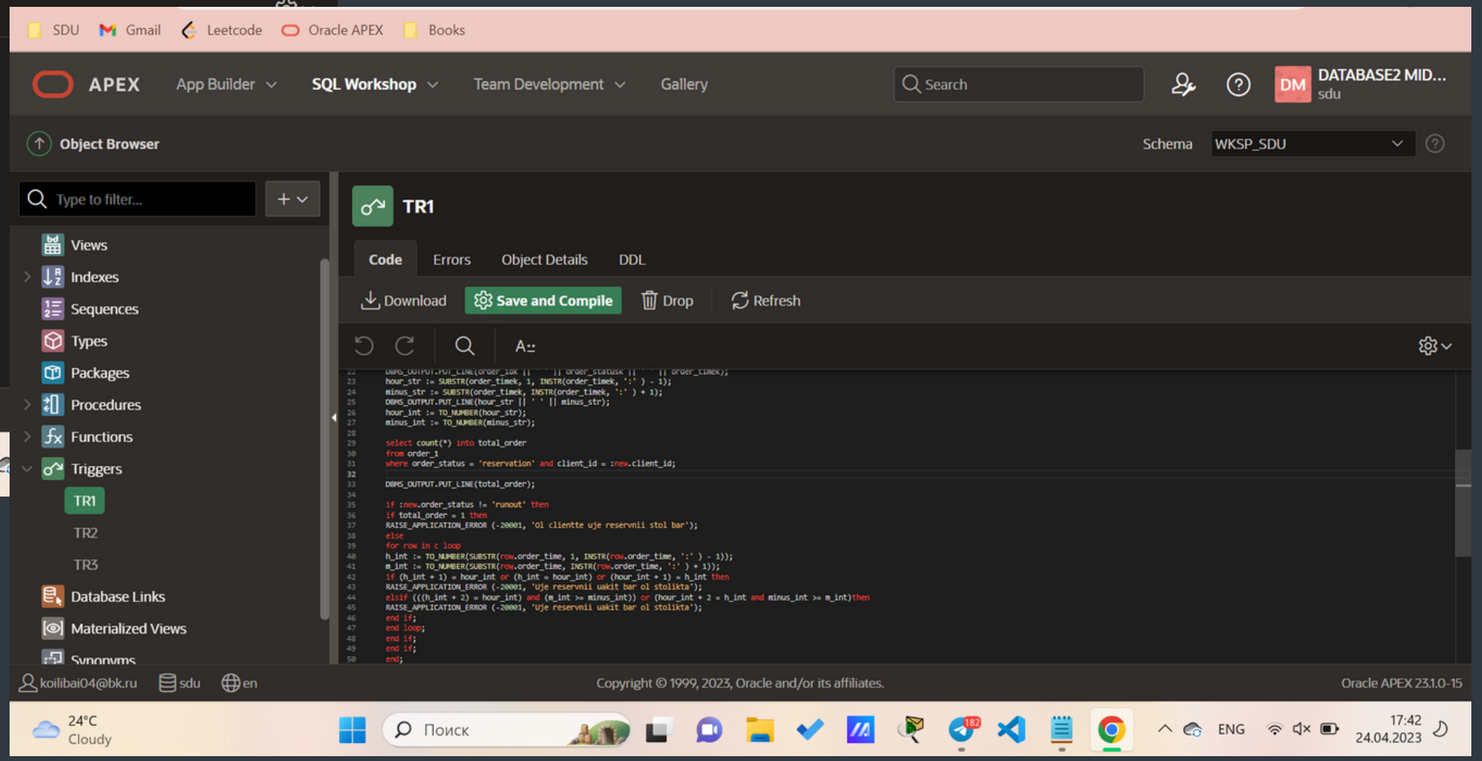
Поиск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TR2
TR3
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hour_str := SUBSTR(order_timek, 1, INSTR(order_timek, ':') - 1);
minus_str := SUBSTR(order_timek, INSTR(order_timek, ':') + 1);
DBMS_OUTPUT.PUT_LINE(hour_str || ' ' || minus_str);
hour_int := TO_NUMBER(hour_str);
minus_int := TO_NUMBER(minus_str);
select count(*) into total_order
from order_1
where order_status = 'reservation' and client_id = :new.client_id;
DBMS_OUTPUT.PUT_LINE(total_order);
if :new.order_status != 'runout' then
if total_order = 1 then
RAISE_APPLICATION_ERROR (-20001, 'Ol clientte uje reservnii stol bar');
else
for row in c loop
h_int := TO_NUMBER(SUBSTR(row.order_time, 1, INSTR(row.order_time, ':') - 1));
m_int := TO_NUMBER(SUBSTR(row.order_time, INSTR(row.order_time, ':') + 1));
