DATABASE TECHNOLOGIES

Section - I

Create a table Stock with stockid number, stockdet xmltype. Insert values into the stock table as shown below.

```
create table stock(stockid number, stockdet xmltype);

insert into stock values(1, xmltype('<?xml version="1.0"?>
<?xml:stylesheet type="text/xsl" href="stock.xsl"?>
<portfolio xmlns:dt="urn:schemas-microsoft-com:datatypes">
<stock exchange="nasdaq">
<name>new</name>
<symbol>zzzz</symbol>
<price dt:dt="number">20.313</price>
</stock>
<stock exchange="nyse">
<name>zacx corp</name>
<symbol>ZCXM</symbol>
<price dt:dt="number">28.875</price>
</stock>
<stock exchange="nasdaq">
<name>zaffymat inc</name>
<symbol>ZFFX</symbol>
<price dt:dt="number">92.250</price>
</stock>
<stock exchange="nasdaq">
<name>zymergy inc</name>
```

```
ble STOCK created.


row inserted.
```

1. **Display stock price whose value is greater than 50.50 using xpath.**

```
WITH
  stock_data AS
    (select xt.* from stock x, xmltable('portfolio/stock'
        passing x.stockdet columns
        stock_exchange varchar2(10) path '@exchange',
        name varchar2(10) path 'name',
        symbol varchar2(12) path 'symbol',
        price number(10, 4) path 'price')
    xt)
    select * from stock_data where price>50.50;
```

Display only the attribute values of the Stock exchange.

```
WITH
  stock_data AS
    (select xt.* from stock x, xmltable('portfolio/stock'
        passing x.stockdet columns
        stock_exchange varchar2(10) path '@exchange',
        name varchar2(10) path 'name',
        symbol varchar2(12) path 'symbol',
        price number(10, 4) path 'price')
    xt)
    select stock_exchange from stock_data;
```

