Social Media Post Analyzer

v**Introduction**

The social Media Post Analyzer is a software application designed to analyze social media posts for sentiment and engagement metrics. With the pervasive use of social media, understanding the emotions and reactions of users can provide valuable insights for businesses and individuals alike. This project implements a basic sentiment analysis model and aggregates engagement metrics to present a clear overview of user interactions.

v**Objective**

Sentiment Analysis: Classify posts as positive, negative, or neutral based on the presence of certain keywords.

2. Engagement Metrics: Calculate and display metrics such as likes and shares for each post.

3. Data Processing: Efficiently process a collection of posts to derive insights.

4. User-Friendly Output: Present the analysis results in a clear format for easy interpretation.

v**Working Model**

1. Data Structure: The project uses a Post class to encapsulate the content of the post along with its likes and shares.

2. Sentiment Analysis: A method in the SocialMediaAnalyzer class scans the content of each post for specific keywords to determine its sentiment.

3. Processing Posts: The processPosts method iterates through a vector of Post objects, analyzing and displaying the results.

4. Output Display: Results are printed to the console, providing a summary of each post's sentiment and engagement metrics.

v**Code Review**

1. Functionality:

The code successfully performs sentiment analysis and displays engagement metrics for a set of sample posts.

2. Modularity:

The use of classes (Post and SocialMediaAnalyzer) enhances code organization and readability.

3. Error Handling:

Currently, there is no error handling for edge cases (e.g., empty posts). This could be improved in future iterations.

4. Scalability:

The sentiment analysis approach is basic; integrating a more sophisticated natural language processing library could enhance accuracy.

5. Performance:

The code efficiently processes a small number of posts. However, as the dataset grows, consider optimizing the search mechanism or using more advanced data structures.

6. Documentation:

The code is mostly self-explanatory, but adding comments to clarify complex sections would improve maintainability.

v**Applications**

1. Marketing Insights: Businesses can analyze customer sentiments and engagement metrics to tailor their marketing strategies.

2. Product Development: Companies can gather feedback from users and improve products based on sentiment analysis.

3. Social Research: Researchers can study public opinions on various topics by analyzing sentiment over time.

4. Customer Service: Organizations can monitor customer feedback in real-time to address issues promptly and improve service quality.