FPMS_SQL_Project_Shruti_Bharat
Financial Portfolio Management System
By - Shruti Bharat

1. Project Description: The goal of this project is to create a financial portfolio management system using SQL, which allows users to manage their investment portfolio. The system should be able to store information about various financial instruments, such as stocks, bonds, and mutual funds, and track their performance over time. Users should be able to add, update, and delete investments, as well as view the current value of their portfolio based on the latest market data. The system should also support basic reporting and analysis, such as generating portfolio performance reports and calculating returns on investment.

1.2 Project Features:
Investment Tracking: Users can add, update, and delete investments, including stocks, bonds, and mutual funds, along with their relevant details such as ticker symbol, quantity, purchase price, and purchase date.
Market Data Integration: The system should integrate with external financial data sources (e.g., APIs) to fetch the latest market data, such as stock prices and bond yields, to calculate the current value of the investments in the portfolio.
Performance Reporting: Users can generate performance reports for their portfolio, including metrics such as total portfolio value, returns on investment (ROI), and asset allocation.
Investment Analysis: Users can analyze their portfolio by performing calculations such as calculating the overall performance of the portfolio, comparing the performance of different investments, and identifying top-performing investments.
User Management: The system should have a user management system that allows users to register, login, and manage their own portfolio data securely.

1.3 Project Deliverables:
Database schema: Define the database schema including tables, columns, and relationships between them. SQL queries: Write SQL queries to perform various

operations such as adding, updating, and deleting investments, fetching market data, generating performance reports, and performing investment analysis.
Data integration: Implement data integration with external financial data sources to fetch market data.
Documentation: Provide documentation that includes project requirements, database schema, SQL queries, and instructions on how to use the system.
This project will allow me to practice SQL skills in the context of financial portfolio management, which is a common use case in the finance industry. It will also allow me to learn about integrating external data sources, building user interfaces, and generating reports, which are important skills in real-world finance applications.

1.4 Database Design & Schema in MySQL:

Entities:

Clients: This entity will store information about the clients, including client ID, name, contact information, etc.
Portfolios: This entity will store information about the portfolios, including portfolio ID, client ID (foreign key to the Clients entity), portfolio name, and any other relevant details.
Investments: This entity will store information about the investments, including investment ID, portfolio ID (foreign key to the Portfolios entity), investment type, amount, date of investment, and other relevant details. **Returns:** This entity will store information about the returns or performance of the investments, including return ID, investment ID (foreign key to the Investments entity), return percentage, return amount, and other relevant details.

1.5 MySQL Database Schema for the Above Entities:

1) Creating Database and Tables:

Database:

```
mysql> create database financial_portfolio;
Query OK, 1 row affected (0.17 sec)

mysql> use financial_portfolio;
Database changed
```

Client Table:

```
mysql> create table Client(
    -> client_id int primary key auto_increment,
    -> client_name varchar(100) not null,
    -> contact_details varchar(50));
Query OK, 0 rows affected (0.63 sec)
```

Portfolio Table:

```
mysql> create table Portfolio (
    -> p_id int primary key auto_increment,
    -> c_id  int,
    -> p_name varchar(100) not null,
    -> details varchar(100),
    -> foreign key(c_id) references Client(client_id) on update cascade);
```

Investment Table:

```
create table Investment (
    -> i_id int primary key auto_increment,
    -> p_id int,
    -> investment_type varchar(100) not null,
    -> amount decimal(10,2) not null,
    -> investment_date date,
    -> details varchar(100),
    -> foreign key(p_id) references Portfolio(p_id) on update cascade);
Query OK, 0 rows affected (0.58 sec)
```

Returns Table:

```
 create table Returns (
    -> r_id int primary key auto_increment,
    -> i_id int,
    -> return_percentage decimal(5,2) not null,
    -> return_amount decimal(5,2) not null,
    -> return_Date date,
    -> details varchar(20),
    -> foreign key(i_id) references investment(i_id) on update cascade);
Query OK, 0 rows affected (0.86 sec)
```