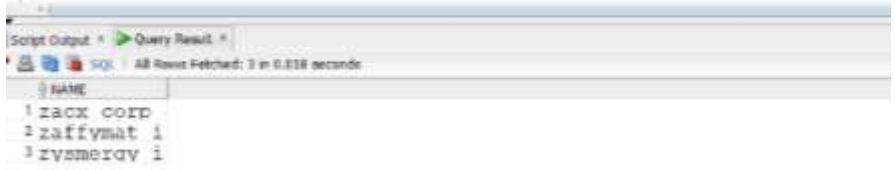
Script Output × Query Result ×

All Rows Fetched: 4 in 0.023 seconds

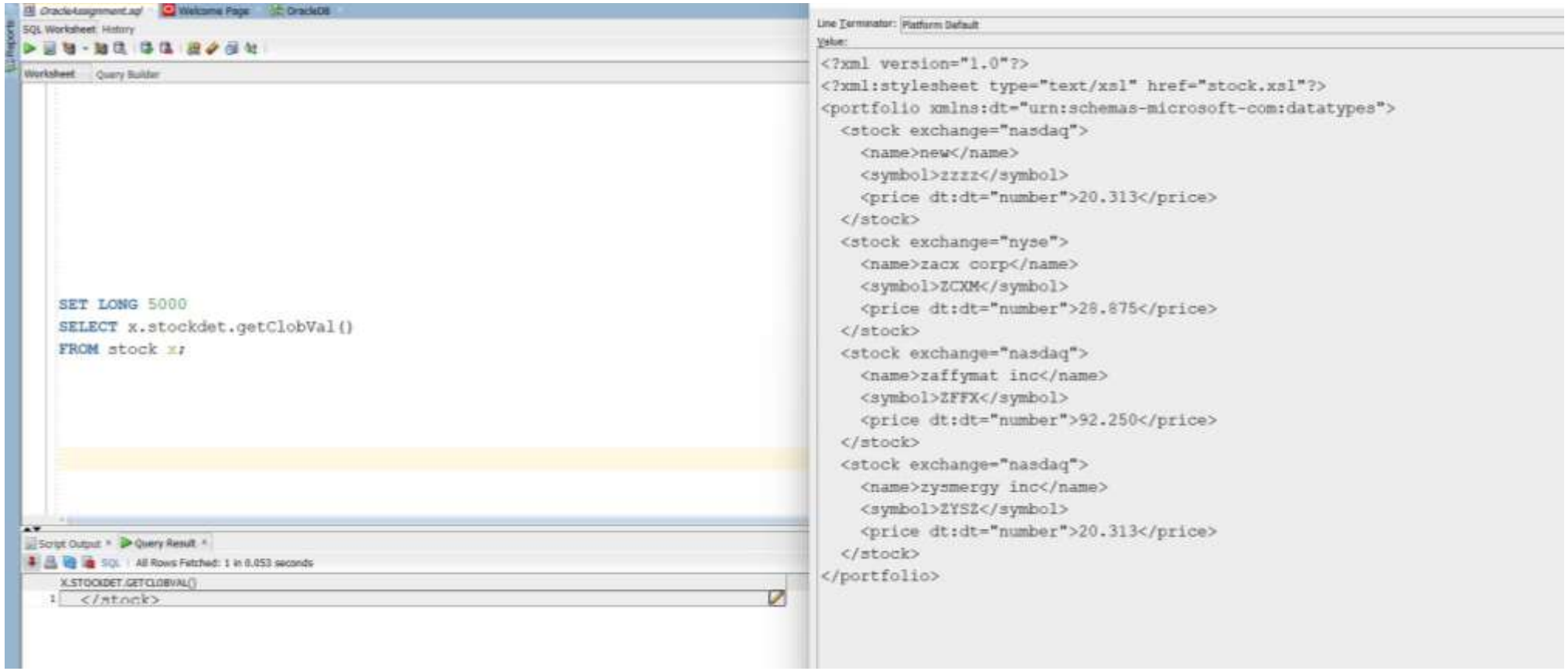
	STOCK_EXCHANGE
1	nasdaq
2	nyse
3	nasdaq
4	nasdaq

2. **Display the name of the stock whose name starts with "z…".**

```
WITH
  stock_data AS
    (select xt.* from stock x, xmltable('portfolio/stock'
        passing x.stockdet columns
        stock_exchange varchar2(10) path '@exchange',
        name varchar2(10) path 'name',
        symbol varchar2(12) path 'symbol',
        price number(10, 4) path 'price')
    xt)
    select name from stock_data where name like 'z%';
```



3. Display the all the elements of the stock.



4. **Display only the symbol and price values.**

```
WITH
  stock_data AS
    (select xt.* from stock x, xmltable('portfolio/stock'
        passing x.stockdet columns
        symbol varchar2(12) path 'symbol',
        price number(10, 4) path 'price')
    xt)
    select symbol, price from stock_data;
```

	SYMBOL	PRICE
1	zzzz	20.313
2	ZCXM	28.875
3	ZFFX	92.25
4	ZYSZ	20.313

5. Change the price value of stock whose name is “zysmergy inc”.

```
update stock set stockdet = updatexml(stockdet,'portfolio/stock[name="zysmergy inc"]',
xmltype('<stock exchange="nasdaq">
 <name>zysmergy inc</name>
 <symbol>ZYSZ</symbol>
 <price>100</price>
 </stock>
'));
```

```
Script Output | Query Result | Query Result 1
Task completed in 0.208 seconds
>>Query Run In:Query Result

1 row updated.
```

Section - II

Convert RDBMS table into XMLtype. For the following Restaurant data. Create tables for restaurant and menu as per xml document shown below. Copy the restaurant information into the 'rest_xmltab' using PL/SQL.

```
create or replace type coordinate as object(
latitutude varchar2(30),
longtitude varchar2(30));

CREATE OR REPLACE TYPE addr AS OBJECT (
 street varchar2(30),
 city varchar2(20),
 country varchar2(30),
 coordinates coordinate
);

create or replace type map_zoom as object
(minZoomLevel number(3),
    maxZoomLevel number(3));
```

