

# SQL Task 5

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DATA ENGINEERING

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BYTEWISE LDT

## DE - Task 5

**Q1:** Write a query to calculate the percentage contribution of each item's amount to its order's total amount, grouped by order\_id. (Topics: Partition BY)

**Query:**

```
SELECT
    order_id,
    item_id,
    amount,
    (amount/SUM(amount) OVER (PARTITION BY order_id)) * 100 AS percentage_contribution
FROM
    mypublic.items;
```

**Result:**

Dashboard × Properties × SQL × Statistics × Dependencies × Dependents × Processes × customer\_db/postgres@

customer\_db/postgres@PostgreSQL 15

No limit

Query Query History

```

1 SELECT
2     order_id,
3     item_id,
4     amount,
5     (amount/SUM(amount) OVER (PARTITION BY order_id)) * 100 AS percentage_contribution
6 FROM
7     mypublic.items;
8
9
10

```

Data Output Messages Notifications

	order_id character varying (100)	item_id [PK] character varying (100)	amount double precision	percentage_contribution double precision
1	0077622c-f789-402f-8f27-a8ef29b92f99	caadf311-7efb-47b9-bd48-ccd4d0e9d628	32.05	100
2	007c6893-fc40-44f8-a794-741ad1bfd9c7	d7c40e3c-3c7c-48d1-a657-03e72e34e8...	52.99	100
3	00860b6c-6b06-4694-8708-f7aa4375d5...	ccc44ebb-07d3-4d71-91c6-22c52bba1c...	99.77	46.78765709998124
4	00860b6c-6b06-4694-8708-f7aa4375d5...	d2d2243f-1e68-4e2d-8fb9-31c8d2862416	39.54	18.542487338210467
5	00860b6c-6b06-4694-8708-f7aa4375d5...	ed82300c-05b2-468f-8056-5a61c89a39d6	73.93	34.66985556180829
6	00871b7a-6c23-4916-aeff-e22ee8e27ea9	68e9bbd1-10c4-4518-8320-e7cf83dcb93a	65.86	100
7	00aa2373-5f66-4165-8ebf-7724b314028a	da44883b-5b94-4107-b7e8-18dd3a6c2b...	10.07	27.51366120218579
8	00aa2373-5f66-4165-8ebf-7724b314028a	90563a9f-0c7b-4e55-b7aa-3f3d7231bf15	26.53	72.48633879781421
9	00ce4abc-b40a-4918-a245-5489bea007...	52d92662-c37f-488b-a57c-e6ec730533d6	91.49	50.558134394341295

Total rows: 1000 of 1000 Query complete 00:00:00.096

**Q2:** Write a query to rank orders by their total amount within each customer, ordering them from highest to lowest total amount. (Topics: Window functions like RANK, PARTITION BY, and ORDER BY)

### Query:

```

SELECT

    order_id,

    total_amount,

```

rank() OVER (PARTITION BY customer\_id ORDER BY total\_amount DESC) AS orders\_rank

FROM

mypublic.orders

ORDER BY

```
customer_id;
```

**Result:**

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**Query** Query History

```

1 SELECT
2     order_id,
3     total_amount,
4     customer_id,
5     rank() OVER (PARTITION BY customer_id ORDER BY total_amount DESC) AS orders_rank
6 FROM
7     mypublic.orders
8 ORDER BY |
9     customer_id;
10
11
12