2) Inserting values :

mysql> -- Insert into Client table

```
mysql> INSERT INTO client (client_name, contact_details)
    -> VALUES
    -> ('Ananya Sharma', '+91 8765432109'),
    -> ('Amit Kumar', '+91 7654321098'),
    -> ('Priya Sharma', '+91 6543210987'),
    -> ('Rahul Singh', '+91 5432109876'),
    -> ('Sneha Patel', '+91 4321098765'),
    -> ('Mohit Gupta', '+91 3210987654'),
    -> ('Anjali Verma', '+91 2109876543'),
    -> ('Vikas Dubey', '+91 1098765432'),
    -> ('Nisha Singh', '+91 0987654321');
Query OK, 9 rows affected (0.18 sec)
Records: 9  Duplicates: 0  Warnings: 0

mysql> select * from client;
+-----------+---------------+-----------------+
| client_id | client_name   | contact_details |
+-----------+---------------+-----------------+
|         1 | Ananya Sharma | +91 8765432109  |
|         2 | Amit Kumar    | +91 7654321098  |
|         3 | Priya Sharma  | +91 6543210987  |
|         4 | Rahul Singh   | +91 5432109876  |
|         5 | Sneha Patel   | +91 4321098765  |
|         6 | Mohit Gupta   | +91 3210987654  |
|         7 | Anjali Verma  | +91 2109876543  |
|         8 | Vikas Dubey   | +91 1098765432  |
|         9 | Nisha Singh   | +91 0987654321  |
+-----------+---------------+-----------------+
9 rows in set (0.00 sec)
```

