```
168

169 -- 1. Basic SELECT Queries

170

171 -- All customers

172 • SELECT * FROM customers;
```

<								
Re	sult Grid 🔢	N Filter Rows:	Edit: @	<u> </u>	Export/Import:	6	Wrap Cell Content:	<u>‡A</u>
	customer_id	name	email	phone	address			
•	1	Alice Johnson	alice@gmail.com	9876543210	New York	_		
	2	Bob Smith	bob@gmail.com	8765432109	California			
	3	Charlie Lee	charlie@gmail.com	7654321098	Texas			
	4	David Kim	david.kim@gmail.com	7543210987	Washington			
	5	Evelyn Clark	evelyn.clark@gmail.com	7432109876	Florida			
	6	Frank Wright	frank.wright@gmail.com	7321098765	Illinois			
	7	Grace Hall	grace.hall@gmail.com	7210987654	Ohio			
	8	Hannah Adams	hannah.adams@gmail.com	7109876543	Georgia			
	9	Ian Baker	ian.baker@gmail.com	7098765432	Nevada			
	10	Jackie Chen	jackie.chen@gmail.com	6987654321	Oregon			
	11	Karen Davis	karen.davis@gmail.com	6876543210	Colorado			
	12	Liam Evans	liam.evans@gmail.com	6765432109	Michigan			
	13	Mia Foster	mia.foster@gmail.com	6654321098	Arizona			
	14	Nathan Gray	nathan.gray@gmail.com	6543210987	Indiana			
	15	Olivia Harris	olivia.harris@gmail.com	6432109876	Tennessee			
	16	Paul Irving	paul.irving@gmail.com	6321098765	Missouri			
	17	Queenie Jones	queenie.jones@gmail.com	6210987654	Louisiana			
	18	Ryan King	ryan.king@gmail.com	6109876543	Kentucky			
	19	Sophia Lee	sophia.lee@gmail.com	6098765432	Alabama			
	20	Tommy Nelson	tommy.nelson@gmail.com	5987654321	Massachus			
	NULL	NULL	NULL	NULL	NULL			

```
173

-- All orders placed in May 2025

175 • SELECT * FROM orders WHERE order_date BETWEEN '2025-05-01' AND '2025-05-31';

176
```

<					
Re	sult Grid	Filter	Rows:	Edit: 🕍 🖶 Export/Import: 📳 🐻 Wrap Cell Content: 🌃	Ā
	order_id	customer_id	order_date	total_amount	
•	201	1	2025-05-01	799.99	
	202	2	2025-05-02	149.99	
	203	3	2025-05-03	999.99	
	204	4	2025-05-03	349.99	
	205	5	2025-05-04	180.00	
	206	6	2025-05-04	59.99	
	207	7	2025-05-05	129.95	
	208	8	2025-05-05	549.99	
	209	9	2025-05-06	49.99	
	210	10	2025-05-06	139.99	
	211	11	2025-05-07	119.95	
	212	12	2025-05-08	649.99	
	213	13	2025-05-08	150.00	
	214	14	2025-05-09	59.99	
	215	15	2025-05-09	999.99	
	216	16	2025-05-10	399.99	
	217	17	2025-05-10	849.50	
	218	18	2025-05-11	39.99	
	219	19	2025-05-12	150.00	
	220	20	2025-05-12	799.99	
	NULL	NULL	NULL	MULL	

```
176
177 -- Products under ₹500
178 • SELECT * FROM products WHERE price < 500;
```

