

a. Basic SELECT, WHERE, ORDER BY, GROUP BY

Q1. Show all fitness bands with a rating above 4.2

SELECT *

FROM db.fitness_trackers_updated

WHERE Rating > 4.2 AND Device_type = 'FitnessBand';

	Brand_name	Device_type	Model_name	Color	selling_price	Original_price	Display	Rating	Strap Material	Avg_battery_life
▶	Xiaomi	FitnessBand	Band 3	Black	1,799	2,199	OLED Display	4.3	Plastic	7
	Xiaomi	FitnessBand	Band 2	Black	2,499	2,499	OLED Display	4.3	Plastic	7
	OnePlus	FitnessBand	Steven Harrington Edition Band	Blue	3,299	3,999	AMOLED Display	4.3	Thermoplastic polyurethane	7
	FitBit	FitnessBand	Inspire 2	Black, Desert Rose, Lunar White	6,999	7,999	PMOLED Display	4.4	Thermoplastic polyurethane	10
	FitBit	FitnessBand	Lunar	White	10,899	10,999	AMOLED Display	4.7	Silicone	7
	FitBit	FitnessBand	Inspire HR	Black	5,599	8,999	LED Display	4.3	Silicone	5
	FitBit	FitnessBand	Charge 3	Grey	7,599	13,999	OLED Display	4.3	Silicone	7
	FitBit	FitnessBand	Charge 2	Black	7,499	14,999	PMOLED Display	4.3	Silicone	7
	FitBit	FitnessBand	Alta HR	Black, Plum, Grey	14,999	14,999	OLED Display	4.3	Elastomer	7
	FitBit	FitnessBand	Charge 2	Plum silver	14,999	14,999	PMOLED Display	4.4	Silicone	7
	FitBit	FitnessBand	Alta HR	Rose Gold, Gun Metal Black	16,999	16,999	OLED Display	4.3	Elastomer	7
	FitBit	FitnessBand	Charge 2	Violet	14,999	14,999	PMOLED Display	4.3	Silicone	7
	FitBit	FitnessBand	Charge 2	Black	14,999	14,999	OLED Display	4.3	Silicone	7

Q2. Show all devices ordered by battery life (highest first)

SELECT *

FROM db.fitness_trackers_updated

ORDER BY Avg_battery_life DESC;

	Brand_name	Device_type	Model_name	Color	selling_price	Original_price	Display	Rating	Strap Material	Avg_battery_life	Reviews
▶	huami	Smartwatch	Amazfit Bip	Black	5,499	6,999	AMOLED Display	4.2	Silicone	28	4651
	huami	Smartwatch	Amazfit Bip	Pink	5,499	5,990	AMOLED Display	4.2	Silicone	28	489
	huami	Smartwatch	Amazfit Bip	Red	4,950	5,990	AMOLED Display	4.2	Silicone	28	176
	huami	Smartwatch	Amazfit Bip	Purple	5,499	6,999	AMOLED Display	4.2	Silicone	28	176
	huami	Smartwatch	Amazfit Bip	Grey	6,399	7,399	AMOLED Display	4.4	Silicone	28	176
	Honor	Smartwatch	GS Pro	Black	13,999	20,999	AMOLED Display	4.4	Nylon	25	215
	Honor	Smartwatch	GS Pro	Blue	17,999	20,999	AMOLED Display	4.4	Nylon	25	215
	huami	Smartwatch	Amazfit GTR 47	Black	10,999	18,999	AMOLED Display	4.2	Silicone	25	
	huami	Smartwatch	Amazfit GTR 47	Black	8,999	13,999	AMOLED Display	4.3	Silicone	25	176
	huami	Smartwatch	Amazfit Verge	Black	12,999	12,999	AMOLED Display	4.1	Silicone	25	489
	huami	Smartwatch	Amazfit Verge	Black	11,999	12,999	AMOLED Display	4.1	Silicone	25	489

