```sql
SELECT * FROM `bootcamp-402414.data_analytic.super_store`
LIMIT 10 ;

select customer_id, order_date, ship_date
FROM `bootcamp-402414.data_analytic.super_store`
LIMIT 10 ;


--- DATE_ADD(date_expression, INTERVAL int64_expression date_part)
SELECT DATE_ADD(DATE '2023-10-22', INTERVAL 5 DAY) AS five_days_later; --- 2023-10-27
SELECT DATE_ADD(DATE '2023-10-22', INTERVAL 10 DAY) AS ten_days_later; --- 2023-11-01
SELECT DATE_ADD(DATE '2023-10-22', INTERVAL -10 DAY) AS ten_days_back; --- 2023-10-12


select customer_id, Product_name, order_date, ship_date
, DATE_ADD(ship_date, INTERVAL 10 DAY) AS ten_days_later_from_ship_date
, DATE_ADD(ship_date, INTERVAL 1 MONTH) AS a_month_later_from_ship_date
, DATE_DIFF(ship_date, order_date, DAY) AS days_diff
FROM `bootcamp-402414.data_analytic.super_store`
limit 10 ;

select * from
  (
  select product_name
  , count(*) as total_trx
  , min(days_diff) as min_days_diff
  , max(days_diff) as max_days_diff
  , avg(days_diff) as avg_days_diff
  from
      (
      select customer_id, Product_name, order_date, ship_date
      , DATE_ADD(ship_date, INTERVAL 10 DAY) AS ten_days_later_from_ship_date
      , DATE_ADD(ship_date, INTERVAL 1 MONTH) AS a_month_later_from_ship_date
      , DATE_DIFF(ship_date, order_date, DAY) AS days_diff
      FROM `bootcamp-402414.data_analytic.super_store`
      ) as x
  --- where total_trx > 50
  group by product_name
  --- order by avg_days_diff asc
  having total_trx > 10
  ) as y
order by 5 asc ;



 select ship_mode
  , count(*) as total_trx
  , min(days_diff) as min_days_diff
  , max(days_diff) as max_days_diff
  , avg(days_diff) as avg_days_diff
  from
      (
```

```sql
      select customer_id, Product_name, order_date, ship_date, ship_mode
      , DATE_ADD(ship_date, INTERVAL 10 DAY) AS ten_days_later_from_ship_date
      , DATE_ADD(ship_date, INTERVAL 1 MONTH) AS a_month_later_from_ship_date
      , DATE_DIFF(ship_date, order_date, DAY) AS days_diff
      FROM `bootcamp-402414.data_analytic.super_store`
      ) as x
  group by ship_mode
;



--- DATE_DIFF(date_expression_a, date_expression_b, date_part)
SELECT DATE_DIFF(DATE '2023-10-22', DATE '2023-10-28', DAY) AS days_diff; --- (-6)
SELECT DATE_DIFF(DATE '2023-10-28', DATE '2023-10-22', DAY) AS days_diff; --- 6


SELECT
  DATE_DIFF(DATE '2023-10-25', DATE '2023-10-23', DAY) AS days_diff,
  DATE_DIFF(DATE '2023-10-25', DATE '2023-10-23', WEEK) AS weeks_diff,
  DATE_DIFF(DATE '2023-10-25', DATE '2023-10-20', WEEK) AS weeks_diff,
  DATE_DIFF(DATE '2023-10-25', DATE '2020-10-20', YEAR) AS year_diff,
  ;


--- DATE_SUB(date_expression, INTERVAL int64_expression date_part)
SELECT
  DATE_ADD(DATE '2023-10-22', INTERVAL 5 DAY) AS five_days_later,
  DATE_ADD(DATE '2023-10-22', INTERVAL -5 DAY) AS five_days_ago,
  DATE_SUB(DATE '2023-10-22', INTERVAL 5 DAY) AS five_days_ago
;

      select customer_id, Product_name, order_date, ship_date, ship_mode
      , DATE_ADD(ship_date, INTERVAL 10 DAY) AS ten_days_later_from_ship_date
      , DATE_ADD(ship_date, INTERVAL 1 MONTH) AS a_month_later_from_ship_date
      , DATE_SUB(ship_date, INTERVAL 10 DAY) AS ten_days_before_from_ship_date
      , DATE_DIFF(ship_date, order_date, DAY) AS days_diff
      FROM `bootcamp-402414.data_analytic.super_store`
      limit 10 ;




--- EXTRACT


select customer_id
, ship_date
, extract(day from ship_date) as ship_date_day
FROM `bootcamp-402414.data_analytic.super_store`
limit 10 ;
```

```sql
--- FORMAT DATE
SELECT FORMAT_DATE('%b-%d-%Y', DATE '2008-12-25') AS formatted;
SELECT FORMAT_DATE('%b %Y', DATE '2008-12-25') AS formatted;


-- This works because elements on both sides match.
