Types of Join:

1. NATURAL JOIN
2. Join with USING clause
3. Join with ON clause
4. OUTER joins

* LEFT OUTER JOINS
* RIGHT OUTER JOINS
* FULL OUTER JOINS

5. CROSS JOIN (CARTESIAN PRODUCT)

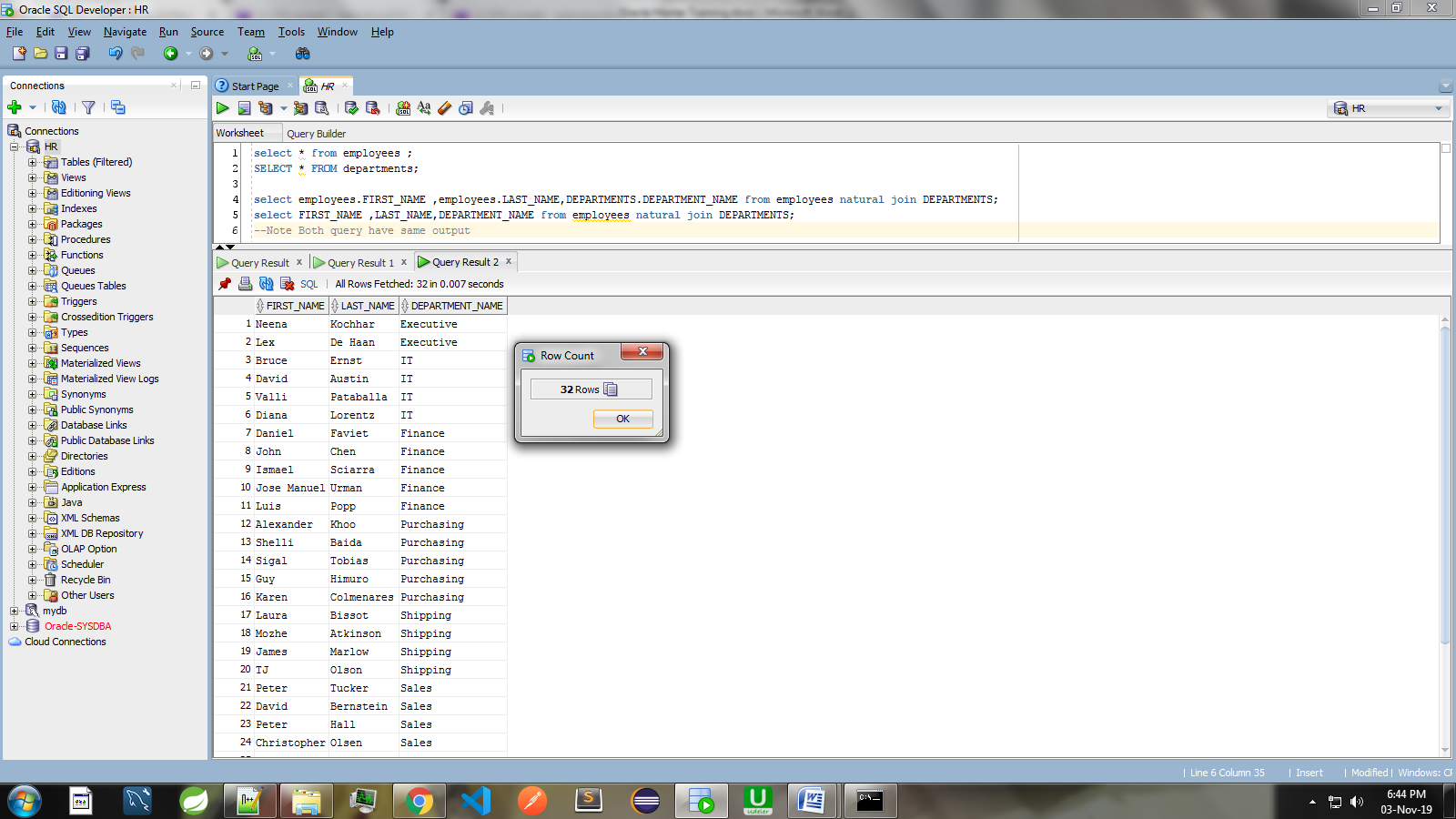
---------------------------------------------------------------------------------------------------------------------------------------**NATURAL JOIN: Apna Logic ( where department\_id=? and manager\_id=?)**

* Join two table with the columns that have same name.
* Select rows from two tables that have the equal values in the same columns.
* If two columns have same name but different data type , it will give error.

select employees.FIRST\_NAME ,employees.LAST\_NAME,DEPARTMENTS.DEPARTMENT\_NAME from employees natural join DEPARTMENTS;

select FIRST\_NAME ,LAST\_NAME,DEPARTMENT\_NAME from employees natural join DEPARTMENTS;

--Note Both query have same output



**NOTE: JOIN with USING clause i.e USING (department\_id) , USING (department\_id,manager\_id) this can be only used when column name must be same in both the tables other wise use ON.**