Q3. Count number of devices by each brand

SELECT Brand_name, COUNT(*) AS Device_Count

FROM db.fitness_trackers_updated

GROUP BY Brand_name;

	Brand_name	Device_Count
►	Xiaomi	10
	OnePlus	3
	FitBit	51
	realme	12
	Huawei	26
	Honor	20
	GOQii	4
	Infinix	1
	LCARE	2
	LAVA	1
	Noise	2
	Oppo	2
	Fastrack	6

Q4. List all Xiaomi devices with plastic strap

SELECT *

FROM db.fitness_trackers_updated

WHERE Brand_name = 'Xiaomi' AND Display = 'AMOLED Display';

	Brand_name	Device_type	Model_name	Color	selling_price	Original_price	Display	Rating	Strap Material	Avg_battry_life	Reviews
►	Xiaomi	FitnessBand	Smart Band 5	Black	2,499	2,999	AMOLED Display	4.1	Thermoplastic polyurethane	14	
	Xiaomi	FitnessBand	Smart Band 4	Black	2,099	2,499	AMOLED Display	4.2	Thermoplastic polyurethane	14	
	Xiaomi	FitnessBand	Smart Band 5	Black	2,469	2,999	AMOLED Display	4.1	Thermoplastic polyurethane	14	
	Xiaomi	Smartwatch	Revolve	Black	12,349	15,999	AMOLED Display	4.4	Silicone	14	2
	Xiaomi	Smartwatch	RevolveActive	Black	12,999	15,999	AMOLED Display	4.4	Silicone	14	3

b. JOIN Queries

Assume second table: db.reviews_details

Q5. Inner Join with reviews_details

SELECT f.Model_name, f.Brand_name, r.Review_Text

FROM db.fitness_trackers_updated f

INNER JOIN db.reviews_details r

ON f.Model_name = r.Model_name;

	Model_name	Brand_name	Review_Text
►	Smart Band 5	Xiaomi	Perfect for fitness beginners.
	Smart Band 5	Xiaomi	Display is bright and clear.
	Smart Band 5	Xiaomi	Excellent features at this price point.
	Smart Band 5	Xiaomi	Perfect for fitness beginners.
	Smart Band 5	Xiaomi	Display is bright and clear.
	Smart Band 5	Xiaomi	Excellent features at this price point.
	Smart Band 5	Xiaomi	Perfect for fitness beginners.
	Smart Band 5	Xiaomi	Display is bright and clear.
	Smart Band 5	Xiaomi	Excellent features at this price point.
	Smart Band 5	Xiaomi	Perfect for fitness beginners.
	Smart Band 5	Xiaomi	Display is bright and clear.
	Smart Band 5	Xiaomi	Excellent features at this price point.
	Smart Band 5	Xiaomi	Perfect for fitness beginners.

Q6. Left Join to include all devices, even without reviews

```
SELECT f.Model_name, f.Brand_name, r.Review_Text
```

```
FROM db.fitness_trackers_updated f
```

```
LEFT JOIN db.reviews_details r
```

```
ON f.Model_name = r.Model_name;
```

	Model_name	Brand_name	Review_Text
►	Smart Band 5	Xiaomi	Perfect for fitness beginners.
	Smart Band 5	Xiaomi	Display is bright and clear.
	Smart Band 5	Xiaomi	Excellent features at this price point.
	Smart Band 5	Xiaomi	Perfect for fitness beginners.
	Smart Band 5	Xiaomi	Display is bright and clear.
	Smart Band 5	Xiaomi	Excellent features at this price point.
	Smart Band 5	Xiaomi	Perfect for fitness beginners.
	Smart Band 5	Xiaomi	Display is bright and clear.
	Smart Band 5	Xiaomi	Excellent features at this price point.
	Smart Band 5	Xiaomi	Perfect for fitness beginners.
	Smart Band 5	Xiaomi	Display is bright and clear.
	Smart Band 5	Xiaomi	Excellent features at this price point.
	Smart Band 5	Xiaomi	Perfect for fitness beginners.

