SQL Schema

Table: OrdersDetails

+-------------+------+

| Column Name | Type |

+-------------+------+

| order\_id | int |

| product\_id | int |

| quantity | int |

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(order\_id, product\_id) is the primary key for this table.

Each row of this table contains the quantity ordered of the product product\_id in the order order\_id.

A single order with k different products will appear as k separate rows in this table.

The **average quantity** of an order is calculated as (total quantity of products in the order) / (number of different products in the order). The **maximum average quantity** is the highest **average quantity** among all orders.

The **maximum quantity** of an order is the highest quantity of any product purchased in the order.

Write an SQL query to find the order\_id of all orders whose **maximum quantity** is **strictly greater than** the **maximum average quantity**.

Return the result table in **any order**.

The query result format is in the following example:

OrdersDetails table:

+----------+------------+----------+

| order\_id | product\_id | quantity |

+----------+------------+----------+

| 1 | 1 | 12 |

| 1 | 2 | 10 |

| 1 | 3 | 15 |

| 2 | 1 | 8 |

| 2 | 4 | 4 |

| 2 | 5 | 6 |

| 3 | 3 | 5 |

| 3 | 4 | 18 |

| 4 | 5 | 2 |

| 4 | 6 | 8 |

| 5 | 7 | 9 |

| 5 | 8 | 9 |

| 3 | 9 | 20 |

| 2 | 9 | 4 |

+----------+------------+----------+

Result table:

+----------+

| order\_id |

+----------+

| 1 |

| 3 |

+----------+

The average quantity of each order is:

- order\_id=1: (12+10+15)/3 = 12.3333333

- order\_id=2: (8+4+6+4)/4 = 5.5

- order\_id=3: (5+18+20)/3 = 14.333333

- order\_id=4: (2+8)/2 = 5

- order\_id=5: (9+9)/2 = 9

The maximum average quantity is 14.333333

The maximum quantity of each order is:

- order\_id=1: max(12, 10, 5) = 12

- order\_id=2: max(8, 4, 6, 4) = 8

- order\_id=3: max(5, 18, 20) = 20

- order\_id=4: max(2, 8) = 8

- order\_id=5: max(9, 9) = 9

Only orders 1 and 3 have a maximum quantity strictly greater than the maximum average quantity.