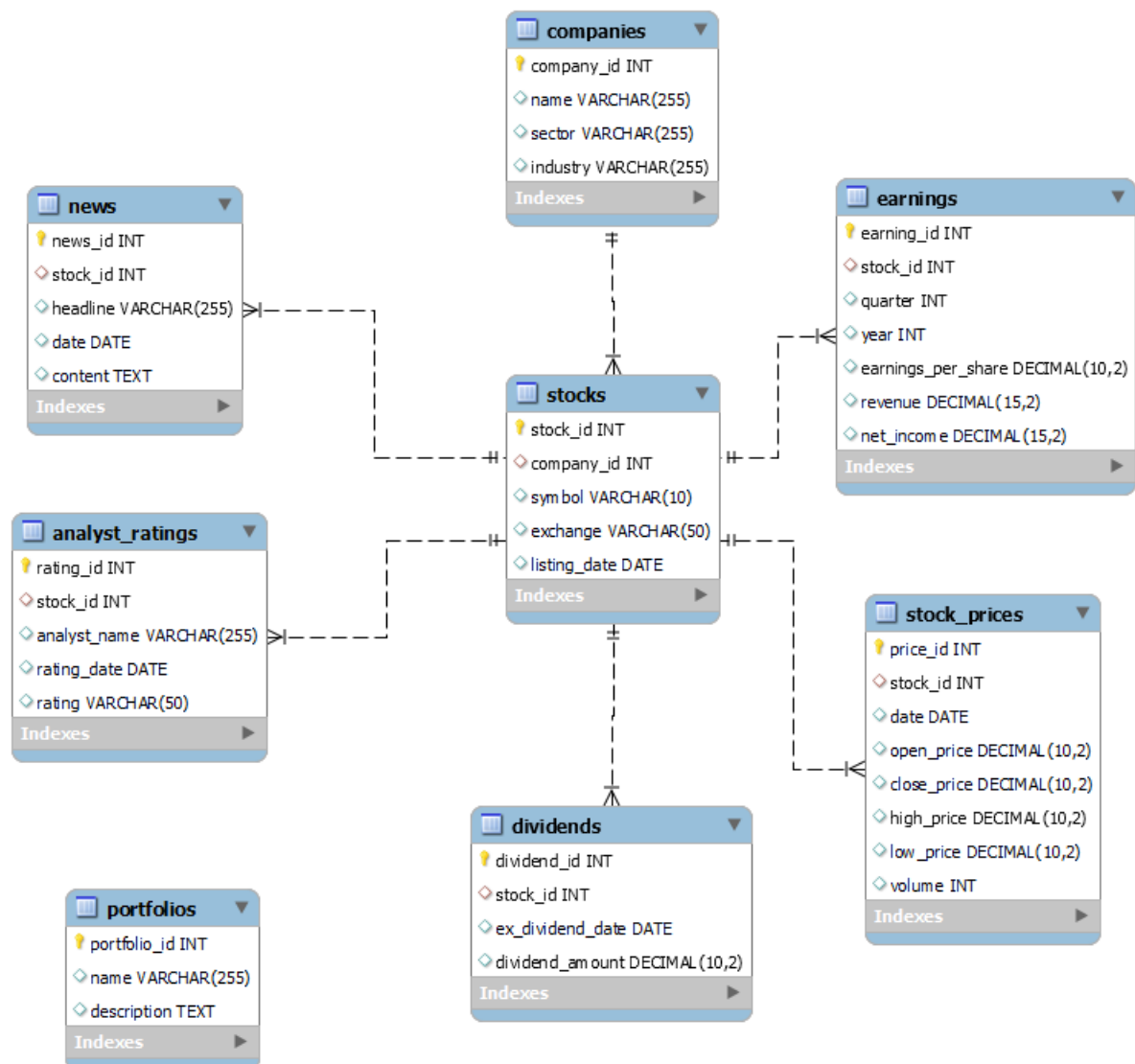# STOCKMARKETANALYZER

INTRODUCTION:-

StockMarketAnalyzer: Empowering investors with comprehensive data and insights for informed decision-making in the dynamic world of stock market investments.

ER DIAGRAM

companies
- 🔑 company_id INT
- ◇ name VARCHAR(255)
- ◇ sector VARCHAR(255)
- ◇ industry VARCHAR(255)
- Indexes ▶

news
- 🔑 news_id INT
- ◇ stock_id INT
- ◇ headline VARCHAR(255)
- ◇ date DATE
- ◇ content TEXT
- Indexes ▶

earnings
- 🔑 earning_id INT
- ◇ stock_id INT
- ◇ quarter INT
- ◇ year INT
- ◇ earnings_per_share DECIMAL(10,2)
- ◇ revenue DECIMAL(15,2)
- ◇ net_income DECIMAL(15,2)
- Indexes ▶

stocks
- 🔑 stock_id INT
- ◇ company_id INT
- ◇ symbol VARCHAR(10)
- ◇ exchange VARCHAR(50)
- ◇ listing_date DATE
- Indexes ▶

analyst_ratings
- 🔑 rating_id INT
- ◇ stock_id INT
- ◇ analyst_name VARCHAR(255)
- ◇ rating_date DATE
- ◇ rating VARCHAR(50)
- Indexes ▶

stock_prices
- 🔑 price_id INT
- ◇ stock_id INT
- ◇ date DATE
- ◇ open_price DECIMAL(10,2)
- ◇ close_price DECIMAL(10,2)
- ◇ high_price DECIMAL(10,2)
- ◇ low_price DECIMAL(10,2)
- ◇ volume INT
- Indexes ▶

dividends
- 🔑 dividend_id INT
- ◇ stock_id INT
- ◇ ex_dividend_date DATE
- ◇ dividend_amount DECIMAL(10,2)
- Indexes ▶

portfolios
- 🔑 portfolio_id INT
- ◇ name VARCHAR(255)
- ◇ description TEXT
- Indexes ▶

