Online shop 2024

**Question 1: Calculate total sales per month.**

**Query:**

SELECT

Extract(month from order\_date) AS month,

SUM(total\_price) AS total\_sales

FROM

orders

GROUP BY

month

ORDER BY

month

**Output:**

|  |  |
| --- | --- |
| month | total\_sales |
| 1 | 3667448 |
| 2 | 3300225 |
| 3 | 3756172 |
| 4 | 3493861 |
| 5 | 3590165 |
| 6 | 3355548 |
| 7 | 3760471 |
| 8 | 3737818 |
| 9 | 3526270 |
| 10 | 3772435 |
| 11 | 3174421 |
| 12 | 3360870 |

**Question 2: Calculate the total revenue generated by each customer**

**Query:**

SELECT

a.first\_name,

a.last\_name,

SUM(b.total\_price)

FROM

customers a JOIN orders b

ON a.customer\_id = b.customer\_id

GROUP By

a.first\_name,

a.last\_name

ORDER By 3 DESC

LIMIT 5;

**Result:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  |  | | --- | --- | --- | --- | | first\_name | last\_name | price |  | | Mary | Judith | 315877.7 |  | | Mary | Frank | 305556.69000000006 | | | James | Amy | 301104.79999999993 | | | Mary | Scott | 300427.31999999995 | | | James | Williams | 292264.24999999994 | | |

**Question 3: Compute the average order value for each custome**

**Query:**

SELECT

a.first\_name,

a.last\_name,

AVG(b.total\_price) Price

FROM

customers a JOIN orders b

ON a.customer\_id = b.customer\_id

GROUP By

a.first\_name,

a.last\_name

ORDER By 3 DESC

LIMIT 5;

**Result:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | first\_name | last\_name | AVG | | John | Natalie | 3595.952 | | John | Moore | 3561.916 | | John | Roger | 3485.915 | | John | Rodriguez | 3476.871 | | James | Amy | 3460.975 | |

**Question 4 : Identify the top 10 products by total revenue.  
Query:**

SELECT

a.product\_name,

SUM(b.quantity \* b.price\_at\_purchase) AS Total\_Revenue

FROM

products a JOIN order\_items b ON

a.product\_id = b.product\_id

GROUP BY

a.product\_name

ORDER BY 2 DESC

LIMIT 10;

**Output:**

|  |  |
| --- | --- |
| product\_name | Total\_revenue |
| 4K Monitor | 1028666.5 |
| Microphone | 981300.29 |
| Standing Desk | 974797.23 |
| Kitchen Blender | 932734.2 |
| Air Purifier | 924883.08 |
| Office Chair | 908531.71 |
| Food Processor | 903902.22 |
| Water Bottle | 903662.53 |
| Bluetooth Headphones | 894944.67 |
| Tablet Stand | 894409.8 |

**Question 5: Calculate total sales grouped by product categories.**

**Query:**

SELECT

a.Category,

SUM(b.quantity \* b.price\_at\_purchase) AS Total\_Revenue

FROM

products a JOIN order\_items b ON

a.product\_id = b.product\_id

GROUP BY

a.Category

ORDER BY 2 DESC;

**Result:**

|  |  |
| --- | --- |
| category | Total\_revenue |
| Electronics | 15247167.14 |
| Home & Kitchen | 11182785.9 |
| Accessories | 9833968.69 |
| Furniture | 6231783.08 |
|  |  |
|  |  |

**Question 6: Calculate the average time between order placement and shipment for each month.**

**Query:**

SELECT

EXTRACT(month from o.order\_date) AS month,

AVG(s.shipment\_date - o.order\_date) AS avg\_fulfillment\_days

FROM

orders o

JOIN

shipments s ON o.order\_id = s.order\_id

GROUP BY

month

ORDER BY

month;

