amazon

SALES ANALYSIS

SQL PROJECT

Presented by

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ABOUT AMAZON

Amazon: A Leading Global Technology Giant

Company Name: Amazon

Date of Incorporation: July 5, 1994

Core Businesses:

- **Amazon Prime** – Subscription-based streaming and shopping services
- **Amazon Web Services (AWS)** – Cloud computing solutions
- **Amazon Echo & Alexa** – Smart home and AI-powered voice assistant technology
- **Amazon Entertainment** – Digital streaming and media services
- **Exclusive Amazon Products** – Proprietary product offerings across various categories

About the Founder:

Jeffrey Preston Bezos, born on January 12, 1964, in Albuquerque, New Mexico, is the founder, executive chairman, and former president & CEO of Amazon. Under his leadership, Amazon has grown into a global powerhouse in technology and e-commerce.

About Amazon:

Amazon is a leading American multinational technology company specializing in e-commerce, cloud computing, online advertising, digital streaming, and artificial intelligence. It is widely recognized as one of the Big Five American technology companies, alongside Apple, Microsoft, Google, and Meta.

PROBLEM STATEMENT

As an analyst at Amazon, a global e-commerce leader, you've been tasked with diving into sales data using SQL queries to uncover key insights. Here's what you need to accomplish:

- Retrieve all products with a discounted price **below ₹500.**
- Identify products with a discount percentage of **50% or more.**
- Find all products where the name includes the word **"Cable".**
- Calculate the difference between the **average actual price** and the **discounted price** for each category.
- Query customer reviews that mention **"fast charging"** in their content.

- Identify products with a discount percentage between **20% and 40%.**
- Retrieve products with an actual price **above ₹1,000** that are rated **4 stars or higher.**
- Find products where the discounted price ends in **'9'.**
- Display review contents containing words like **"worst," "waste," "poor,"** or **"not good".**
- List all products where the category includes **"Accessories".**
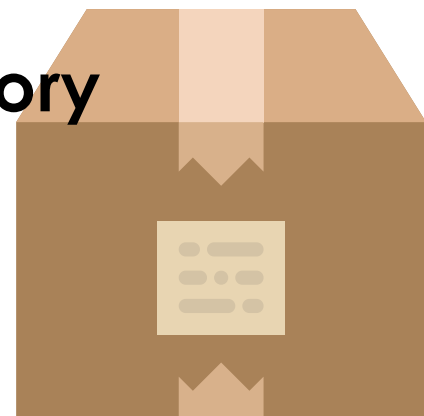
WHAT IS 'SQL'

SQL (Structured Query Language) is a powerful programming language specifically designed for managing and manipulating data in relational databases. It enables users to efficiently perform operations such as querying, updating, inserting, and deleting data across databases like MySQL, SQL Server, Oracle, and more.
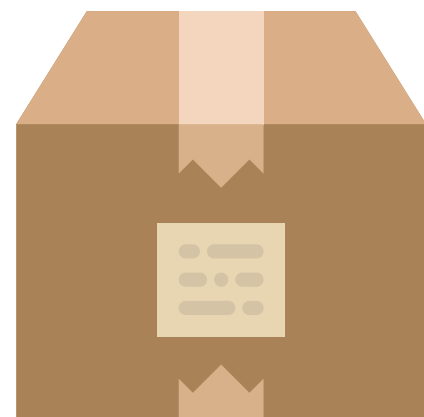
Importance and Uses of SQL

SQL is essential for various reasons:

Data Retrieval: Efficiently retrieves data from large databases.

Data Manipulation: Allows for the insertion, updating, and deletion of data.

Data Definition: Defines the structure of data within a database.