if (h_int + 1) = hour_int or (h_int = hour_int) or (hour_int + 1) = h_int then
RAISE_APPLICATION_ERROR (-20001, 'Uje reservnii uakit bar ol stolikta');
elsif (((h_int + 2) = hour_int) and (m_int >= minus_int)) or (hour_int + 2 = h_int and minus_int >= m_int)then
RAISE_APPLICATION_ERROR (-20001, 'Uje reservnii uakit bar ol stolikta');
end if;
end loop;
end if;
end if;
end;
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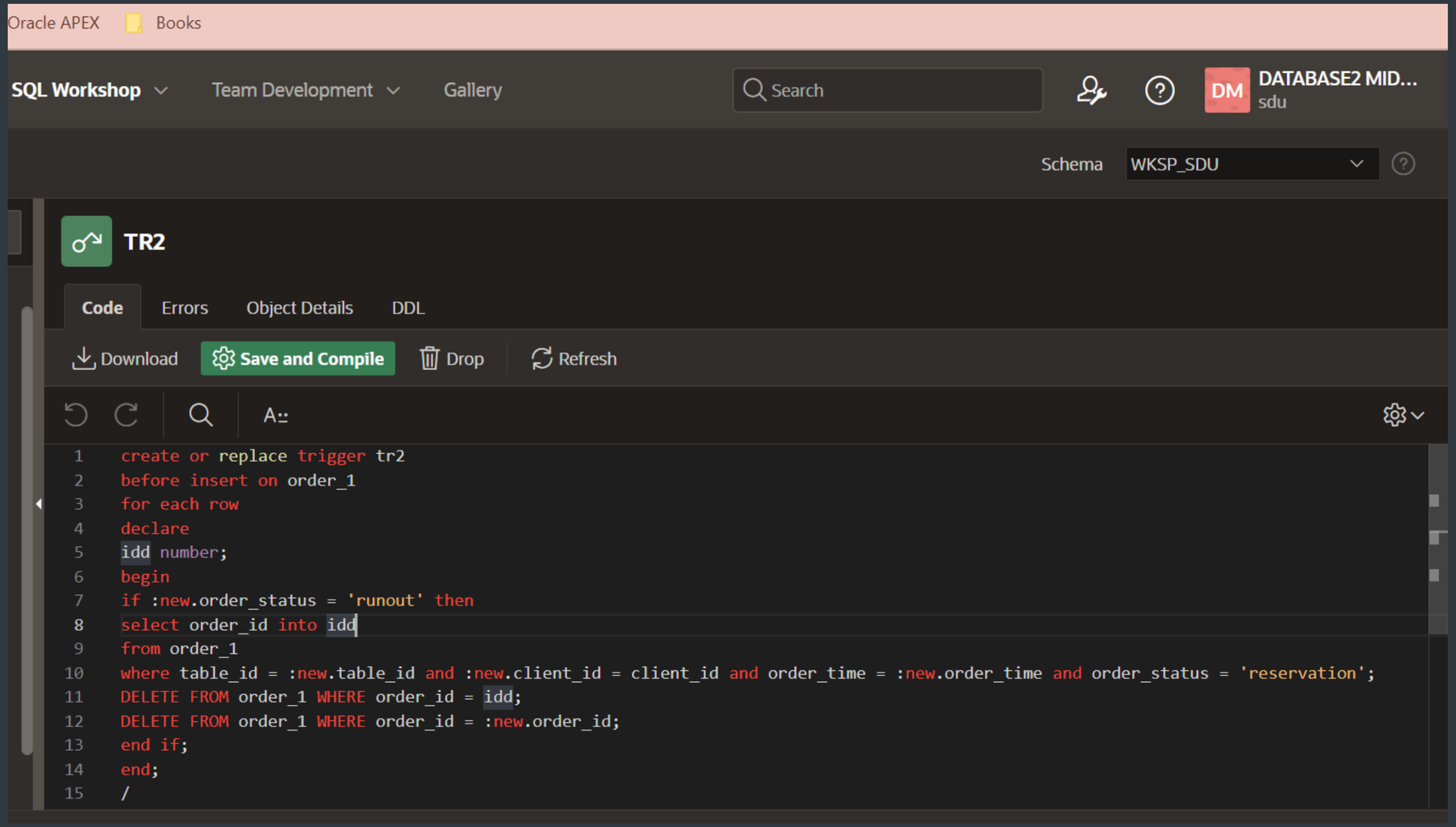
Trigger 2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create or replace trigger tr2
before insert on order_1
for each row
declare
idd number;
begin
if :new.order_status = 'runout' then
select order_id into idd
from order_1
where table_id = :new.table_id and :new.client_id = client_id and order_time = :new.order_time and order_status = 'reservation';
DELETE FROM order_1 WHERE order_id = idd;
DELETE FROM order_1 WHERE order_id = :new.order_id;
end if;
end;
/

