Q1. Write a query to list all products with their product_id, product_name, and category.

Soln- SELECT product_id, product_name, category
FROM product_reviews;

```
30      -- apoorv ranjan
31 •    SELECT product_id, product_name, category
32      FROM product_reviews;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

product_id	product_name	category
B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Ch...	Computers&Accessories|Accessories&Peripheral...
B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging ...	Computers&Accessories|Accessories&Peripheral...
B096MSW6CT	Sounce Fast Phone Charging Cable & Data Sync...	Computers&Accessories|Accessories&Peripheral...
B08HDJ86NZ	boAt Deuce USB 300 2 in 1 Type-C & Micro USB ...	Computers&Accessories|Accessories&Peripheral...
B08CF3B7N1	Portronics Konnect L 1.2M Fast Charging 3A 8 P...	Computers&Accessories|Accessories&Peripheral...

product_reviews 4 ×

Output

Q2. Write a query to display all columns for products that have a rating of 4.0 or higher.

Soln- SELECT *
FROM product_reviews
WHERE rating >= 4.0;

```
33      -- Q2.
34      -- apoorv ranjan
35 •    SELECT * FROM product_reviews WHERE rating >= 4.0;
36
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

product_id	product_name	category	discount
B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Ch...	Computers&Accessories|Accessories&Peripheral...	399
B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging ...	Computers&Accessories|Accessories&Peripheral...	199
B08HDJ86NZ	boAt Deuce USB 300 2 in 1 Type-C & Micro USB ...	Computers&Accessories|Accessories&Peripheral...	329
B08CF3B7N1	Portronics Konnect L 1.2M Fast Charging 3A 8 P...	Computers&Accessories|Accessories&Peripheral...	154

Q3. Write a query to list products that are in the Computers&Accessories category.

```
-- apoorv ranjan
SELECT product_id, product_name, category, rating
FROM product_reviews WHERE category LIKE 'Computers&Accessories%';
```

```
36      -- Q3.
37      -- apoorv ranjan
38 •    SELECT product_id, product_name, category, rating
39      FROM product_reviews WHERE category LIKE 'Computers&Accessories%';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

product_id	product_name	category	rating
B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Ch...	Computers&Accessories|Accessories&Peripheral...	4.2
B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging ...	Computers&Accessories|Accessories&Peripheral...	4
B096MSW6CT	Sounce Fast Phone Charging Cable & Data Sync...	Computers&Accessories|Accessories&Peripheral...	3.9
B08HDJ86NZ	boAt Deuce USB 300 2 in 1 Type-C & Micro USB ...	Computers&Accessories|Accessories&Peripheral...	4.2
B08CF3B7N1	Portronics Konnect L 1.2M Fast Charging 3A 8 P...	Computers&Accessories|Accessories&Peripheral...	4.2

roduct_reviews 17 ×

utput

Action Output

#	Time	Action	Message

Q4. Write a query to find all products where the about_product column contains the word durable.

```
SELECT product_id,
       product_name,
       about_product
FROM product_reviews
WHERE about_product LIKE '%durable%';
```

```
40      -- Q4.
41      -- apoorv ranjan
42 •    SELECT product_id, product_name,about_product
43      FROM product_reviews
44      WHERE about_product LIKE '%durable%';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

product_id	product_name	about_product
B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Ch...	High Compatibility : Compatible With iPhone 12, ...
B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging ...	Compatible with all Type C enabled devices, be i...
B096MSW6CT	Sounce Fast Phone Charging Cable & Data Sync...	【Fast Charger&Data Sync】-With built-in safet...
B08CF3B7N1	Portronics Konnect L 1.2M Fast Charging 3A 8 P...	[CHARGE & SYNC FUNCTION]- This cable comes...
B08WRWPM22	boAt Micro USB 55 Tangle-free, Sturdy Micro US...	It Ensures High Speed Transmission And Chargi...

