Network of Friendships

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Created and Presented By

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“Iteratively, recursively, precisely.”

-Prof. Gharibi

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Agenda

An outline of our objective and goals

Agenda

Our Project: Network of Friendships
Our Objectives:

- Represent a weighted graph in a social relation setting i.e. network of friendships.
- Show each the Graph's statistic i.e. median friendship weight etc.

And the most important thing:
Representing Graph Theory by showing connections between a network of friendships!

02

Methodology

What and How we will represent Graph Theory!

Methodology Cont.

- List of Friends for each person within the group
- Find common factor between three list of friends
- Find the statistic of the most popular friend, median of each friendship weight etc.
- Creating a graph with each person within our group being a major node(root) and connections with each friends.

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Methodology – Friend Lists

Tanner

Johnny - 10
Nhu - 8
Jacob - 9
Kayden - 8
Jordan - 9
Juice - 7
Francis - 7
Adeeba - 8
Alex – 9
Prof. Gharibi - 10

Johnny

Tanner – 10
Nhu – 8
Cameron – 7
Jacob – 8
Jordan – 8
Juice – 8
Adeeba – 9
Aleeza – 9
Kieran - 8
Prof. Gharibi – 10

Nhu

Johnny – 8
Tanner – 8
Joseph – 6
Benny – 7
Mystic – 7
Adeeba – 8
Juice – 7
Aleeza – 7
Jordan 6
Prof. Gharibi - 10

Total friend per person: 10

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Statistics

	Average Strength	Highest Strength	Lowest Strength
Tanner	8.5	10	7
Johnny	8.4	10	7
Nhu	7.4	10	6

Most Popular Person: Tanner (85), Johnny (85), Nhu (74)
Graph Total Weight: 244
Graph Average Weight: 8.13

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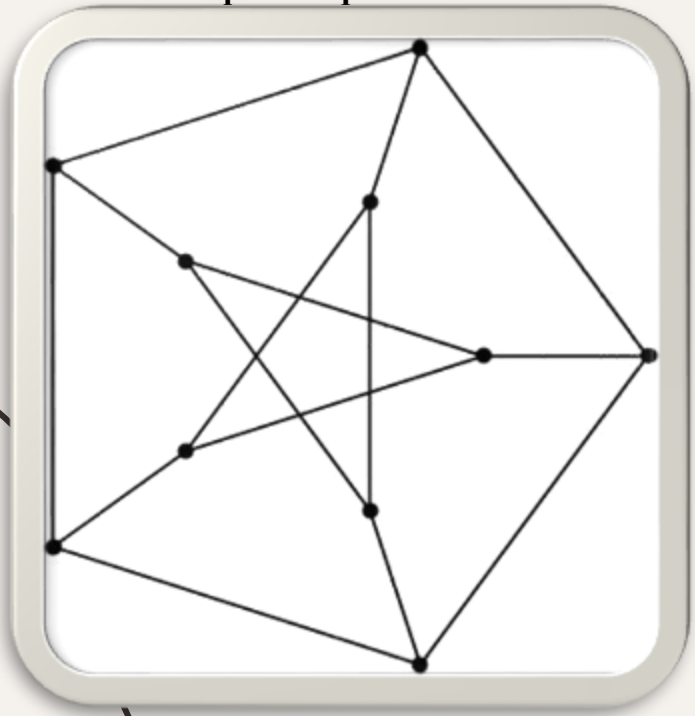
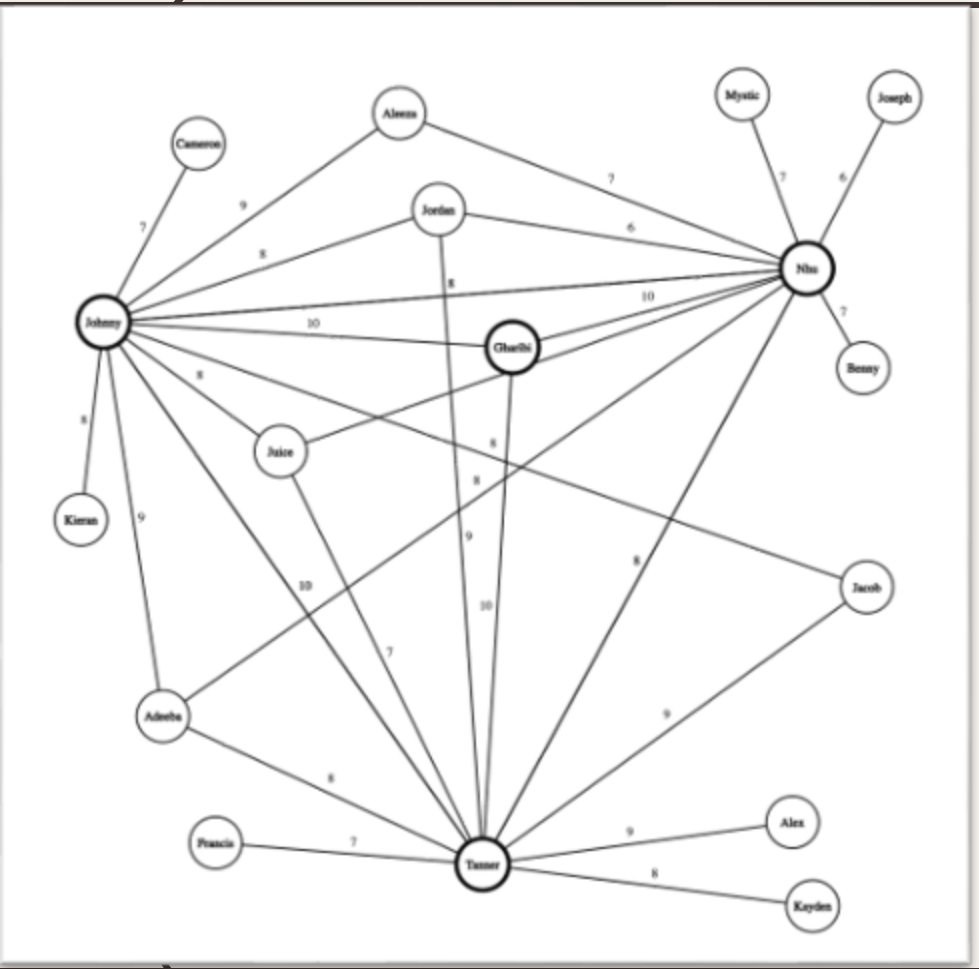
P.S: Example Graph



