



Marvelist

The Marvel Social Network

Purpose

- Easily find common appearances in issues between two characters
 - Including first appearance
- Identify the top “friends” of characters
- Identify size of individual characters’ networks and their relative place in it
- Output to user above information in visually appealing and comprehensive fashion



Databases



- Marvel Universe Social by Kai Chang, Tom Turner, and Jefferson Braswell
 - Comic and Hero Network Data
 - Hero Social Network Data
- Marvel Developer Database
 - Issue year of publication
- Marvel Chronology Project
 - Keys for issue codenames

Python Libraries



- PyMarvel
 - Python wrapper for Marvel developer API
- Networkx
 - Python library for visualizing and analyzing networks
- SQLite
 - Databases
- Tkinter
 - Graphics
- BeautifulSoup
 - Webscrapper

Tasks

Have two characters met?

- List of shared appearances, chronological
- Series with most shared appearances
- Images of two characters
- Years created and first year of meeting
- Link to individual networks

Individual's network

- Top 5 “Friends”
 - Links to two character meeting screen
- Character image
- Size of network
- Year created
- Network measurements
- Location in macro network visualization

1. Tables

Keys

- Key
- Title

Issues

- Codename
- ID (From Marvel API)
- Full issue title (from Key table)
- Year of publication (From Marvel API)
- Series title

Series

- Series key
- Full series title
- Marvel series ID (Marvel API)

Characters

- ID
- Image
- Name
- Civilian Name
- Alias

2. Images

- Option 1
 - Webscrapper for Wikipedia images
- Option 2
 - Marvel API



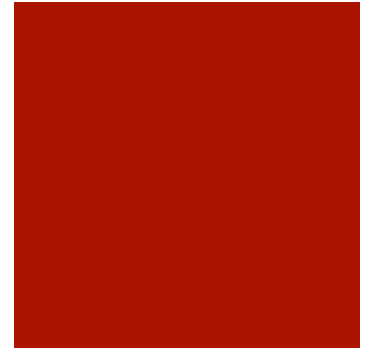
Code and Data Interaction



- Asks user to input character name and matches to relevant rows in database
- Pulls relevant queries and outputs to GUI in correct format and order.
- Visualizes network data and creates graphic
 - With help from networkx library
- Image and key webscrapers add new data to tables and databases

Expected Difficulties

- Image webscrapper pulls relevant image
- Issue codenames without key
- Merging data from Social Network databases with Marvel Developer API databases
- Highlighting location in network while still being clear



Home Screen



view character's
network



find common
appearances between
two characters



Home Screen



view character's
network



Enter Character:

find common
appearances between
two characters

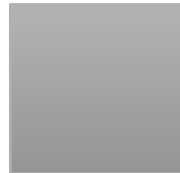


Enter Characters:

Individual Network Screen



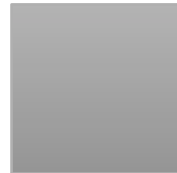
Top Five Friends



Name



Name



Name



Name



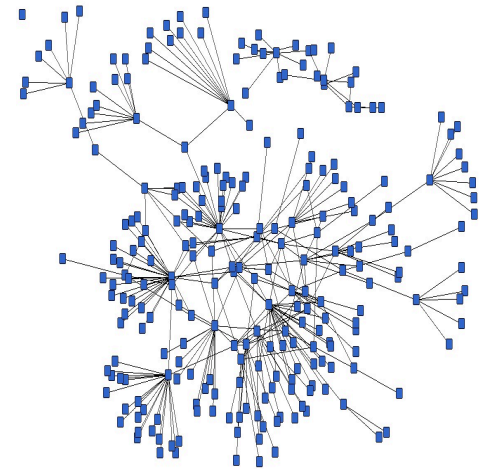
Name

Network Statistics

Centrality

Degrees

Etc...



Name

Alias

Year created

Common Appearance Screen



<div></div>	<div>Series with most common appearances</div> <div>Common Appearances</div> <table><thead><tr><th>Issue</th><th>Year</th></tr></thead><tbody><tr><td>...</td><td>...</td></tr><tr><td>...</td><td>...</td></tr><tr><td>...</td><td>...</td></tr><tr><td>...</td><td>...</td></tr><tr><td>...</td><td>...</td></tr><tr><td>...</td><td>...</td></tr><tr><td>...</td><td>...</td></tr><tr><td>...</td><td>...</td></tr><tr><td>...</td><td>...</td></tr><tr><td>...</td><td>...</td></tr></tbody></table>	Issue	Year	<div></div>
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