Script Output | Query Result | Query Result 1

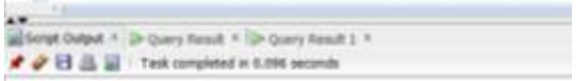
Task completed in 0.083 seconds

```
Type COORDINATE compiled


Type ADDR compiled


Type MAP_ZOOM compiled
```

```
create table restaurant(
    name varchar2(30),
    logo varchar2(30),
    address addr,
    map map_zoom,
    telephone varchar2(13),
    url varchar2(60),
    description VARCHAR2(1000)
);
```




```
Table RESTAURANT created.
```

```
insert into restaurant values(
'dinner',
'content/logo.png',
addr('1567 Broadway', 'New York', 'United States', coordinate('40.75930175423635', '-73.98525953292847')),
map_zoom(12, 17),
'+2129189999',
'http://www.diner.com',
'It takes guts to open a restaurant in Times Square that lacks a theme or
strives to be classier than a carnival. Granted, Diner offers an audacious voyeurs paradise in
its soaring staircase that rises alongside a suspended abstract sculpture of a fork. Mayson
Bacon Jr. has succeeded finding a perfect balance between class and bacon.'
);
```

Script Output | Query Result | Query Result 1

Task completed in 0.073 seconds

```
1 row inserted.
```

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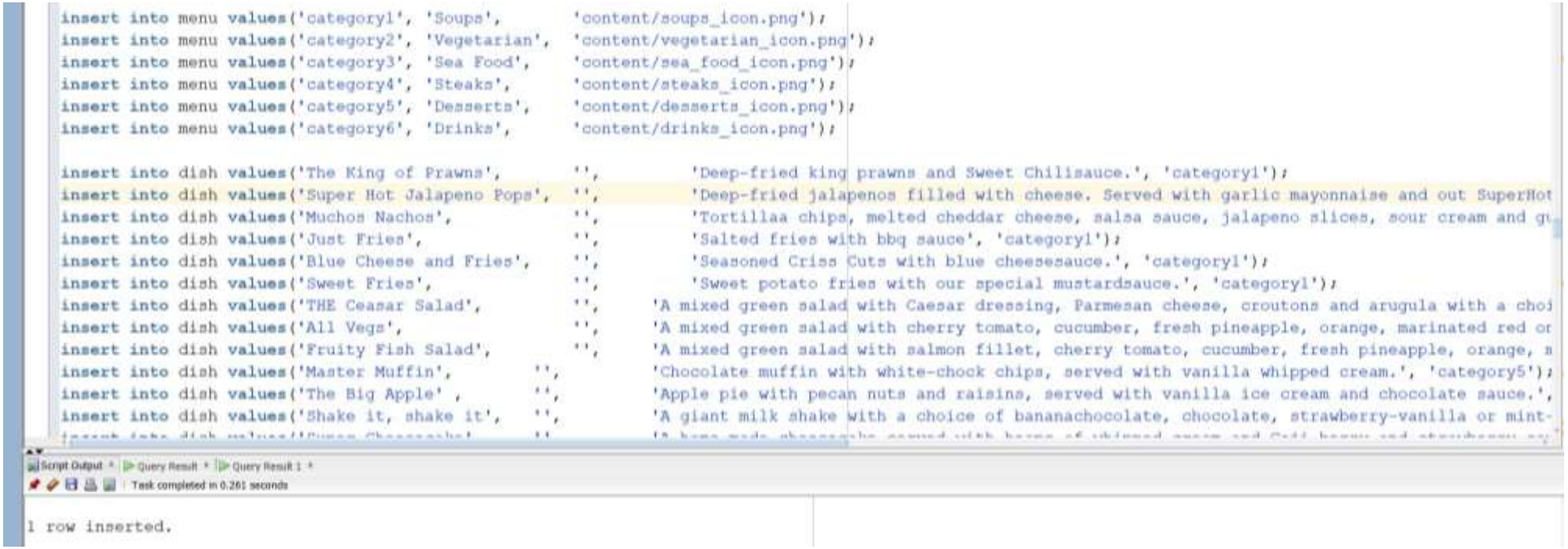