product_reviews 19 ×

Q5. Write a query to count the total number of products in the dataset.
SELECT COUNT(DISTINCT product_id) AS total_products
FROM product_reviews;

```
45    -- Q5.
46    -- apoorv ranjan
47 •  SELECT COUNT(DISTINCT product_id) AS total_products
48    FROM product_reviews;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

total_products
1351

Q6. Write a query to find the average rating of all products.
SELECT AVG(rating) AS average_rating
FROM product_reviews;

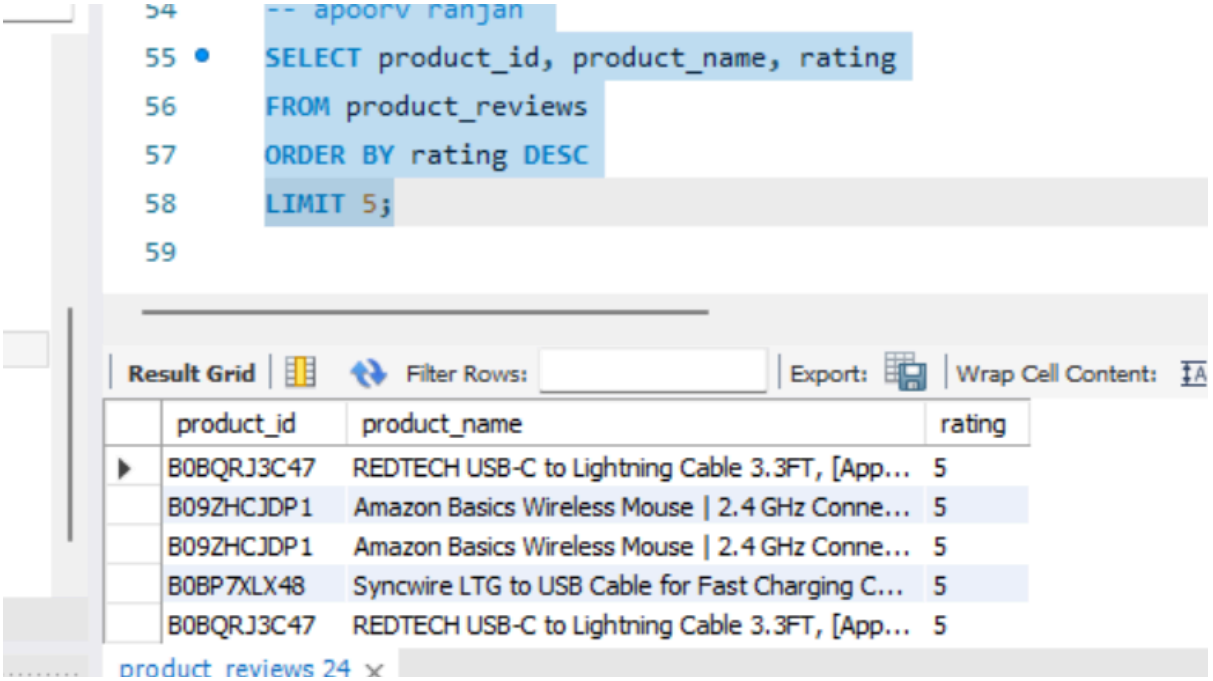
```
49    -- Q6.
50    -- apoorv ranjan
51 •  SELECT AVG(rating) AS average_rating
52    FROM product_reviews;
```

Result Grid | Filter Rows: | Export:

average_rating
4.096587025671689

Q7. Write a query to list the top 5 highest-rated products based on the rating, sorted in descending order.