STRUCTURE OF TABLES: -

Companies: -

```
mysql> desc companies;
+------------+--------------+------+-----+---------+-------+
| Field      | Type         | Null | Key | Default | Extra |
+------------+--------------+------+-----+---------+-------+
| company_id | int          | NO   | PRI | NULL    |       |
| name       | varchar(255) | YES  |     | NULL    |       |
| sector     | varchar(255) | YES  |     | NULL    |       |
| industry   | varchar(255) | YES  |     | NULL    |       |
+------------+--------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

STOCKS: -

```
mysql> desc stocks;
+--------------+-------------+------+-----+---------+-------+
| Field        | Type        | Null | Key | Default | Extra |
+--------------+-------------+------+-----+---------+-------+
| stock_id     | int         | NO   | PRI | NULL    |       |
| company_id   | int         | YES  | MUL | NULL    |       |
| symbol       | varchar(10) | YES  |     | NULL    |       |
| exchange     | varchar(50) | YES  |     | NULL    |       |
| listing_date | date        | YES  |     | NULL    |       |
+--------------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

STOCK_PRICES: -

```
mysql> desc stock_prices;
+-------------+---------------+------+-----+---------+-------+
| Field       | Type          | Null | Key | Default | Extra |
+-------------+---------------+------+-----+---------+-------+
| price_id    | int           | NO   | PRI | NULL    |       |
| stock_id    | int           | YES  | MUL | NULL    |       |
| date        | date          | YES  |     | NULL    |       |
| open_price  | decimal(10,2) | YES  |     | NULL    |       |
| close_price | decimal(10,2) | YES  |     | NULL    |       |
| high_price  | decimal(10,2) | YES  |     | NULL    |       |
| low_price   | decimal(10,2) | YES  |     | NULL    |       |
| volume      | int           | YES  |     | NULL    |       |
+-------------+---------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

DIVIDENDS:-

```
mysql> desc dividends;
+-----------------+---------------+------+-----+---------+-------+
| Field           | Type          | Null | Key | Default | Extra |
+-----------------+---------------+------+-----+---------+-------+
| dividend_id     | int           | NO   | PRI | NULL    |       |
| stock_id        | int           | YES  | MUL | NULL    |       |
| ex_dividend_date| date          | YES  |     | NULL    |       |
| dividend_amount | decimal(10,2) | YES  |     | NULL    |       |
+-----------------+---------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

NEWS:-

```
mysql> desc news;
+----------+--------------+------+-----+---------+-------+
| Field    | Type         | Null | Key | Default | Extra |
+----------+--------------+------+-----+---------+-------+
| news_id  | int          | NO   | PRI | NULL    |       |
| stock_id | int          | YES  | MUL | NULL    |       |
| headline | varchar(255) | YES  |     | NULL    |       |
| date     | date         | YES  |     | NULL    |       |
| content  | text         | YES  |     | NULL    |       |
+----------+--------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

ANALYST_RATINGS:-

```
mysql> desc analyst_ratings;
+--------------+--------------+------+-----+---------+-------+
| Field        | Type         | Null | Key | Default | Extra |
+--------------+--------------+------+-----+---------+-------+
| rating_id    | int          | NO   | PRI | NULL    |       |
| stock_id     | int          | YES  | MUL | NULL    |       |
| analyst_name | varchar(255) | YES  |     | NULL    |       |
| rating_date  | date         | YES  |     | NULL    |       |
| rating       | varchar(50)  | YES  |     | NULL    |       |
+--------------+--------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

EARNINGS:-

```
mysql> desc earnings;
+--------------------+---------------+------+-----+---------+-------+
| Field              | Type          | Null | Key | Default | Extra |
+--------------------+---------------+------+-----+---------+-------+
| earning_id         | int           | NO   | PRI | NULL    |       |
| stock_id           | int           | YES  | MUL | NULL    |       |
| quarter            | int           | YES  |     | NULL    |       |
| year               | int           | YES  |     | NULL    |       |
| earnings_per_share | decimal(10,2) | YES  |     | NULL    |       |
| revenue            | decimal(15,2) | YES  |     | NULL    |       |
| net_income         | decimal(15,2) | YES  |     | NULL    |       |
+--------------------+---------------+------+-----+---------+-------+
7 rows in set (0.00 sec)
```

PORTFOLIOS:-

```
mysql> desc portfolios;
+--------------+--------------+------+-----+---------+-------+
| Field        | Type         | Null | Key | Default | Extra |
+--------------+--------------+------+-----+---------+-------+
| portfolio_id | int          | NO   | PRI | NULL    |       |
| name         | varchar(255) | YES  |     | NULL    |       |
| description  | text         | YES  |     | NULL    |       |
+--------------+--------------+------+-----+---------+-------+
3 rows in set (0.00 sec)
```

