



DBMS Project

INVESTHUB

Lab Group: 04

Team I'd: 02

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Market Analysis

- 1) List stocks which have Market Capitalization > 200000000000 and P/E ratio < 20 on 4th March.

```
SELECT Distinct Stock_ID FROM Trend
WHERE "Date" = '2025-03-04' and PE_Ratio < 20 and
Market_Cap > 200000000000
```

	stock_id character varying (50) 🔒
1	BAJAJHFL
2	WIPRO
3	JSWSTEEL
4	CIPLA
5	ICICIBANK
6	AXISBANK

- 2) Give the details of the stock which has the highest dividend yield

```
SELECT t.* FROM Dividend as d
Join Trend as t
on d.Payment_Date = t."Date" and d.Stock_ID = t.Stock_ID
and d.exchange = t.exchange
order by (Dividend_Amount/Close_Price) Desc
Limit 1
```

	stock_id [PK] character varying (50) 🔒	exchange [PK] character (3) 🔒	Date [PK] date 🔒	open_price numeric (10,2) 🔒	close_price numeric (10,2) 🔒	high_price numeric (10,2) 🔒	low_price numeric (10,2) 🔒	volume bigint 🔒	year_high numeric (10,2) 🔒	year_low numeric (10,2) 🔒	pe_ratio numeric (8,2) 🔒	market_cap numeric (20,2) 🔒
1	ITC	BSE	2025-03-04	400.00	402.50	405.00	398.00	750000	415.00	370.00	20.00	250000000000.00

3) Which stocks saw a price rise for 2 consecutive days(3 to 5 March)?

```
SELECT d1.stock_Id, d1.Exchange FROM
(SELECT Stock_ID, Exchange, Close_Price FROM Trend
WHERE "Date" = '2025-03-03') as d1
Join
(SELECT Stock_ID, Exchange, Close_Price FROM Trend
WHERE "Date" = '2025-03-04') as d2
on d1.stock_id = d2.stock_id and d1.exchange =
d2.exchange
Join
(SELECT Stock_ID, Exchange, Close_Price FROM Trend
WHERE "Date" = '2025-03-05') as d3
on d3.stock_id = d2.stock_id and d3.exchange =
d2.exchange
WHERE d1.Close_Price < d2.Close_Price and d2.Close_Price
< d3.Close_Price
```

	stock_id character varying (50) 🔒	exchange character (3) 🔒
1	TCS	NSE
2	TCS	BSE
3	GODREJCP	BSE
4	GODREJCP	NSE
5	HDFCAMC	BSE
6	HDFCAMC	NSE

- 4) Find the stock with the highest price difference between NSE and BSE.

```
SELECT NSE.Stock_Id, abs(BSE.Current_Price -  
NSE.Current_Price) as Price_Difference FROM  
(SELECT * FROM Stock_Pricing WHERE Exchange = 'BSE') as  
BSE  
JOIN  
(SELECT * FROM Stock_Pricing WHERE Exchange = 'NSE') as  
NSE  
on BSE.stock_id = NSE.stock_id  
order by Price_Difference Desc  
limit 1
```

	stock_id character varying (50) 🔒	price_difference numeric 🔒
1	LNT	5.20

- 5) Which stocks have gained more than 10% over the last 2 days (based on Trend data)?

```
SELECT d1.stock_Id, d1.Exchange FROM  
(SELECT Stock_ID, Exchange, Close_Price FROM Trend  
WHERE "Date" = '2025-03-03') as d1  
Join  
(SELECT Stock_ID, Exchange, Close_Price FROM Trend  
WHERE "Date" = '2025-03-05') as d3  
on d1.stock_id = d3.stock_id and d1.exchange = d3.exchange  
WHERE (d3.Close_Price - d1.Close_Price)/d1.Close_Price >  
0.1
```

	stock_id character varying (50) 🔒	exchange character (3) 🔒
1	TCS	BSE
2	TCS	NSE
3	GODREJCP	BSE
4	GODREJCP	NSE
5	LODHA	BSE
6	LODHA	NSE
7	HDFCAMC	BSE
8	HDFCAMC	NSE

- 6) Which companies belong to industries with a sector size above 1 million?

```
SELECT Company_Name FROM Company Natural Join Industry
Natural Join Sector
WHERE Sector_Size > 1000000
```

	company_name [PK] character varying (50) ✎
1	Axis Bank
2	ICICI Bank Ltd.
3	HDFC Bank Ltd.
4	ICICI Lombard General Ins.
5	Bajaj Finance
6	Bajaj Housing Finance
7	HDFC Asset Management ...