**Access Control:** Manages user permissions and access to data
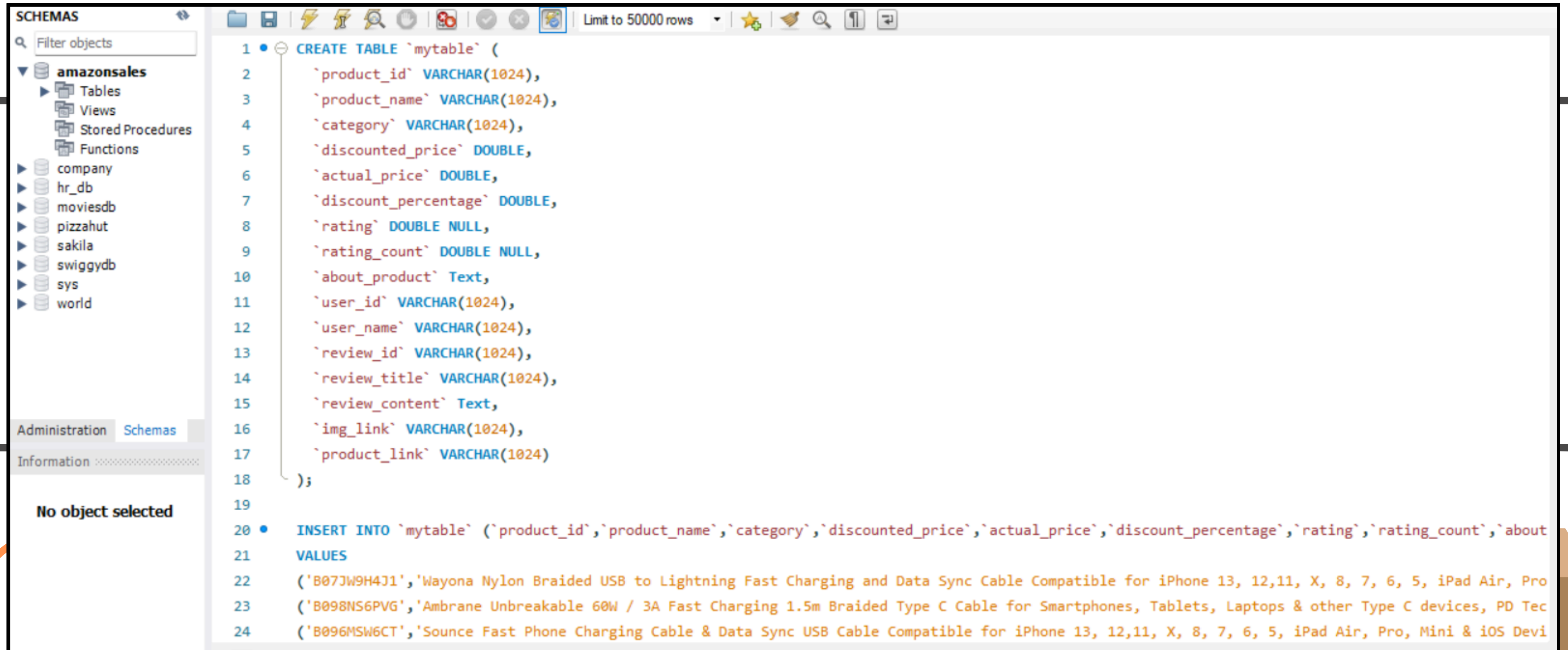
INITIAL STEPS BEFORE STARTING THE QUERIES

```
Filter objects                          1        CREATE DATABASE amazonsal
  amazonsales                           2   ●    USE amazonsales;
  ▶  Tables
```

In Workbench, create a new Database named 'amazonsales' and then use it by executing the command 'USE amazonsales'; by pressing Ctrl+enter.

Since the tables are empty, import the Data by clicking on "File" and selecting "Open SQL Script..." or directly open it by pressing Ctrl+Shift+O and then eventually upload your Dataset file (amazonsales)
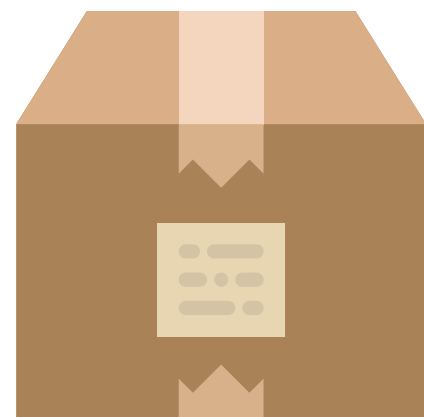
After the Dataset file is uploaded, this screen will appear and you'll have to run the above query to access the Dataset, allowing you to start your project queries.

RETRIEVE ALL PRODUCTS WITH A DISCOUNTED PRICE BELOW ₹500.

```
1   SELECT product_name, discounted_price
2   FROM mytable
3   WHERE discounted_price < 500;
```

Result Grid	Filter Rows:	Export:
product_name	discounted_price
Wayona Nylon Braided USB to Lightning Fast Ch...	399
Ambrane Unbreakable 60W / 3A Fast Charging ...	199
Sounce 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 Smartphone (Black)	229

Purpose

The purpose of this tool is to find budget friendly products under ₹500, catering to price-sensitive customers.

