Q&A; Section

Q: Why have you chosen this topic? What inspired you to do this?
A: I chose this topic because I've always been curious about how people make decisions in the stock market. I found it interesting that many traders use technical indicators like RSI and Moving Averages, and I wanted to test if these actually work or not. Also, since I'm comfortable with coding and data analysis, I felt this topic would let me apply those skills to a real-world problem.

Q: What exactly did you want to show or achieve with this thesis?
A: The main goal was to simulate a trading strategy and check if it would have worked on real historical stock data. I wanted to see whether simple strategies based on RSI or MA can beat a basic buy-and-hold approach, how many trades they trigger, and whether they are profitable in the long run.

Q: What previous works have been done on this topic globally?
A: There are many academic and industry papers where researchers have tested different trading strategies using historical data. Some works use machine learning to improve the strategies, while others test technical indicators like RSI, MACD, Bollinger Bands, etc. My work is simplified and focused on practical backtesting.

Q: What improvements have you made on this topic?
A: Since this is a simple undergraduate thesis, I didn't try to improve the technical indicators themselves. But I compared two strategies side-by-side, used clean code for simulation, and visualized the buy/sell points and returns clearly.

Q: Why should anyone read your thesis paper?
A: Because it's a good starter guide for anyone who wants to understand how technical trading strategies work in real life. It shows a full pipeline from data collection to backtesting and analysis, with simple explanations and visuals.

Thesis Roadmap

Phase 1: Setup & Planning
Fix your scope (2 strategies: RSI & MA), select 1-2 stocks, get 3–5 years of daily data. Set up Python environment and install libraries.

Phase 2: Data Collection
Use yfinance to download historical stock data and clean/preprocess it.

Phase 3: Feature Engineering
Calculate RSI and MA indicators, generate Buy/Sell signals.

Phase 4: Strategy Logic & Backtesting
Simulate trades based on signals and track capital growth, trade history, profit/loss.

Phase 5: Performance Analysis
Calculate return %, number of trades, win rate, and compare against Buy & Hold.

Phase 6: Visualization
Plot price charts with indicators and signals, return bar charts, portfolio value graphs.

Phase 7: Report Writing
Write all sections: Abstract, Intro, Methodology, Results, Discussion, Conclusion.

Phase 8: Final Checks & Presentation
Clean code, polish charts, finalize report, prepare for presentation if required.