03

Graph

Our graph with connected nodes and weights



Friendship Graph

	Average Strength	Highest Strength	Lowest Strength
Tanner	8.5	10	7
Johnny	8.4	10	7
Nhu	7.4	10	6

- Major nodes (Hubs):
  - Johnny, Nhu, Tanner, Prof. Gharibi
- Most shared neighbors:
  - Adeeba, Juice, Jordan, Prof. Gharibi
- Strongest Ties (Closest friends):
  - Prof. Gharibi

- (If weights 6-7 are removed, most of the network is still connected, shows strong relationships)

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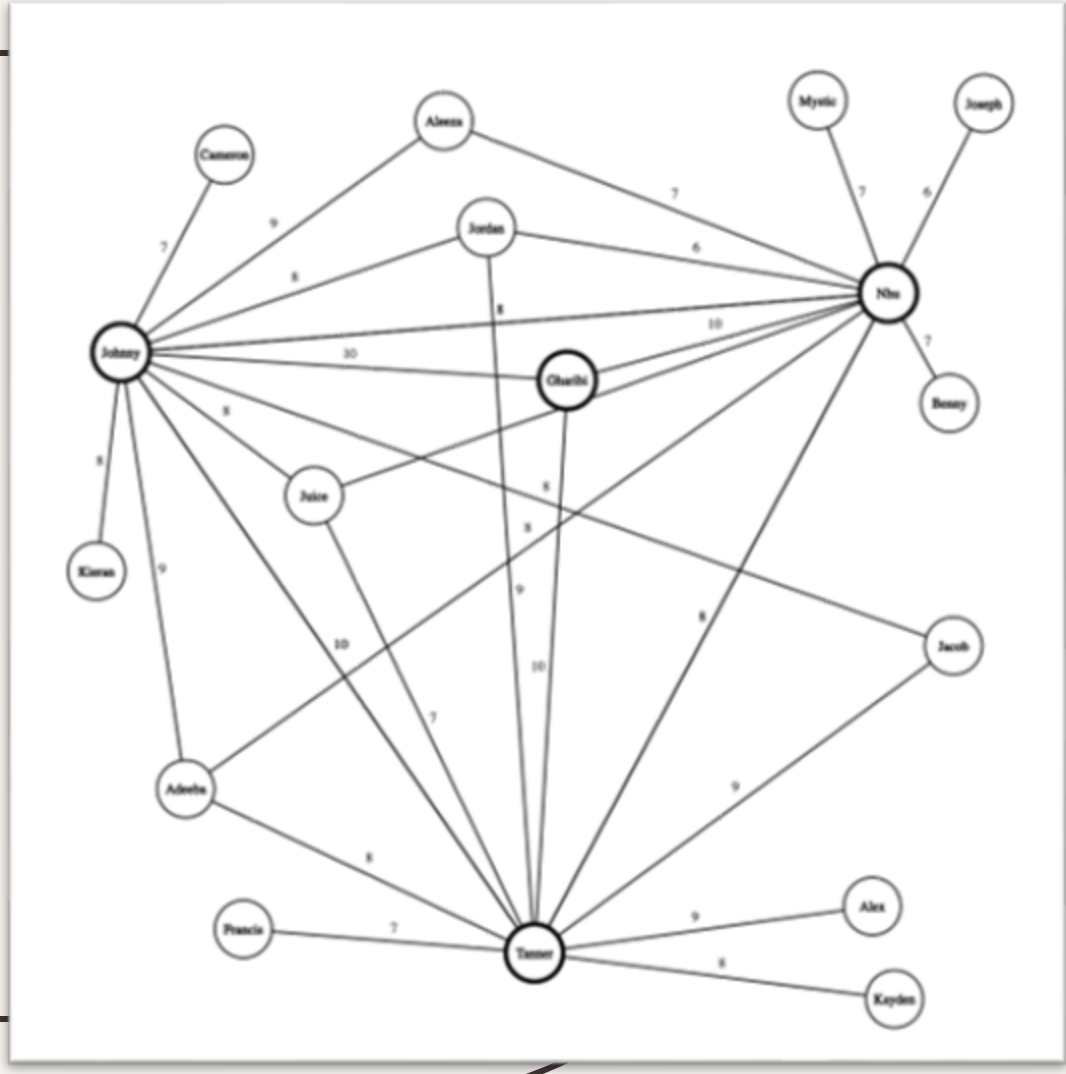
04