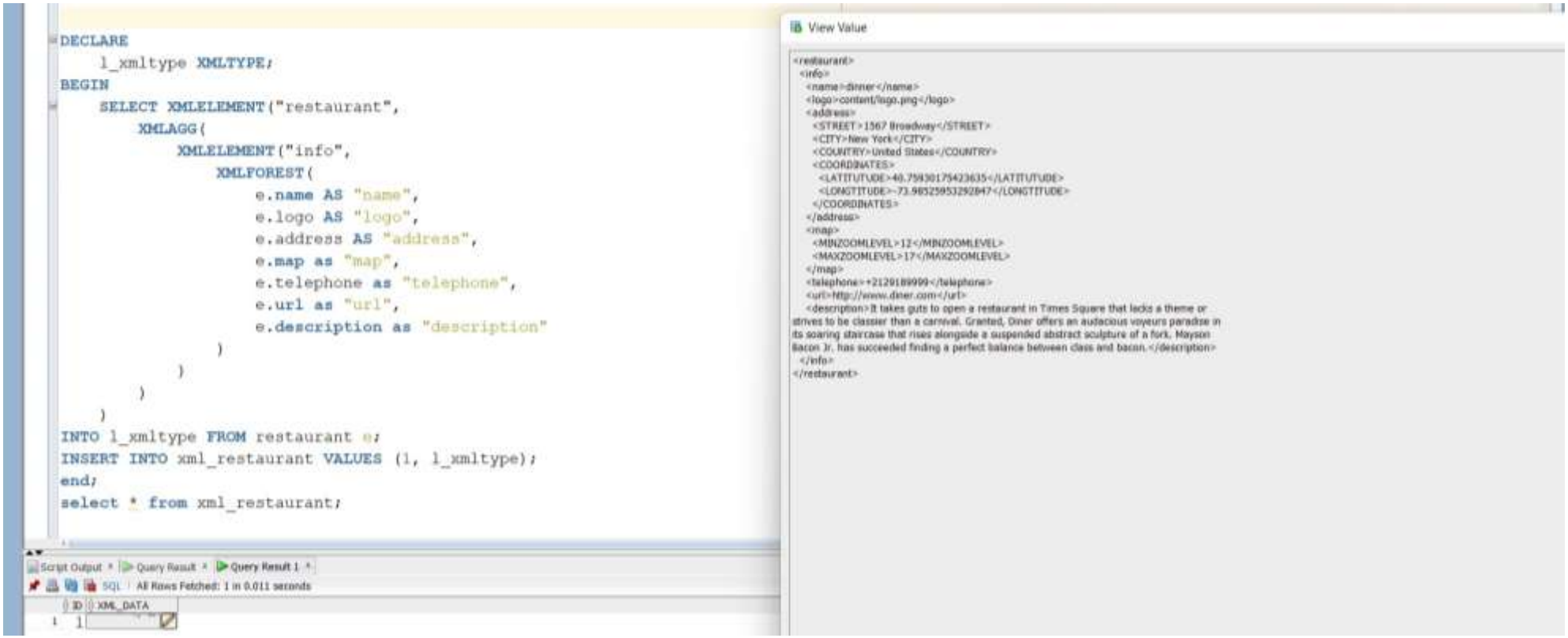
```
insert into menu values('category1', 'Soups',       'content/soups_icon.png');
insert into menu values('category2', 'Vegetarian',  'content/vegetarian_icon.png');
insert into menu values('category3', 'Sea Food',    'content/sea_food_icon.png');
insert into menu values('category4', 'Steaks',      'content/steaks_icon.png');
insert into menu values('category5', 'Desserts',    'content/desserts_icon.png');
insert into menu values('category6', 'Drinks',      'content/drinks_icon.png');

insert into dish values('The King of Prawns',       '',         'Deep-fried king prawns and Sweet Chilisauce.', 'category1');
insert into dish values('Super Hot Jalapeno Pops',  '',         'Deep-fried jalapenos filled with cheese. Served with garlic mayonnaise and out SuperHot
insert into dish values('Muchos Nachos',            '',         'Tortillaa chips, melted cheddar cheese, salsa sauce, jalapeno slices, sour cream and gu
insert into dish values('Just Fries',               '',         'Salted fries with bbq sauce', 'category1');
insert into dish values('Blue Cheese and Fries',    '',         'Seasoned Criss Cuts with blue cheesesauce.', 'category1');
insert into dish values('Sweet Fries',              '',         'Sweet potato fries with our special mustardsauce.', 'category1');
insert into dish values('THE Ceasar Salad',         '',     'A mixed green salad with Caesar dressing, Parmesan cheese, croutons and arugula with a choi
insert into dish values('All Vegs',                 '',     'A mixed green salad with cherry tomato, cucumber, fresh pineapple, orange, marinated red or
insert into dish values('Fruity Fish Salad',        '',     'A mixed green salad with salmon fillet, cherry tomato, cucumber, fresh pineapple, orange, s
insert into dish values('Master Muffin',        '',         'Chocolate muffin with white-chock chips, served with vanilla whipped cream.', 'category5');
insert into dish values('The Big Apple' ,       '',         'Apple pie with pecan nuts and raisins, served with vanilla ice cream and chocolate sauce.',
insert into dish values('Shake it, shake it',   '',         'A giant milk shake with a choice of bananachocolate, chocolate, strawberry-vanilla or mint-
```