CONTENTS OF TABLES:-

Companies: -

```
mysql> select * from companies;
+------------+------------------------------------+--------------------+------------------+
| company_id | name                               | sector             | industry         |
+------------+------------------------------------+--------------------+------------------+
|          1 | Tata Motors                        | Automotive         | Manufacturing    |
|          2 | Reliance Industries                | Conglomerate       | Energy           |
|          3 | Infosys                            | Technology         | IT Services      |
|          4 | HDFC Bank                          | Financials         | Banking          |
|          5 | ITC Limited                        | Consumer Goods     | FMCG             |
|          6 | Maruti Suzuki India                | Automotive         | Manufacturing    |
|          7 | State Bank of India                | Financials         | Banking          |
|          8 | Hindustan Unilever                 | Consumer Goods     | FMCG             |
|          9 | Axis Bank                          | Financials         | Banking          |
|         10 | Wipro                              | Technology         | IT Services      |
|         11 | Bharti Airtel                      | Telecommunications | Telecom          |
|         12 | Mahindra & Mahindra                | Automotive         | Manufacturing    |
|         13 | TCS (Tata Consultancy Services)    | Technology         | IT Services      |
|         14 | HCL Technologies                   | Technology         | IT Services      |
|         15 | ICICI Bank                         | Financials         | Banking          |
|         16 | Asian Paints                       | Materials          | Paints           |
|         17 | Larsen & Toubro                    | Industrials        | Construction     |
|         18 | Sun Pharmaceutical Industries      | Healthcare         | Pharmaceuticals  |
|         19 | Adani Ports and Special Economic Zone | Industrials     | Ports            |
|         20 | Dr. Reddy                          | s Laboratories     | Healthcare       |
+------------+------------------------------------+--------------------+------------------+
20 rows in set (0.02 sec)
```

STOCKS: -

```
mysql> select * from stocks;
+----------+------------+------------+----------+--------------+
| stock_id | company_id | symbol     | exchange | listing_date |
+----------+------------+------------+----------+--------------+
|        1 |          1 | TATAMOTORS | NSE      | 2004-07-01   |
|        2 |          1 | TATAMOTORS | BSE      | 2004-07-01   |
|        3 |          2 | RELIANCE   | NSE      | 1977-03-01   |
|        4 |          2 | RELIANCE   | BSE      | 1977-03-01   |
|        5 |          3 | INFY       | NSE      | 1993-06-14   |
|        6 |          3 | INFY       | BSE      | 1993-06-14   |
|        7 |          4 | HDFCBANK   | NSE      | 1995-11-17   |
|        8 |          4 | HDFCBANK   | BSE      | 1995-11-17   |
|        9 |          5 | ITC        | NSE      | 1991-08-27   |
|       10 |          5 | ITC        | BSE      | 1991-08-27   |
|       11 |          6 | MARUTI     | NSE      | 2003-07-09   |
|       12 |          6 | MARUTI     | BSE      | 2003-07-09   |
|       13 |          7 | SBIN       | NSE      | 1995-09-20   |
|       14 |          7 | SBIN       | BSE      | 1995-09-20   |
|       15 |          8 | HINDUNILVR | NSE      | 1991-07-25   |
|       16 |          8 | HINDUNILVR | BSE      | 1991-07-25   |
|       17 |          9 | AXISBANK   | NSE      | 1998-11-16   |
|       18 |          9 | AXISBANK   | BSE      | 1998-11-16   |
|       19 |         10 | WIPRO      | NSE      | 1995-11-11   |
|       20 |         10 | WIPRO      | BSE      | 1995-11-11   |
+----------+------------+------------+----------+--------------+
20 rows in set (0.00 sec)
```