Trigger 3

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TR3

Code | Errors | Object Details | DDL

Download | Save and Compile | Drop | Refi

```
1   create or replace trigger tr3
2   before insert on order_1
3   for each row
4   declare
5   total_bill integer;
6   tt integer := 0;
7
8   function total_amountko(c_id number) return number is
9   cursor c_c is
10  select *
11  from basket;
```

TR3

Code | Errors | Object Details | DDL

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```
12  dish_price integer := 0;
13  total integer := 0;
14  begin
15  for row in c_c loop
16  if row.CLIENT_ID = c_id then
17      select menu_price into dish_price
18      from menu
19      where menu_id = row.menu_id;
20      total := total + dish_price;
21      dish_price := 0;
22  end if;
23  end loop;
24  return total;
25  end;
26
27  begin
28  if :new.order_status = 'runout' then
29  select count(*) into total_bill
30  from bill;
31  tt := total_amountko(:new.client_id);
32  insert into bill values(total_bill, tt, 200, :new.client_id, 'CARD');
33  delete from basket where client_id = :new.client_id;
34  end if;
35  end;
```

1 procedure

Language SQL Rows 10 Clear Co

```
CREATE OR REPLACE PROCEDURE update_employee_salary(
    n_employee_id IN employee.employee_id%TYPE,
    i_perc IN NUMBER
)
IS
no_found exception;
BEGIN
    UPDATE employee
    SET employee_salary = employee_salary * (1 + i_perc/100)
    WHERE employee_id = n_employee_id;

    IF SQL%ROWCOUNT = 0 THEN
        RAISE_APPLICATION_ERROR(-20001, 'No employee found with ID ' || n_employee_id);
    ELSE
        DBMS_OUTPUT.PUT_LINE('Salary updated for employee ' || n_employee_id || '.');
    END IF;
EXCEPTION
   WHEN no_found THEN
      dbms_output.put_line('No such employee!');
   WHEN OTHERS THEN
      DBMS_OUTPUT.PUT_LINE('Error: '|| SQLERRM);
END;
```

Results Explain Describe Saved SQL History

rocedure created.

2

```
1 BEGIN
2     update_employee_salary(5, 10);
3 END;
4
5
```

Results Explain Describe Saved SQL History

Salary updated for employee 5.

Statement processed.

procedura 2

```
1   CREATE OR REPLACE PROCEDURE find_sname
2   (o_employee_id IN NUMBER,
3   o_employee_name OUT VARCHAR2,
4   o_employee_pos OUT varchar2
5   )
6   AS
7   BEGIN
8   SELECT employee_name, employee_pos
9   INTO o_employee_name, o_employee_pos
10  FROM employee
11  WHERE employee_id = o_employee_id;
12  EXCEPTION
13  WHEN OTHERS
14  THEN
15  DBMS_OUTPUT.PUT_LINE('Error in finding employee_id: '||o_employee_id);
16  END find_sname;
17
18
```

Results | Explain | Describe | Saved SQL | History

```
Salary updated for employee 5.