7) Find the average gross profit of companies founded before 2000.

```
SELECT Avg(Gross_QTR_Profit) FROM Company
WHERE Founded_Year < '2000'
```

	avg numeric
1	19708.333333333333

8) Which sector has the most number of news items the week 1st week of March 2025?

```
SELECT Sector_Name FROM News Natural Join Sector
WHERE "Date" between '2025-03-01' and '2025-03-07'
Group By Sector_Name
order by count(News_Title) desc
limit 1
```

	sector_name character varying (50)
1	Automobile

9) Which industries have companies whose average EPS is more than 20?

```
SELECT Industry_Name, Avg(EPS) FROM Company
Group By (Industry_Name)
Having Avg(EPS) > 20
```

	industry_name character varying (50)	avg double precision
1	NBFC	49.70000171661377
2	Oil & Gas	85.54999732971191
3	Real Estate Development	23.699999809265137
4	Software Services	59.216666301091514
5	Steel	49.400001525878906
6	Insurance	27.399999618530273
7	FMCG	23.450000286102295
8	Banking	83.6999994913737
9	Jewellery	63.20000076293945
10	Construction & Engineering	70.30000305175781
11	Electricity Generation	45.900001525878906
12	Automobiles Manufacturing	89.0999984741211
13	Asset Management	39.5
14	Pharmaceutical Manufacturing	37.449999034404755

10) List the companies having P/E Ratio less than the Industry P/E Ratio (on 05-03-2025).

```
SELECT DISTINCT Company_name
FROM
  (SELECT Industry_Name, AVG(PE_Ratio) AS Avg_PE_Ratio
   FROM
     (SELECT *
      FROM Trend
      WHERE "Date" = '2025-03-05')
   NATURAL JOIN Stock_Info
   NATURAL JOIN Company
   GROUP BY Industry_Name) AS r2
NATURAL JOIN Company
```

```

NATURAL JOIN Stock_Info
NATURAL JOIN
    (SELECT *
     FROM Trend
     WHERE "Date" = '2025-03-05')
WHERE PE_Ratio < r2.Avg_PE_Ratio;

```

	company_name [PK] character varying (50) 
1	Axis Bank
2	Bajaj Housing Finance
3	Cipla Ltd.
4	DLF Ltd.
5	HCL Technologies
6	ICICI Bank Ltd.
7	ITC Ltd.
8	Oil & Natural Gas Corp.
9	Sun Pharmaceutical
10	Vodafone Idea
11	Wipro Ltd.

11) List the stocks which have 40% less current price than its 52 week high price (on 05-03-2025).

```

SELECT Stock_Id, Exchange FROM Trend
Natural Join Stock_Pricing
WHERE "Date" = '2025-03-05' and (Year_High -
Current_Price) / Year_High >= 0.4



```


	stock_id character varying (50) 🔒	exchange character (3) 🔒
1	BAJAJHFL	BSE
2	BAJAJHFL	NSE

IPO




- 1) Which IPOs are currently ongoing or upcoming?

```
SELECT Symbol, "Status" FROM IPO
WHERE "Status" = 'Ongoing' or "Status" = 'Upcoming'
```

	symbol [PK] character varying (50) 	Status character varying (10) 
1	GREENVOLT	Ongoing
2	SNAPFIN	Ongoing
3	URBANWARE	Ongoing
4	NOVAMED	Upcoming
5	TECHPLAZA	Upcoming
6	SMARTINFRA	Upcoming

