

PRACTICAL NO 7

XML Database

Abhishek Ojha
Seat No 027

Practical 7: XML Database

Aim:

Create a table employee having dept_id as number datatype and employee_spec as XML data type (XM_Type). The employee_spec is a schema with attributes emp_id, name, email, acc_no, managerEmail, dataOf Joining. Insert 10 tuples into employee table. Fire the following queries on XML database.

Query:

1. Retrieve the names of employee.
2. Retrieve the acc_no of employees.
3. Retrieve the names, acc_no, and email of employees.
4. Update the 3rd record from the table and display the name of an employee.
5. Delete 4th record from the table

Software Requirements:

Oracle 11g Express Edition, Any browser.

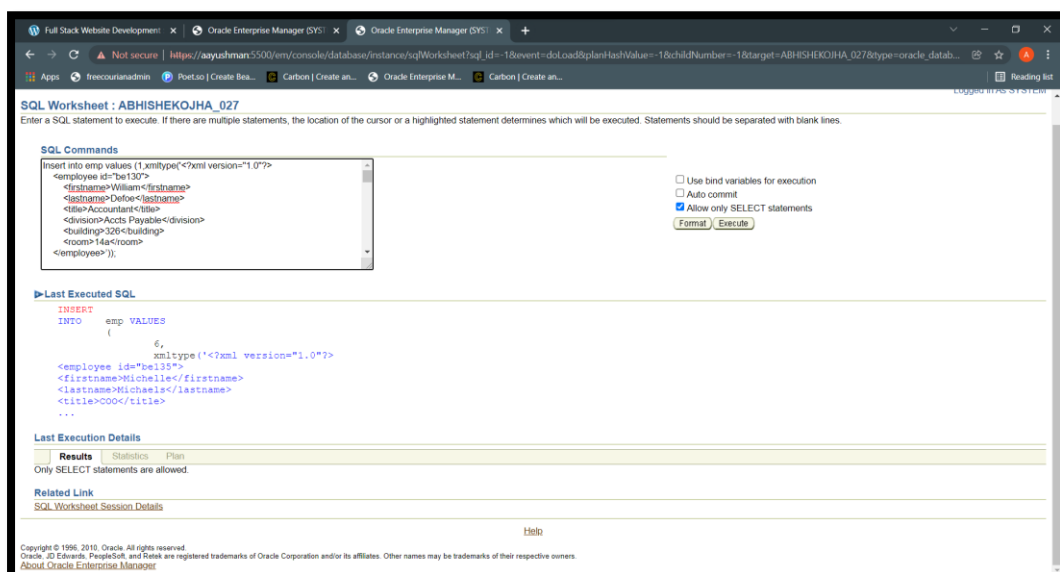
Practical Implementation:

1. Create Table Employee



```
SQL Plus
Connected.
SQL> create table emp
2 (
3   emp_id int,
4   emp_spec xmltype
5 );
Table created.
```