c. Subqueries

Q7. Models with price less than average selling price

SELECT Model_name, selling_price

FROM db.fitness_trackers_updated

WHERE selling_price < (SELECT AVG(selling_price) FROM db.fitness_trackers_updated);

	Model_name	selling_price
►	Smart Band 5	2,499
	Smart Band 4	2,099
	HMSH01GE	1,722
	Smart Band 5	2,469
	Band 3	1,799
	Band - HRX Edition	1,299
	Band 2	2,499
	Revolve	12,349
	RevolveActive	12,999
	Smart Band 3i	1,270
	Steven Harrington...	3,299
	Band	2,499
	Versa 2	11,999

Q8. Device(s) with highest rating

SELECT *

FROM db.fitness_trackers_updated

WHERE Rating = (SELECT MAX(Rating) FROM db.fitness_trackers_updated);

	Brand_name	Device_type	Model_name	Color	selling_price	Original_price	Display	Rating	Strap Material	Avg_battry_life	Reviews
►	SAMSUNG	Smartwatch	Galaxy Classic 4 LTE	Black	28,999	31,999	AMOLED Display	5	Elastomer	14	
	FOSSIL	Smartwatch	Neutra Hybrid	Silver	13,495	13,495	AMOLED Display	5	Stainless Steel	12	
	FOSSIL	Smartwatch	Neutra Hybrid	Brown, Black	11,995	11,995	AMOLED Display	5	Leather	12	
	FOSSIL	Smartwatch	FTW1159 Hybrid	Gold	8,995	12,995	AMOLED Display	5	Stainless Steel	2	
	APPLE	Smartwatch	Series 7 GPS 45 mm	Black	44,900	44,900	OLED Retina Display	5	Silicone	1	
	APPLE	Smartwatch	Series 7 GPS 41 mm Aluminium Case	Black	41,900	41,900	OLED Retina Display	5	Aluminium	1	
	GARMIN	Smartwatch	Instinct	Graphite	19,990	28,490	AMOLED Display	5	Silicone	7	
	GARMIN	Smartwatch	Forerunner 745 Black	Black	46,990	51,990	AMOLED Display	5	Silicone	14	
	GARMIN	Smartwatch	vivoactive 4S 40mm	Rose Gold, Slate Black	28,990	34,990	AMOLED Display	5	Silicone	14	

d. Aggregate Functions

Q9. Average battery life by strap material

```
SELECT Original_price, AVG(Avg_battry_life) AS Avg_price  
FROM db.fitness_trackers_updated  
GROUP BY Original_price;
```

	Original_price	Avg_price
▶	2,999	8.4211
	2,499	7.7500
	2,099	14.0000
	2,199	7.0000
	1,799	20.0000
	15,999	13.5000
	1,599	7.0000
	3,999	8.5714
	2,799	7.0000
	14,999	7.2500
	22,999	7.0000
	18,999	13.0000
	9.999	8.8000

Q10. Total discount (original - selling) per brand

```
SELECT Brand_name, SUM(Original_price - selling_price) AS Total_Discount  
FROM db.fitness_trackers_updated  
GROUP BY Brand_name;
```

	Brand_name	Total_Discount
►	Xiaomi	8
	OnePlus	2
	FitBit	167
	realme	19
	Huawei	126
	Honor	42
	GOQii	0
	Infinix	1
	LCARE	3
	LAVA	2
	Noise	1
	Oppo	12
	Fastrack	1

e. Create Views

Q11. View for Smartwatches

```
CREATE VIEW db.smartwatch_only AS
```

```
SELECT * FROM db.fitness_trackers_updated
```

```
WHERE Device_type = 'Smartwatch';
```

```
SELECT * FROM db.smartwatch_only;
```