- 2) List all IPOs that got listed at a price higher than the issue price.

```
SELECT Symbol, Listing_Price, Issue_Price FROM IPO
WHERE Listing_Price > Issue_Price
```

	symbol [PK] character varying (50) 	listing_price numeric (10,2) 	issue_price numeric (10,2) 
1	TCS	1040.00	850.00
2	INFY	145.00	95.00
3	HDFCBANK	1450.00	40.00


- 3) Which IPOs were listed on NSE but not on BSE (or vice versa)?

```
SELECT Symbol FROM (
    (SELECT * FROM IPO WHERE Exchange = 'NSE'
    EXCEPT
    SELECT * FROM IPO WHERE Exchange = 'BSE'))
```

```

UNION
(SELECT * FROM IPO WHERE Exchange = 'BSE'
EXCEPT
SELECT * FROM IPO WHERE Exchange = 'NSE')
) AS One_Exchange_IPOs
WHERE "Status" = 'Listed';

```


	symbol character varying (50) 
1	HDFCBANK
2	INFY
3	TCS

4) Which companies had the largest IPOs in terms of issue size?

```

SELECT Symbol FROM IPO
order by Issue_Size desc
limit 1

```



	symbol [PK] character varying (50) 
1	TCS

5) What is the Highest GMP (Grey Market Premium) of all listed IPOs?

```

SELECT Symbol, Final_GMP FROM IPO
WHERE "Status" = 'Listed'
order by Final_GMP desc
limit 1

```

	symbol [PK] character varying (50) 	final_gmp numeric (5,2) 
1	TCS	190.00

6) Which IPOs gave more than 20% listing gain?

```
SELECT Symbol FROM IPO
WHERE (Listing_Price - Issue_Price)/Issue_Price > 0.2
```

	symbol [PK] character varying (50)
1	TCS
2	INFY
3	HDFCBANK


7) Find all Ongoing or Upcoming IPOs of companies founded Before 2020.

```
SELECT Symbol, Founded_Year, "Status" FROM Company
Natural Join IPO
WHERE Founded_Year < '2020' and ("Status" = 'Ongoing' or
"Status" = 'Upcoming')
```

	symbol character varying (50)	founded_year character (4)	Status character varying (10)
1	URBANWARE	2019	Ongoing

8) Which newly listed IPO stocks have gained the most since listing?

```
SELECT Symbol FROM IPO Join Stock_Pricing
on Stock_Id = Symbol
Order By (Current_Price - Listing_Price)/Listing_Price
Desc
limit 1
```

	symbol [PK] character varying (50) 
1	INFY

Transaction And Portfolio related queries

- 1) Give Name of the FII/DII that has the Highest amount of transactions.

```
SELECT Investor_Id, Investor_Type, sum(Quantity *  
Price_At_Transaction) as Transaction_Amount FROM  
Transaction Natural Join Investor  
Group By (Investor_Id, Investor_Type)  
Having Investor_Type = 'FII' or Investor_Type = 'DII'  
Order By sum(Quantity * Price_At_Transaction) Desc  
limit 1
```

	investor_id integer	investor_type character varying (20)	transaction_amount numeric
1	21	FII	700000.00

- 2) Identify the Most Active Users in Buying Stocks (based on the number of buys).

```
SELECT Investor_Id, count(*) FROM Transaction  
Group By Investor_Id, Transaction_Type  
Having Transaction_Type = 'BUY'  
Order By Count(*) Desc  
limit 1
```

	investor_id integer	count bigint
1	41	5

- 3) List users who have a portfolio with stocks from more than 2 different sectors.

```
SELECT Investor_Id, count(distinct Sector_Name) as  
Sector_Count FROM  
Portfolio Natural Join Stock_Info Natural Join Company  
Natural Join Industry  
Group By Investor_Id, Broker_Id  
Having count(distinct Sector_Name) > 2
```

	investor_id integer	sector_count bigint
1	44	4
2	45	3

- 4) List the Top Performing Stock from Used_Id 42's Portfolio.

```
SELECT Stock_Id FROM Portfolio Natural Join  
Stock_Pricing  
Where Investor_Id = 42  
Order By (Current_Price - Avg_Buy_Price)/Avg_Buy_Price  
Desc  
limit 1
```