**case 1: Both are same, for first column name should be same,for second column name can be different.**

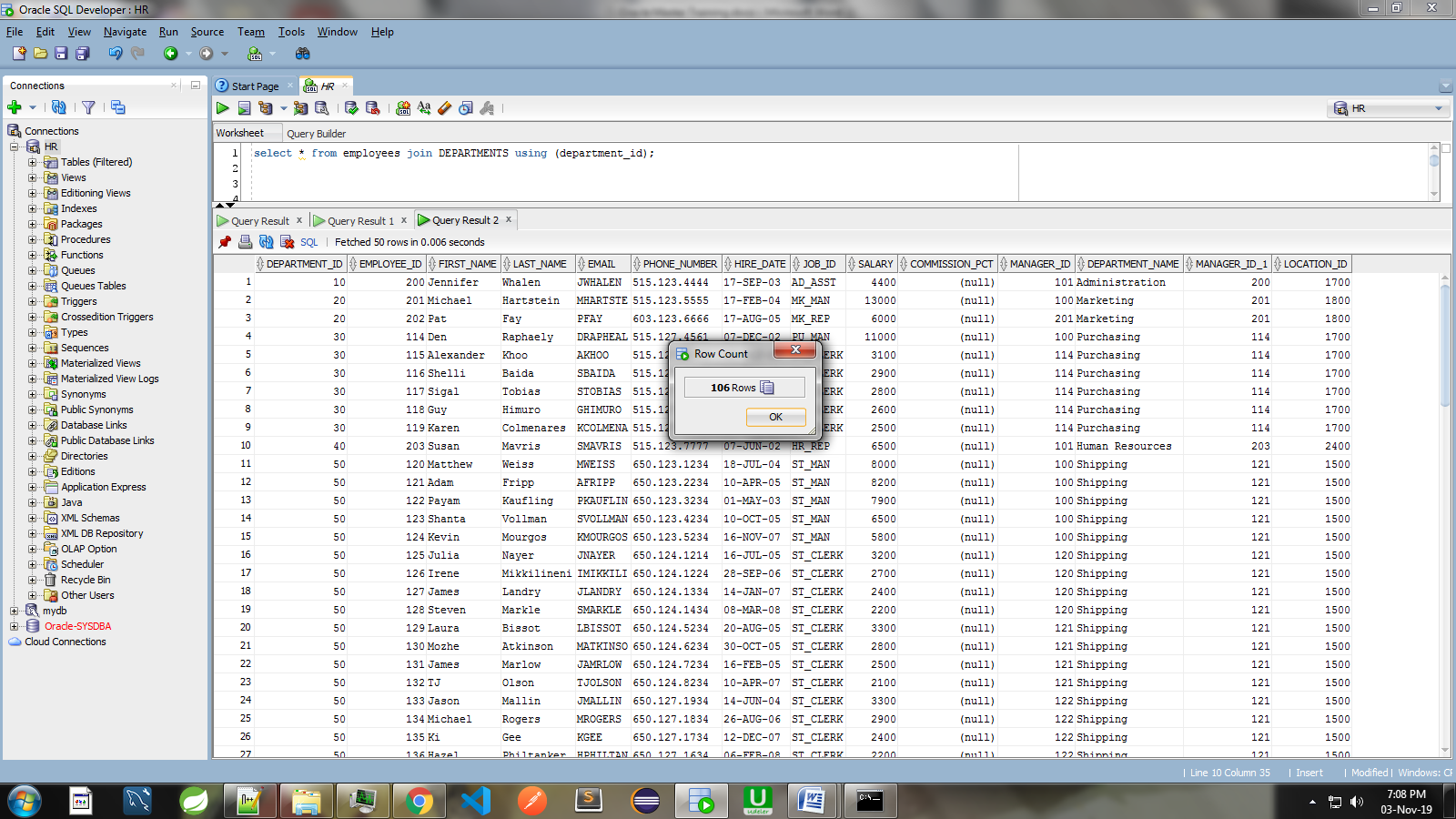
**USING (department\_id) OR ON e. department\_id = d. department\_id;**

**case 2: Both are same, for first column name should be same,for second column name can be different.**

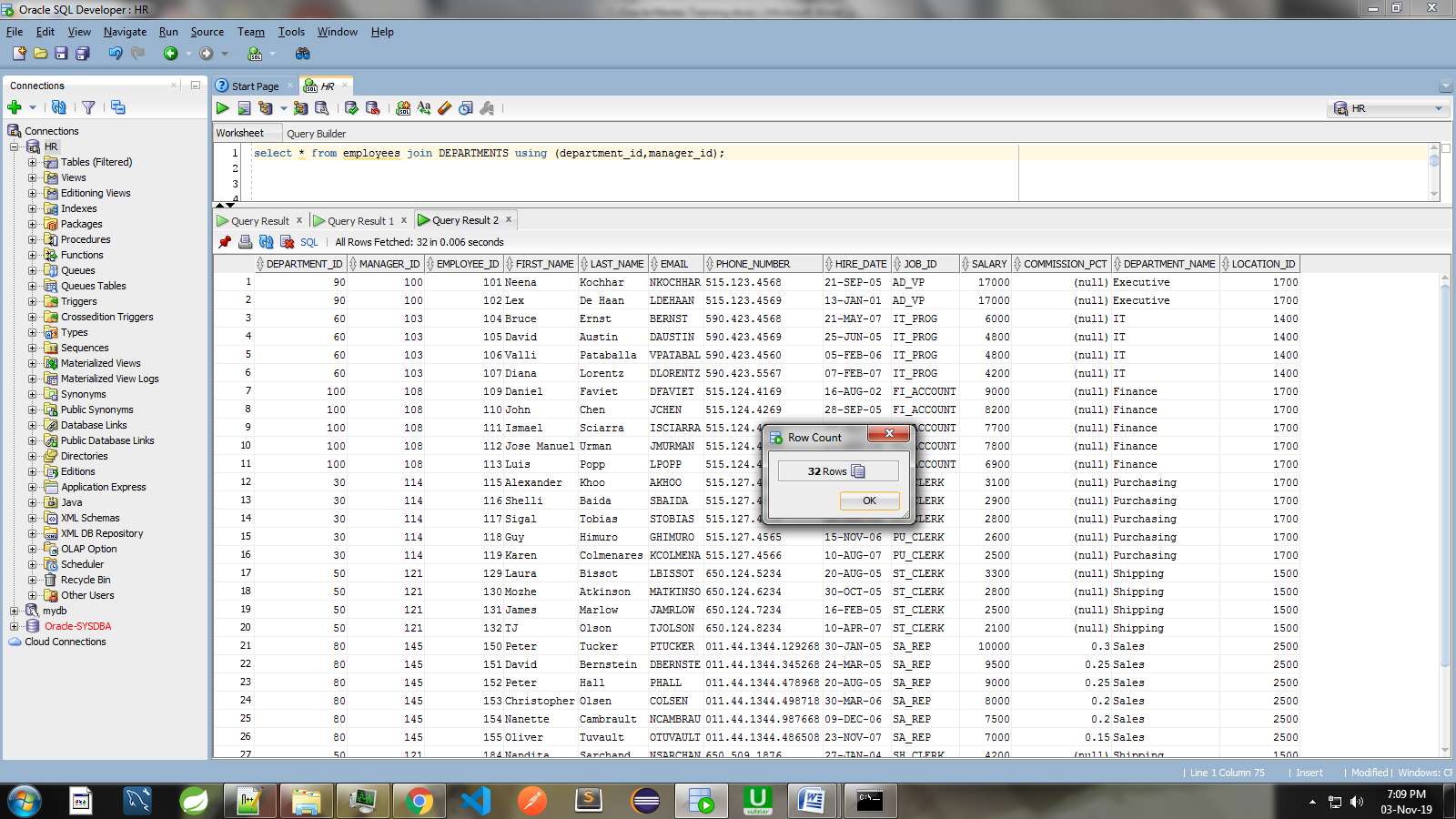
**USING (department\_id, manager\_id) OR ON e. department\_id = d. department\_id and**

