Islamic University of Technology CSE 4508

Lab Report 3

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Section: 1

Lab Group: 1B (shifted from 1A)

Date of Performance: 30/08/23

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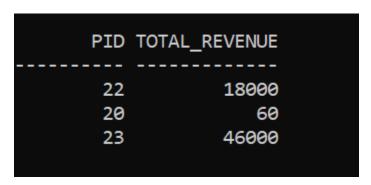
Task A

At first we will create 3 tables in our database and insert some data within the tables.

```
create table Products(
   product_id int primary key,
   name varchar2(40),
   unit_price int
);
create table Orders(
   order_id int primary key,
   customer_id int,
   order_date varchar2(22)
);
create table Order_items(
   order_id int,
   product_id int,
    quantity int,
   CONSTRAINT fk_order_items_order_id FOREIGN KEY (order_id) REFERENCES
Orders(order_id),
    CONSTRAINT fk_order_items_product_id FOREIGN KEY (product_id) REFERENCES
Products(product_id)
);
```

```
insert into Products values(20 , 'Doll', 20);
insert into Products values(21 , 'Socks', 30);
insert into Products values(22 , '4- dimensional pocket', 3000);
insert into Products values(23 , 'Anywhere door', 2000);
insert into Products values(24 , 'Small light', 200);
insert into Products values(25 , 'Big light', 300);
insert into Products values(26 , 'Bamboo copter', 50);
insert into Products values(27 , 'Time machine', 5000);
insert into Products values(28 , 'Air canon', 200);
insert into Products values(29 , 'Animal beam', 220);
insert into Orders values(500 , 1000, 'July 20, 2023');
insert into Orders values(501 , 1001, 'June 13, 2023');
insert into Orders values(502 , 1002, 'June 24, 2023');
insert into Orders values(503 , 1003, 'July 26, 2023');
insert into Orders values(504 , 1004, 'June 17, 2023');
insert into Orders values(505 , 1005, 'July 19, 2023');
insert into Orders values(506 , 1006, 'June 20, 2023');
insert into Orders values(507 , 1007, 'July 30, 2023');
insert into Orders values(508 , 1008, 'July 23, 2023');
insert into Orders values(509 , 1009, 'June 12, 2023');
insert into Order items values(509, 23, 23);
insert into Order items values(508, 23, 2);
insert into Order_items values(507, 24, 4);
insert into Order items values(505, 22, 5);
insert into Order_items values(501 , 22, 6);
insert into Order items values(500 , 26, 7);
insert into Order items values(508, 26, 2);
insert into Order items values(507, 27, 3);
insert into Order items values(507, 28, 5);
insert into Order_items values(503, 21, 6);
insert into Order items values(502, 20, 3);
```

Query for A1:



Query for A2:

SERIAL	PRODUCT_ID	TOTAL_QUANTITY	
1	26	9	
2	21	6	
3	22	5	
4	28	5	
5	24	4	

Query for A3:

```
select customer_id from(
    select customer_id, sum(quantity * unit_price) as total_money
    from Products, Orders, Order_items
    where Products.product_id = Order_items.product_id and
        Orders.order_id = Order_items.order_id and
        order_date like '%July%'
    group by Orders.customer_id
)
where total_money >= 1000;
```

```
CUSTOMER_ID
-----
1007
1005
1008
```

Query for A4:

```
--A4
update Products set unit_price = 1.5 * unit_price
where product_id in
(
    select Products.product_id
    from Products, Orders, Order_items
    where Products.product_id = Order_items.product_id and
        Orders.order_id = Order_items.order_id and
        order_date like '%July%'
    group by Products.product_id
    having sum(quantity) >= 5
);
```

```
4 rows updated.
SQL> select * from Products;
PRODUCT_ID NAME
                                             UNIT_PRICE
             20 Doll
                                                     20
       21 Socks
                                                     45
       22 4- dimensional pocket
                                                   4500
       23 Anywhere door
                                                   2000
       24 Small light
                                                    200
       25 Big light
                                                    300
       26 Bamboo copter
                                                     75
       27 Time machine
                                                   5000
       28 Air canon
                                                    300
       29 Animal beam
                                                    220
10 rows selected.
```

<u>Previous Table</u>:

PRODUCT_ID	NAME	UNIT_PRICE
20	Doll	20
21	Socks	30
22	4- dimensional pocket	3000
23	Anywhere door	2000
24	Small light	200
25	Big light	300
26	Bamboo copter	50
27	Time machine	5000
28	Air canon	200
29	Animal beam	220
10 rows sel	lected.	

Task B

In Task B, we were asked to demonstrate the use of some builtin functions. The examples are given below.

CONCAT:

```
SQL> SELECT CONCAT('Mimi', 'Mina') AS concatenated_string from DUAL;

CONCATEN

-----
MimiMina
```

INSTR:

```
SQL> SELECT INSTR('Doraemon', 'mon') AS position FROM dual;

POSITION
-----6
```

LOWER:

```
SQL> SELECT LOWER('NOBITA') AS lower_text FROM dual;

LOWER_
-----
nobita
```

UPPER:

```
SQL> SELECT UPPER('riruru') AS upper_text FROM dual;

UPPER_
-----
RIRURU
```

LENGTH:

```
SQL> SELECT LENGTH('Nobita sleeps') AS text_length FROM dual;
TEXT_LENGTH
------
13
```

L/R PAD:

L/R TRIM:

```
SQL> SELECT LTRIM(' Karayel ') AS left_trimmed_text FROM dual;

LEFT_TRIMM
------
Karayel

SQL> SELECT RTRIM(' Karayel ') AS right_trimmed_text FROM dual;

RIGHT_TRIM
------
Karayel
```

SUBSTR:

```
SQL> SELECT SUBSTR('Computer Science', 10) AS extracted_substring FROM dual;

EXTRACT

-----
Science
```

COUNT: