



## CASE STUDY

You are working at Amazon, a leading e-commerce platform. The management has tasked you with analyzing sales data by performing different queries in sql.

.....PARTH MISHRA

- 1 List all products with a discounted price below ₹500.

The screenshot shows a MySQL Workbench interface with several tabs at the top: customers, orderdetails, orders, products, orders, orderdetails, and aavar. The SQL editor tab contains the following code:

```
1 •   SELECT * FROM amazon.mytable;
2 •   select product_name, discount_price from mytable
3   where discounted_price <500;
4 •   SELECT product_name, discounted_price
5     FROM mytable
6   WHERE discounted_price < 500;
7
```

The Results Grid shows the output of the query, listing various products and their discounted prices. The table has two columns: product\_name and discounted\_price. The data includes items like Wayona Nylon Braided USB to Lightning Fast Ch... (399), Ambrane Unbreakable 60W / 3A Fast Charging ... (199), and AmazonBasics Flexible Premium HDMI Cable (Bla... (219)).

product_name	discounted_price
Wayona Nylon Braided USB to Lightning Fast Ch...	399
Ambrane Unbreakable 60W / 3A Fast Charging ...	199
Source Fast Phone Charging Cable & Data Sync...	199
boAt Deuce USB 300 2 in 1 Type-C & Micro USB ...	329
Portronics Konnect L 1.2M Fast Charging 3A 8 P...	154
pTron Solero TB301 3A Type-C Data and Fast C...	149
boAt Micro USB 55 Tangle-free, Sturdy Micro US...	176.63
MI Usb Type-C Cable Smartphones (Black)	229
TP-Link USB WiFi Adapter for PC(TL-WN725N), ...	499
Ambrane Unbreakable 60W / 3A Fast Charging ...	199
Portronics Konnect L POR-1081 Fast Charging 3...	154
boAt Rugged v3 Extra Tough Unbreakable Braid...	299
AmazonBasics Flexible Premium HDMI Cable (Bla...	219

The Output pane shows the history of actions taken:

#	Time	Action
8	18:21:48	SELECT product_name, discount_price FROM mytable WHERE discount_price < 500 LIMIT
9	18:22:09	SELECT product_name, discounted_price FROM mytable WHERE discounted_price < 500 L

## 2 Find products with a discount percentage of 50% or more.

```
7 •   select * from mytable  
8     where discount_percentage>=0.5;  
9 •   select product_name, discount_percentage from mytable where discount_percentage >=0.5  
10    order by discount_percentage  
11
```

The screenshot shows the MySQL Workbench interface with the following details:

- Result Grid:** Displays a table with two columns: `product_name` and `discount_percentage`. The data shows various products with their respective discount percentages, all of which are 0.5.
- Action Output:** Shows the history of actions taken:
  - Action 15 at 18:38:41: `select product_name, discounted_percentage from mytable where discount_percentage >=0.5 order by discount_...` Error Code: 1054. Unknown column 'discounted\_percentage' in field list'
  - Action 16 at 18:39:20: `select product_name, discount_percentage from mytable where discount_percentage >=0.5 order by discount_...` 200 row(s) returned

## 3 Retrieve all products where the name contains the word "Cable."

```
--  
11 •   select product_name from mytable  
12     where product_name like "%cable%"
```

The screenshot shows the MySQL Workbench interface with the following details:

- Result Grid:** Displays a table with one column: `product_name`. The results list various products, many of which contain the word "Cable" in their names.
- Action Output:** Shows the history of actions taken:
  - Action 16 at 18:39:20: `select product_name, discount_percentage from mytable where discount_percentage >=0.5 order by discount_...` 200 row(s) returned
  - Action 17 at 18:42:17: `select product_name from mytable where product_name like "%cable%" LIMIT 0, 200` 200 row(s) returned

4 Display the difference between the average of the actual price and the discounted price for each product.

```
14 ## difference between the avg of actual price and discounted price of each product
15 • select avg(actual_price)- avg(discounted_price) difference from mytable;
16 • select avg(actual_price)- avg(discounted_price) difference from mytable;
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
difference	2319.6797610921512			

Result 11 ×			
Output			
Action Output			Message
#	Time	Action	
19	18:48:02	select avg(actual_price)- avg(actual_price) difference from mytable LIMIT 0, 200	1 row(s) returned
20	18:49:42	select avg(actual_price)- avg(discounted_price) difference from mytable LIMIT 0, 200	1 row(s) returned

5 Query reviews that mention "fast charging" in their content.

```
17
18 ## Query reviews that mention "fast charging" in their content.
19 • select review_content from mytable
20 where review_content like "%fast charging%";
```

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Output			
Action Output			Message
#	Time	Action	
20	18:49:42	select avg(actual_price)- avg(discounted_price) difference from mytable LIMIT 0, 200	1 row(s) returned
21	18:54:35	select review_content from mytable where review_content like "%fast charging%" LIMIT 0, 200	157 row(s) returned

## 6 Identify products with a discount percentage between 20% and 40%.

```
21
22  ## Identify products with a discount percentage between 20% and 40%.
23 •   select product_name, discount_percentage from mytable
24   where discount_percentage between 0.20 and 0.40;
```

The screenshot shows a database interface with a SQL editor at the top containing the provided code. Below it is a 'Result Grid' table with columns 'product\_name' and 'discount\_percentage'. The table lists various products and their discount percentages, with rows like 'MI Usb Type-C Cable Smar...' (0.23), 'Ambrane Unbreakable 60...' (0.33), and 'OnePlus 80 cm (32 inches) HD R...' (0.39). At the bottom of the interface, there is an 'Output' section showing two log entries: one for the initial query and another for the second query, both indicating successful execution and row counts.

product_name	discount_percentage
MI Usb Type-C Cable Smar...	0.23
Ambrane Unbreakable 60...	0.33
Ambrane Unbreakable 60...	0.38
LG 80 cm (32 inches) HD R...	0.39
OnePlus 80 cm (32 inches) ...	0.25
Ambrane Unbreakable 3 in ...	0.25
OnePlus 126 cm (50 inches...	0.28
TP-Link Nano AC600 USB ...	0.38
Amazon Basics High-Speed...	0.35
OnePlus 80 cm (32 inches) ...	0.27
Samsung 108 cm (43 inche...	0.31
Redmi 108 cm (43 inches) ...	0.37
OnePlus 108 cm (43 inches...)	0.25

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Output

#	Time	Action	Message
21	18:54:35	select review_content from mytable where review_content like "%fast charging%" LIMIT 0, 200	157 row(s) returned
22	18:57:57	select product_name, discount_percentage from mytable where discount_percentage between 0.20 and 0.40 ...	200 row(s) returned

## 7 Find products that have an actual price above ₹1,000 and are rated 4 stars or above.

```
26  ## Find products that have an actual price above ₹1,000 and are rated 4 stars or above.
27 •   select product_name, actual_price,rating from mytable
28   where actual_price > 1000 and rating >=4]
29 •   select product_name, actual_price,rating from mytable
30   where actual_price > 1000 or rating >=4
31
```

The screenshot shows a database interface with a SQL editor at the top containing the provided code. Below it is a 'Result Grid' table with columns 'product\_name', 'actual\_price', and 'rating'. The table lists various products and their details, with rows like 'Wayona Nylon Braided US...' (1099, 4.2), 'MI 80 cm (32 inches) 5A Se...' (24999, 4.2), and 'LG 80 cm (32 inches) HD R...' (21990, 4.3). At the bottom of the interface, there is an 'Output' section showing two log entries: one for the initial query and another for the second query, both indicating successful execution and row counts.

product_name	actual_price	rating
Wayona Nylon Braided US...	1099	4.2
MI 80 cm (32 inches) 5A Se...	24999	4.2
LG 80 cm (32 inches) HD R...	21990	4.3
Duracell USB Lightning Appl...	1799	4.5
Samsung 80 cm (32 Inches...)	22900	4.3
Acer 80 cm (32 inches) I S...	19990	4.3
OnePlus 80 cm (32 inches) ...	19999	4.2
Duracell USB C To Lightnin...	1999	4.4
Zoul USB C 60W Fast Char...	1099	4.3
Amazonbasics Nylon Braide...	1900	4.4
OnePlus 126 cm (50 Inches...)	45999	4.2
Duracell Type C To Type C...	1999	4.2
Mi 108 cm (43 inches) Full ...	34999	4.3

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Output

#	Time	Action	Message
24	19:01:52	select product_name, actual_price,rating from mytable where actual_price > 1000 or rating >=4 LIMIT 0, 200	200 row(s) returned
25	19:02:04	select product_name, actual_price,rating from mytable where actual_price > 1000 and rating >=4 LIMIT 0, 200	200 row(s) returned

## 8 Find products where the discounted price ends with a 9

```
33     ## Find products where the discounted price ends with a 9
34 •   select product_name, discounted_price from mytable
35   where discounted_price like "%9";
```

The screenshot shows a database interface with a query editor at the top and a results grid below. The query editor contains the code from step 35. The results grid shows a list of products with their names and discounted prices. The output section at the bottom shows a log entry for the query execution.

product_name	discounted_price
Wayona Nylon Braided US...	399
Ambrane Unbreakable 60...	199
Source Fast Phone Chargi...	199
boAt Deuce USB 300 2 in 1...	329
pTron Solero TB301 3A Ty...	149
MI Usb Type-C Cable Smar...	229
TP-Link USB WiFi Adapter f...	499
Ambrane Unbreakable 60...	199
boAt Rugged v3 Extra Tou...	299
AmazonBasics Flexible Pre...	219
Portronics Konnect L 1.2M ...	159
MI Braided USB Type-C Ca...	349
MI 80 cm (32 inches) 5A Se...	13999

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Output:

Action Output
# Time Action Message Du
25 19:02:04 select product_name, actual_price,rating from mytable where actual_price > 1000 and rating >=4 LIMIT 0, 200 200 row(s) returned 0.0

## 9 Display review contents that contain words like worst, waste, poor, or not good.