Script Output × | Query Result × | Query Result 1 ×

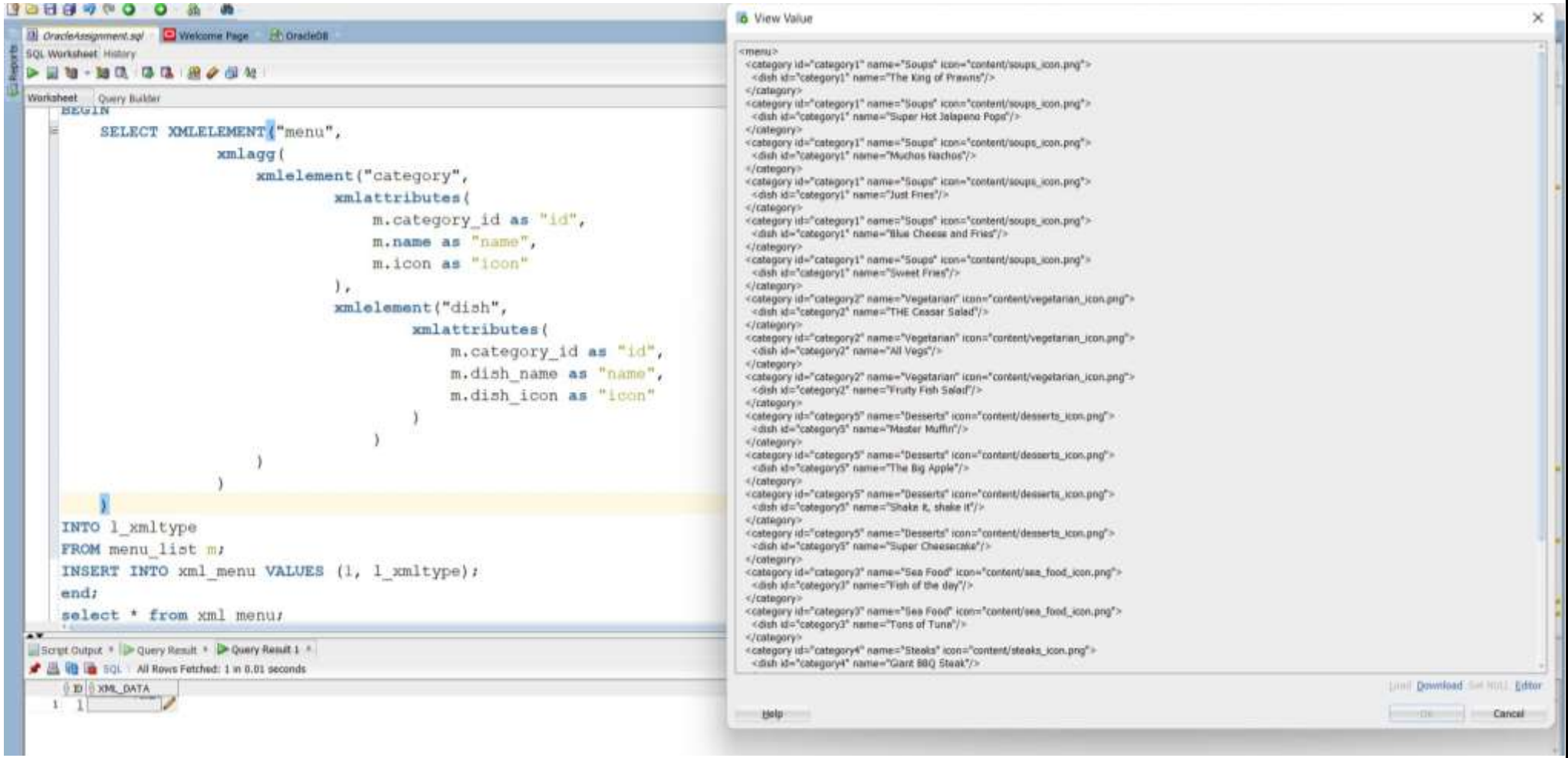
Task completed in 0.261 seconds

```
1 row inserted.
```

