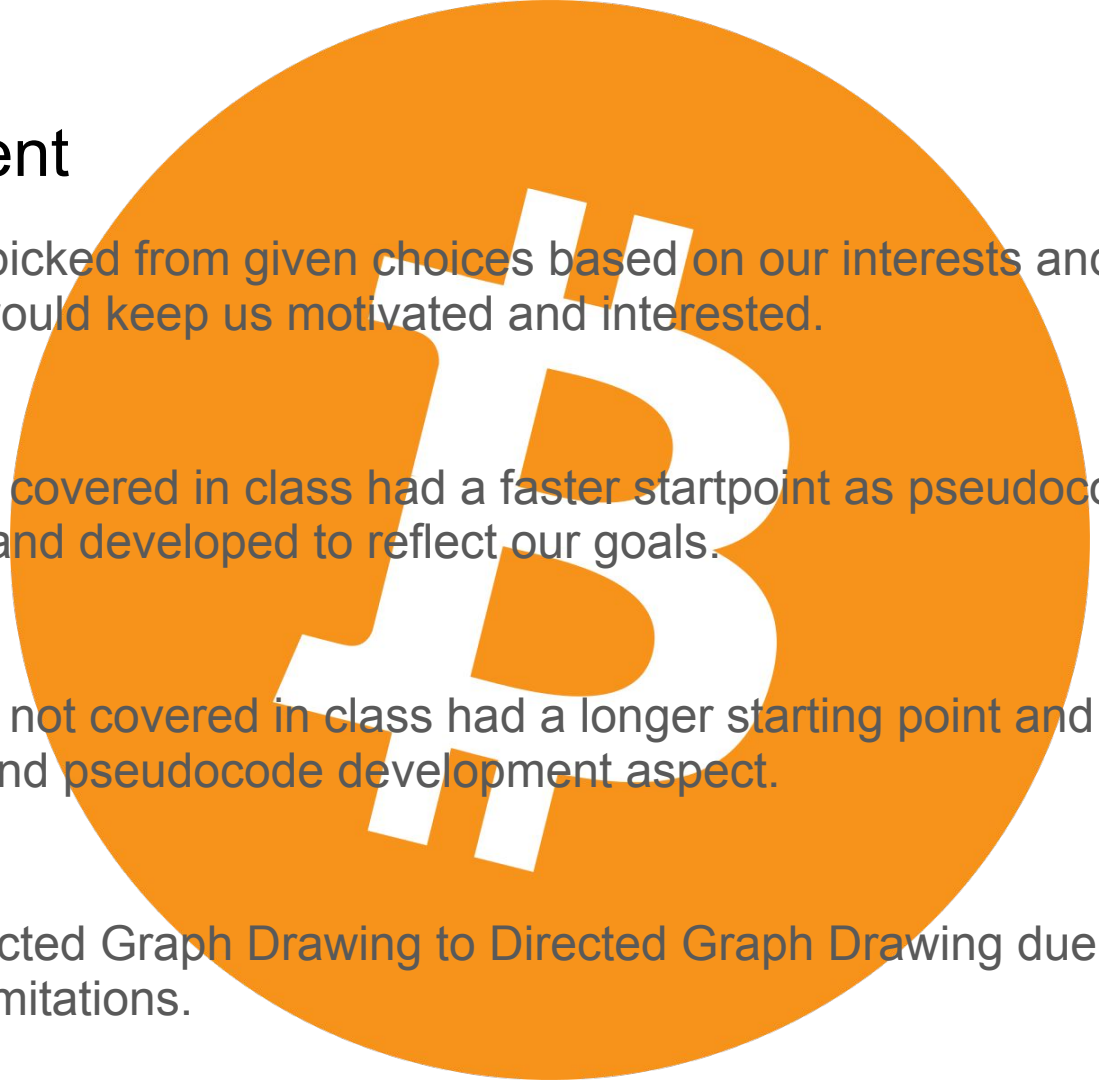
CS 225 Final Presentation

David Rodriguez (davidr6), Alex Romo (aromo20), Carlos Perez (carlosp4)

Goals

- How could we create a safer platform for buying, selling, and/or trading Bitcoin due to the anonymity behind any transaction.
- Create an unordered map that will be used to represent a graph, the keys in the unordered map will be the string id for each sendee in the database and the value for each key will be an array of pairs that holds the string id of the sender and the rating they give the sendee.
- BFS Traversal
  - Aid in traversing our data structure to create a new data structure with average ratings per member.
- Prim's Algorithm for Minimum Spanning Tree
  - Tree where weight in our dataset is the rankings and highlights the Bitcoin members that might be the most risky to engage in transactions.
- Force-Directed Graph Drawing
  - Display our dataset in a way in which Bitcoin members who are most highly ranked will be positioned larger towards the middle and Bitcoin members that might be more risky to perform transactions with would be smaller and pushed outwards.

Development



- Data was picked from given choices based on our interests and what the team felt would keep us motivated and interested.
- Algorithms covered in class had a faster startpoint as pseudocode from class was used and developed to reflect our goals.
- Algorithms not covered in class had a longer starting point and time due to the research and pseudocode development aspect.
- Force-Directed Graph Drawing to Directed Graph Drawing due to research and time limitations.

Development

- Tests reflect those of MP by developing a smaller data set and comparing them to their counterparts in the ones generated by the algorithms to test for correctness.

- Always room for improvements, especially for our Directed-Graph Algorithm

Conclusions

- We created a ranking system that holds more trusted sources to a higher degree and less to a lower. Using the Bitcoin OTC trust-weighted signed network dataset and applying the aforementioned algorithms to aid us, we answered our leading question with a resounding yes!

Conclusions