	stock_id character varying (50)
1	TCS

- 5) List the stock name having the highest investment by FII/DII.

```
SELECT Stock_Id, sum(Qty_Held * Avg_Buy_Price) as  
Highest_Investment FROM  
(SELECT * FROM Investor Natural Join Portfolio
```

```
WHERE Investor_Type = 'FII' or Investor_Type = 'DII') as
r1
Group By (Stock_Id, Exchange)
Order By sum(Qty_Held * Avg_Buy_Price) Desc
limit 1
```

	stock_id character varying (50)	highest_investment numeric
1	RELIANCE	680815.00

- 6) List all the stocks that User ID 44 has in his all portfolio (i.e.across different brokers).

```
SELECT * From Portfolio
WHERE Investor_Id = 44
```

	investor_id [PK] integer	broker_id [PK] integer	stock_id [PK] character varying (50)	exchange [PK] character (3)	qty_held integer	avg_buy_price numeric (10,2)	last_updated timestamp without time zone
1	44	12	DLF	NSE	15	646.33	2025-03-06 10:30:00
2	44	12	SUNPHARMA	NSE	3	1102.75	2025-03-09 13:30:00
3	44	12	AXISBANK	NSE	4	1048.60	2025-03-09 10:00:00
4	44	12	MARUTI	BSE	70	10600.50	2025-03-06 13:00:00

- 7) What is the current portfolio value of each investor based on the latest stock prices?

```
SELECT Investor_Id, Broker_Id, sum(Qty_Held *
Current_Price) as Current_Portfolio_Value
FROM Portfolio Natural Join Stock_Pricing
Group By (Broker_Id, Investor_Id)
Order By sum(Qty_Held * Current_Price) Asc
```


	investor_id integer	broker_id integer	current_portfolio_value numeric
1	50	15	9901.00
2	43	11	13049.00
3	42	11	21338.50
4	46	13	25536.70
5	47	13	55109.00
6	35	18	112175.00
7	45	12	117049.10
8	23	17	132672.00
9	31	16	376120.00
10	22	16	523612.00
11	41	13	614480.00
12	21	16	701490.00
13	44	12	760379.00
14	41	11	968837.50

- 8) Which investor holds the most diversified portfolio (i.e., holds the highest number of different stocks)?

```
SELECT Investor_Id, count(Distinct Stock_Id) as
No_Of_Diff_Stocks FROM Portfolio
Group By (Investor_Id, Broker_Id)
Order By count(Distinct Stock_Id) Desc
limit 1
```

	investor_id integer	no_of_diff_stocks bigint
1	44	4

9) Which stock is held by the most number of investors?

```
SELECT Stock_Id, count(Investor_Id) as No_Of_Investor FROM
Portfolio
Group By (Stock_Id, Exchange)
Order By No_Of_Investor Desc
limit 1
```

	stock_id character varying (50) 🔒	no_of_investor bigint 🔒
1	TCS	3

10) Which investors have stocks only on one exchange (NSE or BSE)

```
SELECT Distinct Investor_Id FROM Portfolio
Group by (Investor_Id, Broker_Id)
Having Count(Distinct Exchange) = 1
```

	investor_id integer 🔒
1	21
2	23
3	35
4	41
5	43
6	45
7	46
8	50

- 11) Which investor has made the highest single trade (in value = price × quantity)?

```
SELECT Investor_Id, Broker_Id, Stock_Id,
Exchange, (Quantity * Price_At_Transaction) as
Trade_Value FROM Transaction
Order By Trade_Value Desc
limit 1
```

	investor_id integer	broker_id integer	stock_id character varying (50)	exchange character (3)	trade_value numeric
1	21	16	JSWSTEEL	NSE	427950.00

- 12) List all transactions of User Id 43 in the last 7 days(i.e. 01-03-2025 to 07-03-2025).

```
SELECT * FROM Transaction
WHERE Investor_ID = 43 and DATE(Transaction_Time) Between
'2025-03-01' and '2025-03-07'
```

	transaction_id [PK] integer	investor_id integer	broker_id integer	stock_id character varying (50)	exchange character (3)	transaction_type character varying (4)	quantity integer	price_at_transaction numeric (10,2)	payment_method character varying (20)	transaction_fee numeric (10,2)	Status character varying (10)	transaction_time timestamp without time zone
1	1005	43	11	ITC	NSE	BUY	20	428.90	Card	8.50	Executed	2025-03-05 13:00:00