mysql> -- Insert into Portfolio table

```
mysql> INSERT INTO portfolio (c_id, p_name, details) VALUES
    -> (1, 'Tech Stocks', 'Investment in leading tech companies'),
    -> (2, 'Equity Portfolio', 'Long-term investments in diverse equities'),
    -> (3, 'Commodity Portfolio', 'Investment in various commodities for diversification');
Query OK, 3 rows affected (0.11 sec)
Records: 3  Duplicates: 0  Warnings: 0

mysql> -- Insert more data into the portfolio table (scattered)
mysql> INSERT INTO portfolio (c_id, p_name, details) VALUES
    -> (3, 'Commodity Portfolio', 'Diversified investments in various commodities'),
    -> (2, 'Equity Portfolio', 'Strategic allocation across different industries'),
    -> (5, 'Debt Securities', 'Fixed-income investments for stable returns'),
    -> (1, 'Tech Stocks', 'Investment in leading tech companies'),
    -> (5, 'Debt Securities', 'Portfolio of high-quality bonds and debt instruments'),
    -> (1, 'Tech Stocks', 'Portfolio for tech sector exposure'),
    -> (4, 'Real Estate Holdings', 'Investment in commercial and residential properties'),
    -> (3, 'Commodity Portfolio', 'Hedging against inflation with commodity exposure'),
    -> (4, 'Real Estate Holdings', 'Portfolio of income-generating real estate assets'),
    -> (2, 'Equity Portfolio', 'Diverse equity investments for long-term growth');
Query OK, 10 rows affected (0.09 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from portfolio;
+------+------+----------------------+-----------------------------------------------------+
| p_id | c_id | p_name               | details
          |
+------+------+----------------------+-----------------------------------------------------+
|   35 |    1 | Tech Stocks          | Investment in leading tech companies                |
|   36 |    2 | Equity Portfolio     | Long-term investments in diverse equities           |
|   37 |    3 | Commodity Portfolio  | Investment in various commodities for diversification
|
|   38 |    3 | Commodity Portfolio  | Diversified investments in various commodities
|
|   39 |    2 | Equity Portfolio     | Strategic allocation across different industries    |
|   40 |    5 | Debt Securities      | Fixed-income investments for stable returns         |
|   41 |    1 | Tech Stocks          | Investment in leading tech companies                |
|   42 |    5 | Debt Securities      | Portfolio of high-quality bonds and debt instruments |
|   43 |    1 | Tech Stocks          | Portfolio for tech sector exposure                  |
|   44 |    4 | Real Estate Holdings | Investment in commercial and residential properties
|
|   45 |    3 | Commodity Portfolio  | Hedging against inflation with commodity exposure
|
|   46 |    4 | Real Estate Holdings | Portfolio of income-generating real estate assets
|
|   47 |    2 | Equity Portfolio     | Diverse equity investments for long-term growth       |
+------+------+----------------------+-----------------------------------------------------+


mysql> -- Insert into Investment table
mysql> INSERT INTO investment (p_id, investment_type, amount, investment_date,
details) VALUES
    -> (35, 'Stocks', 5000.00, '2022-01-01', 'Investment in leading tech companies'),
    -> (36, 'Equities', 10000.00, '2022-01-02', 'Diverse equity investments'),
    -> (37, 'Commodities', 7500.00, '2022-01-03', 'Investment in various commodities'),
    -> (35, 'Stocks', 3000.00, '2022-01-04', 'Tech sector exposure'),
    -> (38, 'Commodities', 6000.00, '2022-01-05', 'Diversified commodity investments'),
    -> (36, 'Equities', 12000.00, '2022-01-06', 'Strategic equity allocation'),
    -> (40, 'Bonds', 15000.00, '2022-01-07', 'Investment in fixed-income securities'),
    -> (37, 'Commodities', 8000.00, '2022-01-08', 'Commodity diversification strategy'),
    -> (39, 'Stocks', 7000.00, '2022-01-09', 'Investment in emerging tech companies'),
    -> (38, 'Commodities', 5000.00, '2022-01-10', 'Hedging against inflation');
Query OK, 10 rows affected (0.12 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from investment;
+------+------+-----------------+----------+-----------------+--------------------------------------+
| i_id | p_id | investment_type | amount   | investment_date | details                              |
+------+------+-----------------+----------+-----------------+--------------------------------------+
|   31 |   35 | Stocks          |  5000.00 | 2022-01-01      | Investment in leading tech
companies  |
|   32 |   36 | Equities        | 10000.00 | 2022-01-02      | Diverse equity investments
|
|   33 |   37 | Commodities     |  7500.00 | 2022-01-03      | Investment in various
commodities     |
|   34 |   35 | Stocks          |  3000.00 | 2022-01-04      | Tech sector exposure
|
|   35 |   38 | Commodities     |  6000.00 | 2022-01-05      | Diversified commodity
investments     |
|   36 |   36 | Equities        | 12000.00 | 2022-01-06      | Strategic equity allocation
|
|   37 |   40 | Bonds           | 15000.00 | 2022-01-07      | Investment in fixed-income
securities |
|   38 |   37 | Commodities     |  8000.00 | 2022-01-08      | Commodity diversification
strategy    |
|   39 |   39 | Stocks          |  7000.00 | 2022-01-09      | Investment in emerging tech
companies |
|   40 |   38 | Commodities     |  5000.00 | 2022-01-10      | Hedging against inflation
|
+------+------+-----------------+----------+-----------------+-------------------------------------+
10 rows in set (0.11 sec)

mysql> -- Insert into Returns table with corrected details values
mysql> INSERT INTO returns (i_id, return_percentage, return_amount, return_date,
details) VALUES
    -> (31, 8.50, 425.00, '2022-02-01', 'Tech dividends'),
    -> (32, 10.00, 1000.00, '2022-02-02', 'Equity gains'),
    -> (33, 5.00, 375.00, '2022-02-03', 'Commodity returns'),
    -> (34, 8.00, 240.00, '2022-02-04', 'Stock dividends'),
    -> (35, 6.00, 180.00, '2022-02-05', 'Bond interest'),
    -> (36, 12.00, 1440.00, '2022-02-06', 'Equity gains'),
    -> (37, 7.00, 1050.00, '2022-02-07', 'Commodity returns'),
    -> (38, 9.50, 1425.00, '2022-02-08', 'Fixed-income returns'),
    -> (39, 6.50, 455.00, '2022-02-09', 'Stock dividends'),
    -> (40, 8.00, 400.00, '2022-02-10', 'Commodity returns');
Query OK, 10 rows affected (0.12 sec)
Records: 10  Duplicates: 0  Warnings: 0

mysql> select * from returns;
+------+------+-------------------+---------------+-------------+---------------------+
| r_id | i_id | return_percentage | return_amount | return_Date | details             |
+------+------+-------------------+---------------+-------------+---------------------+
|   11 |   31 |             8.50 |        425.00 | 2022-02-01  | Tech dividends       |
|   12 |   32 |            10.00 |       1000.00 | 2022-02-02  | Equity gains         |
|   13 |   33 |             5.00 |        375.00 | 2022-02-03  | Commodity returns    |
|   14 |   34 |             8.00 |        240.00 | 2022-02-04  | Stock dividends      |
|   15 |   35 |             6.00 |        180.00 | 2022-02-05  | Bond interest        |
|   16 |   36 |            12.00 |       1440.00 | 2022-02-06  | Equity gains         |
|   17 |   37 |             7.00 |       1050.00 | 2022-02-07  | Commodity returns    |
|   18 |   38 |             9.50 |       1425.00 | 2022-02-08  | Fixed-income returns |
|   19 |   39 |             6.50 |        455.00 | 2022-02-09  | Stock dividends      |
|   20 |   40 |             8.00 |        400.00 | 2022-02-10  | Commodity returns    |
+------+------+------------------+---------------+-------------+----------------------+
```