Statement processed.
```

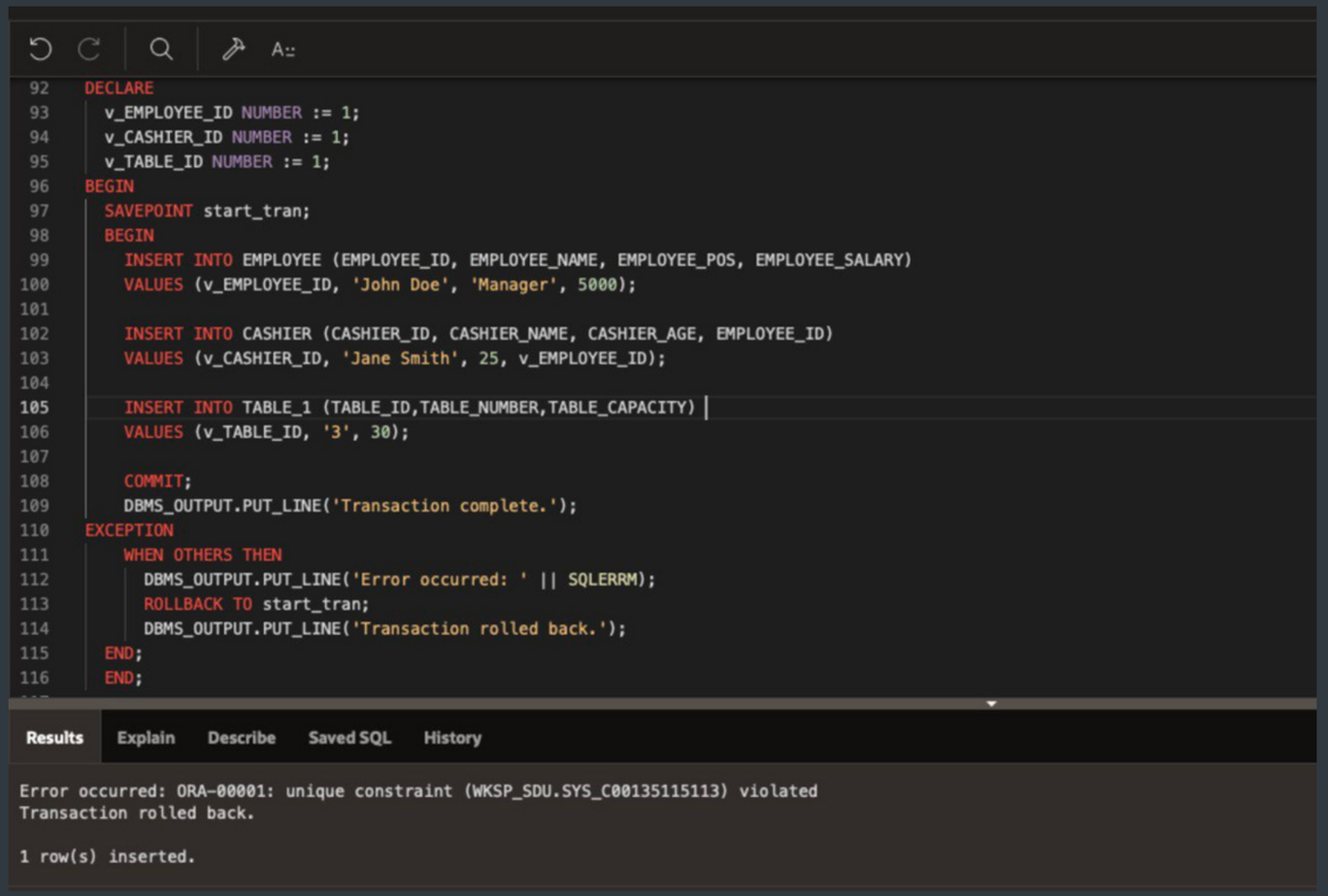
```
1  DECLARE
2    v_local_employee_name employee.employee_name%TYPE;
3    v_local_employee_pos employee.employee_pos%TYPE;
4  BEGIN
5    find_employee(1, v_local_employee_name, v_local_employee_pos);
6    DBMS_OUTPUT.PUT_LINE('Employee is: ' || v_local_employee_name || ' ' || v_local_employee_pos || '.');
7  END;
8  /
```

Results | Explain | Describe | Saved SQL | History

```
Employee is: Rogers chef.