```

**Data Output** Messages Notifications

	order_id [PK] character varying (100)	total_amount double precision	customer_id character varying (100)	orders_rank bigint
1	a2f7c3af-4f45-413a-951a-aaf4a8f35c95	380.06	003ee86f-4e17-4b39-bb6a-30897fe0a1...	1
2	e8e664fb-189a-48f6-8815-9075fc391b83	691.4	00d40438-5bf3-4f1b-aaa9-32130a7cd6...	1
3	e0aeaf57-5169-4300-bc73-cbd81c52b9...	903.59	01624052-d9dc-4150-bd53-255b82ce6...	1
4	df8c9be5-054e-462f-8d10-0a1f906f72d4	414.86	01624052-d9dc-4150-bd53-255b82ce6...	2
5	40d3d4b8-4f19-415a-a027-b08fd264e7...	322.84	01624052-d9dc-4150-bd53-255b82ce6...	3
6	a234d0cc-04dd-4e98-822c-bb44d5833d...	242.15	01624052-d9dc-4150-bd53-255b82ce6...	4
7	4baad587-2be9-463e-bd5c-db912ad70b...	188.72	01624052-d9dc-4150-bd53-255b82ce6...	5
8	0b346353-a7af-471c-bd6d-46a2d07f2d...	950.95	017058e3-3c0b-4f2f-a359-06cba4a8b5ff	1
9	483bc108-36ae-431d-9591-95a71189ab...	700.13	017058e3-3c0b-4f2f-a359-06cba4a8b5ff	2

Total rows: 1000 of 1000    Query complete 00:00:00.097

**Q3:** Write a query to calculate the average price of products supplied by each supplier. Exclude suppliers who have no products in the result. (Topics: JOINS, AGGREGATE FUNCTIONS, GROUP BY)

**Query:**

```
SELECT
    suppliers.supplier_id,
    suppliers.name AS supplier_names,
    AVG(products.price) AS average_price
FROM
    mypublic.suppliers
JOIN
    mypublic.products
    ON suppliers.supplier_id = products.supplier_id
GROUP BY
    suppliers.supplier_id, suppliers.name;
```

**Result:**



Can't perform any JOIN function because there is no same column named as category\_id in "products" TABLE in the given database.

**Q5:** Write a query to retrieve the total amount spent by each customer, along with their name and phone number. Ensure customers with no orders also appear with a total amount of 0. (WINDOW FUNCTIONS, AGGREGATE FUNCTIONS, JOINS, GROUP BY)

**Query:**

```
SELECT
    cx.customer_id,
    cx.name,
    cx.phone,
    COALESCE(SUM(o.total_amount),0) AS amount_per_customer
FROM
    mypublic.orders as o
RIGHT JOIN
    mypublic.customers as cx
ON
    cx.customer_id = o.customer_id
GROUP BY
    cx.customer_id, cx.name, cx.phone
ORDER BY
    customer_id;
```

**Result:**

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Query Query History

```
42 SELECT
43     cx.customer_id,
44     cx.name,
45     cx.phone,
46     COALESCE(SUM(o.total_amount),0) AS amount_per_customer
47 FROM
48     mypublic.orders as o
49 RIGHT JOIN
50     mypublic.customers as cx
51 ON
52     cx.customer_id = o.customer_id
53 GROUP BY
54     cx.customer_id, cx.name, cx.phone
55 ORDER BY
56     customer_id;
57
```

Data Output Messages Notifications



	customer_id [PK] character varying (100)	name character varying (100)	phone character varying (50)	amount_per_customer double precision
1	001b8f8a-0030-45c8-a552-831822bf2a...	Joseph Robinson	(937)452-2438x37004	0
2	003ee86f-4e17-4b39-bb6a-30897fe0a1...	Timothy Hall	+1-585-798-5830x891	380.06
3	00c2f7f4-c4df-4be2-952e-2191a2f97fe2	Sandra Scott	001-574-844-6809x741	0
4	00d40438-5bf3-4f1b-aaa9-32130a7cd6...	Alyssa Howe	(344)681-2421	691.4
5	00d89950-1c32-49c7-8373-b9a51109c...	Erin Ward	+1-640-549-0044	0
6	01624052-d9dc-4150-bd53-255b82ce6...	Heather Cox	353.683.5816x9857	2072.16
7	017058e3-3c0b-4f2f-a359-06cba4a8b5ff	Lindsay Jacobs	395.874.3265x706	2004.1399999999999

Total rows: 1000 of 1000 Query complete 00:00:00.100