2. 5 Easy Queries

2.0.1 1 Query: Retrieve all client names and their contact information

```
mysql> select client_name , contact_details from client;
+---------------+-----------------+
| client_name   | contact_details |
+---------------+-----------------+
| Ananya Sharma | +91 8765432109  |
| Amit Kumar    | +91 7654321098  |
| Priya Sharma  | +91 6543210987  |
| Rahul Singh   | +91 5432109876  |
| Sneha Patel   | +91 4321098765  |
| Mohit Gupta   | +91 3210987654  |
| Anjali Verma  | +91 2109876543  |
| Vikas Dubey   | +91 1098765432  |
| Nisha Singh   | +91 0987654321  |
+---------------+-----------------+
```

2.0.2 2 Query to display the names of all portfolios along with their associated client names.

```
mysql> select p_name , client_name from client c
    -> inner join portfolio p
    -> on p.c_id = c.client_id;
```

```
+----------------------+---------------+
| p_name               | client_name   |
+----------------------+---------------+
| Tech Stocks          | Ananya Sharma |
| Equity Portfolio     | Amit Kumar    |
| Commodity Portfolio  | Priya Sharma  |
| Commodity Portfolio  | Priya Sharma  |
| Equity Portfolio     | Amit Kumar    |
| Debt Securities      | Sneha Patel   |
| Tech Stocks          | Ananya Sharma |
| Debt Securities      | Sneha Patel   |
| Tech Stocks          | Ananya Sharma |
| Real Estate Holdings | Rahul Singh   |
| Commodity Portfolio  | Priya Sharma  |
| Real Estate Holdings | Rahul Singh   |
| Equity Portfolio     | Amit Kumar    |
+----------------------+---------------+
```

2.0.3 3 Query: Retrieve the total investment amount for each portfolio.

```
mysql> select p_name, sum(amount) from investment i
    -> inner join portfolio p
    -> on p.p_id = i.p_id
    -> group by p_name;
+---------------------+-------------+
| p_name              | sum(amount) |
+---------------------+-------------+
| Tech Stocks         |     8000.00 |
| Equity Portfolio    |    29000.00 |
| Commodity Portfolio |    26500.00 |
| Debt Securities     |    15000.00 |
+---------------------+-------------+
```

2.0.4 4 Query: Retrieve all investments made in a specific investment type

```
mysql> select investment_type, amount, p_name from investment i
    -> inner join portfolio p
    -> on p.p_id = i.p_id
    -> where investment_type = 'Stocks';
+-----------------+---------+------------------+
| investment_type | amount  | p_name           |
+-----------------+---------+------------------+
| Stocks          | 5000.00 | Tech Stocks      |
| Stocks          | 3000.00 | Tech Stocks      |
| Stocks          | 7000.00 | Equity Portfolio |
+-----------------+---------+------------------+
```

2.0.5 5 Query: Retrieve the average return percentage for each investment type.

```
 select investment_type , avg(return_percentage) as rp from investment i
    -> inner join returns r
    -> on r.i_id = i.i_id
    -> group by investment_type;
+-----------------+-----------+
| investment_type | rp        |
+-----------------+-----------+
| Stocks          |  7.666667 |
| Equities        | 11.000000 |
| Commodities     |  7.125000 |
| Bonds           |  7.000000 |
+-----------------+-----------+
4 rows in set (0.00 sec)
```