IDENTIFY PRODUCTS WITH A DISCOUNT PERCENTAGE OF 50% OR MORE.

```sql
1
2 •   SELECT  product_id, product_name, discount_percentage
3     FROM mytable
4     WHERE discount_percentage >= 0.50;
```

Result Grid			Filter Rows:	Export:	Wrap Cell Content:

	product_id	product_name	discount_percentage
▶	B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Ch...	0.64
	B096MSW6CT	Sounce Fast Phone Charging Cable & Data Sync...	0.9
	B08HDJ86NZ	boAt Deuce USB 300 2 in 1 Type-C & Micro USB ...	0.53
	B08CF3B7N1	Portronics Konnect L 1.2M Fast Charging 3A 8 P...	0.61
	B08Y1TFSP6	pTron Solero TB301 3A Type-C Data and Fast C...	0.85
	B08WRWPM22	boAt Micro USB 55 Tangle-free, Sturdy Micro US...	0.65
	B008IFXQFU	TP-Link USB WiFi Adapter for PC(TL-WN725N), ...	0.5

Purpose

Highlight items with a discount percentage of 50% or more for significant sales opportunities often featured in promotional campaigns, aiding in finding heavily discounted items.
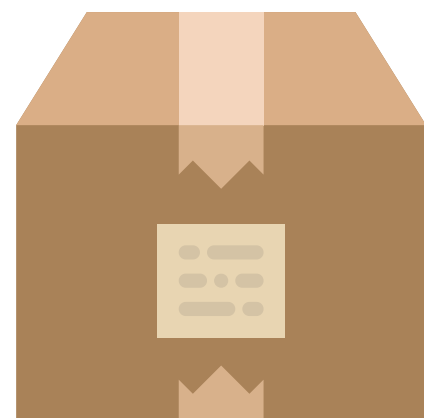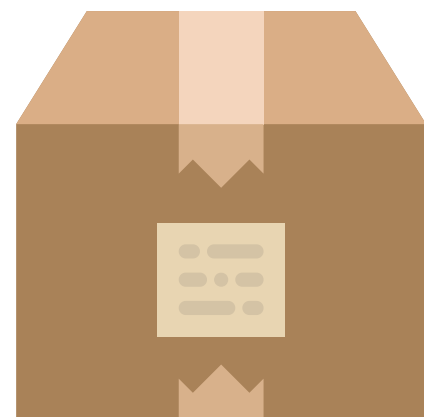
FIND ALL PRODUCTS WHERE THE NAME INCLUDES THE WORD "CABLE".

```sql
SELECT  product_id, product_name
FROM mytable
WHERE product_name LIKE '%Cable%';
```

	product_id	product_name
▶	B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Ch...
	B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging ...
	B096MSW6CT	Sounce Fast Phone Charging Cable & Data Sync...
	B08HDJ86NZ	boAt Deuce USB 300 2 in 1 Type-C & Micro USB ...
	B08CF3B7N1	Portronics Konnect L 1.2M Fast Charging 3A 8 P...
	B08Y1TFSP6	pTron Solero TB301 3A Type-C Data and Fast C...
	B08WRWPM22	boAt Micro USB 55 Tangle-free, Sturdy Micro US...
	B08DDRGWTJ	MI Usb Type-C Cable Smartphone (Black)

Result Grid | Filter Rows: | Export:

Purpose

This query finds products with "Cable" in the name, aiding in: **Product search for cables, Inventory management and categorization, Targeted marketing campaigns, Customer support efficiency, Sales analysis for cable products**

CALCULATE THE DIFFERENCE BETWEEN THE AVERAGE ACTUAL PRICE AND THE DISCOUNTED PRICE FOR EACH CATEGORY.

```sql
SELECT  category,
AVG(actual_price) - AVG(discounted_price)
AS 'price after discount'
FROM mytable
GROUP BY category;
```

category	price after discount
Computers&Accessories|Accessories&Peripheral...	545.2991416309013
Computers&Accessories|NetworkingDevices|Ne...	666.333333333333
Electronics|HomeTheater,TV&Video|Accessories...	768.958333333333
Electronics|HomeTheater,TV&Video|Televisions|...	15292.650793650795
Electronics|HomeTheater,TV&Video|Accessories...	731.510204816325
Electronics|HomeTheater,TV&Video|Televisions|...	8148.83333333333
Electronics|HomeTheater,TV&Video|Accessories...	918.6666666666666
Electronics|HomeTheater,TV&Video|Accessories...	515
Electronics|HomeAudio|Accessories|SpeakerAcc...	950
Electronics|HomeTheater,TV&Video|Accessories...	735.6666666666666
Electronics|HomeTheater,TV&Video|Projectors	8303.333333333332
Electronics|HomeAudio|Accessories|Adapters	391

