

# CLI for DB

## *Query Squad*

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## 1 Introduction

This command-line interface (CLI) provides a user-friendly way to interact with a MySQL database system. Upon running the program, users will be directed to a command-like interface where they can execute various commands to perform actions related to stocks, tax records, transactions, and database management.

## 2 Getting Started

- **Connecting to MySQL:** Initially, users will need to connect to MySQL by providing the root password. This step is essential to access the database functionalities.
- **Navigating the Interface:** After successful login, pressing the "Enter" key will lead users to the main interface, where commands are issued using numbers ranging from 0 to 16. Each command corresponds to a specific action or query related to the database.

## 3 List of Commands and Descriptions

After executing any of the listed commands (choices 1-16), such as displaying data, inserting information, or performing other relevant operations, upon pressing the 'Enter' key, the interface will prompt for the next choice to be inputted, enabling a seamless progression between different functionalities. Here is a brief overview of the commands available in this CLI:

- **Stocks with P/E less than a threshold - choice 1:** Asks for an input value which will be set as threshold. Returns a list of stocks with a Price-to-Earnings (P/E) ratio below a specified threshold. This helps identify stocks potentially undervalued based on their earnings.
- **Tax records of a particular type - choice 2:** Enter the type of tax records needed. Retrieves tax records of a specific type, offering details about the taxes incurred for particular transactions, aiding in financial analysis or tax reporting.
- **Names of all stocks with share price lesser than a value - choice 3:** Enter the input value to set the limit for the share price to get stocks with price lesser than it. Lists the names of all stocks whose share price exceeds a given value. Useful for identifying high-value stocks within the market.
- **MFs owned by a particular PAN - choice 4:** Give the PAN of the user as input to check for the mutual funds owned by that user. Fetches information about mutual funds owned by a specific individual identified by their PAN (Permanent Account Number).
- **Volume (qty of shares bought/sold) of total trade on a particular date - choice 5:** Asks for the date(format YYYY-MM-DD) as input to get that day's trade volume Provides the total volume or quantity of shares bought or sold on a specific date, assisting in analyzing market activity for that day.
- **Stock with the biggest market cap - choice 6:** Identifies the stock with the largest market capitalization among the available stocks in the database, offering insights into the most valuable stock.

- **All MFs belonging to a particular company - choice 7:** Enter the Fund name as input(even a prefix of the Fund name gives the information of all the matching names in the Mutual Funds table). Retrieves all mutual funds associated with a specific company, aiding in company-specific investment analysis or comparison.
- **Details of all transactions in a particular year and month - choice 8:** Give the year and then month as input. Retrieves comprehensive details of all transactions occurring in a specified year and month, facilitating month-wise financial analysis.
- **Insert new users to the DB - choice 9:** Provide the values to be inserted into the STOCKS table, entering each value as prompted. Allows the addition of new users into the database, providing a means to expand the user base for managing portfolios and transactions.
- **Insert new transactions to the DB - choice 10:** Enter the values to be inserted in the TRANSACTIONS table one by one as prompted. Facilitates the addition of new transactions into the database, enabling the recording of various buy/sell activities for stocks, mutual funds, etc.
- **Update live stock prices and daily gain/loss - choice 11:** Provide the StockID whose price is getting updated and the new price to which it is updated. Enables the update of live stock prices and daily gain/loss metrics, ensuring real-time and accurate valuation of portfolios.
- **Update number of shares of a particular MF - choice 12:** Enter the MFID of a particular mutual fund and also enter the value to which its shares are updated. Allows modification of the number of shares held for a specific mutual fund in the database, reflecting changes in the investment portfolio.
- **Delete a folio of any user - choice 13:** Enter the PAN of the user to delete his/her folio. Offers the capability to delete an entire folio or investment portfolio associated with any user from the database.
- **Delete a stock from the market - choice 14:** Provide with the stock ID of the stock to be deleted. Removes a particular stock from the market listings in the database, potentially due to delisting or other reasons.
- **Get report of gain/loss separately incurred from stocks and MF for any folio - choice 15:** Enter the folio ID for getting Gain/Loss report. Generates a report detailing the gain/loss separately incurred from stocks and mutual funds for a specific investment portfolio or folio.
- **Get report of total tax incurred over all transactions by any individual - choice 16:** Enter the PAN of the user for total tax calculation. Provides a comprehensive report detailing the total tax incurred over all transactions by a specific individual, aiding in tax assessment and analysis.
- **Logout - choice 0:** Logs out and terminates the session.

## 4 Conclusion

This command-line interface offers a comprehensive set of commands facilitating various database operations related to stocks, transactions, and user management within the MySQL environment. Users can seamlessly interact with the database using the provided commands for efficient data retrieval, modification, and analysis.