١ ٢									
Re	sult Grid	Filter Rows:	Edit:	-	Export/Import:		♦	Wrap (Cell Conte
	product_id	name	category	price	stock_quantity				
•	103	Sony WH-1000XM4 Headphones	Audio	349.99	30	_			
	107	Apple Watch Series 8	Wearables	399.99	40				
	108	Fitbit Charge 5	Wearables	129.95	25				
	109	Amazon Echo Dot (5th Gen)	Smart Home	49.99	60				
	110	Google Nest Mini	Smart Home	39.99	55				
	111	Nike Air Max 270	Footwear	150.00	35				
	112	Adidas Ultraboost 22	Footwear	180.00	28				
	113	Logitech MX Master 3 Mouse	Accessories	99.99	75				
	114	Razer BlackWidow Keyboard	Accessories	129.99	20				
	117	Kindle Paperwhite	Books & Media	139.99	22				
	118	JBL Flip 6 Bluetooth Speaker	Audio	119.95	33				
	120	WD 1TB External HDD	Storage	59.99	65				
	NULL	MULL	NULL	NULL	NULL				

```
179

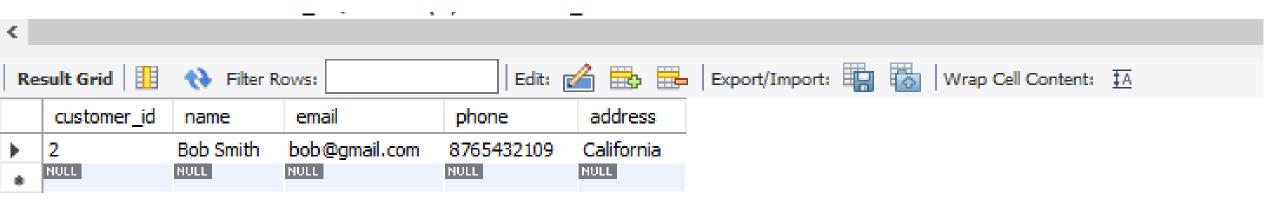
180 -- 2. WHERE, ORDER BY, GROUP BY

181

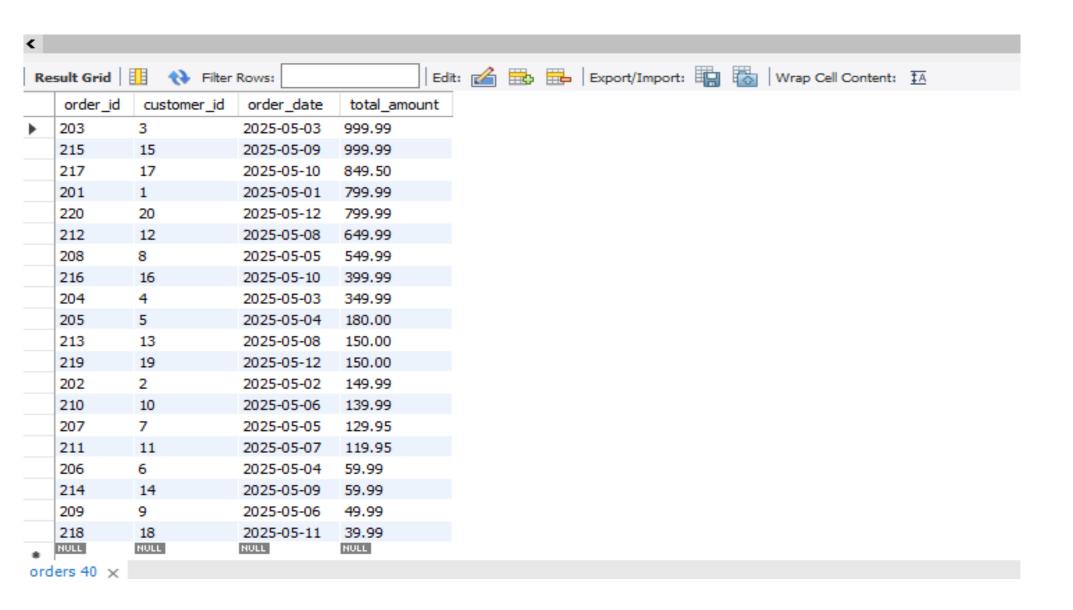
182 -- Customers in California

183 • SELECT * FROM customers WHERE address = 'California';

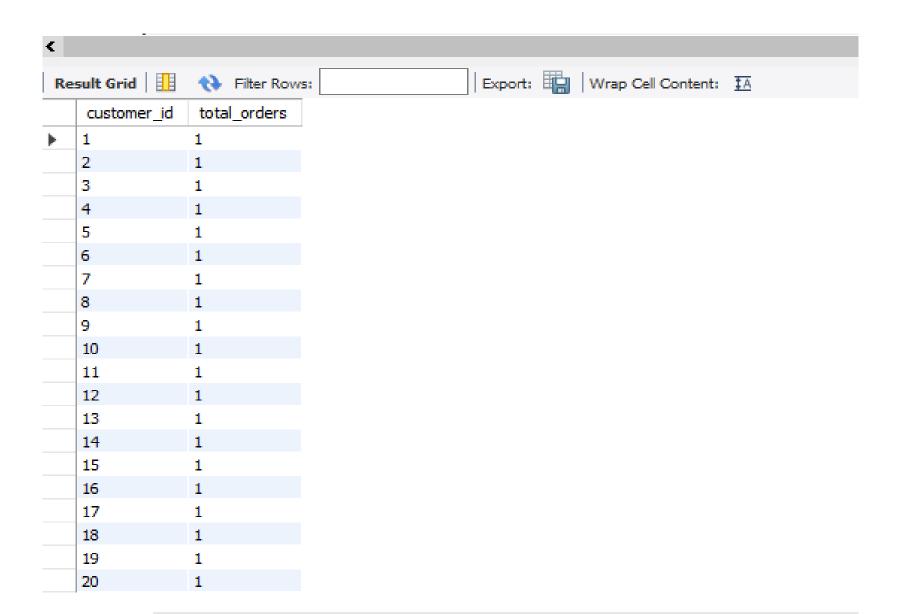
184
```



```
184
185    -- Orders sorted by amount
186    SELECT * FROM orders ORDER BY total_amount DESC;
187
```



```
188  -- Total orders per customer
189  • SELECT customer_id, COUNT(*) AS total_orders
190  FROM orders
191  GROUP BY customer_id;
```



```
192
193 -- 3. JOINS: INNER, LEFT, RIGHT
194
195 -- INNER JOIN: Orders with customer names
196 • SELECT o.order_id, c.name, o.total_amount
197 FROM orders o
198 INNER JOIN customers c ON o.customer id = c.customer id;
```