- 13) List the stocks from user 45's holding which paid some dividend

```
SELECT Stock_ID, Exchange FROM Portfolio WHERE Investor_ID
= 45
INTERSECT
SELECT Stock_ID, Exchange FROM Dividend
```

	stock_id character varying (50)	exchange character (3)
1	DLF	NSE

14) List the Profit/Loss of all the Investors.(Portfolio wise)

```
SELECT Investor_Id, Broker_Id,  
Sum((Current_Price-Avg_Buy_Price)*Qty_Held) as Net_Profit  
FROM Portfolio Natural Join Stock_Pricing  
Group By (Investor_Id,Broker_Id)  
Order By Sum((Current_Price-Avg_Buy_Price)*Qty_Held) Asc
```

	investor_id integer	broker_id integer	net_profit numeric
1	47	13	-9.00
2	35	18	0.00
3	42	11	68.50
4	23	17	132.00
5	31	16	280.00
6	43	11	405.60
7	50	15	494.14
8	41	13	984.00
9	45	12	1135.34
10	44	12	1146.40
11	21	16	1490.00
12	41	11	1508.73
13	22	16	2147.00
14	46	13	19348.98

15) List all block deals executed at a price lower than the current market price.

```
SELECT * FROM Block_Deals Natural Join Stock_Pricing  
WHERE Trade_Price < Current_Price
```

	exchange character (3)	stock_id character varying (50)	deal_id integer	deal_type character varying (4)	qty_traded integer	investor_id integer	trade_price numeric (10,2)	deal_time timestamp without time zone	current_price numeric (10,2)
1	NSE	SUNPHARMA	17	SELL	4349	34	1100.00	2025-03-06 14:07:35	1105.60
2	NSE	SUNPHARMA	18	SELL	8384	35	1100.00	2025-03-06 14:07:35	1105.60
3	NSE	SUNPHARMA	19	BUY	8827	31	1100.00	2025-03-06 14:07:35	1105.60
4	NSE	SUNPHARMA	20	BUY	3906	24	1100.00	2025-03-06 14:07:35	1105.60

16) List all block deals where both buyer and seller were FIIs.

```
SELECT DISTINCT BD1.Investor_Id as Buyer_Id, BD2.Investor_Id
as Seller_Id, BD1.Stock_ID, BD1.Exchange, BD1.Deal_Time
FROM Block_Deals BD1
JOIN Block_Deals BD2 ON
    BD1.Stock_ID = BD2.Stock_ID AND
    BD1.Exchange = BD2.Exchange AND
    BD1.Deal_Time = BD2.Deal_Time AND
    BD1.Deal_Type = 'BUY' AND
    BD2.Deal_Type = 'SELL'
JOIN Investor I1 ON BD1.Investor_ID = I1.Investor_ID
JOIN Investor I2 ON BD2.Investor_ID = I2.Investor_ID
WHERE I1.Investor_Type = 'FII' AND I2.Investor_Type =
'FII';
```

	buyer_id integer	seller_id integer	stock_id character varying (50)	exchange character (3)	deal_time timestamp without time zone
1	25	23	MARUTI	BSE	2025-03-07 14:07:00

Broker & Analyst

- 1) Calculate the Total Transaction Fee Collected by Brokers in the Month of March.

```
SELECT Broker_Id, Sum(Transaction_Fee) as  
Total_Transaction_Fee FROM Transaction  
WHERE Extract(Month from Transaction_Time) = '03'  
Group By (Broker_Id)  
Order By Sum(Transaction_Fee) Desc
```

	broker_id integer	total_transaction_fee numeric
1	16	551.00
2	17	160.00
3	12	101.19
4	11	73.25
5	13	34.88
6	14	29.30
7	15	23.89
8	18	20.00