**e. manager\_id = d. manager\_id;**

**NATURAL JOIN with USING clause: Only Department\_ID**

****

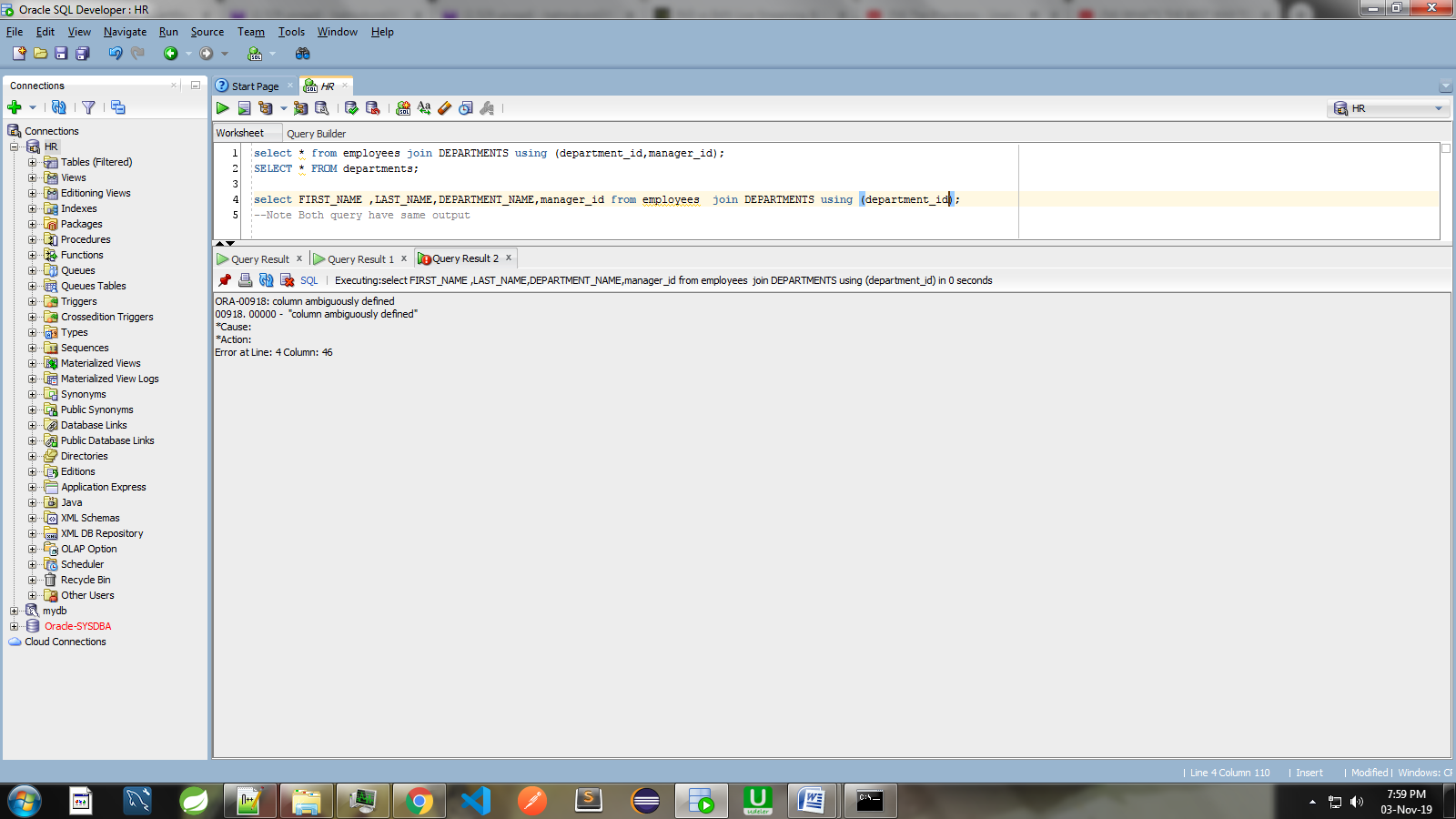
**NATURAL JOIN with USING clause: Department\_ID , Manager\_ID**