**Answer:**

|  |  |
| --- | --- |
| month | Avg\_fulfillment\_days |
| 1 | 2.999221184 |
| 2 | 2.927536232 |
| 3 | 3.032924962 |
| 4 | 3.052761748 |
| 5 | 2.999210734 |
| 6 | 3.007563025 |
| 7 | 3.010606061 |
| 8 | 3.006880734 |
| 9 | 3.046698873 |
| 10 | 3.042066421 |
| 11 | 2.939285714 |
| 12 | 2.995908347 |

**Question 7: Count the number of shipments delayed beyond the expected delivery date.**

**Query:**

SELECT

COUNT(\*) AS delayed\_shipments

FROM

shipments

WHERE

shipment\_date > delivery\_date;

**Result:**

|  |
| --- |
| Delayed\_shipments |
| 0 |

**Question 8: Count the number of payments made using each payment method.**

**Query:**

SELECT

payment\_method,

COUNT(\*) AS payment\_count

FROM

payment

GROUP BY

payment\_method

ORDER BY

payment\_count DESC;

**Result:**

|  |  |
| --- | --- |
| payment\_method | payment\_count |
| Credit Card | 15000 |

**Question 9: Calculate the average payment amount grouped by payment method.**

**Query:**

SELECT

payment\_method,

AVG(amount) AS avg\_payment\_amount

FROM

payment

GROUP BY

payment\_method

ORDER BY

avg\_payment\_amount DESC;

**Result :**

|  |  |
| --- | --- |
| payment\_method | Avg\_payment\_amount |
| Credit Card | 358.9766487 |

**Question 10 : Compute the total revenue generated by products supplied by each supplier.**

**Query:**

SELECT

s.supplier\_name AS supplier\_name,

SUM(oi.quantity \* oi.price\_at\_purchase) AS total\_revenue

FROM

order\_items oi

JOIN

products p ON oi.product\_id = p.product\_id

JOIN

suppliers s ON p.supplier\_id = s.supplier\_id

GROUP BY

s.supplier\_name

ORDER BY

total\_revenue DESC

LIMIT 10;

**Result:**

|  |  |
| --- | --- |
| supplier\_name | Total\_revenue |
| Next Level Systems | 3458937.63 |
| Ultimate Services | 2584189.72 |
| Modern Tech Enterprises | 2538935.59 |
| Premier Logistics Inc. | 2293785.7 |
| Unified Trading Co. | 2253219.08 |
| Precision Suppliers LLC | 2252561.35 |
| Mega Suppliers | 2075749.35 |
| Strategic Partners Co. | 2063347.05 |
| Advanced Hardware Corp. | 1860465.68 |
| Excel Distribution Group | 1727347.25 |

**Question 11: Calculate the average rating for each product based on reviews.**

**Query:**

SELECT

b.product\_name AS product\_name,

AVG(a.rating) AS avg\_rating,

COUNT(a.rating) AS review\_count

FROM

reviews a

JOIN

products b ON a.product\_id = b.product\_id

GROUP BY

b.product\_name

ORDER BY

avg\_rating DESC;