Re	sult Grid	🔢 🙌 Filter Ro	ws:		Export:	Export:	Export: Wrap Cell Content:
	order_id	name	total_amount	Ī			
>	201	Alice Johnson	799.99				
	202	Bob Smith	149.99				
	203	Charlie Lee	999.99				
	204	David Kim	349.99				
	205	Evelyn Clark	180.00				
	206	Frank Wright	59.99				
	207	Grace Hall	129.95				
	208	Hannah Adams	549.99				
	209	Ian Baker	49.99				
	210	Jackie Chen	139.99				
	211	Karen Davis	119.95				
	212	Liam Evans	649.99				
	213	Mia Foster	150.00				
	214	Nathan Gray	59.99				
	215	Olivia Harris	999.99				
	216	Paul Irving	399.99				
	217	Queenie Jones	849.50				
	218	Ryan King	39.99				
	219	Sophia Lee	150.00				
	220	Tommy Nelson	799.99				

<						
Re	sult Grid 📗	Filter Rows:		Export:	Export:	Export: Wrap Cell Content:
	customer_id	name	order_id			
>	1	Alice Johnson	201			
	2	Bob Smith	202			
	3	Charlie Lee	203			
	4	David Kim	204			
	5	Evelyn Clark	205			
	6	Frank Wright	206			
	7	Grace Hall	207			
	8	Hannah Adams	208			
	9	Ian Baker	209			
	10	Jackie Chen	210			
	11	Karen Davis	211			
	12	Liam Evans	212			
	13	Mia Foster	213			
	14	Nathan Gray	214			
	15	Olivia Harris	215			
	16	Paul Irving	216			
	17	Queenie Jones	217			
	18	Ryan King	218			
	19	Sophia Lee	219			
	20	Tommy Nelson	220			