****

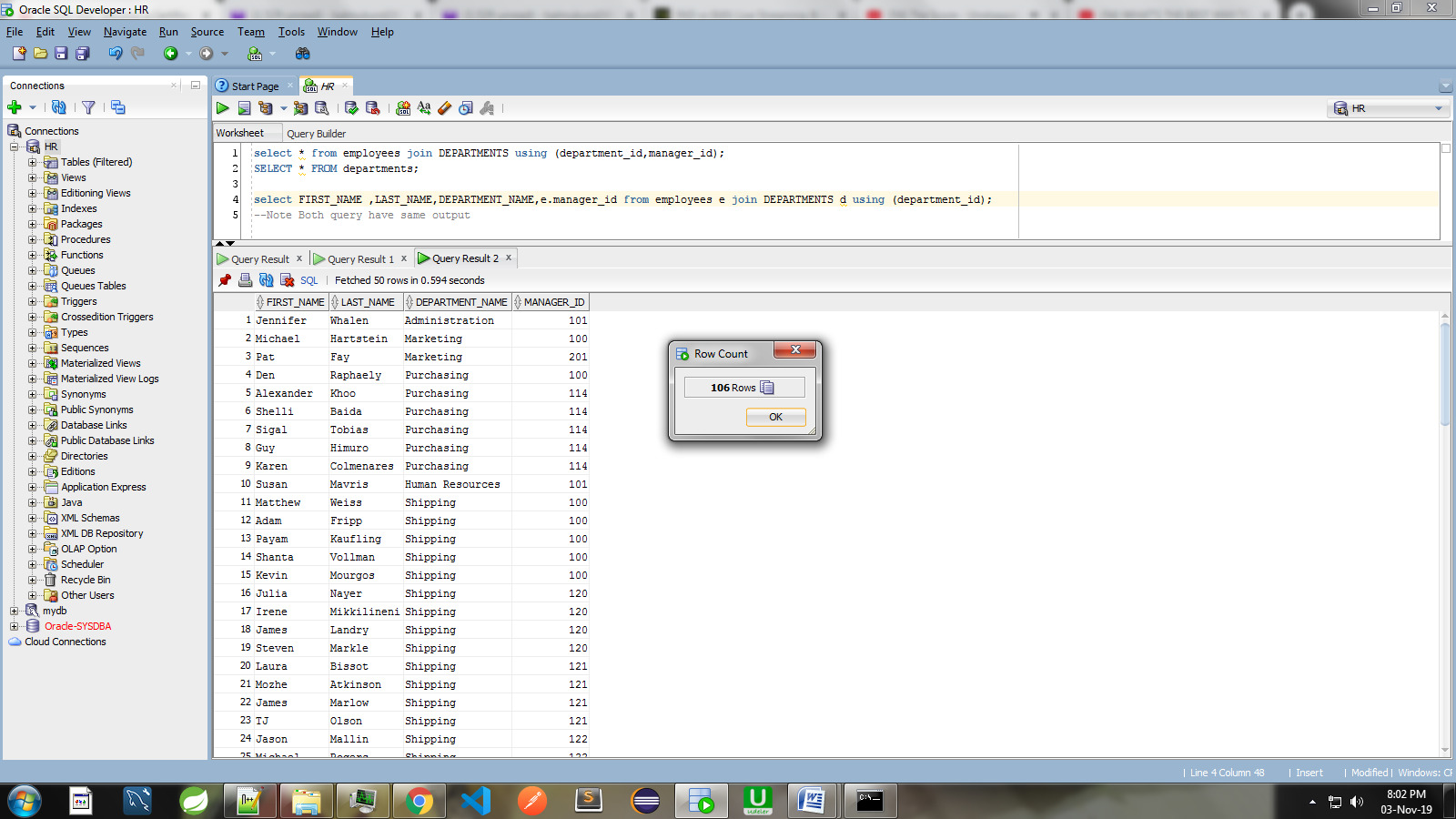
**Handling Ambiguous Column Name:**

1. Table aliases are used for handling duplicates column names in two tables.

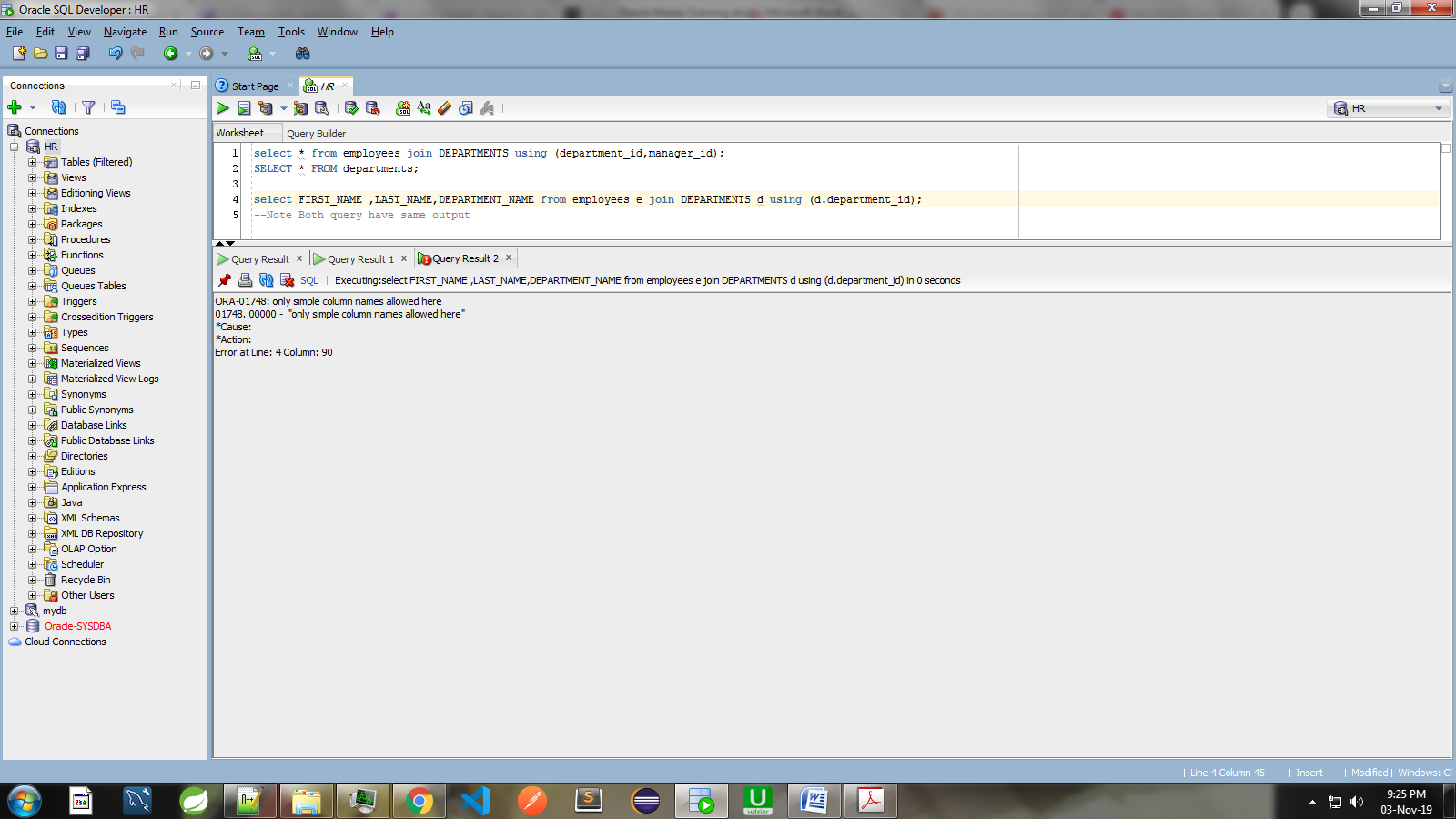
**Here compiler wont to come to know from which table manager\_id column should get select?**