```
SELECT product_id, product_name, rating
FROM product_reviews
ORDER BY rating DESC
LIMIT 5;
```



```
54    -- apoorv ranjan
55    SELECT product_id, product_name, rating
56    FROM product_reviews
57    ORDER BY rating DESC
58    LIMIT 5;
59
```

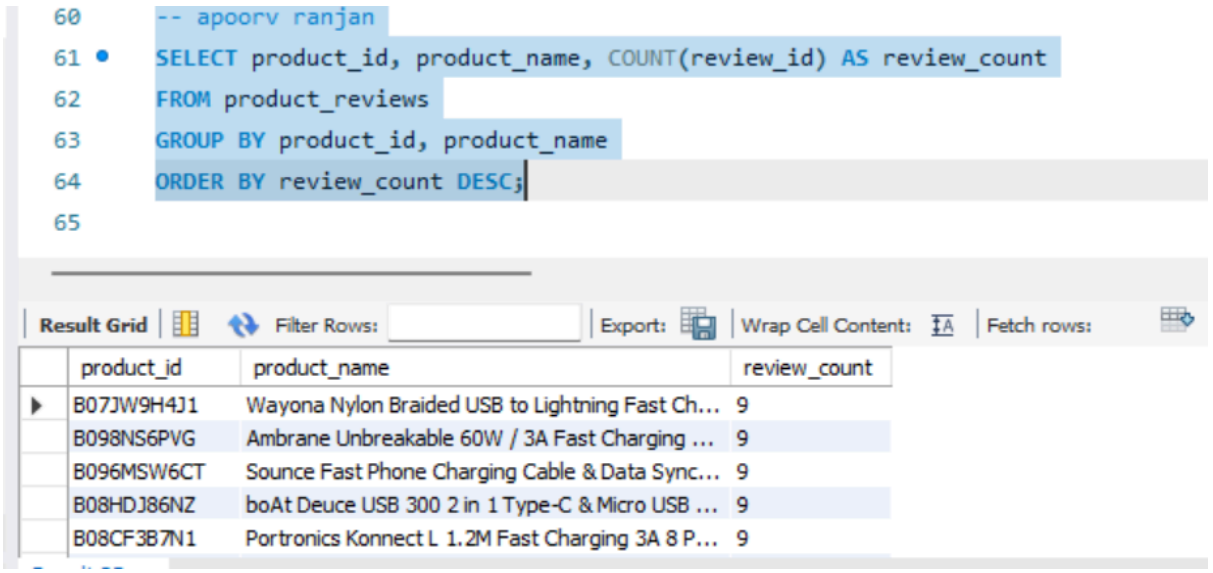
Result Grid | Filter Rows: | Export: | Wrap Cell Content:

product_id	product_name	rating
B0BQRJ3C47	REDTECH USB-C to Lightning Cable 3.3FT, [App...	5
B09ZHCJDP1	Amazon Basics Wireless Mouse | 2.4 GHz Conne...	5
B09ZHCJDP1	Amazon Basics Wireless Mouse | 2.4 GHz Conne...	5
B0BP7XLX48	Syncwire LTG to USB Cable for Fast Charging C...	5
B0BQRJ3C47	REDTECH USB-C to Lightning Cable 3.3FT, [App...	5

product_reviews 24

Q8. Write a query to list all products along with the number of reviews they have. Include columns for product_id, product_name, and review_count.

