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Tool: Oracle  11g expression
CMD: SQLPLUS
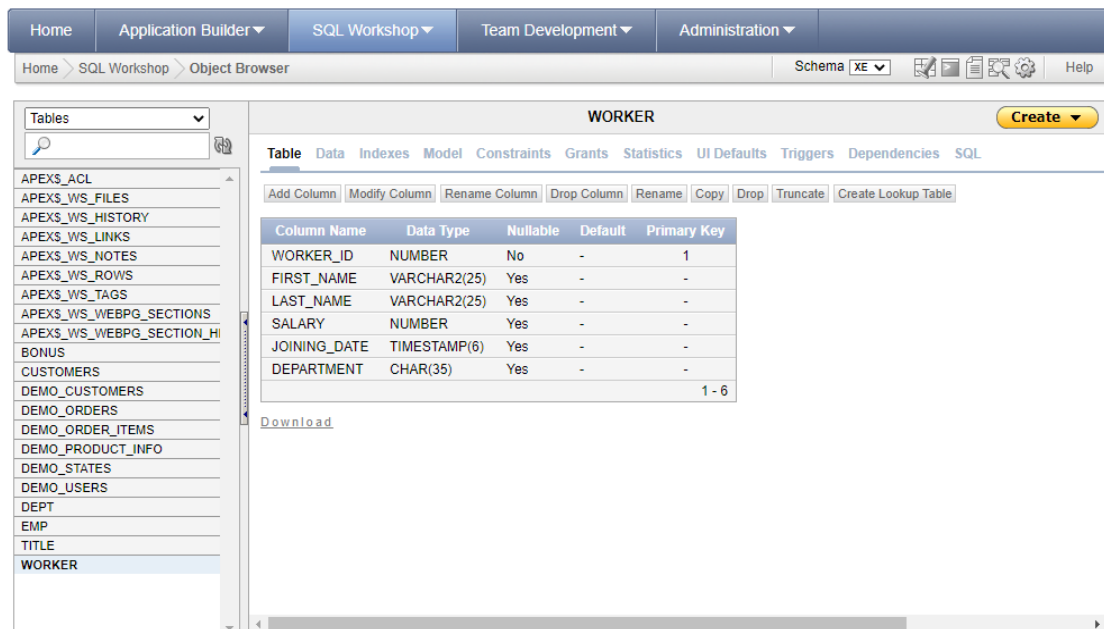
**DDL PART**:

*Schema design:

●Defining the table Worker
•WORKER_ID is the Primary Key

CREATE TABLE Worker (WORKER_ID INT PRIMARY KEY, FIRST_NAME VARCHAR(25),
LAST_NAME VARCHAR(25), SALARY INT, JOINING_DATE TIMESTAMP, DEPARTMENT
CHAR(35));

TABLE schema

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WORKER          Create ▼

**Table** Data Indexes Model Constraints Grants Statistics UI Defaults Triggers Dependencies SQL

Add Column | Modify Column | Rename Column | Drop Column | Rename | Copy | Drop | Truncate | Create Lookup Table

| Column Name | Data Type | Nullable | Default | Primary Key |
|---|---|---|---|---|
| WORKER_ID | NUMBER | No | - | 1 |
| FIRST_NAME | VARCHAR2(25) | Yes | - | - |
| LAST_NAME | VARCHAR2(25) | Yes | - | - |
| SALARY | NUMBER | Yes | - | - |
| JOINING_DATE | TIMESTAMP(6) | Yes | - | - |
| DEPARTMENT | CHAR(35) | Yes | - | - |
| | | | | 1 - 6 |

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●Defining the table Title
•WORKER_REF_ID is the foreign key in referenced with WORKER_ID

INPUT:

CREATE TABLE Title (WORKER_REF_ID INT references Worker(WORKER_ID)
, WORKER_TITLE VARCHAR(25), AFFECTED_FROM TIMESTAMP);

TABLE schema



INPUT:
●Defining the table Bonus
•Worker_Ref_Id is the foreign key

CREATE TABLE Bonus (WORKER_REF_ID INT references Worker(WORKER_ID) ,
BONUS_DATE TIMESTAMP, BONUS_AMOUNT INT);

Table Schema:

●DATA INSERTION/table entry

•input data in the table Worker

INPUT:

INSERT INTO Worker
VALUES(001, 'Monika', 'Arora', 100000,
timestamp '2014-02-20 09:00:00', 'HR');
VALUES(002, 'Niharika', 'Verma', 80000, timestamp '2014-06-11 09:00:00', 'Admin');
VALUES(003, 'Vishal', 'Singhal', 300000, timestamp '2014-02-20 09:00:00', 'HR');
VALUES(004, 'Amitabh', 'Singh', 500000, timestamp  '2014-02-20 09:00:00', 'Admin');
VALUES(005, 'Vivek', 'Bhati', 500000,timestamp  '2014-06-11 09:00:00', 'Admin');
VALUES(006, 'Vipul', 'Diwan', 200000, timestamp '2014-06-11 09:00:00', 'Account');
VALUES(007, 'Satish', 'Kumar', 75000,timestamp  '2014-01-20 09:00:00', 'Account');
VALUES(008, 'Geetika', 'Chauhan', 90000, timestamp '2014-04-11 09:00:00', 'Admin');

Table Data:

•input data in the table Title

INPUT
INSERT INTO Title
VALUES(1, 'Manager', timestamp '2016-02-20 00:00:00');

VALUES(2, 'Executive', timestamp '2016-06-11 00:00:00');
VALUES(8, 'Executive', timestamp '2016-06-11 00:00:00');
VALUES(5, 'Asst. Manager', timestamp '2016-06-11 00:00:00');
VALUES(4, 'Asst. Manager', timestamp '2016-06-11 00:00:00');
 VALUES(7, 'Executive', timestamp '2016-06-11 00:00:00');
VALUES(6, 'Lead', timestamp '2016-06-11 00:00:00');
VALUES(3, 'Lead', timestamp '2016-06-11 00:00:00');

Table Data:

•input data in the table Bonus

INPUT
INSERT INTO Bonus
VALUES(1, timestamp '2016-02-20 00:00:00', 5000);
VALUES(2, timestamp '2016-06-11 00:00:00', 3000);
VALUES(3, timestamp '2016-02-20 00:00:00', 4000);
VALUES(1, timestamp '2016-02-20 00:00:00', 4500);
VALUES(2, timestamp '2016-06-11 00:00:00', 3500);

Table Data:

**DML PART:**

●QUERY

```
SELECT (worker.first_name||' '||worker.last_name) as
fullname,WORKER_TITLE,Worker.DEPARTMENT,WORKER.SALARY,BONUS.BONUS_AMOUNT,
count(*) over(partition by department) occurrences
FROM Worker
LEFT JOIN Title ON worker.worker_id=Title.worker_ref_id
LEFT JOIN Bonus ON Worker.WORKER_ID=Bonus.WORKER_REF_ID
```
where substr(worker.department,1,1)='A' AND (worker.first_name||worker.last_name like '%A%' or worker.first_name||worker.last_name like '%e%' or worker.first_name||worker.last_name like'%i%' or worker.first_name||worker.last_name like '%o%' or worker.first_name||worker.last_name like'%u%')

AND JOINING_DATE<to_timestamp('2014-6-11', 'YYYY-MM-DD')
Group by  department , (worker.first_name||'
'||worker.last_name),WORKER_TITLE,WORKER.SALARY,BONUS.BONUS_AMOUNT
ORDER BY (worker.first_name||' '||worker.last_name) ASC;

```
SQL> SELECT (worker.first_name||' '||worker.last_name) as fullname,WORKER_TITLE,Worker.DEPARTMENT,WORKER.SALARY,BONUS.BO
NUS_AMOUNT,
  2  count(*) over(partition by department) occurrences
  3  FROM Worker
  4  LEFT JOIN Title ON worker.worker_id=Title.worker_ref_id
  5  LEFT JOIN Bonus ON Worker.WORKER_ID=Bonus.WORKER_REF_ID
  6  where substr(worker.department,1,1)='A' AND (worker.first_name||worker.last_name like '%A%' or worker.first_name||w
orker.last_name like '%e%' or worker.first_name||worker.last_name like'%i%' or worker.first_name||worker.last_name like
'%o%' or worker.first_name||worker.last_name like'%u%')
  7  AND JOINING_DATE<to_timestamp('2014-6-11', 'YYYY-MM-DD')
  8  Group by  department , (worker.first_name||' '||worker.last_name),WORKER_TITLE,WORKER.SALARY,BONUS.BONUS_AMOUNT
  9  ORDER BY (worker.first_name||' '||worker.last_name) ASC;

FULLNAME                                          WORKER_TITLE
------------------------------------------------- ------------------------
DEPARTMENT                          SALARY BONUS_AMOUNT OCCURRENCES
----------------------------------- ---------- ------------ -----------
Amitabh Singh                                     Asst. Manager
Admin                               500000                            2

Geetika Chauhan                                   Executive
Admin                               90000                             2

Satish Kumar                                      Executive
Account                             75000                             1


SQL>
```