Result Grid | Filter Rows: | Export: | Wrap

Purpose

The purpose of this query calculates the price difference between actual and discounted prices for each category, helping assess customer savings, pricing strategies, promotions, profit margins, and inventory decisions.
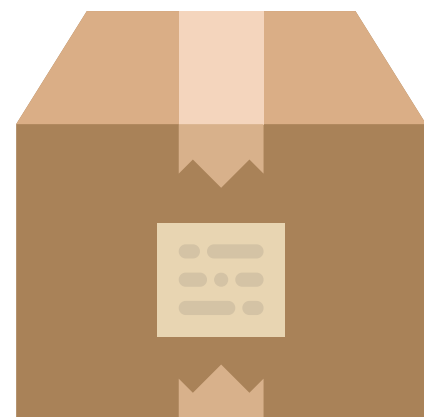
QUERY CUSTOMER REVIEWS THAT MENTION "FAST CHARGING" IN THEIR CONTENT.

```sql
SELECT  product_id, product_name, review_content

FROM mytable

WHERE review_content LIKE '%fast charging%';
```

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

	product_id	product_name	review_content
▶	B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging ...	I ordered this cable to connect my phone to An.
	B08HDJ86NZ	boAt Deuce USB 300 2 in 1 Type-C & Micro USB ...	Good product,long wire,Charges good,Nice,I bo
	B082LZGK39	Ambrane Unbreakable 60W / 3A Fast Charging ...	I ordered this cable to connect my phone to An.
	B08CF3D7QR	Portronics Konnect L POR-1081 Fast Charging 3...	The cable is efficient in fast charging but in quic
	B0789LZTCJ	boAt Rugged v3 Extra Tough Unbreakable Braid...	Good product,long wire,Charges good,Nice,I b
	B085DTN6R2	Portronics Konnect CL 20W POR-1067 Type-C t...	Definitely isn't as good as the original cord but .
	B083342NKJ	MI Braided USB Type-C Cable for Charging Ada...	I like it ⚖⚖,Best charging power . I used this c
	B082LSVT4B	Ambrane Unbreakable 60W / 3A Fast Charging ...	I ordered this cable to connect my phone to An.
	B08WRBG3XW	boAt Type C A325 Tangle-free, Sturdy Type C ...	Check for offera before buying,18w charging c.
	B09NHVCHS9	Flix Micro Usb Cable For Smartphone (Black)	Worked on iPhone 7 and didn't work on iPhone .
	B094JNXNPV	Ambrane Unbreakable 3 in 1 Fast Charging Brai...	The product seems and works good but it's not.

Purpose

This query helps in understanding customer opinions, improving products, evaluating competition, addressing issues, and monitoring trends for strategic decisions.
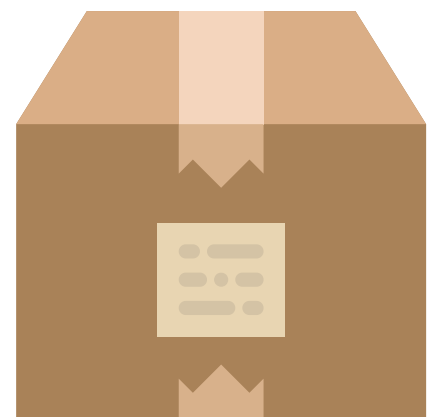
IDENTIFY PRODUCTS WITH A DISCOUNT PERCENTAGE BETWEEN 20% AND 40%.

```sql
SELECT  product_id, product_name, discount_percentage

FROM mytable

WHERE discount_percentage BETWEEN 0.20 AND 0.40;
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:

product_id	product_name	discount_percentage
B08DDRGWTJ	MI Usb Type-C Cable Smartphone (Black)	0.23
B082LZGK39	Ambrane Unbreakable 60W / 3A Fast Charging ...	0.33
B082LSVT4B	Ambrane Unbreakable 60W / 3A Fast Charging ...	0.38
B08DPLCM6T	LG 80 cm (32 inches) HD Ready Smart LED TV 3...	0.39
B08B42LWKN	OnePlus 80 cm (32 inches) Y Series HD Ready L...	0.25
B094JNXNPV	Ambrane Unbreakable 3 in 1 Fast Charging Brai...	0.25
B0B3MMYHYW	OnePlus 126 cm (50 inches) Y Series 4K Ultra H...	0.28
B07KRCW6LZ	TP-Link Nano AC600 USB Wi-Fi Adapter(Archer ...	0.38
B014I8SSD0	Amazon Basics High-Speed HDMI Cable, 6 Feet ...	0.35

Purpose

This query is used to find products with discounts between 20% and 40%, aiding in identifying products with moderate discounts, useful for sales analysis focusing on specific discount ranges.
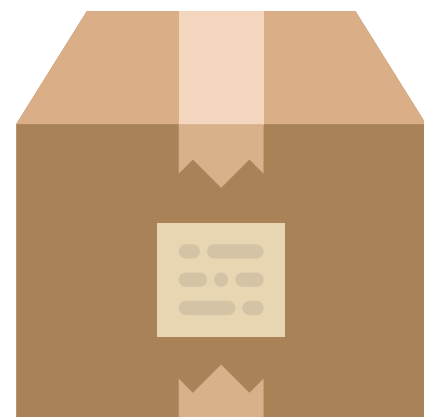
RETRIEVE PRODUCTS WITH AN ACTUAL PRICE ABOVE ₹1,000 THAT ARE RATED 4 STARS OR HIGHER.

