The program should have two parts:

• Building Data series

• Query Builder for financial analysis

**Data Collection and Series formation:**

**Analyst Estimates:**

Analysts Estimates and ratings from current and past say x Analyst reports (Alpha Vantage API) are extracted and collated to create a time series data.

Create and maintain a database to which new data is added when released.

Estimates to be used:

• EPS

• Target Price

• P/E Ratio

• Revenue

• Dividend Yield

Ratings to be used:

• Sell

• Hold

• Buy

Develop a trend series of these estimates & ratings, visible as graphs, feature to draw multiple graphs for comparison, for 2 or more companies and add-ons like stock price, candlesticks, trendlines, interest rates etc. basically other data can be charted on top.

**Quarterly Results:**

The same process mentioned above of creating database, time series data etc. to be done for Actual results published quarterly.

Difference between Analyst Estimates and Actuals to be computed.

Features to Rank this data and chart graphs to be available, same as above.

Key Statistics to be used:

• Gross Margin

• Operating Margin

• Free Cash Flow

• P/E

• Shiller P/E

• PEG

• P/S

• P/B

• EV to EBIT

• EV to Revenue

• ROE

• ROA

• Debt/Equity

• Beta of stock

• Market Cap

• Industry

• Sector

**• Financial Analysis**

Step 1: Ranking

Step 2: Strategies

Step 3: Combination of strategies

**Step 1a: Ranking**

Ranking is decided based on trends in Analyst Estimates. Four factors are considered for ranking:

• Consensus

%age of analysts upgrading/downgrading EPS of a stock

Calculate a number for an analyst score based on buy/hold/sell and compare that formula with previous. This % change is the number needed. (e.g. day, week, month)

• Magnitude

• %age change in the EPS estimate vs previous period (e.g. day, week, month)

• %change in 12 month target/price vs previous period (e.g. day, week, month)

• Upside

Consensus 12Mth %age upside vs current price

• Surprise

%age surprise - actual vs estimate

Compare actual numbers against analyst estimates (EPS) – as and when result is available for each period

Rank all stocks by a, b, c, d. Take average rank of each stock

**Ranking:**

R1: Top 5%

R2: Next 15%

R3: Next 60%

R4: Next 15%

R5: Last 5%

**Step 1b: Financial Criteria**

Profitability (Actual)

ROE for last 12 months > X%

ROE for last 60 months > Y%

Upward Revisions (Analyst Ratings)

1. EPS revisions %age change in the EPS estimate vs previous period (e.g. day, week, month) where EPS is the EPS estimate for the next quarter/period

2. Change in Analyst Rating - vs previous period (e.g. day, week, month)

Where rating is a number from 1 to 5 (from Refinitiv)

Financial strength

Value

P/E for last 12 mths < Index

P/Sales for last 12 mths < Index

EPS for last 12 mths > Index

**Can we get P/E and EPS for the index? E.g. S&P500 ? Else this wont be possible.**

Momentum

Change in Price in last 24 weeks - top 20

Change in Price in last 12 weeks - top 10

Change in Price in last 4 weeks - top 5