

```
CREATE SCHEMA timeitemloc_dw;
```

```
CREATE TABLE timeitemloc_dw.dim_time AS
```

```
SELECT 1 AS date_id, 'Q1' AS quarter, 2025 AS year UNION ALL
```

```
SELECT 2, 'Q2', 2025 UNION ALL
```

```
SELECT 3, 'Q3', 2025 UNION ALL
```

```
SELECT 4, 'Q4', 2025;
```

```
CREATE TABLE timeitemloc_dw.dim_item AS
```

```
SELECT 1 AS item_id, 'Egg' AS item_name UNION ALL
```

```
SELECT 2, 'Milk' UNION ALL
```

```
SELECT 3, 'Bread' UNION ALL
```

```
SELECT 4, 'Biscuit';
```

```
CREATE TABLE timeitemloc_dw.dim_location AS
```

```
SELECT 1 AS location_id, 'Delhi' AS city UNION ALL
```

```
SELECT 2, 'Chennai' UNION ALL
```

```
SELECT 3, 'Kolkata' UNION ALL
```

```
SELECT 4, 'Mumbai';
```

```
CREATE TABLE timeitemloc_dw.fact_sales AS
```

```
SELECT 1 AS date_id, 1 AS item_id, 1 AS location_id, 340 AS rupee_sold
```

```
UNION ALL SELECT 1, 2, 1, 360
```

```
UNION ALL SELECT 1, 3, 1, 20
```

```
UNION ALL SELECT 1, 4, 1, 10
```

UNION ALL SELECT 2, 1, 1, 490

UNION ALL SELECT 2, 2, 1, 490

UNION ALL SELECT 2, 3, 1, 16

UNION ALL SELECT 2, 4, 1, 50

UNION ALL SELECT 3, 1, 1, 680

UNION ALL SELECT 3, 2, 1, 583

UNION ALL SELECT 3, 3, 1, 46

UNION ALL SELECT 3, 4, 1, 43

UNION ALL SELECT 4, 1, 1, 535

UNION ALL SELECT 4, 2, 1, 694

UNION ALL SELECT 4, 3, 1, 39

UNION ALL SELECT 4, 4, 1, 38

-- Kolkata

UNION ALL SELECT 1, 1, 2, 435

UNION ALL SELECT 1, 2, 2, 460

UNION ALL SELECT 1, 3, 2, 20

UNION ALL SELECT 1, 4, 2, 15

UNION ALL SELECT 2, 1, 2, 389

UNION ALL SELECT 2, 2, 2, 385

UNION ALL SELECT 2, 3, 2, 45

UNION ALL SELECT 2, 4, 2, 35

UNION ALL SELECT 3, 1, 2, 684

UNION ALL SELECT 3, 2, 2, 490

UNION ALL SELECT 3, 3, 2, 39

UNION ALL SELECT 3, 4, 2, 48

UNION ALL SELECT 4, 1, 2, 335

UNION ALL SELECT 4, 2, 2, 365

UNION ALL SELECT 4, 3, 2, 83

UNION ALL SELECT 4, 4, 2, 35

-- Mumbai

UNION ALL SELECT 1, 1, 3, 390

UNION ALL SELECT 1, 2, 3, 385

UNION ALL SELECT 1, 3, 3, 20

UNION ALL SELECT 1, 4, 3, 39

UNION ALL SELECT 2, 1, 3, 463

UNION ALL SELECT 2, 2, 3, 366

UNION ALL SELECT 2, 3, 3, 25

UNION ALL SELECT 2, 4, 3, 48

UNION ALL SELECT 3, 1, 3, 568

UNION ALL SELECT 3, 2, 3, 594

UNION ALL SELECT 3, 3, 3, 36

UNION ALL SELECT 3, 4, 3, 39

UNION ALL SELECT 4, 1, 3, 338

UNION ALL SELECT 4, 2, 3, 484

UNION ALL SELECT 4, 3, 3, 48

UNION ALL SELECT 4, 4, 3, 80

-- Delhi

UNION ALL SELECT 1, 1, 4, 260

UNION ALL SELECT 1, 2, 4, 508

UNION ALL SELECT 1, 3, 4, 15

UNION ALL SELECT 1, 4, 4, 60

UNION ALL SELECT 2, 1, 4, 390

UNION ALL SELECT 2, 2, 4, 256

UNION ALL SELECT 2, 3, 4, 20

UNION ALL SELECT 2, 4, 4, 90

UNION ALL SELECT 3, 1, 4, 436

UNION ALL SELECT 3, 2, 4, 396

UNION ALL SELECT 3, 3, 4, 50

UNION ALL SELECT 3, 4, 4, 40

UNION ALL SELECT 4, 1, 4, 528

UNION ALL SELECT 4, 2, 4, 483

UNION ALL SELECT 4, 3, 4, 35

UNION ALL SELECT 4, 4, 4, 50;

--Roll-Up (Quarter → Year)

SELECT

t.year,

SUM(f.rupee_sold) AS total_sales

FROM timeitemloc_dw.fact_sales f

JOIN timeitemloc_dw.dim_time t

ON f.date_id = t.date_id

GROUP BY t.year;

-- Drill-Down (Year → Quarter)

SELECT

t.year,

t.quarter,

SUM(f.rupee_sold) AS total_sales

FROM timeitemloc_dw.fact_sales f

JOIN timeitemloc_dw.dim_time t

ON f.date_id = t.date_id

GROUP BY t.year, t.quarter;

-- Slice (Delhi Only)

SELECT

t.quarter,

i.item_name,

f.rupee_sold

FROM timeitemloc_dw.fact_sales f

JOIN timeitemloc_dw.dim_time t

```
ON f.date_id = t.date_id
JOIN timeitemloc_dw.dim_item i
ON f.item_id = i.item_id
WHERE f.location_id = 4;
```

```
-- Dice (Milk & Biscuit, Q1 & Q2)
```

```
SELECT
    t.quarter,
    i.item_name,
    l.city,
    f.rupee_sold
FROM timeitemloc_dw.fact_sales f
JOIN timeitemloc_dw.dim_time t
ON f.date_id = t.date_id
JOIN timeitemloc_dw.dim_item i
ON f.item_id = i.item_id
JOIN timeitemloc_dw.dim_location l
ON f.location_id = l.location_id
WHERE i.item_name IN ('Milk','Biscuit')
AND t.quarter IN ('Q1','Q2');
```