STOCK_PRICES: -

```
mysql> select * from stock_prices;
+----------+----------+------------+------------+-------------+------------+-----------+--------+
| price_id | stock_id | date       | open_price | close_price | high_price | low_price | volume |
+----------+----------+------------+------------+-------------+------------+-----------+--------+
|        1 |        1 | 2023-07-01 |     400.50 |      410.75 |     415.20 |    399.25 |  50000 |
|        2 |        1 | 2023-07-02 |     410.00 |      415.50 |     420.00 |    405.75 |  60000 |
|        3 |        2 | 2023-07-01 |    1100.00 |     1125.50 |    1130.25 |   1095.75 |  75000 |
|        4 |        2 | 2023-07-02 |    1125.75 |     1132.00 |    1140.50 |   1120.25 |  80000 |
|        5 |        3 | 2023-07-01 |    3000.00 |     3020.25 |    3035.50 |   2995.75 |  40000 |
|        6 |        3 | 2023-07-02 |    3010.00 |     3025.50 |    3037.75 |   2998.25 |  45000 |
|        7 |        4 | 2023-07-01 |    2400.50 |     2415.25 |    2422.75 |   2395.50 |  30000 |
|        8 |        4 | 2023-07-02 |    2420.00 |     2430.75 |    2440.00 |   2405.25 |  35000 |
|        9 |        5 | 2023-07-01 |     220.50 |      225.25 |     227.00 |    218.75 | 600000 |
|       10 |        5 | 2023-07-02 |     225.00 |      230.50 |     232.75 |    222.25 | 700000 |
|       11 |        6 | 2023-07-01 |    8000.00 |     8055.75 |    8090.50 |   7985.25 |  10000 |
|       12 |        6 | 2023-07-02 |    8055.00 |     8075.50 |    8105.25 |   8020.75 |  12000 |
|       13 |        7 | 2023-07-01 |     500.50 |      505.25 |     510.00 |    495.75 | 200000 |
|       14 |        7 | 2023-07-02 |     505.00 |      510.50 |     515.75 |    500.25 | 220000 |
|       15 |        8 | 2023-07-01 |    2500.00 |     2515.25 |    2522.50 |   2495.75 |  15000 |
|       16 |        8 | 2023-07-02 |    2510.00 |     2520.75 |    2525.50 |   2505.25 |  18000 |
|       17 |        9 | 2023-07-01 |    1500.50 |     1515.25 |    1522.00 |   1495.75 |  80000 |
|       18 |        9 | 2023-07-02 |    1515.00 |     1520.50 |    1525.75 |   1505.25 |  90000 |
|       19 |       10 | 2023-07-01 |     600.50 |      605.25 |     610.00 |    595.75 | 300000 |
|       20 |       10 | 2023-07-02 |     605.00 |      610.50 |     615.75 |    600.25 | 320000 |
+----------+----------+------------+------------+-------------+------------+-----------+--------+
20 rows in set (0.00 sec)
```

```
mysql> select * from dividends;
+-------------+----------+------------------+-----------------+
| dividend_id | stock_id | ex_dividend_date | dividend_amount |
+-------------+----------+------------------+-----------------+
|           1 |        1 | 2023-06-30       |            5.00 |
|           2 |        1 | 2022-12-31       |            4.50 |
|           3 |        2 | 2023-06-30       |           12.50 |
|           4 |        2 | 2022-12-31       |           11.75 |
|           5 |        3 | 2023-06-30       |            2.50 |
|           6 |        3 | 2022-12-31       |            2.25 |
|           7 |        4 | 2023-06-30       |            6.00 |
|           8 |        4 | 2022-12-31       |            5.50 |
|           9 |        5 | 2023-06-30       |            3.50 |
|          10 |        5 | 2022-12-31       |            3.25 |
|          11 |        6 | 2023-06-30       |            8.00 |
|          12 |        6 | 2022-12-31       |            7.50 |
|          13 |        7 | 2023-06-30       |            4.50 |
|          14 |        7 | 2022-12-31       |            4.25 |
|          15 |        8 | 2023-06-30       |            3.00 |
|          16 |        8 | 2022-12-31       |            2.75 |
|          17 |        9 | 2023-06-30       |            5.50 |
|          18 |        9 | 2022-12-31       |            5.25 |
|          19 |       10 | 2023-06-30       |            2.00 |
|          20 |       10 | 2022-12-31       |            1.75 |
+-------------+----------+------------------+-----------------+
20 rows in set (0.00 sec)
```

```
mysql> select * from analyst_ratings;
+-----------+----------+-------------------+--------------+---------+
| rating_id | stock_id | analyst_name      | rating_date  | rating  |
+-----------+----------+-------------------+--------------+---------+
|         1 |        1 | John Smith        | 2023-07-01   | Buy     |
|         2 |        1 | Emily Johnson     | 2023-07-02   | Hold    |
|         3 |        2 | David Thompson    | 2023-07-01   | Buy     |
|         4 |        2 | Sarah Davis       | 2023-07-02   | Hold    |
|         5 |        3 | Michael Wilson    | 2023-07-01   | Sell    |
|         6 |        3 | Jennifer Brown    | 2023-07-02   | Hold    |
|         7 |        4 | Robert Johnson    | 2023-07-01   | Buy     |
|         8 |        4 | Lisa Smith        | 2023-07-02   | Hold    |
|         9 |        5 | Daniel Anderson   | 2023-07-01   | Buy     |
|        10 |        5 | Amy Thompson      | 2023-07-02   | Hold    |
|        11 |        6 | Michelle Davis    | 2023-07-01   | Buy     |
|        12 |        6 | Matthew Wilson    | 2023-07-02   | Hold    |
|        13 |        7 | Emily Brown       | 2023-07-01   | Sell    |
|        14 |        7 | John Anderson     | 2023-07-02   | Hold    |
|        15 |        8 | Sarah Wilson      | 2023-07-01   | Buy     |
|        16 |        8 | Daniel Smith      | 2023-07-02   | Hold    |
|        17 |        9 | Jessica Thompson  | 2023-07-01   | Buy     |
|        18 |        9 | Robert Davis      | 2023-07-02   | Hold    |
|        19 |       10 | Lisa Johnson      | 2023-07-01   | Sell    |
|        20 |       10 | David Anderson    | 2023-07-02   | Hold    |
+-----------+----------+-------------------+--------------+---------+
20 rows in set (0.00 sec)
```

```
mysql> select * from earnings;
+------------+----------+---------+------+--------------------+---------------+---------------+
| earning_id | stock_id | quarter | year | earnings_per_share | revenue       | net_income    |
+------------+----------+---------+------+--------------------+---------------+---------------+
|          1 |        1 |       1 | 2023 |              10.50 |  500000000.00 |  200000000.00 |
|          2 |        1 |       2 | 2023 |              11.25 |  550000000.00 |  220000000.00 |
|          3 |        2 |       1 | 2023 |              25.75 | 2000000000.00 |  800000000.00 |
|          4 |        2 |       2 | 2023 |              27.50 | 2200000000.00 |  880000000.00 |
|          5 |        3 |       1 | 2023 |               8.25 | 1500000000.00 |  600000000.00 |
|          6 |        3 |       2 | 2023 |               9.00 | 1750000000.00 |  700000000.00 |
|          7 |        4 |       1 | 2023 |              15.50 | 1200000000.00 |  480000000.00 |
|          8 |        4 |       2 | 2023 |              16.75 | 1350000000.00 |  540000000.00 |
|          9 |        5 |       1 | 2023 |               5.75 |  800000000.00 |  320000000.00 |
|         10 |        5 |       2 | 2023 |               6.25 |  900000000.00 |  360000000.00 |
|         11 |        6 |       1 | 2023 |              19.00 | 2500000000.00 | 1000000000.00 |
|         12 |        6 |       2 | 2023 |              20.50 | 2750000000.00 | 1100000000.00 |
|         13 |        7 |       1 | 2023 |              10.25 | 1800000000.00 |  720000000.00 |
|         14 |        7 |       2 | 2023 |              11.00 | 2000000000.00 |  800000000.00 |
|         15 |        8 |       1 | 2023 |               7.50 | 1000000000.00 |  400000000.00 |
|         16 |        8 |       2 | 2023 |               8.00 | 1150000000.00 |  460000000.00 |
|         17 |        9 |       1 | 2023 |              13.25 | 1400000000.00 |  560000000.00 |
|         18 |        9 |       2 | 2023 |              14.50 | 1600000000.00 |  640000000.00 |
|         19 |       10 |       1 | 2023 |               4.75 |  700000000.00 |  280000000.00 |
|         20 |       10 |       2 | 2023 |               5.25 |  800000000.00 |  320000000.00 |
+------------+----------+---------+------+--------------------+---------------+---------------+
20 rows in set (0.00 sec)
```

NEWS:-

```
mysql> select * from news;
+---------+----------+-----------------------------------------------------------------------------+------------+-----------------------------------------------------------------------------+
| news_id | stock_id | headline                                                                    | date       | content                                                                     |
+---------+----------+-----------------------------------------------------------------------------+------------+-----------------------------------------------------------------------------+
|       1 |        1 | Tata Motors announces new electric vehicle launch                           | 2023-07-01 | Tata Motors unveiled its latest electric car model today.                   |
|       2 |        1 | Tata Motors reports strong quarterly earnings                               | 2023-07-02 | Tata Motors posted robust financial results for the last quarter.           |
|       3 |        2 | Reliance Industries partners with global energy company                     | 2023-07-01 | Reliance Industries announced a strategic alliance with XYZ Energy.         |
|       4 |        2 | Reliance Industries to invest in renewable energy projects                  | 2023-07-02 | Reliance Industries plans to expand its renewable energy portfolio.        |
|       5 |        3 | Infosys wins prestigious technology innovation award                        | 2023-07-01 | Infosys was honored with the Innovation Excellence Award for its cutting-edge technology solutions. |
|       6 |        3 | Infosys partners with leading global tech firm for AI research              | 2023-07-02 | Infosys joins forces with ABC Tech to accelerate artificial intelligence research. |
|       7 |        4 | HDFC Bank launches new digital banking app                                  | 2023-07-01 | HDFC Bank introduces an innovative mobile app with advanced banking features. |
|       8 |        4 | HDFC Bank expands operations with new branch openings                       | 2023-07-02 | HDFC Bank inaugurates multiple branches across different cities for enhanced customer accessibility. |
|       9 |        5 | ITC Limited introduces sustainable packaging for its products              | 2023-07-01 | ITC Limited adopts eco-friendly packaging solutions to reduce environmental impact. |
|      10 |        5 | ITC Limited receives recognition for corporate social responsibility efforts | 2023-07-02 | ITC Limited honored with CSR Excellence Award for its impactful social initiatives. |
|      11 |        6 | Maruti Suzuki India achieves record sales milestone                        | 2023-07-01 | Maruti Suzuki India sets a new sales record with its highest monthly sales figures. |
|      12 |        6 | Maruti Suzuki India to launch new SUV model                                 | 2023-07-02 | Maruti Suzuki India announces the upcoming launch of its latest SUV model.  |
|      13 |        7 | State Bank of India introduces instant payment feature in mobile banking app | 2023-07-01 | State Bank of India enables instant fund transfers through its mobile banking app. |
|      14 |        7 | State Bank of India partners with fintech startup for digital lending services | 2023-07-02 | State Bank of India collaborates with XYZ Fintech to offer hassle-free digital lending solutions. |
|      15 |        8 | Hindustan Unilever launches new range of organic personal care products    | 2023-07-01 | Hindustan Unilever unveils a premium line of organic skincare and haircare products. |
|      16 |        8 | Hindustan Unilever recognized as a sustainable business leader             | 2023-07-02 | Hindustan Unilever receives the Sustainable Business Excellence Award for its commitment to environmental responsibility. |
|      17 |        9 | Axis Bank introduces AI-powered chatbot for customer support              | 2023-07-01 | Axis Bank launches an intelligent virtual assistant to provide seamless customer service. |
|      18 |        9 | Axis Bank expands international presence with new branch openings          | 2023-07-02 | Axis Bank strengthens its global footprint with the inauguration of branches in key international markets. |
|      19 |       10 | Wipro wins major IT services contract from global conglomerate            | 2023-07-01 | Wipro secures a significant IT services deal with ABC Corporation for digital transformation initiatives. |
|      20 |       10 | Wipro recognized as a leader in technology innovation                      | 2023-07-02 | Wipro receives the Innovation Excellence Award for its groundbreaking technological advancements. |
+---------+----------+-----------------------------------------------------------------------------+------------+-----------------------------------------------------------------------------+
```