2. Insert Some Records in Created Table



```
SQL Commands
Insert into emp values (1,xmtype('<?xml version="1.0"?>
<employee id="be130">
  <firstname>William</firstname>
  <lastname>Deke</lastname>
  <title>Accountant</title>
  <division>Accts Payable</division>
  <building>326</building>
  <room>14a</room>
</employee> ));

Last Executed SQL
INSERT
INTO emp VALUES
(
6,
xmtype('<?xml version="1.0"?>
<employee id="be135">
  <firstname>Michelle</firstname>
  <lastname>Michaelis</lastname>
  <title>COO</title>
...
Last Execution Details
Results
Only SELECT statements are allowed.
```

```
SQL Plus
SQL> Insert into emp values (1,xmotype('<?xml version="1.0"?>
2  <employee id="emp01">
3      <firstname>Aayushman</firstname>
4      <lastname>Ojha</lastname>
5      <title>Manager</title>
6      <division>IT</division>
7      <building>212</building>
8      <room>11g</room>
9      </employee>'));
1 row created.

SQL> Insert into emp values (2,xmotype('<?xml version="1.0"?>
2  <employee id="emp02">
3      <firstname>Joye</firstname>
4      <lastname>Dale</lastname>
5      <title>Engineer</title>
6      <division>Materials</division>
7      <building>327</building>
8      <room>19</room>
9      <supervisor>sup01</supervisor>
10     </employee>'));
1 row created.

SQL> Insert into emp values (3,xmotype('<?xml version="1.0"?>
2  <employee id="emp03">
3      <firstname>Enrique</firstname>
4      <lastname>Iglesias</lastname>
5      <title>Engineer</title>
6      <division>Materials</division>
7      <building>328</building>
8      <room>18</room>
9      <supervisor>sup02</supervisor>
10     </employee>'));
1 row created.

SQL> Insert into emp values (4,xmotype('<?xml version="1.0"?>
2  <employee id="emp04">
3      <firstname>Sandra</firstname>
4      <lastname>Rogers</lastname>
5      <title>Engineering</title>
6      <division>Materials</division>
```

```
SQL Plus

SQL> Insert into emp values (4,xmotype('<?xml version="1.0"?>
2      <employee id="emp04">
3        <firstname>Sandra</firstname>
4        <lastname>Rogers</lastname>
5        <title>Engineering</title>
6        <division>Materials</division>
7        <building>312</building>
8        <room>22</room>
9      </employee>'));

1 row created.

SQL> Insert into emp values (5,xmotype('<?xml version="1.0"?>
2      <employee id="emp05">
3        <firstname>Steve</firstname>
4        <lastname>Casey</lastname>
5        <title>Engineering</title>
6        <division>Materials</division>
7        <building>345</building>
8        <room>24</room>
9      </employee>'));

1 row created.

SQL> Insert into emp values (6,xmotype('<?xml version="1.0"?>
2      <employee id="emp06">
3        <firstname>Baila</firstname>
4        <lastname>Connigo</lastname>
5        <title>COO</title>
6        <division>Management</division>
7        <building>216</building>
8        <room>264</room>
9      </employee>'));

1 row created.

SQL>
```

```
SQL Plus

SQL> select * from emp;

EMP_ID EMP_SPEC
-----
1 <?xml version="1.0"?>
2 <?xml version="1.0"?>
3 <?xml version="1.0"?>
4 <?xml version="1.0"?>
5 <?xml version="1.0"?>
6 <?xml version="1.0"?>

6 rows selected.

SQL>
```

3. Get the first name:

```
SQL Plus
SQL> select x.emp_spec.extract('///firstname/text() ').getStringVal() from emp x;

X.EMP_SPEC.EXTRACT('///FIRSTNAME/TEXT()').GETSTRINGVAL()
-----
Aayushman
Joye
Enrique
Sandra
Steve
Baila

6 rows selected.

SQL> _
```

4. Get the first name and room number

```
SQL Plus
SQL> select x.emp_spec.extract('///firstname/text() ').getStringVal() emp_name, x.emp_spec.extract('///room/text()').getStringVal() room_No from emp x;

EMP_NAME
-----
ROOM_NO
-----
Aayushman
11g
Joye
19
Enrique
18
EMP_NAME
-----
ROOM_NO
-----
Sandra
22
Steve
24
Baila
264

6 rows selected.

SQL> _
```

5. Get the first name and room number and title

```
SQL Plus

SQL> select x.emp_spec.extract('///firstname/text() ').getStringVal() emp_name,
2 x.emp_spec.extract('///room/text() ').getStringVal() room_no,
3 x.emp_spec.extract('///title/text() ').getStringVal() title
4 from emp x;

EMP_NAME
-----
ROOM_NO
-----
TITLE
-----
Aayushman
11g
Manager

Joye
19
Engineer

EMP_NAME
-----
ROOM_NO
-----
TITLE
-----
Enrique
18
Engineer

Sandra
22

EMP_NAME
-----
ROOM_NO
-----
TITLE
-----
Engineering
Steve
24
```

6. Update 6th record from the table:

```
SQL Plus

SQL> Update emp set emp_spec=xmltype('<?xml version="1.0"?>
2 <employee id="emp06">
3 <firstname>Sam</firstname>
4 <lastname>Connigo</lastname>
5 <title>C00</title>
6 <division>Management</division>
7 <building>216</building>
8 <room>264</room>
9 </employee> ') where emp_id=6;

1 row updated.
```

```
SQL Plus

EMP_ID
-----
EMP_SPEC
-----
<?xml version="1.0"?>
  <employee id="emp06">
    <firstname>Sam</firstname>
  <las

6 rows selected.

SQL> .
```

7. Delete a record from the table:

```
SQL> Delete from emp x where x.emp_spec.extract('///firstname/text() ').getStringVal() ='NotMichelle';  
1 row deleted.
```

Conclusion :- Successfully Performed Operation like Create, Read, Update and Delete on XML Database.