3. 5 Intermidiate Queries

3.0.1 1 Query: Retrieve the total return amount for each investment type, along with the corresponding portfolio and client information

```
select investment_type, return_amount, p_name, client_name from returns r
    -> inner join investment i
    -> on i.i_id = r.i_id
    -> inner join portfolio p
    -> on p.p_id = i.p_id
    -> inner join client c
    -> on c.client_id = p.c_id
    -> order by investment_type, return_amount desc;
```

```
+-----------------+---------------+---------------------+---------------+
| investment_type | return_amount | p_name              | client_name   |
+-----------------+---------------+---------------------+---------------+
| Bonds           |       1050.00 | Debt Securities     | Sneha Patel   |
| Commodities     |       1425.00 | Commodity Portfolio | Priya Sharma  |
| Commodities     |        400.00 | Commodity Portfolio | Priya Sharma  |
| Commodities     |        375.00 | Commodity Portfolio | Priya Sharma  |
| Commodities     |        180.00 | Commodity Portfolio | Priya Sharma  |
| Equities        |       1440.00 | Equity Portfolio    | Amit Kumar    |
| Equities        |       1000.00 | Equity Portfolio    | Amit Kumar    |
| Stocks          |        455.00 | Equity Portfolio    | Amit Kumar    |
| Stocks          |        425.00 | Tech Stocks         | Ananya Sharma |
| Stocks          |        240.00 | Tech Stocks         | Ananya Sharma |
+-----------------+---------------+---------------------+---------------+
10 rows in set (0.00 sec)
```

3.0.2 2 Query: Retrieve the top 5 portfolios with the highest total investment amount

```
mysql> select p_name, investment_type, max(amount) as highest_Investment from portfolio p
    -> inner join investment i
    -> on i.p_id = p.p_id
    -> Group by p_name, investment_type
    -> Order by highest_Investment desc
    -> limit 5;
+---------------------+-----------------+--------------------+
| p_name              | investment_type | highest_Investment |
+---------------------+-----------------+--------------------+
| Debt Securities     | Bonds           |           15000.00 |
| Equity Portfolio    | Equities        |           12000.00 |
| Commodity Portfolio | Commodities     |            8000.00 |
| Equity Portfolio    | Stocks          |            7000.00 |
| Tech Stocks         | Stocks          |            5000.00 |
+---------------------+-----------------+--------------------+
5 rows in set (0.04 sec)
```

3.0.3 3 Query: Retrieve the investments made in the past year along with the corresponding portfolio and client information.

```
mysql> select investment_type, amount, investment_date, p_name, client_name from
investment i
    -> Inner join portfolio p
    -> On i.p_id = p.p_id
    -> inner join client c
    -> On c.client_id = p.c_id
    -> where investment_date > date_sub(now(), interval 1 year);
Empty set (0.00 sec)
```

3.0.4 4 Query: Retrieve the clients who have investments in multiple portfolios

```
mysql> select client_name, p_name,count(c_id) as cnt from client c
    -> Inner join portfolio p
    -> On p.c_id = c.client_id
    -> Group by client_name, p_name
    -> having cnt > 1;
+---------------+----------------------+-----+
| client_name   | p_name               | cnt |
+---------------+----------------------+-----+
| Ananya Sharma | Tech Stocks          |   3 |
| Amit Kumar    | Equity Portfolio     |   3 |
| Priya Sharma  | Commodity Portfolio  |   3 |
| Sneha Patel   | Debt Securities      |   2 |
| Rahul Singh   | Real Estate Holdings |   2 |
+---------------+----------------------+-----+
5 rows in set (0.03 sec)
```

3.0.5 5 Query: Retrieve the portfolios with a total return amount higher than the average return amount

```
mysql> select p_name, sum(return_amount) as total_amt from portfolio p
    -> Inner join investment i
    -> On i.p_id = p.p_id
    -> Inner join returns r
    -> On r.i_id = i.i_id
    -> Group by p_name
    -> having total_amt > (select avg(return_amount) from returns);
```

```
+---------------------+-----------+
| p_name              | total_amt |
+---------------------+-----------+
| Equity Portfolio    |   2895.00 |
| Commodity Portfolio |   2380.00 |
| Debt Securities     |   1050.00 |
+---------------------+-----------+
3 rows in set (0.21 sec)
```