```
-- apoorv ranjan
SELECT product_id, product_name, COUNT(review_id) AS review_count
FROM product_reviews
GROUP BY product_id, product_name
ORDER BY review_count DESC;
```



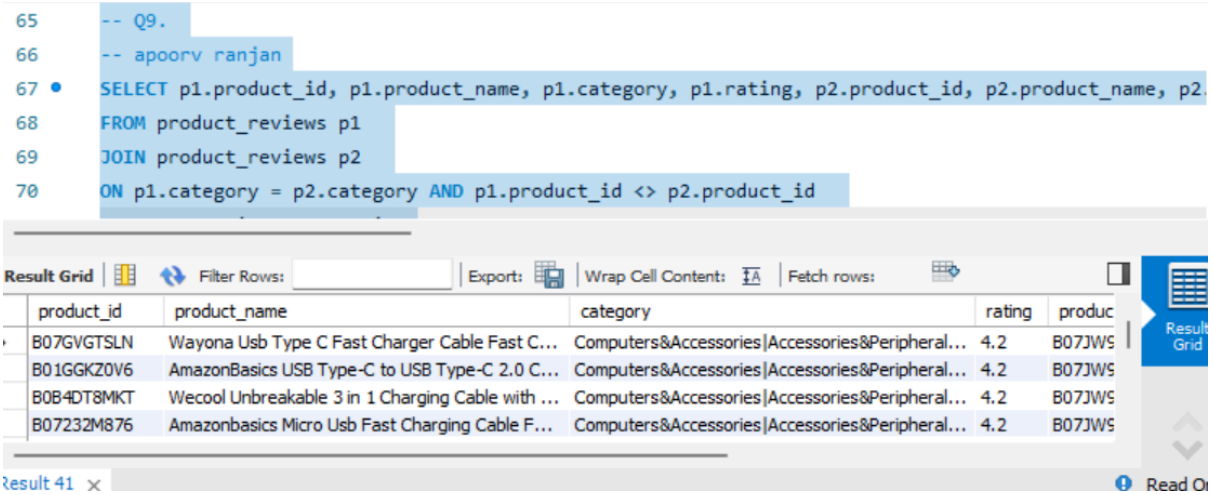
```
60    -- apoorv ranjan
61    SELECT product_id, product_name, COUNT(review_id) AS review_count
62    FROM product_reviews
63    GROUP BY product_id, product_name
64    ORDER BY review_count DESC;
65
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

product_id	product_name	review_count
B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Ch...	9
B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging ...	9
B096MSW6CT	Sounce Fast Phone Charging Cable & Data Sync...	9
B08HDJ86NZ	boAt Deuce USB 300 2 in 1 Type-C & Micro USB ...	9
B08CF3B7N1	Portronics Konnect L 1.2M Fast Charging 3A 8 P...	9

Q9. Write a query to find products that have the same rating and belong to the same category. Display product_id, product_name, category, and rating.

```
-- apoorv ranjan
SELECT p1.product_id AS product_id_1, p1.product_name AS product_name_1,
p2.product_id AS product_id_2, p2.product_name AS product_name_2,
p1.category,p1.rating
FROM product_reviews p1
JOIN product_reviews p2
  ON p1.category = p2.category
  AND p1.rating = p2.rating
  AND p1.product_id < p2.product_id
ORDER BY p1.category, p1.rating;
```



Q10. Write a query using a CASE statement to categorize products into three categories based on their rating: Excellent for ratings 4.5 and above, Good for ratings between 4.0 and 4.5, and Average for ratings below 4.0.

```
-- apoorv ranjan
SELECT product_id, product_name, rating,
    CASE
        WHEN rating >= 4.5 THEN 'Excellent'
        WHEN rating >= 4.0 THEN 'Good'
        ELSE 'Average'
    END AS rating_category
FROM product_reviews
ORDER BY rating DESC;
```

```
75      -- apoorv ranjan
76  •   SELECT product_id, product_name, rating,
77          CASE
78              WHEN rating >= 4.5 THEN 'Excellent'
79              WHEN rating >= 4.0 THEN 'Good'
80              ELSE 'Average'
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows

product_id	product_name	rating	rating_category
B0BQRJ3C47	REDTECH USB-C to Lightning Cable 3.3FT, [App...	5	Excellent
B09ZHCJDP1	Amazon Basics Wireless Mouse | 2.4 GHz Conne...	5	Excellent
B0BP7XLX48	Syncwire LTG to USB Cable for Fast Charging C...	5	Excellent
B0BQRJ3C47	REDTECH USB-C to Lightning Cable 3.3FT, [App...	5	Excellent
B09ZHCJDP1	Amazon Basics Wireless Mouse | 2.4 GHz Conne...	5	Excellent

Result 28

Q.11 Write a query to add a new column discount_amount to the products table that calculates the difference between actual_price and discounted_price.

-- apoorv ranjan

```
ALTER TABLE product_reviews
ADD COLUMN discount_amount DECIMAL(10, 2);
UPDATE product_reviews
SET discount_amount = COALESCE(actual_price, 0) - COALESCE(discounted_price, 0);
SELECT product_id, product_name, actual_price, discounted_price, discount_amount
FROM product_reviews
LIMIT 10;
```

