# Part 1

1. We selected the movie The Trial of the Chicago 7.
2. **Summary**: During the democratic convention in Chicago, protests against the ongoing war in Vietnam get violent and bloody. Several months after that, after elections, the U.S Department of Justice puts the protest leaders on trial. Throughout the trial we learn more about the protests, and the organizers.
3. The main characters:
   1. Abbie Hoffman – the leader of the hippy protests
   2. Tom Hayden – the leader of the students (more proper) protests
   3. William Kunstler – the lawyer defending the Chicago 7
   4. Richard Schultz – the prosecutor + (TODO maybe the Judge)
4. Weaknesses:
   1. Abbie Hoffman – his weakness is the concept of establishment. He’s in general anti-government and rules and believes in being more open.
   2. Tom Hayden – his weakness is that he believes in the system, yet the system is the one who at first didn’t let him protest, and then arrested him and put him on trial.
   3. William Kunstler – his weakness is the obvious prejudice that Judge Hoffman has in the trial. With that, he sometimes phrases himself in a manner not appropriate for an attorney in a courthouse.
   4. Richard Schultz - his weakness is he doesn’t completely believe the defendants are guilty.
5. The AB graph: this graph connects between the speakers in the movie. Generally speaking, it is safe to assume that people who speak one after the other are speaking to each other and are in the same party. When adding weights, we can see who speaks more, and with this determine who the main characters are, and who they are most connected to.
6. For this part, we started with the pdf found online. We used an online tool to convert it to .txt, and then with a python script we turned into csv. This script realized that the speaker is always upper case indented with quite a bit of tabs. We ran over all lines, grabbed the speakers, saved the text brought after that, and exported to csv file. (The python code is attached).
7. At first, we computed two weighted graphs – directed and undirected. We did so using the program Mathematica, as shown in the lecture. We then computed the unweighted graphs by removing all self-loops and double edged.

\* **here – paste the 4 graph**

1. **Degree Centrality**:

When running degree centrality, we got these results:

For graphs 1-2:

Abbie:31, Kunstler:30, Jerry:25, Tom:24

For graphs 3-4:

Kunstler: 54, Abbie:49, Jerry: 40, Schultz:37

1. **Page Rank Centrality**

When running page rank centrality, we got these results:

For g1:

Kunstler: 0.11, Tom: 0.09, Abbie: 0.078, Judge Hoffman: 0.069  
For g2:

Abbie: 0.0687, Kunstler: 0.0641, Jerry: 0.0507, Tom: 0.04978

For g3:

Kunstler: 0.11, Tom:0.0948, Abbie: 0.0790, Judge Hoffman: 0.0740

For g4:

Kunstler: 0.11, Tom:0.0948, Jerry:0.059, Tom:0.0564

1. **Closeness Centrality**

For g1:

Kunstler: 0.553, Abbie: 0.5531, Tom: 0.5306, Jerry: 0.5306  
For g2:

Kunstler: 0.553, Abbie: 0.551, Tom: 0.530, Jerry: 0.5306  
For g3:

Abbie: 0.58, Kunstler: 0.57, Schultz: 0.542, Tom: 0.534

For g4:

Abbie: 0.58, Kunstler: 0.573, Schultz: 0.542, Tom: 0.534

1. **The comparison in ggole docs**

# Part 2

* 1. We searched online and found the srt file
  2. We wrote a python script that converts the script into csv. Similar to 1-f, we realized the patter in the file, parsed the begin and end time, grabbed the text that was said and pushed all into a csv file. Then we wrote a program to merge between the csv files. The programs logic was as followed: going line by line in the script, we search for the line that matches best a line in the srt (using built in library difflib). If found, we grab that speaker, text, and times, and append to list. If not, we split the script into four and search each one separately. At this point, we are highly likely to match to a srt. We then sorted by time of speech, and found ourselves with a beautiful merge-srt.csv file

# Part 3

See 2b-

# Part 4

1. The main conflict in the movie is between the prosecution – the U.S. represented by Schultz, Vs. the defendants and their lawyer. Although the job of a judge in a court of justice to be unbiased, it is clear that Judge Hoffman is on team Schultz.

In addition, we can add that within the defendants there is another conflict between Abbie and Tom. This conflict is regarding how to address the situation.

1. Team A: Richard Schultz, Judge Hoffman  
   Team B: The Chicago 7 and their lawyer
2. Team A: Schultz  
   Team B: Tom Hayden and Abbie Hoffman  
   Since Schultz is representing the state, the defendants needed two anchors so that they’d have the same strength. In addition, it is clear that within this party there are two different anchors.
3. <https://www.townandcountrymag.com/leisure/arts-and-culture/a34361792/the-trial-of-the-chicago-7-1968-democratic-convention-true-story/>

https://en.wikipedia.org/wiki/The\_Trial\_of\_the\_Chicago\_7

# Part 5

1. At first, we moved our graph to be a distance matrix be setting distance between non-adjacent vertices to , to adjacent vertices by 1/degree, and obviously distance to itself as 0. Then we ran a function to turn this distance to a metric space.

Once we have our matrix, we asked every character to which party is he closer to – and with that we managed to split all the characters to different parties.