	Brand_name	Device_type	Model_name	Color	selling_price	Original_price	Display	Rating	Strap Material	Avg_battry_life	Reviews
►	Xiaomi	Smartwatch	Revolve	Black	12,349	15,999	AMOLED Display	4.4	Silicone	14	2
	Xiaomi	Smartwatch	RevolveActive	Black	12,999	15,999	AMOLED Display	4.4	Silicone	14	3
	FitBit	Smartwatch	Versa 2	Grey, Pink, Black	11,999	14,999	AMOLED Display	4.3	Silicone	7	
	FitBit	Smartwatch	Sense	Black, Pink, Beige	21,499	22,999	AMOLED Display	4.2	Elastomer	7	
	FitBit	Smartwatch	Versa 3	Black, Blue, Pink	17,999	18,999	AMOLED Display	4.3	Elastomer	7	
	FitBit	Smartwatch	Versa Special Edition	Charcoal	10,365	23,499	AMOLED Display	4.1	Fabric	7	
	FitBit	Smartwatch	Ionic	Black	18,999	24,999	LCD Display	4.1	Elastomer	7	
	FitBit	Smartwatch	Versa 2 Special Edition	Multicolor	15,499	23,999	AMOLED Display	4.4	Silicone	7	
	FitBit	Smartwatch	Ionic	Blue	22,499	24,999	LCD Display	4.1	Elastomer	7	
	FitBit	Smartwatch	Ionic	Grey	26,499	26,499	LCD Display	4.1	Elastomer	7	
	FitBit	Smartwatch	Versa	Purple	16,990	23,499	AMOLED Display	4.1	Silicone	7	
	FitBit	Smartwatch	Versa	Grey	17,895	21,499	AMOLED Display	4.2	Silicone	7	

Q12. View for Long Battery Life Devices (>10 days)

```
-- View creation
```

```
CREATE VIEW db.long_life_devices AS
```

```
SELECT *
```

```
FROM db.fitness_trackers_updated
```

```
WHERE Avg_battery_life > 10;
```

```
-- View output
```

```
SELECT * FROM db.long_life_devices;
```

	Brand_name	Device_type	Model_name	Color	selling_price	Original_price	Display	Rating	Strap Material	Avg_battery_life
►	Xiaomi	FitnessBand	Smart Band 5	Black	2,499	2,999	AMOLED Display	4.1	Thermoplastic polyurethane	14
	Xiaomi	FitnessBand	Smart Band 4	Black	2,099	2,499	AMOLED Display	4.2	Thermoplastic polyurethane	14
	Xiaomi	FitnessBand	HMSH01GE	Black	1,722	2,099	LCD Display	3.5	Leather	14
	Xiaomi	FitnessBand	Smart Band 5	Black	2,469	2,999	AMOLED Display	4.1	Thermoplastic polyurethane	14
	Xiaomi	FitnessBand	Band - HRX Edition	Black	1,299	1,799	OLED Display	4.2	Plastic	20
	Xiaomi	Smartwatch	Revolve	Black	12,349	15,999	AMOLED Display	4.4	Silicone	14
	Xiaomi	Smartwatch	RevolveActive	Black	12,999	15,999	AMOLED Display	4.4	Silicone	14
	Honor	FitnessBand	Band 6	Sandstone Grey, Meteorite Black, Coral Pink,	2,999	5,999	AMOLED Display	4.3	Plastic	14
	Honor	FitnessBand	Band 5	Black	2,899	2,999	AMOLED Display	4.4	Plastic	14
	Honor	FitnessBand	Band 5	Black	2,099	2,999	AMOLED Display	4.4	Plastic	14
	Honor	FitnessBand	Band 5	Olive Green	2,199	2,999	AMOLED Display	4.4	Plastic	14
	Honor	FitnessBand	Band 5i	Black	1,799	2,999	LCD Display	4.2	Plastic	14