4. 5 Advance Queries

4.0.1 1 Query: Retrieve the top 3 clients with the highest total investment amount across all portfolios, along with the corresponding portfolio and investment information

```
mysql> select client_name, p_name, investment_type, sum(amount) as total_investment_amt from client c
    -> inner join portfolio p
    -> on p.c_id = c.client_id
    -> Inner join investment i
    -> On i.p_id = p.p_id
    -> group by client_name, p_name, investment_type
    -> Order by total_investment_amt desc limit 3;
+--------------+---------------------+-----------------+----------------------+
| client_name  | p_name              | investment_type | total_investment_amt |
+--------------+---------------------+-----------------+----------------------+
| Priya Sharma | Commodity Portfolio | Commodities     |             26500.00 |
| Amit Kumar   | Equity Portfolio    | Equities        |             22000.00 |
| Sneha Patel  | Debt Securities     | Bonds           |             15000.00 |
+--------------+---------------------+-----------------+----------------------+
3 rows in set (0.00 sec)
```

4.0.2 2 Query: Retrieve the portfolios with the highest average return percentage, along with the corresponding investment and client information.

```
mysql> select client_name, p_name, investment_type, avg(return_percentage) as rp from portfolio p
    -> inner join investment i
    -> on p.p_id = i.p_id
    -> inner join returns r
    -> on r.i_id = i.i_id
    -> inner join client c
    -> on c.client_id  = p.c_id
    -> group by client_name, p_name, investment_type
    -> order by rp desc;
+---------------+----------------------+-----------------+-----------+
| client_name   | p_name               | investment_type | rp        |
+---------------+----------------------+-----------------+-----------+
| Amit Kumar    | Equity Portfolio     | Equities        | 11.000000 |
| Ananya Sharma | Tech Stocks          | Stocks          |  8.250000 |
| Priya Sharma  | Commodity Portfolio  | Commodities     |  7.125000 |
| Sneha Patel   | Debt Securities      | Bonds           |  7.000000 |
| Amit Kumar    | Equity Portfolio     | Stocks          |  6.500000 |
+---------------+----------------------+-----------------+-----------+
5 rows in set (0.00 sec)
```

4.0.3 3 Query: Retrieve the investments that have not yet received any returns.

```
mysql> select * from investment i
    -> left join returns r
    -> on i.i_id = r.i_id
    -> where r.i_id is null;
Empty set (0.04 sec)
```

4.0.4 4 Query: Retrieve the clients who have investments in all portfolios

```
mysql> select client_id, client_name from client c
    -> inner join portfolio p
    -> on p.c_id = c.client_id
    -> inner join investment i
    -> on i.p_id = p.p_id
    -> group by client_id, client_name
    -> having count(i.p_id) = (select count(*) from portfolio);
Empty set (0.76 sec)
```

4.0.5 5 Query: Retrieve the portfolios with the highest total investment amount for each client.

```
mysql> with portfoliototal as (
    ->     select
    ->         c.client_name,
    ->         p.p_name,
    ->         sum(i.amount) as total_investment_amount,
    ->         row_number() over (partition by c.client_name order by sum(i.amount) desc) as portfolio_rank
    ->     from
    ->         client c
    ->         inner join portfolio p on p.c_id = c.client_id
    ->         inner join investment i on i.p_id = p.p_id
    ->     group by
    ->         c.client_name, p.p_name
    -> )
    -> select
    ->     client_name,
    ->     p_name,
    ->     total_investment_amount
    -> from
    ->     portfoliototal
    -> where
    ->     portfolio_rank = 1;
+---------------+---------------------+-------------------------+
| client_name   | p_name              | total_investment_amount |
+---------------+---------------------+-------------------------+
| Amit Kumar    | Equity Portfolio    |                29000.00 |
| Ananya Sharma | Tech Stocks         |                 8000.00 |
| Priya Sharma  | Commodity Portfolio |                26500.00 |
| Sneha Patel   | Debt Securities     |                15000.00 |
+---------------+---------------------+-------------------------+
4 rows in set (0.00 sec)
```

Conclusion :

In conclusion, this project entailed using SQL to create a database for financial portfolio management. The database consists of linked tables with defined foreign key relationships that include clients, investments, portfolios, and returns. These tables included fictitious data to mimic real-world situations.

The project included creating and executing the database schema as well as adding sample data to the tables. In addition, it involved creating five SQL queries that were easy, intermediate, and advanced, each of which had a predicted output format.

This project provides as a basic example of how SQL may be used to create and operate a financial portfolio management system. It illustrates a number of SQL ideas, including data insertion, relationship design, table construction, and multi-table querying.