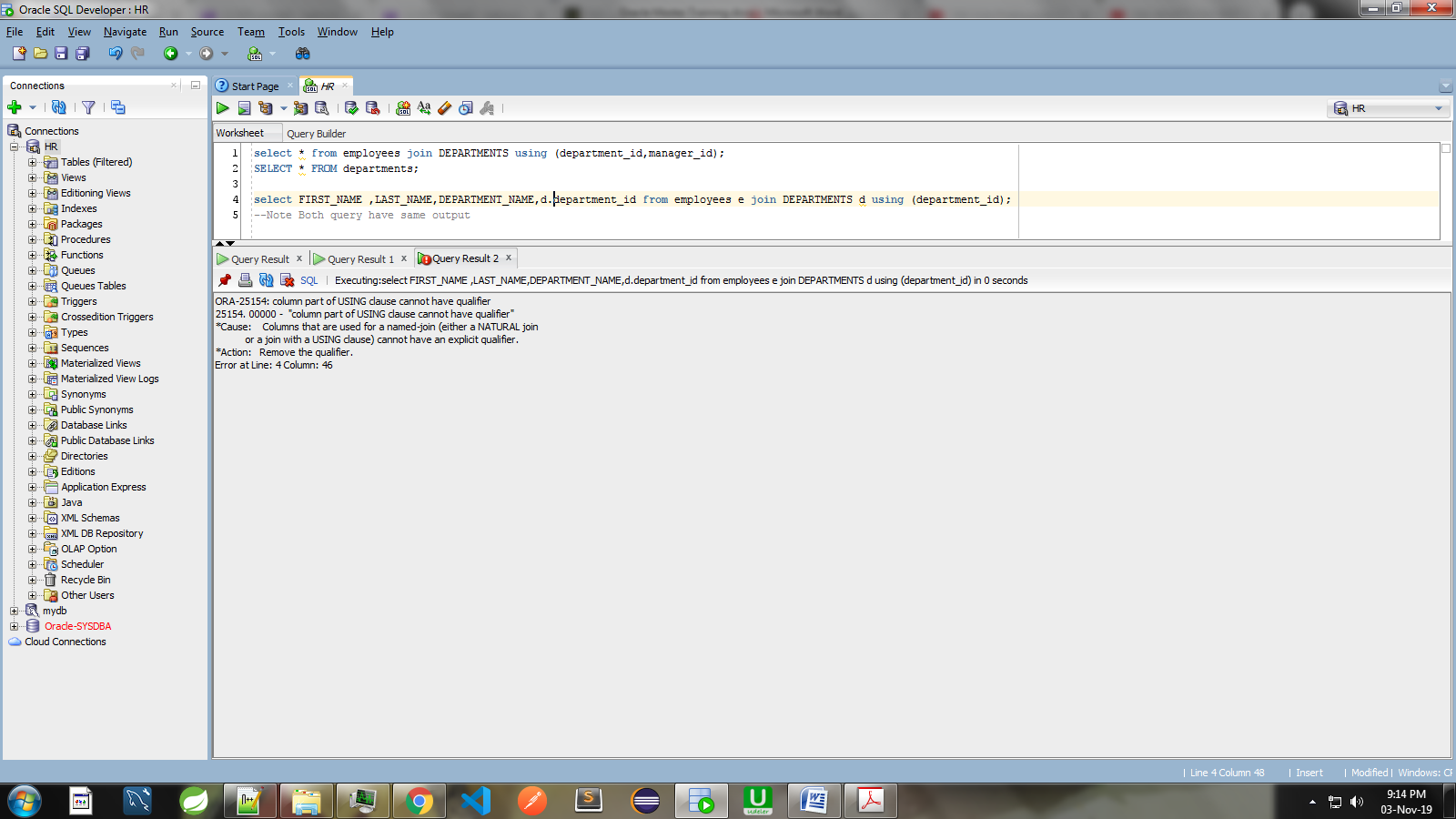
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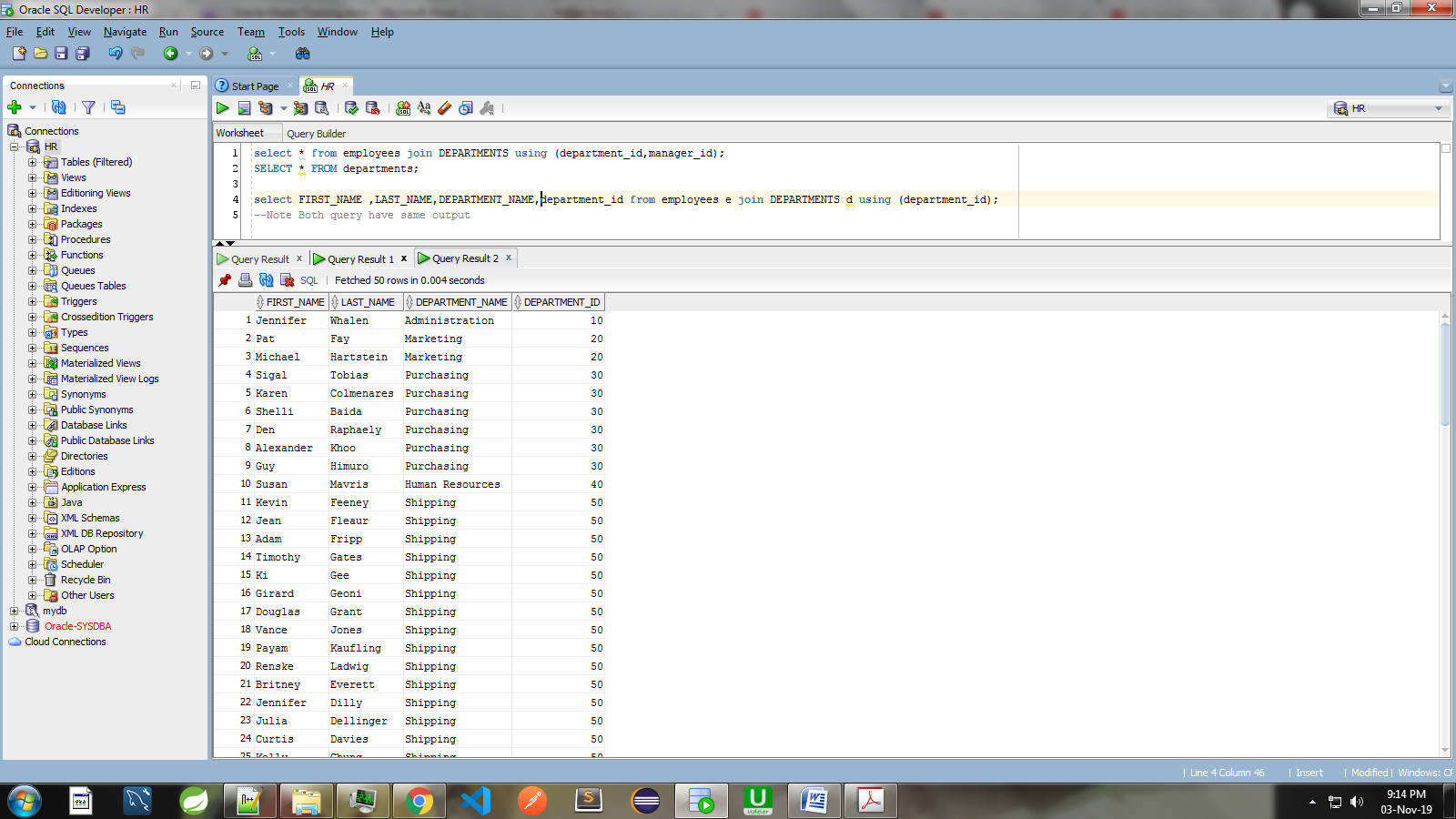
**2. With table aliases we can specify column name that we want to use.**