- 2) Which brokers provide platforms to the largest number of investors?

```
SELECT Broker_Id, Count(Investor_Id) as Investor_Count FROM  
Provides_Platform_To  
Group By Broker_Id  
Order By Count(Investor_Id) Desc  
limit 1
```

	broker_id integer	investor_count bigint
1	18	7

- 3) Each FII is associated with how many analysts ?

```
SELECT Investor_Id as FII_Id, Count(Analyst_Id) as  
No_Of_Analyst FROM Follows Natural Join Investor  
WHERE Investor_Type = 'FII'  
Group By Investor_Id  
Order By Count(Analyst_ID) Desc
```

	fii_id integer	no_of_analyst bigint
1	23	2
2	27	2
3	28	2
4	25	2
5	29	1
6	24	1
7	26	1
8	21	1

- 4) List the top 5 most followed analysts along with the number of followers.

```
SELECT Analyst_Id, Count(Investor_Id) FROM Follows  
Group By Analyst_Id  
Order By Count(Investor_Id) Desc  
limit 5
```

	analyst_id integer	count bigint
1	2	8
2	3	8
3	5	7
4	1	7
5	6	7

5) Which retail investors follow more than 2 different analysts?

```
SELECT Investor_Id, Count(Analyst_Id) as No_Of_Analyst
FROM Follows Natural Join Investor
WHERE Investor_Type = 'Retail_Investor'
Group By Investor_Id
Having Count(Analyst_Id) > 2
```

	investor_id integer	no_of_analyst bigint
1	43	3
2	45	3
3	49	3

6) List the users which are holding the stock which is recommended by some analysts.

```
SELECT Investor_Id, Analyst_Id, Stock_id, Exchange FROM
Stock_Recommendation Natural Join Portfolio
```


	investor_id [PK] integer	analyst_id [PK] integer	stock_id [PK] character varying (50)	exchange [PK] character (3)
1	41	1	TCS	NSE
2	41	1	TCS	NSE
3	43	1	WIPRO	NSE
4	45	4	HCLTECH	NSE
5	43	1	ITC	NSE

- 7) List the users that are only holding the stocks which are recommended by the analyst.

```
SELECT DISTINCT P.Investor_Id FROM Portfolio as P
WHERE Not Exists (
  (SELECT Stock_Id, Exchange FROM Portfolio WHERE
Investor_Id = P.Investor_Id)
Except
  (SELECT Stock_Id, Exchange FROM Stock_Recommandation
WHERE Investor_Id = P.Investor_Id)
)
```

	investor_id integer
1	43

Watchlist

- 1) List all stocks present in the watchlists of a given investor id 43.

```
SELECT Stock_Id, Exchange, Watchlist_Id, Broker_Id
FROM WL_Contains
WHERE Investor_Id = 43
```

	stock_id character varying (50) 🔒	exchange character (3) 🔒	watchlist_id integer 🔒	broker_id integer 🔒
1	ZOMATO	NSE	1	11
2	PAYTM	BSE	1	11
3	TATAELXSI	NSE	1	11

- 2) Which investors created multiple watchlists and what's the average number of stocks in each?

```
SELECT Investor_Id, r1.Watchlist_Count,
Count(Stock_Id)/r1.Watchlist_count as
Avg_Stocks_Per_Wl FROM Wl_contains Natural Join

(SELECT Investor_Id, Count(Watchlist_Id) as
Watchlist_Count FROM Watchlist

Group By (Investor_Id)

Having Count(WatchList_Id) > 1) as r1

Group By (Investor_Id,Watchlist_Count)
```

	investor_id integer	watchlist_count bigint	avg_stocks_per_wl bigint
1	24	2	1
2	41	3	3
3	42	2	3
4	33	2	1
5	21	2	1
6	49	2	1
7	34	4	1
8	45	2	3
9	23	2	1