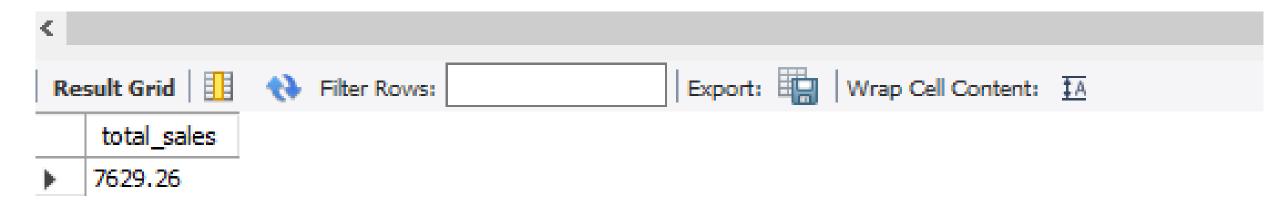
```
-- 4. Aggregate Functions: SUM, AVG

209

-- Total sales amount

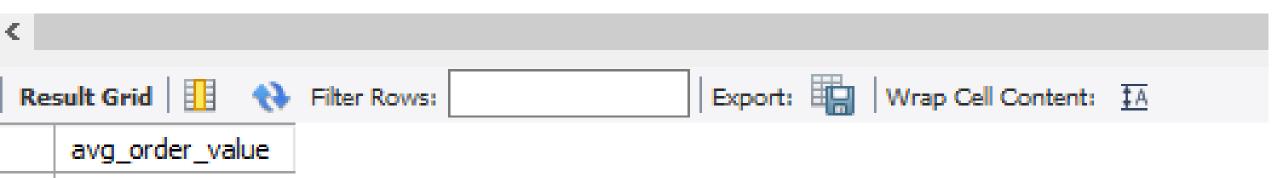
SELECT SUM(total_amount) AS total_sales FROM orders;

212
```



```
213 -- Average order value
214 • SELECT AVG(total_amount) AS avg_order_value FROM orders;
215
```

381.463000



```
-- Sales by payment method

SELECT payment_method, SUM(amount) AS total_by_method
FROM payments
GROUP BY payment_method;
```

Net Banking

Debit Card

Cash on Delivery

799.97

869.98

119.98

<				
Re	sult Grid 📗 🙌	Filter Rows:	Export: Wrap Cell Content:	<u>‡A</u>
	payment_method	total_by_method		
•	Credit Card	3989.85		
	UPI	1849.48		

```
221
222
   -- 5. Subqueries
223
224
      -- Customers who made orders over ₹500
225 • SELECT * FROM customers
    WHERE customer_id IN (
226
           SELECT customer_id FROM orders WHERE total_amount > 500
227
228
220
```

Re	sult Grid	Filter Rows:	Edit:		Export/Import:	Wrap Cell Content:	‡A
	customer_id	name	email	phone	address		
	1	Alice Johnson	alice@gmail.com	9876543210	New York		
	3	Charlie Lee	charlie@gmail.com	7654321098	Texas		
	8	Hannah Adams	hannah.adams@gmail.com	7109876543	Georgia		
	12	Liam Evans	liam.evans@gmail.com	6765432109	Michigan		
	15	Olivia Harris	olivia.harris@gmail.com	6432109876	Tennessee		
	17	Queenie Jones	queenie.jones@gmail.com	6210987654	Louisiana		
	20	Tommy Nelson	tommy.nelson@gmail.com	5987654321	Massachusetts		
	NULL	NULL	NULL	NULL	NULL		

```
229
      -- 6. Create Views for Reuse
230
231
232
        -- View: Sales summary by customer
233 •
       CREATE VIEW customer sales summary AS
        SELECT c.customer id, c.name, SUM(o.total amount) AS total spent
234
235
        FROM customers c
        JOIN orders o ON c.customer id = o.customer id
236
237
        GROUP BY c.customer id, c.name;
238
```

```
240 -- 7. Optimize with Indexes

241

242 -- Improve search performance on frequently filtered columns

243 • CREATE INDEX idx_customer_id ON orders(customer_id);

244 • CREATE INDEX idx_order_date ON orders(order_date);

245
```

```
246
247
       -- 8. Real Sales Reports Examples
248
        -- Sales by Product Category
249
        SELECT p.category, SUM(oi.price * oi.quantity) AS category_sales
250 •
251
        FROM order items oi
        JOIN products p ON oi.product id = p.product id
252
253
        GROUP BY p.category
254
        ORDER BY category sales DESC;
255
```