Statement processed.
```

Transaction 1



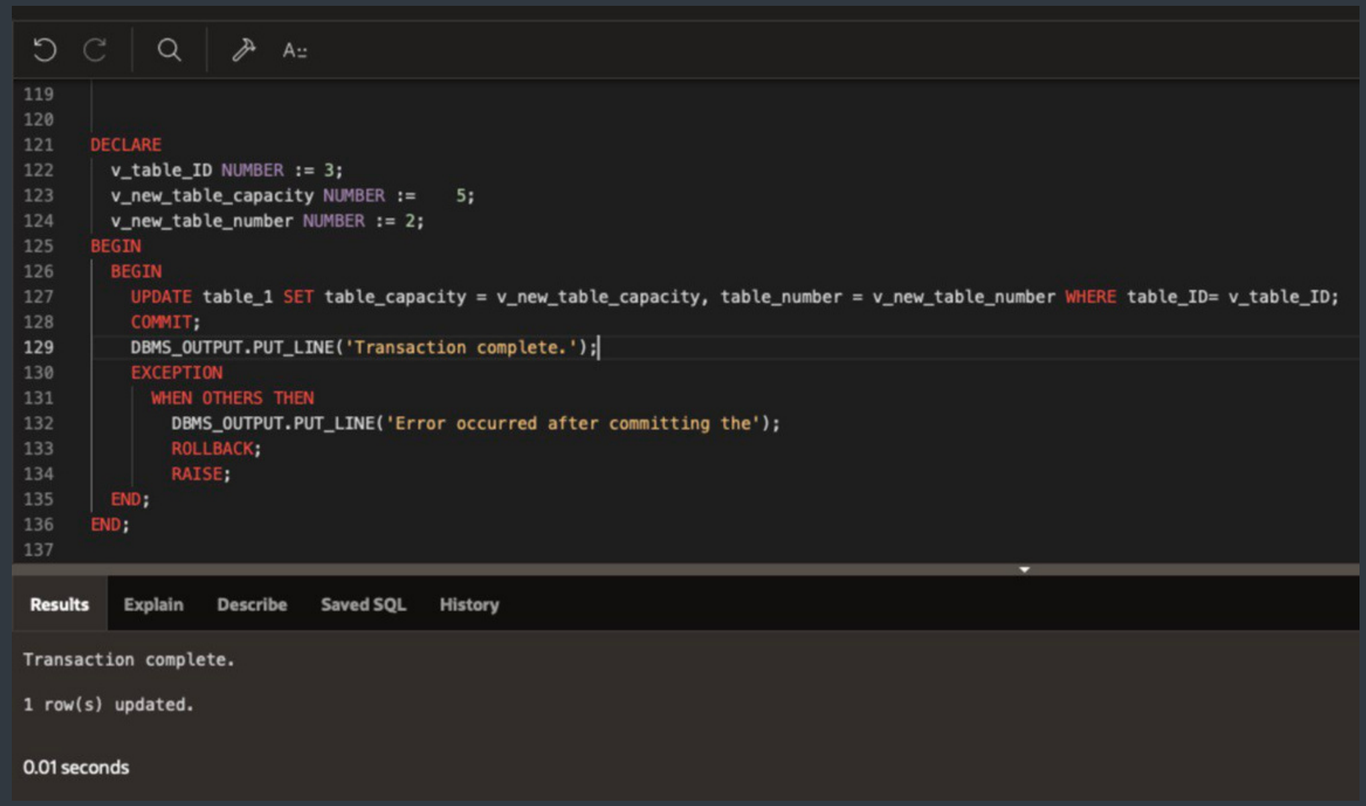
```
92  DECLARE
93    v_EMPLOYEE_ID NUMBER := 1;
94    v_CASHIER_ID NUMBER := 1;
95    v_TABLE_ID NUMBER := 1;
96  BEGIN
97    SAVEPOINT start_tran;
98    BEGIN
99      INSERT INTO EMPLOYEE (EMPLOYEE_ID, EMPLOYEE_NAME, EMPLOYEE_POS, EMPLOYEE_SALARY)
100     VALUES (v_EMPLOYEE_ID, 'John Doe', 'Manager', 5000);
101
102     INSERT INTO CASHIER (CASHIER_ID, CASHIER_NAME, CASHIER_AGE, EMPLOYEE_ID)
103     VALUES (v_CASHIER_ID, 'Jane Smith', 25, v_EMPLOYEE_ID);
104
105     INSERT INTO TABLE_1 (TABLE_ID,TABLE_NUMBER,TABLE_CAPACITY)
106     VALUES (v_TABLE_ID, '3', 30);
107
108     COMMIT;
109     DBMS_OUTPUT.PUT_LINE('Transaction complete.');
110 EXCEPTION
111     WHEN OTHERS THEN
112       DBMS_OUTPUT.PUT_LINE('Error occurred: ' || SQLERRM);
113       ROLLBACK TO start_tran;
114       DBMS_OUTPUT.PUT_LINE('Transaction rolled back.');
115   END;
116   END;
```

Results | Explain | Describe | Saved SQL | History

