

Lecture Notes – Case_When-OrderBy

Section 1: Lecture Summary

CASE WHEN in **ORDER BY** clause enables custom conditional sorting logic for multiple columns. Basic queries sort by one column like `order_date DESC`; adding **CASE WHEN** introduces conditional priority sorting on another column like `order_status`, followed by secondary sorting on the first column for ties. Examples use eCommerceDB: sorting Orders by custom `order_status` priority (Delivered=1, Shipped=2, Pending=3, Canceled=4, else=5) then `order_date DESC`; sorting Payments by `payment_mode` priority (credit_card=1, upi=2, net_banking=3, else=4) then `payment_date DESC`.

Section 2: Key Concepts and Explanations

CASE WHEN in **ORDER BY** acts as an additional conditional sorting column, allowing custom priority (lower numbers first). Syntax: `ORDER BY column1 [ASC|DESC], CASE column2 WHEN value1 THEN priority1 WHEN value2 THEN priority2 ... ELSE lowest END`. For equality checks, shorthand `CASE column WHEN 'value' THEN 1` works without explicit `=`; for `<` `>` use full `WHEN column < value`. Multiple **ORDER BY** columns process sequentially: primary conditional sort first, then tie-breaker on prior column(s). Results show grouped statuses in priority order, with intra-group descending date sort.

Section 3: Example Code and Use Cases

Orders by custom status priority then date:

```
SELECT OrderID, OrderDate, OrderStatus
FROM Orders
ORDER BY OrderDate DESC,
CASE OrderStatus
  WHEN 'Delivered' THEN 1
  WHEN 'Shipped' THEN 2
  WHEN 'Pending' THEN 3
  WHEN 'Canceled' THEN 4
  ELSE 5
END;
```

Delivers all Delivered first (sorted DESC by OrderDate within group), followed by Shipped, Pending, Canceled.

****Payments by custom mode priority then date:****

```
SELECT PaymentID, OrderID, PaymentMode, Amount, PaymentDate
FROM Payments
ORDER BY PaymentDate DESC,
CASE PaymentMode
  WHEN 'credit_card' THEN 1
  WHEN 'upi' THEN 2
  WHEN 'net_banking' THEN 3
  ELSE 4
END;
```

Shows credit_card payments first (DESC by PaymentDate within group), then upi, net_banking.

Section 4: Key Takeaways

CASE WHEN in ORDER BY defines custom multi-level sorting: conditional priority first, existing columns as tie-breakers. Use shorthand for equality (CASE col WHEN 'val' THEN 1); full condition for inequalities. Lower CASE values appear first; ELSE catches unmatched cases. Practice on Orders.OrderStatus and Payments.PaymentMode for priority-based display.