****

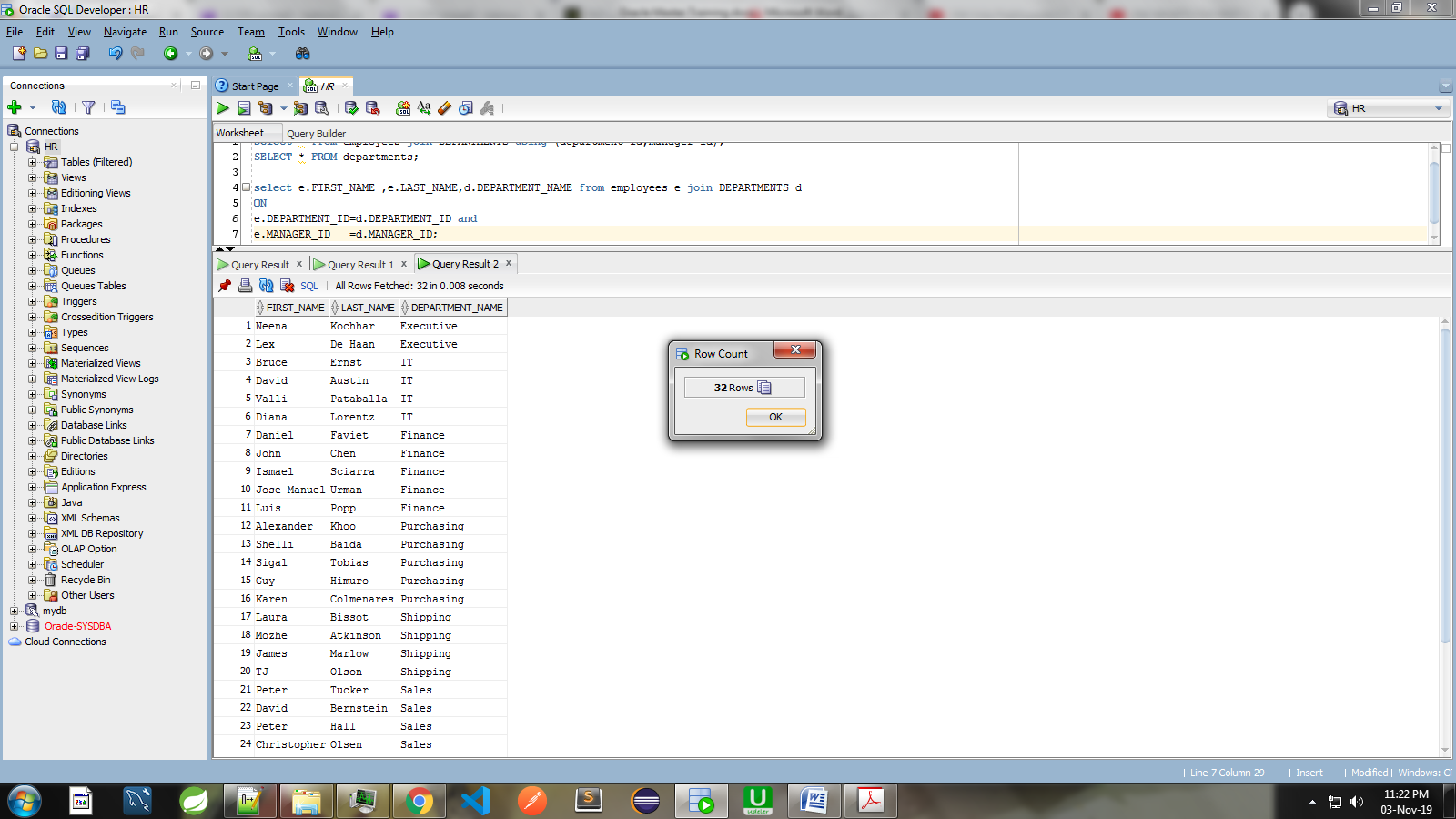
**3. We cannot give an alias to a column that is** **USING** **clause or** **NATURAL JOIN**