```
88  •   UPDATE product_reviews
89      SET discount_amount = COALESCE(actual_price, 0) - COALESCE(discounted_price, 0);
90  •   SELECT product_id, product_name, actual_price, discounted_price, discount_amount
91      FROM product_reviews
92      LIMIT 10;
93
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: | Fetch rows:

product_id	product_name	actual_price	discounted_price	discount_amount
B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Ch...	1,099	399	-398.00
B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging ...	349	199	150.00
B096MSW6CT	Sounce Fast Phone Charging Cable & Data Sync...	1,899	199	-198.00
B08HDJ86NZ	boAt Deuce USB 300 2 in 1 Type-C & Micro USB ...	699	329	370.00
B08CF3B7N1	Portronics Konnect L 1.2M Fast Charging 3A 8 P...	399	154	245.00

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Output

Q12. Write a query using an advanced function to find the product with the highest discount_percentage.

```
SELECT product_id,
      product_name,
      actual_price,
      discounted_price,
      (actual_price - discounted_price) / actual_price * 100 AS discount_percentage
FROM (
   SELECT product_id,
         product_name,
         actual_price,
         discounted_price,
         RANK() OVER (ORDER BY (actual_price - discounted_price) / actual_price * 100 DESC) AS
ranking
   FROM product_reviews
   WHERE actual_price > 0
) AS ranked
WHERE ranking = 1;
```

```
93      -- Q12.
94      -- apoorv ranjan
95 •    SELECT product_id,
96            product_name,
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

product_id	product_name	actual_price	discounted_price	discount_percentage
B0BF57RN3K	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch ...	19,999	1,799	94.73684210526315
B0BF54972T	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch ...	19,999	1,799	94.73684210526315
B0BF563HB4	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch ...	19,999	1,799	94.73684210526315
B0BF4YBLPX	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch ...	19,999	1,799	94.73684210526315
B0BF54LXW6	Fire-Boltt Ninja Call Pro Plus 1.83" Smart Watch ...	19,999	1,799	94.73684210526315

Result 31 ×

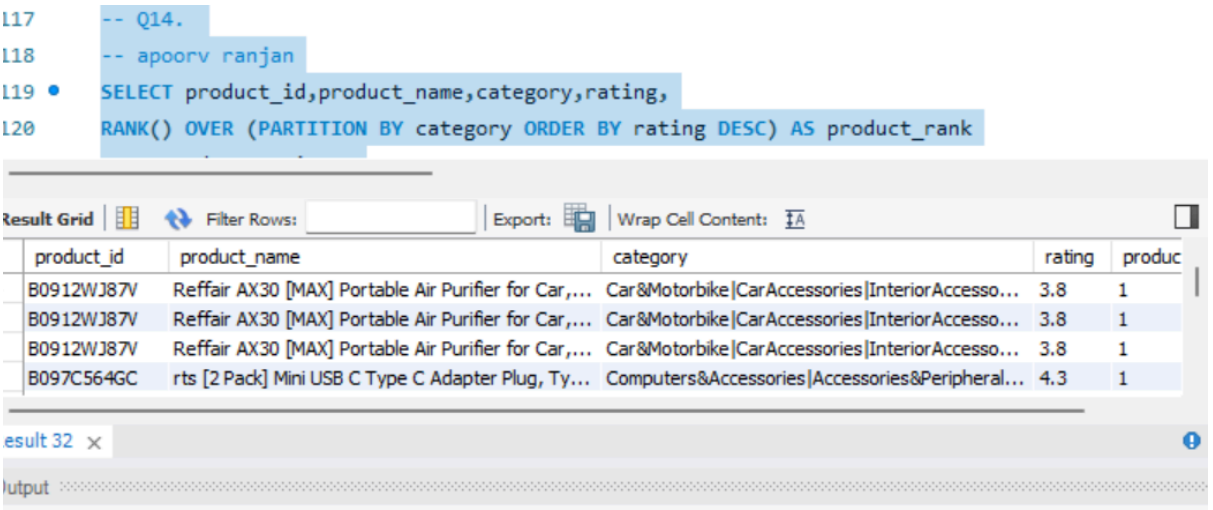
Output

Q13. Create a view named HighRatingProducts that includes products with a rating of 4.5 and above.