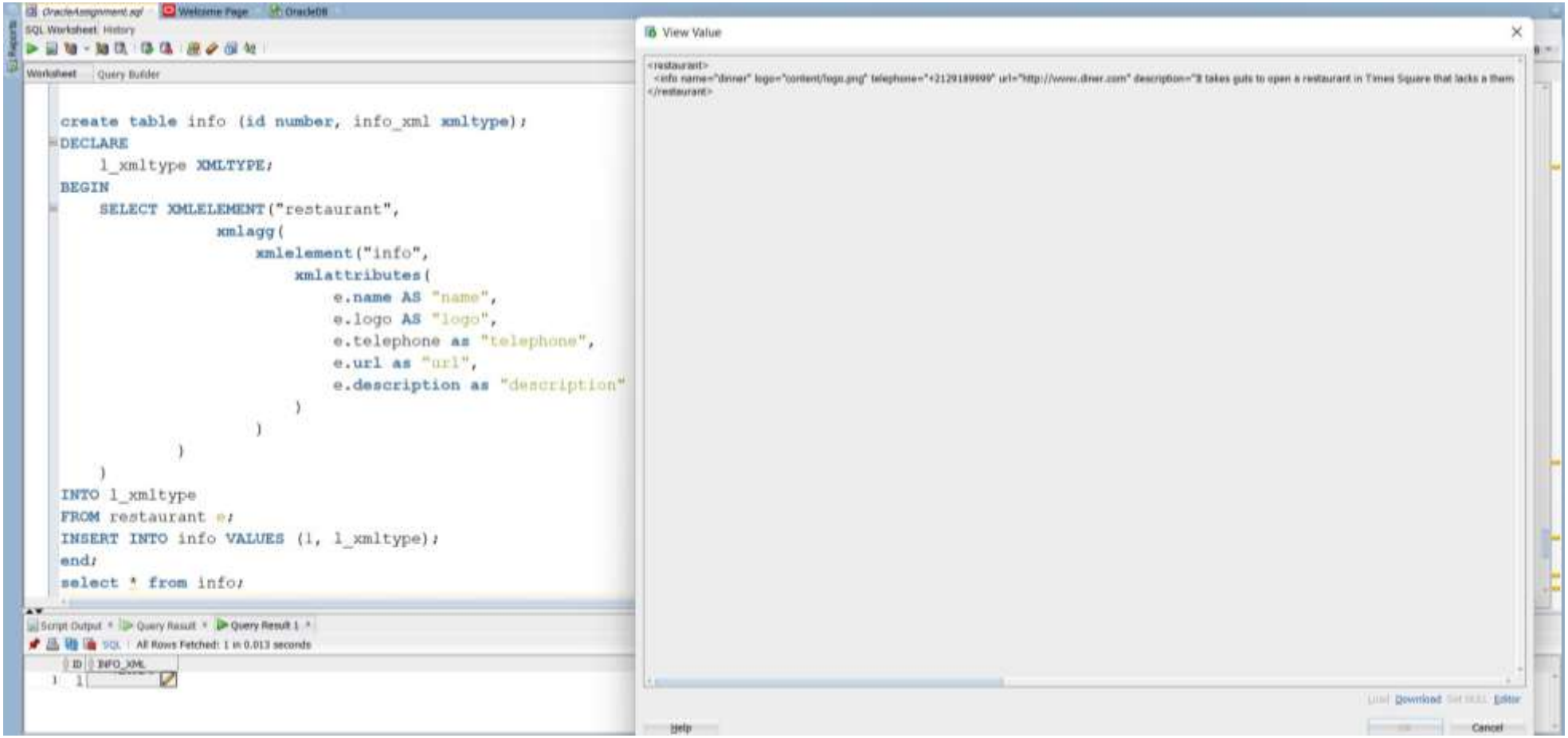
1. **Retrieve the restaurant information into xml form using PL/SQL code**