PORTFOLIOS:-

```
mysql> select * from portfolios;
+--------------+----------------------+---------------------------------------------------------------+
| portfolio_id | name                 | description                                                   |
+--------------+----------------------+---------------------------------------------------------------+
|            1 | Tech Stocks          | Portfolio of technology sector stocks                         |
|            2 | Blue Chip Companies  | Portfolio of large, established companies                     |
|            3 | Dividend Stocks      | Portfolio of stocks with consistent dividend payouts          |
|            4 | Growth Stocks        | Portfolio of high-growth potential stocks                     |
|            5 | Value Stocks         | Portfolio of undervalued stocks with potential for future growth |
|            6 | Banking Sector       | Portfolio of stocks from the banking and financial services sector |
|            7 | FMCG Companies       | Portfolio of fast-moving consumer goods companies             |
|            8 | Automotive Sector    | Portfolio of stocks from the automotive industry              |
|            9 | Healthcare Stocks    | Portfolio of stocks from the healthcare sector                |
|           10 | Energy Companies     | Portfolio of stocks from the energy and utilities sector      |
|           11 | Infrastructure Investments | Portfolio of stocks from the infrastructure and construction industry |
|           12 | Mid-Cap Stocks       | Portfolio of mid-sized companies with growth potential        |
|           13 | Large-Cap Stocks     | Portfolio of large-cap companies with stable performance      |
|           14 | Small-Cap Stocks     | Portfolio of small-cap companies with high growth prospects   |
|           15 | Technology Innovators | Portfolio of innovative technology companies                 |
|           16 | Consumer Discretionary | Portfolio of stocks from the consumer discretionary sector  |
|           17 | Consumer Staples     | Portfolio of stocks from the consumer staples sector          |
|           18 | Telecommunications   | Portfolio of stocks from the telecommunications industry      |
|           19 | Pharmaceutical Stocks | Portfolio of pharmaceutical companies                        |
|           20 | Retail Sector        | Portfolio of stocks from the retail industry                  |
+--------------+----------------------+---------------------------------------------------------------+
20 rows in set (0.00 sec)
```

SUBQUERY: -

Question: Which stocks had either dividends with ex-dividend dates after '2022-01-01' or earnings reported for the first quarter of 2022?:-

```
mysql> SELECT *
    -> FROM Stocks
    -> WHERE stock_id IN (
    ->    SELECT stock_id
    ->    FROM Dividends
    ->    WHERE ex_dividend_date > '2022-01-01'
    ->    UNION
    ->    SELECT stock_id
    ->    FROM Earnings
    ->    WHERE year = 2022 AND quarter = 1
    -> );
+----------+------------+------------+----------+--------------+
| stock_id | company_id | symbol     | exchange | listing_date |
+----------+------------+------------+----------+--------------+
|        1 |          1 | TATAMOTORS | NSE      | 2004-07-01   |
|        2 |          1 | TATAMOTORS | BSE      | 2004-07-01   |
|        3 |          2 | RELIANCE   | NSE      | 1977-03-01   |
|        4 |          2 | RELIANCE   | BSE      | 1977-03-01   |
|        5 |          3 | INFY       | NSE      | 1993-06-14   |
|        6 |          3 | INFY       | BSE      | 1993-06-14   |
|        7 |          4 | HDFCBANK   | NSE      | 1995-11-17   |
|        8 |          4 | HDFCBANK   | BSE      | 1995-11-17   |
|        9 |          5 | ITC        | NSE      | 1991-08-27   |
|       10 |          5 | ITC        | BSE      | 1991-08-27   |
+----------+------------+------------+----------+--------------+
10 rows in set (0.00 sec)
```

Question: Which companies in the "Technology" sector have issued dividends and also have analyst ratings?

```
mysql> use stockmarketdb
Database changed
mysql> SELECT company_id, name, sector, industry
    -> FROM Companies
    -> WHERE company_id IN (
    ->    SELECT stock_id
    ->    FROM Dividends
    ->    WHERE stock_id IN (
    ->       SELECT stock_id
    ->       FROM Analyst_Ratings
    ->    )
    -> )
    -> AND sector = 'Technology';
+------------+---------+------------+-------------+
| company_id | name    | sector     | industry    |
+------------+---------+------------+-------------+
|          3 | Infosys | Technology | IT Services |
|         10 | Wipro   | Technology | IT Services |
+------------+---------+------------+-------------+
2 rows in set (0.00 sec)
```

Question: Which companies have issued dividends and also have analyst ratings with a rating of "Buy"?

```
mysql> SELECT *
    -> FROM Companies
    -> WHERE company_id IN (
    ->   SELECT stock_id
    ->   FROM Dividends
    -> )
    -> AND company_id IN (
    ->   SELECT stock_id
    ->   FROM Analyst_Ratings
    ->   WHERE rating = 'Buy'
    -> );
+------------+-------------------------+----------------+----------------+
| company_id | name                    | sector         | industry       |
+------------+-------------------------+----------------+----------------+
|          1 | Tata Motors             | Automotive     | Manufacturing  |
|          2 | Reliance Industries     | Conglomerate   | Energy         |
|          4 | HDFC Bank               | Financials     | Banking        |
|          5 | ITC Limited             | Consumer Goods | FMCG           |
|          6 | Maruti Suzuki India     | Automotive     | Manufacturing  |
|          8 | Hindustan Unilever      | Consumer Goods | FMCG           |
|          9 | Axis Bank               | Financials     | Banking        |
+------------+-------------------------+----------------+----------------+
7 rows in set (0.00 sec)
```

Question: Which stocks have issued dividends and also have positive earnings in the last quarter?

```
mysql> SELECT *
    -> FROM Stocks
    -> WHERE stock_id IN (
    ->    SELECT stock_id
    ->    FROM Dividends
    -> )
    -> AND stock_id IN (
    ->    SELECT stock_id
    ->    FROM Earnings
    ->    WHERE quarter = (SELECT MAX(quarter) FROM Earnings)
    ->    AND net_income > 0
    -> );
+----------+------------+------------+----------+--------------+
| stock_id | company_id | symbol     | exchange | listing_date |
+----------+------------+------------+----------+--------------+
|        1 |          1 | TATAMOTORS | NSE      | 2004-07-01   |
|        2 |          1 | TATAMOTORS | BSE      | 2004-07-01   |
|        3 |          2 | RELIANCE   | NSE      | 1977-03-01   |
|        4 |          2 | RELIANCE   | BSE      | 1977-03-01   |
|        5 |          3 | INFY       | NSE      | 1993-06-14   |
|        6 |          3 | INFY       | BSE      | 1993-06-14   |
|        7 |          4 | HDFCBANK   | NSE      | 1995-11-17   |
|        8 |          4 | HDFCBANK   | BSE      | 1995-11-17   |
|        9 |          5 | ITC        | NSE      | 1991-08-27   |
|       10 |          5 | ITC        | BSE      | 1991-08-27   |
+----------+------------+------------+----------+--------------+
10 rows in set (0.00 sec)
```

Question: Which companies have issued dividends and also have analyst ratings? Retrieve all matching companies, including those with analyst ratings.