```
-- apoorv ranjan
CREATE VIEW HighRatingProducts AS
SELECT product_id,product_name,category,rating,actual_price,discounted_price
FROM product_reviews
WHERE rating >= 4.5;
```

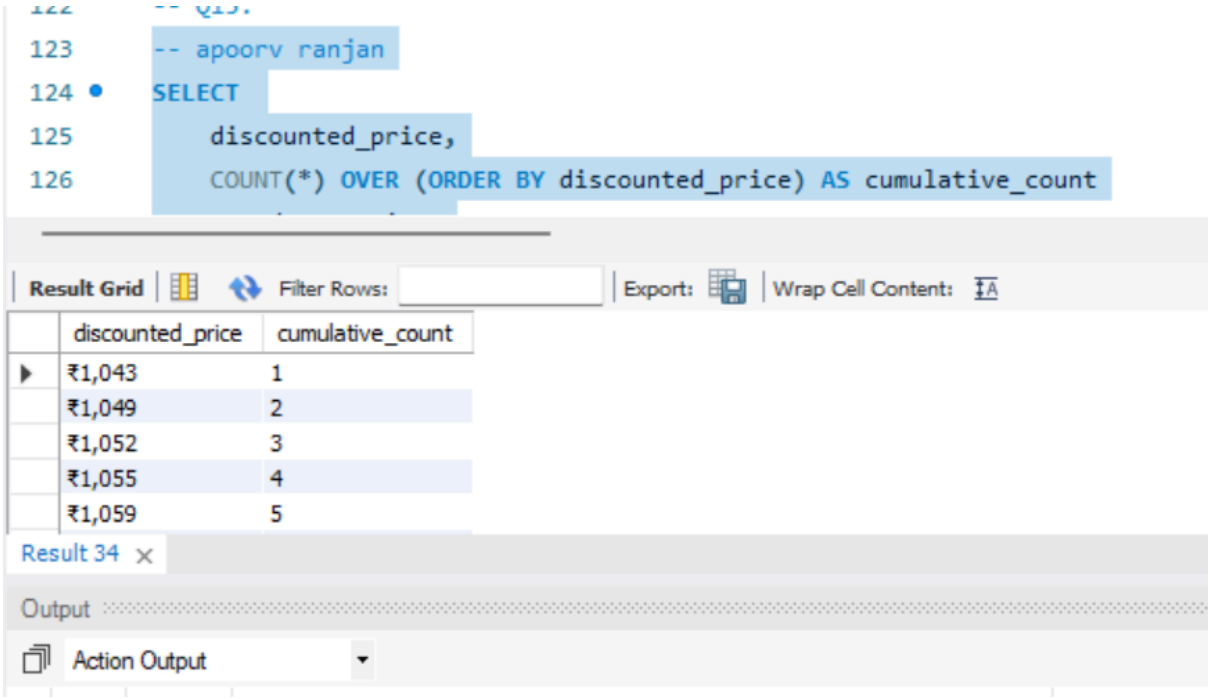
Q14. Write a query using a window function to rank products based on their rating within each category.

```
-- apoorv ranjan
SELECT product_id,product_name,category,rating,
RANK() OVER (PARTITION BY category ORDER BY rating DESC) AS product_rank
FROM product_reviews;
```



Q15. Write a query to calculate the cumulative count of products added each month sorted by discounted_price.