```sql
SELECT   product_id, product_name, actual_price, rating

FROM mytable

WHERE (actual_price >1000) AND (rating >= 4);
```

	product_id	product_name	actual_price	rating
▶	B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Ch...	1099	4.2
	B0B6F7LX4C	MI 80 cm (32 inches) 5A Series HD Ready Smart...	24999	4.2
	B08DPLCM6T	LG 80 cm (32 inches) HD Ready Smart LED TV 3...	21990	4.3
	B09C6HXFC1	Duracell USB Lightning Apple Certified (Mfi) Brai...	1799	4.5
	B09F6S8BT6	Samsung 80 cm (32 Inches) Wondertainment Se...	22900	4.3
	B0B1YVCJ2Y	Acer 80 cm (32 inches) I Series HD Ready Andr...	19990	4.3
	B08B42LWKN	OnePlus 80 cm (32 inches) Y Series HD Ready L...	19999	4.2
	B09W5XR9RT	Duracell USB C To Lightning Apple Certified (Mfi)...	1999	4.4
	B08QSC1XY8	Zoul USB C 60W Fast Charging 3A 6ft/2M Long ...	1099	4.3
	B07XLCFSSN	Amazonbasics Nylon Braided Usb-C To Lightning...	1900	4.4
	B0B3MMYHYW	OnePlus 126 cm (50 inches) Y Series 4K Ultra H...	45999	4.2

Purpose

This query helps in identifying price patterns, tracking promotions, making price adjustment decisions, understanding consumer preferences, and reviewing stock for better pricing strategies and sales performance.
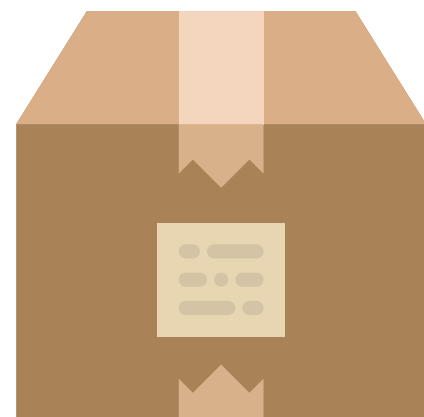
FIND PRODUCTS WHERE THE DISCOUNTED PRICE ENDS IN '9'.