Select * from companies left join devidends on companies.company_id=dividends.stock_id

Inner join analyst_ratings on companies.company_id=analyst_ratings.stock_id;


```
mysql> SELECT *
    -> FROM Companies
    -> LEFT JOIN Dividends ON Companies.company_id = Dividends.stock_id
    -> INNER JOIN Analyst_Ratings ON Companies.company_id = Analyst_Ratings.stock_id;
```

company_id	name	sector	industry	dividend_id	stock_id	ex_dividend_date	dividend_amount	rating_id	stock_id	analyst_name	rating_date	rating
1	Tata Motors	Automotive	Manufacturing	1	1	2023-06-30	5.00	1	1	John Smith	2023-07-01	Buy
1	Tata Motors	Automotive	Manufacturing	2	1	2022-12-31	4.50	1	1	John Smith	2023-07-01	Buy
1	Tata Motors	Automotive	Manufacturing	1	1	2023-06-30	5.00	2	1	Emily Johnson	2023-07-02	Hold
1	Tata Motors	Automotive	Manufacturing	2	1	2022-12-31	4.50	2	1	Emily Johnson	2023-07-02	Hold
2	Reliance Industries	Conglomerate	Energy	3	2	2023-06-30	12.50	3	2	David Thompson	2023-07-01	Buy
2	Reliance Industries	Conglomerate	Energy	4	2	2022-12-31	11.75	3	2	David Thompson	2023-07-01	Buy
2	Reliance Industries	Conglomerate	Energy	3	2	2023-06-30	12.50	4	2	Sarah Davis	2023-07-02	Hold
2	Reliance Industries	Conglomerate	Energy	4	2	2022-12-31	11.75	4	2	Sarah Davis	2023-07-02	Hold
3	Infosys	Technology	IT Services	5	3	2023-06-30	2.50	5	3	Michael Wilson	2023-07-01	Sell
3	Infosys	Technology	IT Services	6	3	2022-12-31	2.25	5	3	Michael Wilson	2023-07-01	Sell
3	Infosys	Technology	IT Services	5	3	2023-06-30	2.50	6	3	Jennifer Brown	2023-07-02	Hold
3	Infosys	Technology	IT Services	6	3	2022-12-31	2.25	6	3	Jennifer Brown	2023-07-02	Hold
4	HDFC Bank	Financials	Banking	7	4	2023-06-30	6.00	7	4	Robert Johnson	2023-07-01	Buy
4	HDFC Bank	Financials	Banking	8	4	2022-12-31	5.50	7	4	Robert Johnson	2023-07-01	Buy
4	HDFC Bank	Financials	Banking	7	4	2023-06-30	6.00	8	4	Lisa Smith	2023-07-02	Hold
4	HDFC Bank	Financials	Banking	8	4	2022-12-31	5.50	8	4	Lisa Smith	2023-07-02	Hold
5	ITC Limited	Consumer Goods	FMCG	9	5	2023-06-30	3.50	9	5	Daniel Anderson	2023-07-01	Buy
5	ITC Limited	Consumer Goods	FMCG	10	5	2022-12-31	3.25	9	5	Daniel Anderson	2023-07-01	Buy
5	ITC Limited	Consumer Goods	FMCG	9	5	2023-06-30	3.50	10	5	Amy Thompson	2023-07-02	Hold
5	ITC Limited	Consumer Goods	FMCG	10	5	2022-12-31	3.25	10	5	Amy Thompson	2023-07-02	Hold
6	Maruti Suzuki India	Automotive	Manufacturing	11	6	2023-06-30	8.00	11	6	Michelle Davis	2023-07-01	Buy
6	Maruti Suzuki India	Automotive	Manufacturing	12	6	2022-12-31	7.50	11	6	Michelle Davis	2023-07-01	Buy
6	Maruti Suzuki India	Automotive	Manufacturing	11	6	2023-06-30	8.00	12	6	Matthew Wilson	2023-07-02	Hold
6	Maruti Suzuki India	Automotive	Manufacturing	12	6	2022-12-31	7.50	12	6	Matthew Wilson	2023-07-02	Hold
7	State Bank of India	Financials	Banking	13	7	2023-06-30	4.50	13	7	Emily Brown	2023-07-01	Sell
7	State Bank of India	Financials	Banking	14	7	2022-12-31	4.25	13	7	Emily Brown	2023-07-01	Sell
7	State Bank of India	Financials	Banking	13	7	2023-06-30	4.50	14	7	John Anderson	2023-07-02	Hold
7	State Bank of India	Financials	Banking	14	7	2022-12-31	4.25	14	7	John Anderson	2023-07-02	Hold
8	Hindustan Unilever	Consumer Goods	FMCG	15	8	2023-06-30	3.00	15	8	Sarah Wilson	2023-07-01	Buy
8	Hindustan Unilever	Consumer Goods	FMCG	16	8	2022-12-31	2.75	15	8	Sarah Wilson	2023-07-01	Buy
8	Hindustan Unilever	Consumer Goods	FMCG	15	8	2023-06-30	3.00	16	8	Daniel Smith	2023-07-02	Hold
8	Hindustan Unilever	Consumer Goods	FMCG	16	8	2022-12-31	2.75	16	8	Daniel Smith	2023-07-02	Hold
9	Axis Bank	Financials	Banking	17	9	2023-06-30	5.50	17	9	Jessica Thompson	2023-07-01	Buy
9	Axis Bank	Financials	Banking	18	9	2022-12-31	5.25	17	9	Jessica Thompson	2023-07-01	Buy
9	Axis Bank	Financials	Banking	17	9	2023-06-30	5.50	18	9	Robert Davis	2023-07-02	Hold
9	Axis Bank	Financials	Banking	18	9	2022-12-31	5.25	18	9	Robert Davis	2023-07-02	Hold
10	Wipro	Technology	IT Services	19	10	2023-06-30	2.00	19	10	Lisa Johnson	2023-07-01	Sell
10	Wipro	Technology	IT Services	20	10	2022-12-31	1.75	19	10	Lisa Johnson	2023-07-01	Sell
10	Wipro	Technology	IT Services	19	10	2023-06-30	2.00	20	10	David Anderson	2023-07-02	Hold
10	Wipro	Technology	IT Services	20	10	2022-12-31	1.75	20	10	David Anderson	2023-07-02	Hold

```
40 rows in set (0.00 sec)
```