```
-- apoorv ranjan
SELECT
   discounted_price,
   COUNT(*) OVER (ORDER BY discounted_price) AS cumulative_count
FROM product_reviews
GROUP BY discounted_price
ORDER BY discounted_price;
```

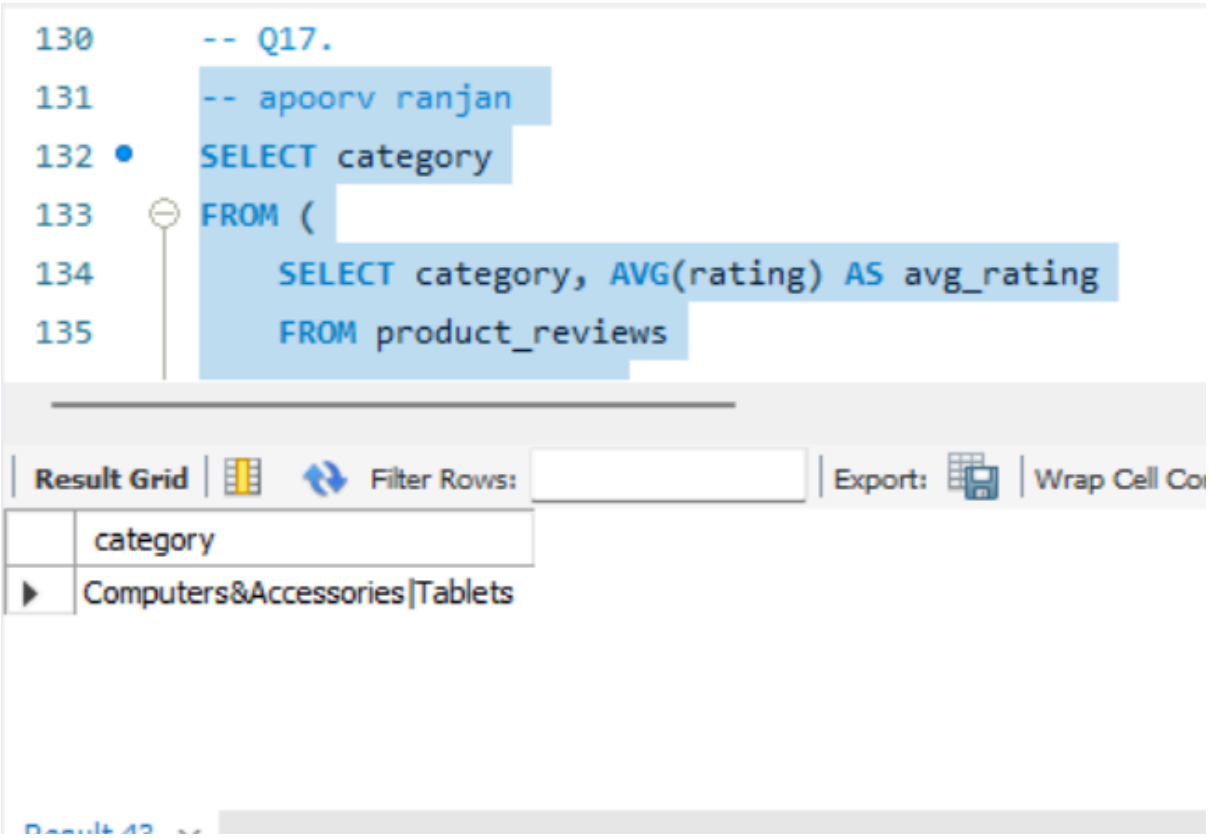


Q16. Write a stored procedure to update the rating of a product given its product_id and new rating.

```
DELIMITER //

CREATE PROCEDURE UpdateProductRating(IN prod_id INT, IN new_rating DECIMAL(3,2))

BEGIN

    UPDATE product_reviews

    SET rating = new_rating

    WHERE product_id = prod_id;