```sql
SELECT   product_id, product_name, discounted_price
FROM mytable
WHERE discounted_price LIKE '%9%';
```

	product_id	product_name	discounted_price
▶	B07JW9H4J1	Wayona Nylon Braided USB to Lightning Fast Ch...	399
	B098NS6PVG	Ambrane Unbreakable 60W / 3A Fast Charging ...	199
	B096MSW6CT	Sounce Fast Phone Charging Cable & Data Sync...	199
	B08HDJ86NZ	boAt Deuce USB 300 2 in 1 Type-C & Micro USB ...	329
	B08Y1TFSP6	pTron Solero TB301 3A Type-C Data and Fast C...	149
	B08DDRGWTJ	MI Usb Type-C Cable Smartphone (Black)	229
	B008IFXQFU	TP-Link USB WiFi Adapter for PC(TL-WN725N), ...	499
	B082LZGK39	Ambrane Unbreakable 60W / 3A Fast Charging ...	199
	B0789LZTCJ	boAt Rugged v3 Extra Tough Unbreakable Braid...	299

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

Purpose

This query provides insights for businesses on pricing analysis, promotional strategies, sales optimization, customer behavior insights, and inventory management related to prices ending in 9.
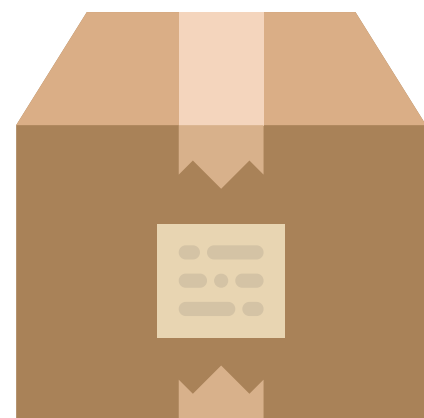
DISPLAY REVIEW CONTENTS CONTAINING WORDS LIKE "WORST," "WASTE," "POOR," OR "NOT GOOD".

```sql
SELECT   product_id, product_name, review_content

FROM mytable

WHERE review_content LIKE '%worst%'

OR review_content LIKE '%waste%'

OR review_content LIKE '%poor%'

OR review_content LIKE '%not good%';
```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
	product_id	product_name	review_content
▶	B08DDRGWTJ	MI Usb Type-C Cable Smartphone (Black)	Worth for money - suitable for Android auto... ...
	B08WRBG3XW	boAt Type C A325 Tangle-free, Sturdy Type C ...	Check for offera before buying,18w charging c...
	B08DPLCM6T	LG 80 cm (32 inches) HD Ready Smart LED TV 3...	LG was always Good , correct delivery, good se...
	B085194JFL	tizum HDMI to VGA Adapter Cable 1080P for Pr...	This connector has provided as a boon for my ol...
	B09F6S8BT6	Samsung 80 cm (32 Inches) Wondertainment Se...	Overall good.,TV picture ok smart betterSound ...
	B0B1YVCJ2Y	Acer 80 cm (32 inches) I Series HD Ready Andr...	About the TV - Wonderful--------------------------
	B08B42LWKN	OnePlus 80 cm (32 inches) Y Series HD Ready L...	This OnePlus TV is great if you want a affordabl...
	B008FWZGSG	Samsung Original Type C to C Cable - 3.28 Feet...	Buy it,Received in good condition and is working...
	B0B3MMYHYW	OnePlus 126 cm (50 inches) Y Series 4K Ultra H...	I am posting this after a few weeks of using the...
	B09JPC82QC	Mi 108 cm (43 inches) Full HD Android LED TV 4...	NOTE:@ If you select brand-authorized TV inst...

Purpose

This query retrieves reviews with negative keywords to analyze customer sentiment, improve products, address complaints, monitor trends, and conduct competitive analysis. It helps businesses enhance customer satisfaction and product quality by understanding and resolving negative feedback.

LIST ALL PRODUCTS WHERE THE CATEGORY INCLUDES "ACCESSORIES".

```sql
SELECT  product_id, product_name, category

FROM mytable

WHERE category LIKE '%Accessories%';
```

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

	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...
	B08Y1TFSP6	pTron Solero TB301 3A Type-C Data and Fast C...	Computers&Accessories|Accessories&Peripheral...
	B08WRWPM22	boAt Micro USB 55 Tangle-free, Sturdy Micro US...	Computers&Accessories|Accessories&Peripheral...
	B08DDRGWTJ	MI Usb Type-C Cable Smartphone (Black)	Computers&Accessories|Accessories&Peripheral...
	B008IFXQFU	TP-Link USB WiFi Adapter for PC(TL-WN725N), ...	Computers&Accessories|NetworkingDevices|Ne...
	B082LZGK39	Ambrane Unbreakable 60W / 3A Fast Charging ...	Computers&Accessories|Accessories&Peripheral...
	B08CF3D7QR	Portronics Konnect L POR-1081 Fast Charging 3...	Computers&Accessories|Accessories&Peripheral...
	B0789LZTCJ	boAt Rugged v3 Extra Tough Unbreakable Braid...	Computers&Accessories|Accessories&Peripheral...
	B07KSMBL2H	AmazonBasics Flexible Premium HDMI Cable (Bla...	Electronics|HomeTheater,TV&Video|Accessories

Purpose

This query retrieves products in the "Accessories" category, useful for: Category analysis, Inventory management, Sales performance tracking, Promotional strategies, Product development.

thank you