```
38 •   select review_content from mytable
39   where review_content like "%words%"
40   or review_content like "%waste%"
41   or review_content like "%poor%"
42   or review_content like "%notgood%"
```

The screenshot shows a database interface with a query editor at the top and a results grid below. The query editor contains the code from step 42. The results grid shows a large number of review contents from the 'mytable' table. The output section at the bottom shows a log entry for the query execution.

review_content
Check for offer before buying,18w charging cable.,Awesome cable!Charging, data transfer and durability is simply awesome, and there is not a single disconnection issue, which I always faced in original mi cable from box. Bought 1 mor... LG was always Good , correct delivery, good service but sound quality was poor. The speakers were fitted below the tv. No clear sound. That was the only problem.,Good videoGood vice.Picture quality is awesome ,Good at that price,O... This connector has provided as a boon for my old Samsung LCD monitor and I am proactively using that monitor as the 2nd screen just if the finishing of the product can be improved then it would be a better purchase option.,Save it pur... Overall good.,TV picture ok smart betterSound very low another brand,Service provider refuse install my TV, bad service and samsung, I am calling 3 times service provider . Not meet my home address.why ? Bad bad,They product did no... About the TV - Wonderful-----Probably the best TV in this price range (INR 13000).Good - Google interface, loaded with features, lightweight, 55 watt power consumption, stable designAve... The signal is too unstable once connect you need a bit of adjustment by unplugging or moving the wire to get a proper signal. But does the job. Go for this if you want to experiment with HDMI as I wasn't sure it would work for me or not... The OnePlus TV is great if you want a affordable and middle range features TV. I got it in the offer and it was totally worth it.Pros:-1. Sound is awesome - 100% satisfied with the quality of sound. Dolby Audio 20W speakers are really gr... I am posting this after a few weeks of using the product.Usage: Continuous , OTT only, no Cable/Dish operator,Average daily usage: 6-8 hours.The TV is a great value-for-money product.Installation: The installation was simple and Amaz... NOTE:@ If you select brand-authorized TV installation, then DO NOT unbox the tv until MI representative arrives.This ensures, that if TV is damaged in transportation, then you will get replacement easily. @ If you didn't choose installati... Overall replacement of original samsung remote,its compatible easily with my samsung uhd tv,but there is no voice command in the remote.,Works well. Will comment on durability after using it for a few months.,It uses two AA battery,S... This OnePlus TV is great if you want a affordable and middle range features TV. I got it in the offer and it was totally worth it.Pros:-1. Sound is awesome - 100% satisfied with the quality of sound. Dolby Audio 20W speakers are really gr... Nice,Works very well with Airtel DTH. The pairing is as same as every Airtel DTH remote. All the buttons works properly.,Nice,Good substitute for original. Nice product,ok,Poor quality! Stopped working in a month,,This remote will work onl... I am posting this after a few weeks of using the product.Usage: Continuous , OTT only, no Cable/Dish operator,Average daily usage: 6-8 hours.The TV is a great value-for-money product.Installation: The installation was simple and Amaz...

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Output:

Action Output
# Time Action Message Du
26 19:05:55 select product_name, discounted_price from mytable where discounted_price like "%9" LIMIT 0, 200 200 row(s) returned 0.0
27 19:10:16 select review_content from mytable where review_content like "%words%" or review_content like "%waste%" ... 166 row(s) returned 0.0

10 List all products where the category includes "Accessories."

```
46     ###List all products where the category includes "Accessories."
47 •   select product_name, category from mytable
48   where category like "%accessories%";
49
```

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

product_name	category
Wayona Nylon Braided US...	Computers...
Ambrane Unbreakable 60...	Computers...
Source Fast Phone Chargi...	Computers...
boAt Deuce USB 300 2 in 1...	Computers...
Portronics Kornnect L 1.2M ...	Computers...
pTron Solero TB301 3A Ty...	Computers...
boAt Micro USB 55 Tangle...	Computers...
MI Usb Type-C Cable Smar...	Computers...
TP-Link USB WiFi Adapter f...	Computers...
Ambrane Unbreakable 60...	Computers...
Portronics Kornnect L POR-...	Computers...
boAt Rugged v3 Extra Tou...	Computers...
AmazonBasics Flexible Pre...	Electronics...

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Output ::::::::::::::::::::

Action Output

#	Time	Action	Message
27	19:10:16	select review_content from mytable where review_content like "%words%" or review_content like "%waste%" ...	166 row(s) returned