SELECT PARSE_DATE('%A %b %e %Y', 'Thursday Dec 25 2008')

-- This produces an error because the year element is in different locations.
SELECT PARSE_DATE('%Y %A %b %e', 'Thursday Dec 25 2008')

-- This produces an error because one of the year elements is missing.
SELECT PARSE_DATE('%A %b %e', 'Thursday Dec 25 2008')

-- This works because %F can find all matching elements in date_string.
SELECT PARSE_DATE('%F', '2000-12-30')


--- MM/DD/YY
SELECT ship_date
, extract(day from ship_date) as ship_date_day
FROM `bootcamp-402414.data_analytic.super_store`
limit 10 ;




--- YYYYMMDD
SELECT PARSE_DATE('%Y%m%d', '20081225') AS parsed;


---------------------------------------- Super Store

select current_date() as date_now ;


--- DATE_ADD(date_expression, INTERVAL int64_expression date_part)
SELECT
  DATE_ADD(DATE '2023-10-22', INTERVAL 5 DAY) AS five_days_later,
  DATE_ADD(DATE '2023-10-22', INTERVAL 10 DAY) AS ten_days_later ;


select *
FROM `bootcamp-402414.data_analytic.super_store`
limit 10 ;

select customer_id, product_name
from `bootcamp-402414.data_analytic.super_store`
where category in
    (
    select category from `bootcamp-402414.data_analytic.super_store`
```

```sql
    where category in ('Furniture','Technology')
    )
;

select customer_id
, Quantity
, case
    when Quantity < 5 then 'Small'
    --- when Quantity between 5 and 10 then 'Medium'
    when Quantity >= 5 and Quantity <= 10 then 'Medium'
    else 'Large'
    end as Quantity_group
from `bootcamp-402414.data_analytic.super_store`
limit 10 ;

select Quantity_group
, count(*) as total
from
  (
  select customer_id
  , Quantity
  , case
      when Quantity < 5 then 'Small'
      --- when Quantity between 5 and 10 then 'Medium'
      when Quantity >= 5 and Quantity <= 10 then 'Medium'
      else 'Large'
      end as Quantity_group
  from `bootcamp-402414.data_analytic.super_store`
  ) x
group by Quantity_group
order by 2 desc ;


select order_date, quantity, region
from `bootcamp-402414.data_analytic.super_store`
limit 10 ;

--- Central,  East, South,  West
select order_date
, sum(quantity) as total_quantity
, sum(case when region = 'Central' then quantity end) as Central_quantity
, sum(case when region = 'East' then quantity end) as East_quantity
, sum(case when region = 'South' then quantity end) as South_quantity
, sum(case when region = 'West' then quantity end) as West_quantity
from `bootcamp-402414.data_analytic.super_store`
group by 1 ;

select order_date, region,
, sum(quantity) as total_quantity
from `bootcamp-402414.data_analytic.super_store`
group by 1,2 ;

select sub_category
, sum(quantity) as quantity
```

```
fromselect order_date, region,
, sum(quantity) as total_quantity
from `bootcamp-402414.data_analytic.super_store`
group by 1,2 ;
group by sub_category
;



select category, ship_mode
, sum(quantity)
from `bootcamp-402414.data_analytic.super_store`
group by category, ship_mode ;


select ship_date
, last_day(ship_date, month) as last
from `bootcamp-402414.data_analytic.super_store`
```