**Result :**

|  |  |  |
| --- | --- | --- |
| product\_name | Avg\_rating | Review\_count |
| Electric Kettle | 5 | 14 |
| Throw Pillows | 5 | 14 |
| Storage Shelf | 5 | 14 |
| Screen Protector | 5 | 14 |
| Phone Grip | 4.5 | 28 |
| Food Processor | 4.5 | 28 |
| Air Purifier | 4 | 14 |
| WiFi Router | 4 | 14 |
| Wireless Charger | 4 | 14 |
| Gaming Mouse Pad | 4 | 28 |
| File Cabinet | 4 | 14 |
| Smartphone Case | 4 | 14 |
| Microphone | 4 | 28 |
| Portable Charger | 3.5 | 28 |
| Smart Watch | 3.5 | 28 |
| Power Strip | 3.5 | 28 |
| Keyboard Wrist Rest | 3 | 14 |
| Rice Cooker | 3 | 28 |
| Kitchen Blender | 3 | 14 |
| Laptop Sleeve | 3 | 28 |
| Document Scanner | 3 | 28 |
| Bookshelf | 3 | 28 |
| Bluetooth Headphones | 3 | 28 |
| Wireless Mouse | 3 | 28 |
| Desk Organizer | 3 | 14 |
| Bath Towels | 3 | 28 |
| Wireless Earbuds | 3 | 14 |
| Monitor Stand | 2.5 | 28 |
| Office Chair | 2.5 | 28 |
| External SSD | 2.5 | 28 |
| Mechanical Keyboard | 2.5 | 28 |
| Laptop Stand | 2.5 | 28 |
| Standing Desk | 2 | 14 |
| Tablet Stand | 2 | 28 |
| Desk Lamp | 2 | 14 |
| Wall Clock | 2 | 14 |
| Noise Cancelling Headset | 2 | 28 |
| 4K Monitor | 2 | 14 |
| USB-C Hub | 2 | 14 |
| Toaster Oven | 2 | 28 |
| Computer Speakers | 2 | 28 |
| Gaming Keyboard | 1.5 | 28 |
| Coffee Maker | 1.5 | 28 |
| Desk Mat | 1.5 | 28 |
| Wireless Presenter | 1 | 14 |
| Storage Containers | 1 | 28 |
| Water Bottle | 1 | 14 |
| Webcam HD | 1 | 14 |
| Drawer Unit | 1 | 28 |
| Cable Organizer | 1 | 28 |

**Question12: Calculate profit margins for each product**

**Query:**

SELECT

b.product\_name AS product\_name,

SUM((a.price\_at\_purchase - b.price) \* a.quantity) AS total\_profit

FROM

order\_items a

JOIN

products b ON a.product\_id = b.product\_id

GROUP BY

b.product\_name

ORDER BY

total\_profit DESC;

**result:**

|  |  |
| --- | --- |
| product\_name | total\_profit |
| Office Chair | 77941.52 |
| Keyboard Wrist Rest | 58602.93 |
| Wireless Earbuds | 51663.5 |
| Wireless Presenter | 41997.81 |
| Coffee Maker | 28025.49 |
| Kitchen Blender | 18370.69 |
| WiFi Router | 13050.84 |
| Throw Pillows | -228.78 |
| Laptop Stand | -8528.29 |
| Monitor Stand | -21461.32 |
| Gaming Mouse Pad | -27802.52 |
| 4K Monitor | -29563.23 |
| Power Strip | -40281.97 |
| Phone Grip | -52113.26 |
| Gaming Keyboard | -55144.92 |
| Desk Organizer | -56034.6 |
| Standing Desk | -57014.93 |
| USB-C Hub | -60503.86 |
| Mechanical Keyboard | -66011.12 |
| External SSD | -66205.05 |
| Electric Kettle | -67456.12 |
| Food Processor | -82838.48 |
| Wireless Mouse | -85873.47 |
| Laptop Sleeve | -85946.89 |
| Microphone | -86177.36 |
| Smartphone Case | -100561.34 |
| Wall Clock | -106665.82 |
| Bath Towels | -109465.34 |
| Bluetooth Headphones | -109845.47 |
| Document Scanner | -125841.39 |
| Toaster Oven | -131156.97 |
| File Cabinet | -131644.96 |
| Noise Cancelling Headset | -136277.95 |
| Webcam HD | -139423.71 |
| Storage Shelf | -140980.49 |
| Desk Lamp | -150832.91 |
| Computer Speakers | -160511.75 |
| Bookshelf | -162471.42 |
| Water Bottle | -163809.71 |
| Air Purifier | -164170.96 |
| Desk Mat | -168946.74 |
| Smart Watch | -169065.62 |
| Storage Containers | -179757.56 |
| Tablet Stand | -183552.85 |
| Portable Charger | -195457.58 |
| Wireless Charger | -202219.37 |
| Rice Cooker | -206125.44 |
| Cable Organizer | -209477.64 |
| Drawer Unit | -248909.65 |
| Screen Protector | -277497.14 |