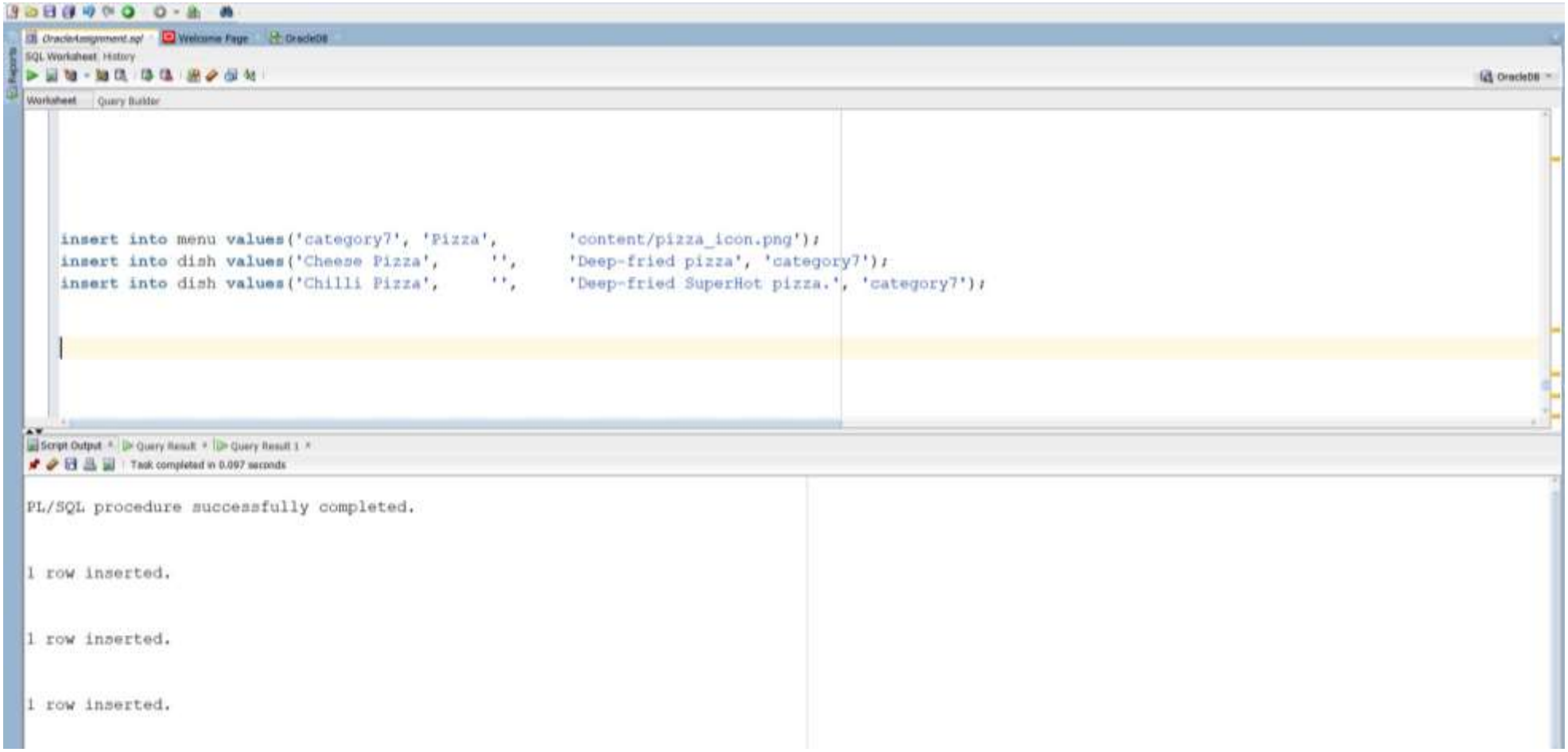
2. Retrieve the menu details into xml column