```
Error occurred: ORA-00001: unique constraint (WKSP_SDU.SYS_C00135115113) violated
Transaction rolled back.

1 row(s) inserted.
```

Transaction 2



```
119
120
121 DECLARE
122   v_table_ID NUMBER := 3;
123   v_new_table_capacity NUMBER :=    5;
124   v_new_table_number NUMBER := 2;
125 BEGIN
126   BEGIN
127     UPDATE table_1 SET table_capacity = v_new_table_capacity, table_number = v_new_table_number WHERE table_ID= v_table_ID;
128     COMMIT;
129     DBMS_OUTPUT.PUT_LINE('Transaction complete.');
130     EXCEPTION
131       WHEN OTHERS THEN
132         DBMS_OUTPUT.PUT_LINE('Error occurred after committing the');
133         ROLLBACK;
134         RAISE;
135   END;
136 END;
137
```

Results | Explain | Describe | Saved SQL | History

```
Transaction complete.

1 row(s) updated.

0.01 seconds
```

```
declare
w_id waiter.waiter_id%type:=204;
w_age waiter.waiter_age%type;
w_name waiter.waiter_name%type;
   wboutage EXCEPTION;
BEGIN
SELECT  waiter_name, waiter_age INTO  w_name, w_age
      FROM waiter
      WHERE waiter_id = w_id;
   IF w_age<18 then
      RAISE wboutage;
   ELSE
      DBMS_OUTPUT.PUT_LINE ('Name: '||  w_name);
      DBMS_OUTPUT.PUT_LINE ('Age: ' || w_age);
   END IF;

   EXCEPTION
      WHEN wboutage THEN
         dbms_output.put_line('Will be fired!');
      WHEN no_data_found THEN
         dbms_output.put_line('No such waiter!');
      WHEN others THEN
         dbms_output.put_line('Error!');
   END;
```

Exception 1

```
No such waiter!

Statement processed.


0.06 seconds
```

Exception 2

```
declare
c_id cashier.cashier_id%type:=204;
c_age cashier.cashier_age%type;
c_name cashier.cashier_name%type;
   cboutage EXCEPTION;
BEGIN
SELECT  cashier_name, cashier_age INTO  c_name, c_age
      FROM cashier
      WHERE cashier_id = c_id;
   IF c_age<18 then
      RAISE cboutage;
   ELSE
      DBMS_OUTPUT.PUT_LINE ('Name: '||  c_name);
      DBMS_OUTPUT.PUT_LINE ('Age: ' || c_age);
   END IF;

EXCEPTION
   WHEN cboutage THEN
      dbms_output.put_line('Will be fired!');
   WHEN no_data_found THEN
      dbms_output.put_line('No such cashier!');
   WHEN others THEN
      dbms_output.put_line('Error!');
END;
```

```
Will be fired!

Statement processed.


0.00 seconds
```

Transaction 3

```
declare
e_id order_1.order_id%type:=58;
e_status order_1.order_status%type;
e_amount bill.total_amount%type;
invalidorder exception;
begin
select order_id, order_status, total_amount into e_id, e_status,e_amount
from order_1, bill
where
order_1.client_id = bill.client_id
   AND order_1.order_id = e_id;
if e_amount<=0 then
raise invalidorder;
else
dbms_output.put_line('Order status: '||e_status);
end if;
```

```
exception
when invalidorder then
dbms_output.put_line('Error!');
when no_data_found then
dbms_output.put_line('No such order');
when others then
dbms_output.put_line('Error');
end;
```

```
Error!

Statement processed.

0.00 seconds
```

```
Order status: runout

Statement processed.

0.07 seconds
```

Everything is fully explained in the video.