Question: Display the companies and which type of industry that is with listing date?

Select companies.name,companies.sector,companies.industry,stock.symbol,stock.listing_date from companies right join stocks on companies.company_id=stocks.stock_id;

```
mysql> select companies.name,companies.sector,companies.industry,stocks.symbol,stocks.listing_date from companies right join stocks on companies.company_id=stocks.stock_id;
+-------------------------------------+-------------------+----------------+-----------+-------------+
| name                                | sector            | industry       | symbol    | listing_date|
+-------------------------------------+-------------------+----------------+-----------+-------------+
| Tata Motors                         | Automotive        | Manufacturing  | TATAMOTORS| 2004-07-01  |
| Reliance Industries                 | Conglomerate      | Energy         | TATAMOTORS| 2004-07-01  |
| Infosys                             | Technology        | IT Services    | RELIANCE  | 1977-03-01  |
| HDFC Bank                           | Financials        | Banking        | RELIANCE  | 1977-03-01  |
| ITC Limited                         | Consumer Goods    | FMCG           | INFY      | 1993-06-14  |
| Maruti Suzuki India                 | Automotive        | Manufacturing  | INFY      | 1993-06-14  |
| State Bank of India                 | Financials        | Banking        | HDFCBANK  | 1995-11-17  |
| Hindustan Unilever                  | Consumer Goods    | FMCG           | HDFCBANK  | 1995-11-17  |
| Axis Bank                           | Financials        | Banking        | ITC       | 1991-08-27  |
| Wipro                               | Technology        | IT Services    | ITC       | 1991-08-27  |
| Bharti Airtel                       | Telecommunications| Telecom        | MARUTI    | 2003-07-09  |
| Mahindra & Mahindra                 | Automotive        | Manufacturing  | MARUTI    | 2003-07-09  |
| TCS (Tata Consultancy Services)     | Technology        | IT Services    | SBIN      | 1995-09-20  |
| HCL Technologies                    | Technology        | IT Services    | SBIN      | 1995-09-20  |
| ICICI Bank                          | Financials        | Banking        | HINDUNILVR| 1991-07-25  |
| Asian Paints                        | Materials         | Paints         | HINDUNILVR| 1991-07-25  |
| Larsen & Toubro                     | Industrials       | Construction   | AXISBANK  | 1998-11-16  |
| Sun Pharmaceutical Industries       | Healthcare        | Pharmaceuticals| AXISBANK  | 1998-11-16  |
| Adani Ports and Special Economic Zone| Industrials      | Ports          | WIPRO     | 1995-11-11  |
| Dr. Reddy                           | s Laboratories    | Healthcare     | WIPRO     | 1995-11-11  |
+-------------------------------------+-------------------+----------------+-----------+-------------+
20 rows in set (0.00 sec)
```

Question: Display the open and close price of all stocks?

select stocks.symbol,stock_prices.open_price,stock_prices.close_price from stock_prices join stocks on stocks.stock_id=stock_prices.stock_id;

```
mysql> select stocks.symbol,stock_prices.open_price,stock_prices.close_price from stock_prices join stocks on stocks.stock_id=stock_prices.stock_id;
+-----------+------------+-------------+
| symbol    | open_price | close_price |
+-----------+------------+-------------+
| TATAMOTORS|     400.50 |      410.75 |
| TATAMOTORS|     410.00 |      415.50 |
| TATAMOTORS|    1100.00 |     1125.50 |
| TATAMOTORS|    1125.75 |     1132.00 |
| RELIANCE  |    3000.00 |     3020.25 |
| RELIANCE  |    3010.00 |     3025.50 |
| RELIANCE  |    2400.50 |     2415.25 |
| RELIANCE  |    2420.00 |     2430.75 |
| INFY      |     220.50 |      225.25 |
| INFY      |     225.00 |      230.50 |
| INFY      |    8000.00 |     8055.75 |
| INFY      |    8055.00 |     8075.50 |
| HDFCBANK  |     500.50 |      505.25 |
| HDFCBANK  |     505.00 |      510.50 |
| HDFCBANK  |    2500.00 |     2515.25 |
| HDFCBANK  |    2510.00 |     2520.75 |
| ITC       |    1500.50 |     1515.25 |
| ITC       |    1515.00 |     1520.50 |
| ITC       |     600.50 |      605.25 |
| ITC       |     605.00 |      610.50 |
+-----------+------------+-------------+
20 rows in set (0.00 sec)
```