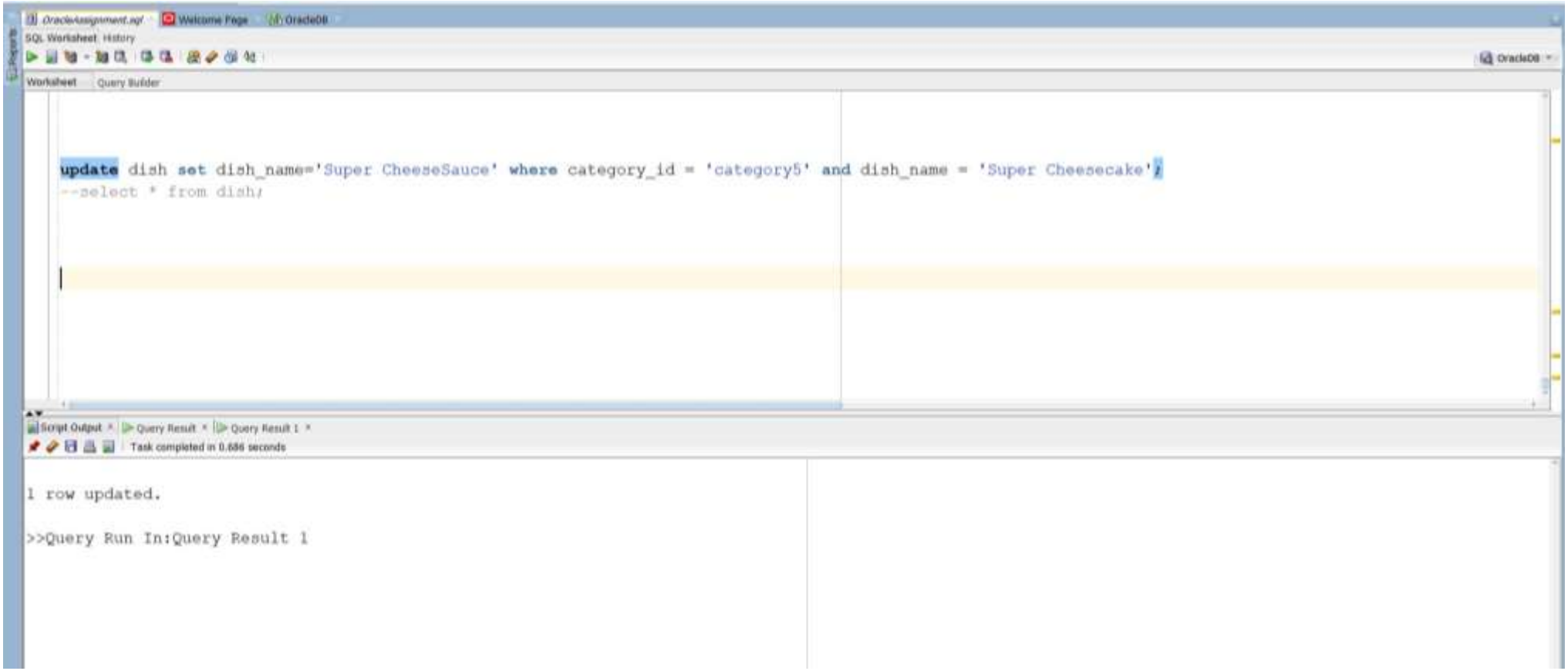
3. Retrieve the info details of sub element as an attribute of info tag.



4. Insert a new category element with a set of dish names.



5. Update “category5” of dish name “Super Cheesecake” into “Super Cheese Sauce”.



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