END //

DELIMITER ;
```

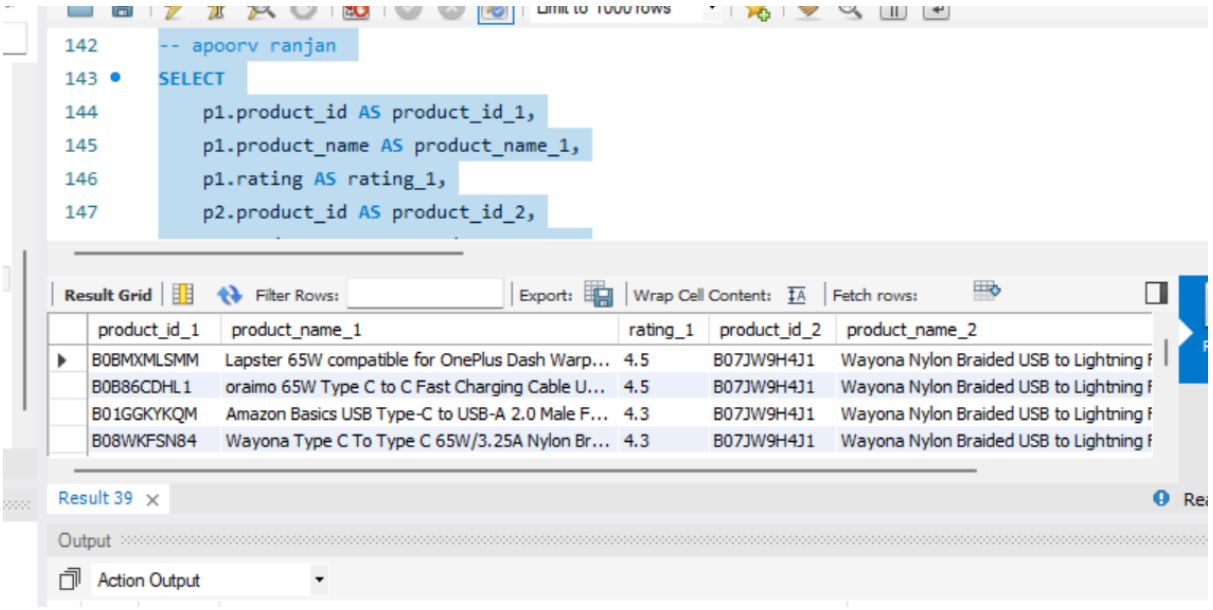
Q17. Write a query to find the category with the highest average rating for products. Use subqueries and aggregate functions to achieve this.

```
-- apoorv ranjan
SELECT category
FROM (
    SELECT category, AVG(rating) AS avg_rating
    FROM product_reviews
    GROUP BY category
    ORDER BY avg_rating DESC
    LIMIT 1
) AS subquery;
```



18. Write a query to find pairs of products from the same category where one product has a higher rating than the other. Display columns for product_id_1, product_name_1, rating_1, product_id_2, product_name_2, and rating_2.

```
-- apoorv ranjan
SELECT
   p1.product_id AS product_id_1,
   p1.product_name AS product_name_1,
   p1.rating AS rating_1,
   p2.product_id AS product_id_2,
   p2.product_name AS product_name_2,
   p2.rating AS rating_2
FROM
   product_reviews p1
JOIN
   product_reviews p2
ON
   p1.category = p2.category AND p1.product_id <> p2.product_id
WHERE
   p1.rating > p2.rating;
```


142 -- apoorv ranjan
143 SELECT
144 p1.product_id AS product_id_1,
145 p1.product_name AS product_name_1,
146 p1.rating AS rating_1,
147 p2.product_id AS product_id_2,
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
Fetch rows:
product_id_1 product_name_1 rating_1 product_id_2 product_name_2
B0BMXMLSMM Lapster 65W compatible for OnePlus Dash Warp... 4.5 B07JW9H4J1 Wayona Nylon Braided USB to Lightning
B0B86CDHL1 oraimo 65W Type C to C Fast Charging Cable U... 4.5 B07JW9H4J1 Wayona Nylon Braided USB to Lightning
B01GGKYKQM Amazon Basics USB Type-C to USB-A 2.0 Male F... 4.3 B07JW9H4J1 Wayona Nylon Braided USB to Lightning
B08WKFSN84 Wayona Type C To Type C 65W/3.25A Nylon Br... 4.3 B07JW9H4J1 Wayona Nylon Braided USB to Lightning
Result 39
Output
Action Output