Wearables

Books & Media 139.99

Audio

Storage

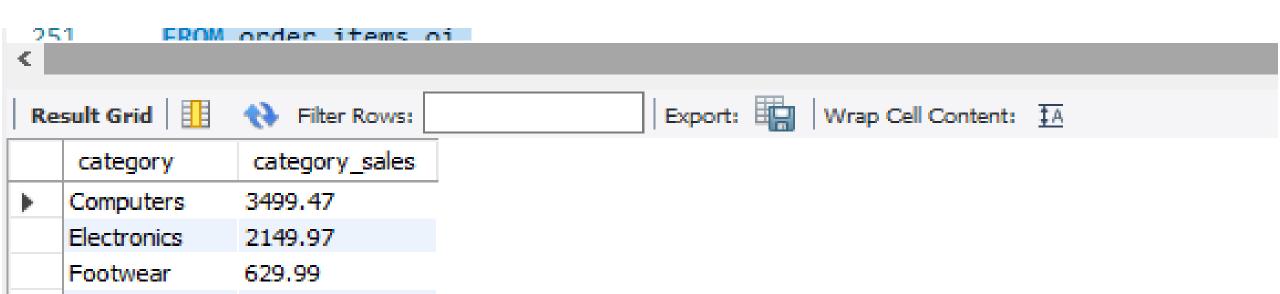
Smart Home

529.94

469.94

119.98

89.98



```
255
256 -- Sales by Date
257 • SELECT order_date, SUM(total_amount) AS daily_sales
258 FROM orders
259 GROUP BY order_date
260 ORDER BY order_date;
261
```

 ✓

 Result Grid
 Image: The second of the se

	order_date	daily_sales
>	2025-05-01	799.99
	2025-05-02	149.99
	2025-05-03	1349.98
	2025-05-04	239.99
	2025-05-05	679.94
	2025-05-06	189.98
	2025-05-07	119.95
	2025-05-08	799.99
	2025-05-09	1059.98
	2025-05-10	1249.49
	2025-05-11	39.99
	2025-05-12	949.99

268

```
261
262    -- Sales by Customer
263    SELECT c.name, SUM(o.total_amount) AS total_spent
264    FROM customers c
265    JOIN orders o ON c.customer_id = o.customer_id
266    GROUP BY c.name
267    ORDER BY total_spent DESC;
```

<		
Res	sult Grid	Filter Rows:
	name	total_spent
▲	Charlie Lee	999.99
	Olivia Harris	999.99
	Queenie Jones	849.50
	Alice Johnson	799.99
	Tommy Nelson	799.99
	Liam Evans	649.99
	Hannah Adams	549.99
	Paul Irving	399.99
	David Kim	349.99
	Evelyn Clark	180.00
	Mia Foster	150.00
	Sophia Lee	150.00
	Bob Smith	149.99
	Jackie Chen	139.99
	Grace Hall	129.95
	Karen Davis	119.95
	Frank Wright	59.99
	Nathan Gray	59.99
	Ian Baker	49.99
	Ryan King	39.99