Conclusion + Reference

Project wrap up + related discussion!

Conclusions

- Prof. Gharibi is recursively popular
- Most friends of the group are connected.
- There would be a lot of connections if the group members were excluded.
- Average of 2-3 person have only one connection with a group numbers



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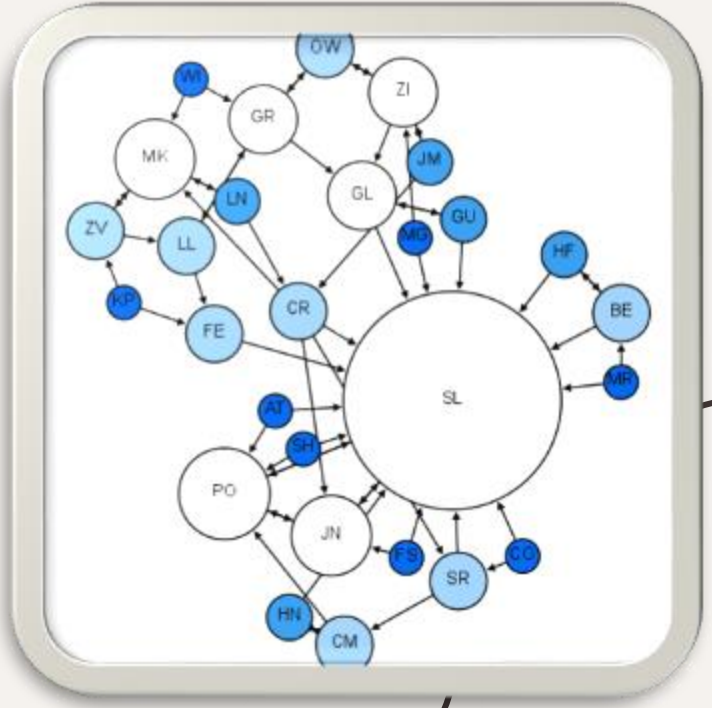
Conclusion - Implementations

Examples

- Social Networks
  - WR: messages per week, post interactions
- Campus Networks
  - WR: classes together, same majors/clubs/etc.
- Workplace Networks
  - WR: emails sent, meetings



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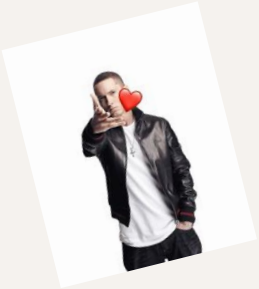
Q&A

Feel free to ask any questions!

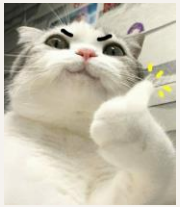
- Why graph theory?
- What is the most interesting part of this project?
- What would we have done better?

Reference

Prof. Gharibi Wajeb



We sincerely offer our greatest gratitude and respect to Prof. Gharibi for offering us the best course and environment we've ever had in our college career.



Sources

Graph Creation: https://csacademy.com/app/graph_editor/

Documentation: https://docs.google.com/document/d/1RXKro5tYmnwxiMJ5Ry9yP0nDDmZzHYCpT3UCAZ7jbtk/edit?usp=sharing

Prof. Gharibi Wajeb

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