****

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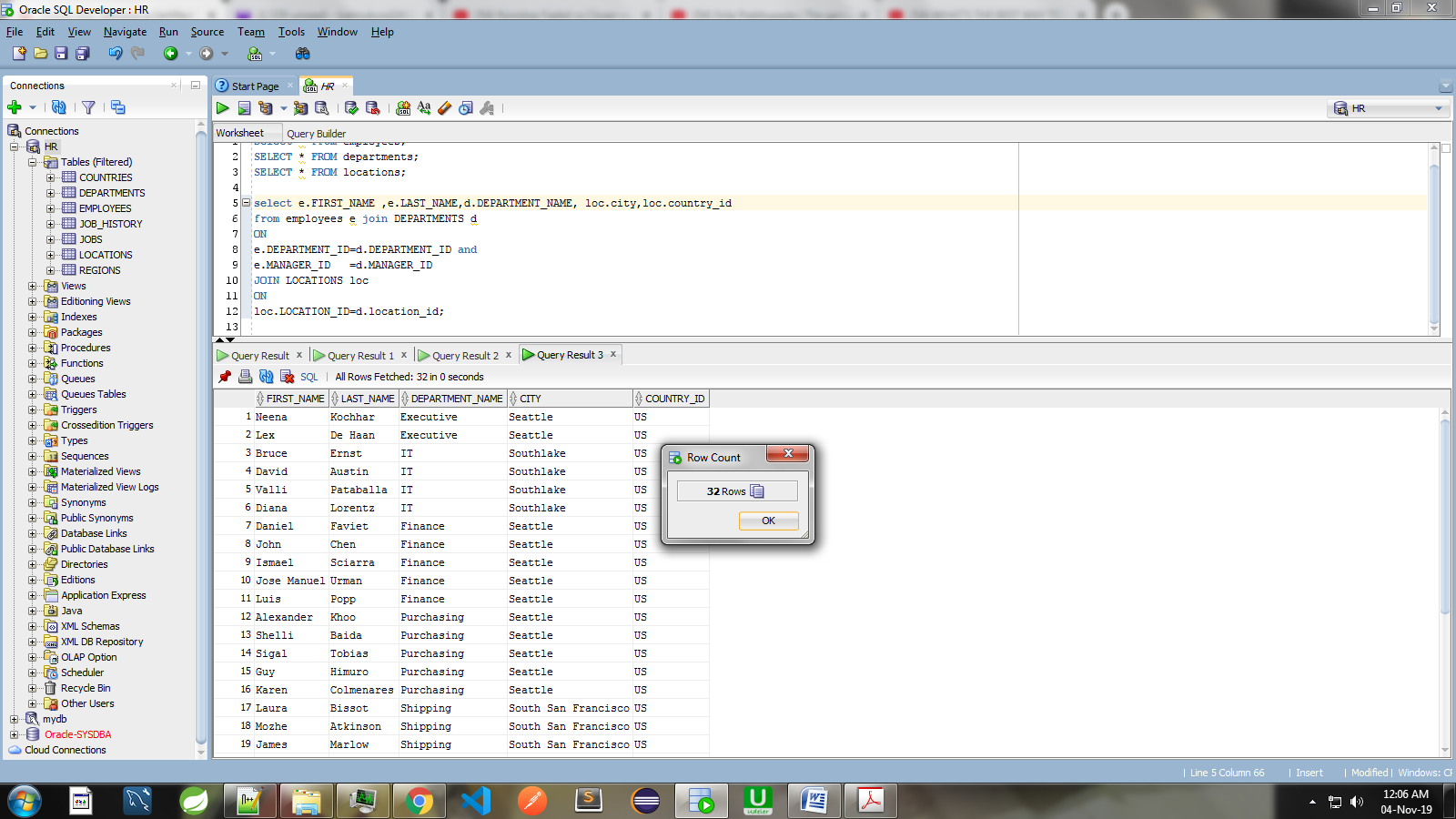
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**Join with ON clause: Between Two Table**