3) Which stock appears in the most number of watchlists?

```
SELECT Stock_Id, Count(Watchlist_Id) FROM
WL_Contains

Group By Stock_Id

Order By Count(Watchlist_Id) Desc

limit 1
```

	stock_id character varying (50)	count bigint
1	RELIANCE	5

Mutual Fund

- 1) List all mutual funds that hold stocks from the Finance Sector.

```
SELECT Distinct MF_Symbol FROM MF_Carries
Natural Join Stock_Info Natural Join Company Natural
Join Industry
WHERE Sector_Name = 'Finance'
```

	mf_symbol character varying (50) 🔒
1	AXISEQFD
2	FRANKLINLIQ
3	ICICIDBF
4	ICICIHBYF
5	IDFCDTBF
6	KOTAKLIQ
7	MIRAEETF
8	UTIDEBTD

- 2) For each stock, provide the number of mutual funds that currently hold it in their portfolio.

```
SELECT Stock_Id, Count(MF_Symbol) as No_Of_MF FROM
MF_Carries
Group By Stock_Id
Order By Count(MF_Symbol) Desc
```

	stock_id character varying (50) 🔒	no_of_mf bigint 🔒
1	HDFCBANK	6
2	INFY	5
3	RELIANCE	5
4	TCS	4
5	ITC	2
6	NTPC	2
7	TITAN	2
8	MARUTI	2
9	ICICIBANK	2
10	BAJFINANCE	1

- 3) Which mutual fund has the most diversified portfolio (i.e., holds the most number of different stocks)?

```
SELECT MF_Symbol, Count(Stock_Id) as No_Of_Stocks FROM
MF_Carries
Group By MF_Symbol
Order By No_Of_Stocks Desc
limit 1
```

	mf_symbol character varying (50) 🔒	no_of_stocks bigint 🔒
1	AXISEQFD	3

- 4) What is the average number of stocks carried by mutual funds?

```
SELECT Count(*)/Count(Distinct MF_Symbol) as Avg_Stocks
FROM MF_Carries
```

	avg_stocks bigint
1	2

5) Which mutual funds hold a particular stock (e.g., INFY)?

```
SELECT MF_Symbol FROM MF_Carries WHERE Stock_Id = 'INFY'
```

	mf_symbol character varying (50)
1	HDFCEQG
2	SBIHYBF
3	NIPPONIDX
4	AXISEQFD
5	MOTILALOETF

6) List all users who have invested more than ₹50,000 in mutual funds.

```
SELECT Investor_Id, Sum(Units_Held * Avg_Buy_NAV) as  
Total_Investment FROM MF_Portfolio  
Group By Investor_Id  
Having Sum(Units_Held * Avg_Buy_NAV) > 50000
```

	investor_id integer	total_investment numeric
1	31	210000.00
2	32	85600.00

7) Which mutual fund appears in the portfolio of most users?

```
SELECT MF_Symbol, count(Investor_Id) as No_Of_Users FROM
MF_Portfolio
Group By Mf_Symbol
Order By No_Of_Users Desc
Limit 1
```

	mf_symbol character varying (50)	no_of_users bigint
1	SBIHYBF	4

- 8) List all mutual funds held by a specific user (say user id 44), along with investment amount and current units.

```
SELECT Investor_Id, Broker_Id, Mf_Symbol, Units_Held,
Units_Held*Avg_Buy_NAV as Investment_Amount FROM
MF_Portfolio
WHERE Investor_Id = 44
```

	investor_id [PK] integer	broker_id [PK] integer	mf_symbol [PK] character varying (50)	units_held integer	investment_amount numeric
1	44	12	NIPPONIDX	5	1040.00


- 9) Are users investing in mutual funds that carry the same stocks as their personal portfolio?

```
SELECT Investor_Id FROM Investor AS I1
WHERE EXISTS (
    (SELECT Stock_Id FROM Portfolio
    WHERE Investor_Id = I1.Investor_Id) INTERSECT
```

```

(SELECT Stock_Id FROM (SELECT * FROM MF_Portfolio
                        WHERE Investor_Id = I1.Investor_Id
                        )
NATURAL JOIN MF_Carries
)
)

```


	investor_id [PK] integer 
1	41
2	42

10) Which users have only mutual fund investments (no direct stock holdings)?

```

SELECT Investor_Id FROM MF_Portfolio
WHERE Investor_Id NOT IN
(SELECT Investor_Id FROM Portfolio)

```

	investor_id integer 
1	49
2	32