

# TASK 3

1. Start & End: The beginning and ending dates of the backtest.
  - Example: Start: Jan 1, 2020, End: Dec 31, 2023.
2. Duration: The total period covered by the backtest.
  - Example: A backtest from Jan 2020 to Dec 2023 has a duration of 4 years.
3. Exposure Time [%]: The percentage of time capital was actively invested.
  - Example: If a strategy was invested for 75% of the time, its exposure time is 75%.
4. Equity Final [\$]: The portfolio value at the end of the backtest.
  - Example: If the starting portfolio was \$10,000 and ended at \$15,000, equity final = \$15,000.
5. Equity Peak [\$]: The highest portfolio value during the backtest.
  - Example: If the highest recorded portfolio value during backtesting was \$18,000, equity peak = \$18,000.
6. Return [%]: The total percentage return over the backtest period.
  - Example: If the portfolio grew from \$10,000 to \$15,000, return = 50%.
7. Buy & Hold Return [%]: The return if capital was held without trading.
  - Example: If holding the asset passively resulted in a 40% gain, buy & hold return = 40%.
8. Return (Ann.) [%]: The annualized return of the strategy.
  - Example: If a portfolio grew 50% in 4 years, its annualized return is approximately 10.67%.
9. Volatility (Ann.) [%]: The annualized standard deviation of returns, measuring risk.
  - Example: If the yearly standard deviation of returns is 15%, volatility = 15%.
10. Criterion suggests 10%, then 10% of capital should be risked per trade.
11. Sharpe Ratio: The risk-adjusted return relative to volatility.
  - Example: If annual return = 12% and volatility = 10%, Sharpe ratio = 1.2.
12. Sortino Ratio: The risk-adjusted return penalizing only downside risk.
  - Example: If annual return = 12% and downside deviation = 8%, Sortino ratio = 1.5.
13. Calmar Ratio: The return adjusted for the maximum drawdown.
  - Example: If annual return = 15% and max drawdown = 30%, Calmar ratio = 0.5.
14. Avg. Drawdown [%]: The average percentage decline from peaks.
  - Example: If the portfolio experiences multiple drawdowns averaging 10%, avg. drawdown = 10%.
15. Max. Drawdown Duration: The longest recovery period from a drawdown.
  - Example: If it takes 200 days to recover from a drawdown, max drawdown duration = 200 days.
16. Avg. Drawdown Duration: The average time to recover from drawdowns.
  - Example: If drawdowns recover in an average of 60 days, avg. drawdown duration = 60 days.
17. # Trades: The total number of trades executed.
  - Example: If the strategy made 250 trades, # trades = 250.
18. Win Rate [%]: The percentage of profitable trades.
  - Example: If 120 out of 200 trades were profitable, win rate = 60%.
19. Best Trade [%]: The highest return from a single trade.
  - Example: If the largest single trade yielded 25%, best trade = 25%.
20. Worst Trade [%]: The largest loss from a single trade.
  - Example: If the worst single trade resulted in a 15% loss, worst trade = -15%.
21. Avg. Trade [%]: The average return per trade.
  - Example: If the total return from 100 trades is 500%, avg. trade = 5%.
22. Max. Trade Duration: The longest duration of a single trade.
  - Example: If a trade was held for 150 days, max. trade duration = 150 days.
23. Avg. Trade Duration: The average duration of all trades.
  - Example: If the average holding period is 20 days, avg. trade duration = 20 days.
24. Profit Factor: The ratio of gross profits to gross losses.
  - Example: If total profit = \$50,000 and total loss = \$25,000, profit factor = 2.
25. Expectancy [%]: The average percentage return per trade.
  - Example: If expected return per trade is 2%, expectancy = 2%.
26. SQN: A measure of strategy performance and consistency.
  - Example: A strategy with an SQN of 3.0 is considered strong.
27. Kelly Criterion: The optimal bet size for maximizing returns.
  - Example: If Kelly Criterion suggests 10%, then 10% of capital should be risked per trade.