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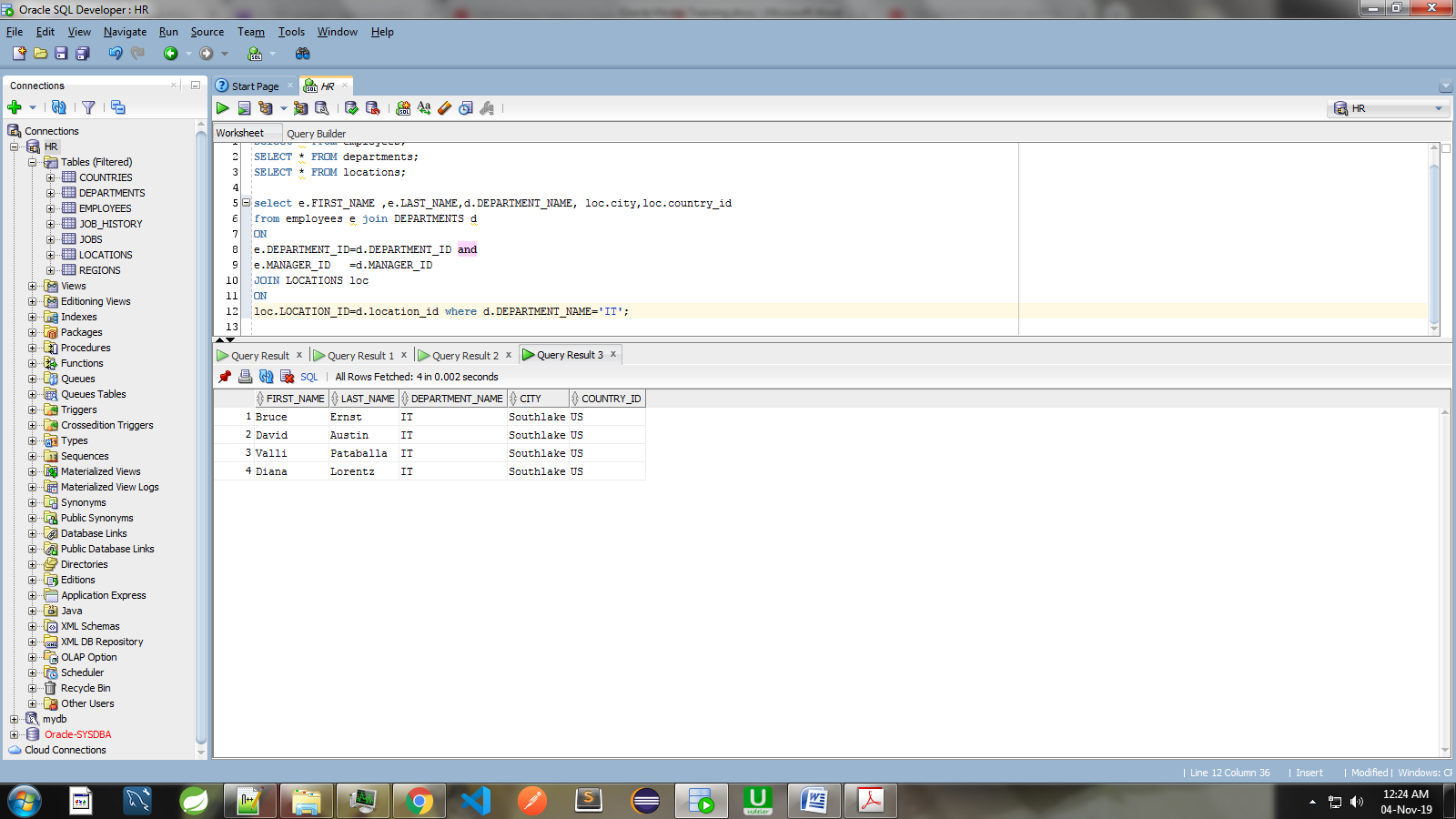
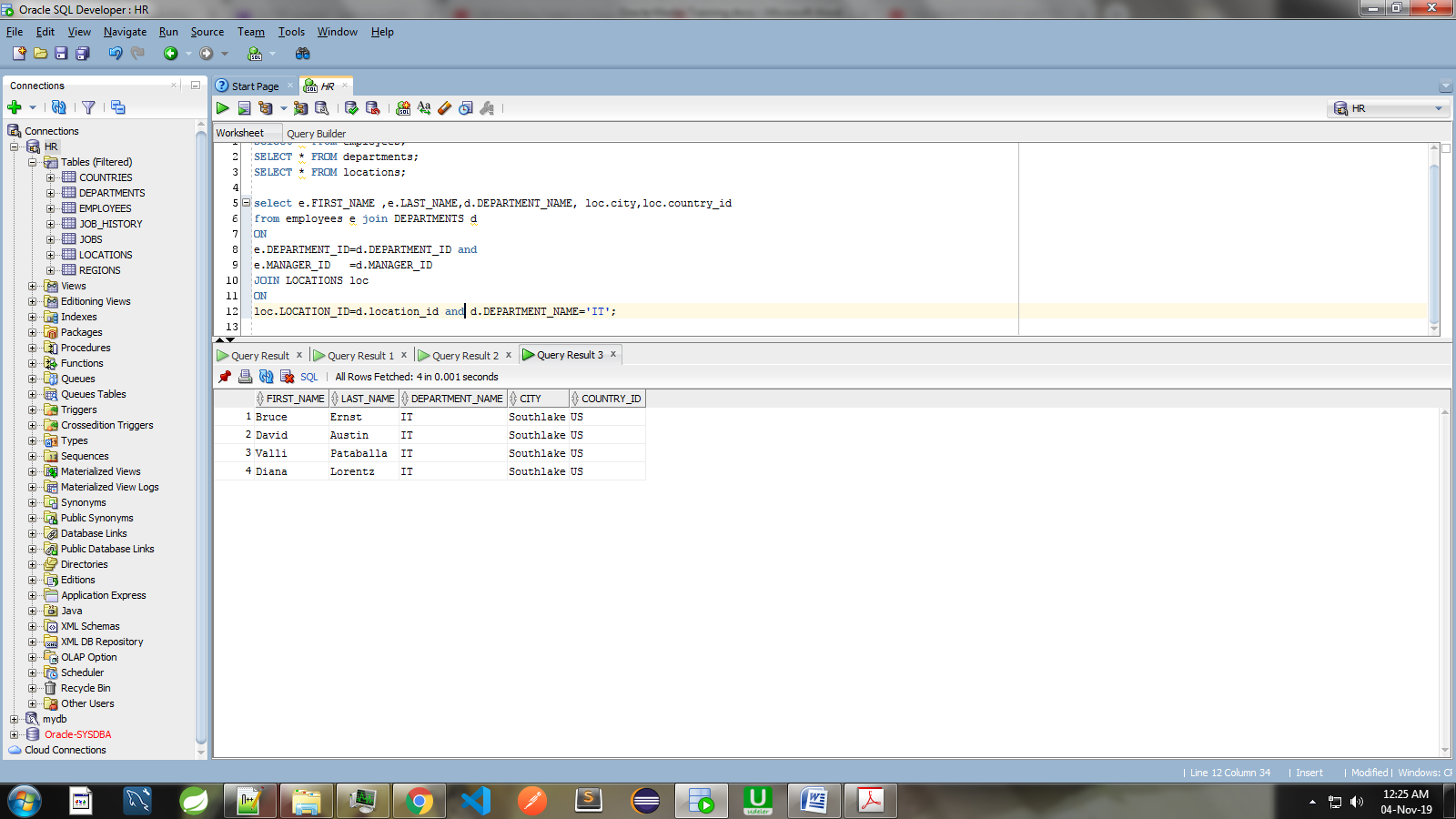
**Multiple JOINS Operations:**

**Join with ON clause: More than Two Table i.e 3 Tables**

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**Restricting JOINS:**

**We can restrict joins with using WHERE clause and AND operators. Both will give same output**

** **