

Assume you are given the table below that shows job postings for all companies on the LinkedIn platform.
Write a query to get the number of companies that have posted duplicate job listings.

Clarification:

Duplicate job listings refer to two jobs at the same company with the same title and description.

job_listings Table:

Column Name	Type
job_id	integer
company_id	integer
title	string
description	string

SOLUTION 1 (my, using window functions)

```
SELECT COUNT (DISTINCT (company_id))
FROM (
    SELECT *,
           COUNT(rwn) OVER(PARTITION BY company_id, title, description) AS cnt
    FROM (
        SELECT *,
              ROW_NUMBER() OVER(PARTITION BY company_id, title, description) AS rwn
        FROM job_listings) AS t1) AS t2
WHERE cnt > 1
;
```

SOLUTION 2 (using subquery)

```
SELECT COUNT (DISTINCT company_id) AS co_w_duplicate_jobs
FROM (
    SELECT company_id,
           title,
           description,
           COUNT(job_id) AS job_count
    FROM job_listings
    GROUP BY company_id,
             title,
             description
    ) AS jobs_grouped
WHERE job_count > 1
;
```

SOLUTION 3 (using CTE)

```
WITH jobs_grouped AS (
    SELECT company_id, title, description, COUNT(job_id) AS job_count
    FROM job_listings
    GROUP BY company_id, title, description)

SELECT COUNT(DISTINCT company_id) AS co_w_duplicate_jobs
FROM jobs_grouped
WHERE job_count > 1
;
```