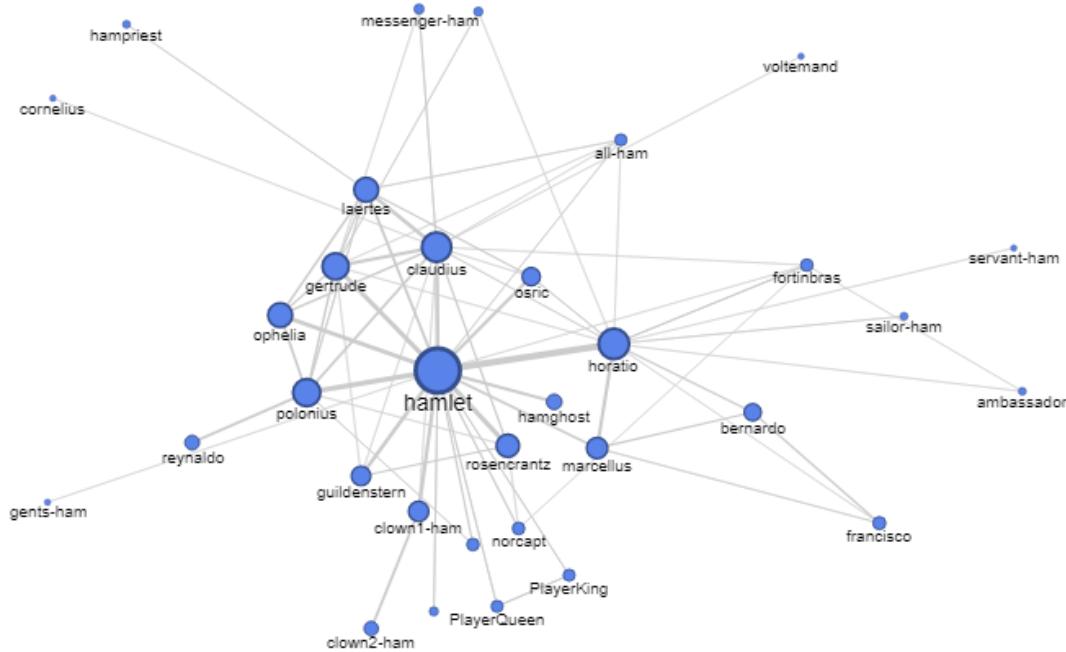


10-min Shakespeare Network Graph (free software, no coding!)

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This will let you make an interactive network graph showing which characters speak to each other the most:



First, you'll need a Google account and to download the [Sublime Text editor](#). ([Notepad++](#) and [Textwrangler](#) will also work, though the instructions will be slightly different.)

1) Pick your play

Go to [Opensourceshakespeare.org](http://opensourceshakespeare.org) and pick your play. View the "Complete Text."

2) Open as an HTML document in your text editor.

(In Chrome, I did a "Save page as" an HTML file and then opened it in Sublime. You should also be able to do a "Ctrl + u" in most browsers—for Macs, I think it's Option/Alt + Command + U. Copy and paste results into text editor.)

You'll see the page's HTML code.

```

1 <!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN">
2 <!-- saved from url=(0110)https://www.opensourceshakespeare.org/views/plays/play_view.php?WorkID=hamlet&Scope=entire&pleasewait=1&msg=pl -->
3 <html><link rel="stylesheet" type="text/css" href="chrome-extension://oonhlohdpiagekajjhffimfgeagjnnop/css/storify-common.css"><head><meta
4 <title> Hamlet (complete text) :: Open Source Shakespeare &nbsp; &nbsp; &nbsp; &nbsp; &nbsp; &nbsp;</title>
5 <meta name="description" content="Array">
6
7 <link href=".//Hamlet (complete text) __ Open Source Shakespeare_files/oss-main.css" rel="stylesheet" type="text/css">
8
9 <script src=".//Hamlet (complete text) __ Open Source Shakespeare_files/rules-p-Z3kISUG3RU4PP.js.download"></script><script src=".//Hamlet (
10 complete text) __ Open Source Shakespeare_files/quant.js.download" async="" type="text/javascript"></script><script type="text/javascript" async=
11 "" src=".//Hamlet (complete text) __ Open Source Shakespeare_files/ga.js.download"></script><script type="text/javascript" src=".//Hamlet (
12 complete text) __ Open Source Shakespeare_files/features.js.download"></script><style></style><style id="style-1-cropbar-clipper"> Copyright
13 2014 Evernote Corporation. All rights reserved. </style>
14 .en-markup-crop-options {
15   top: 18px !important;
16   left: 50% !important;
17   margin-left: -100px !important;
18   width: 200px !important;
19   border: 2px rgba(255,255,255, .38) solid !important;
20   border-radius: 4px !important;
21 }
22 </style></head>
23 <body style="background-color: #F0F0F0; background-image:url(&#39;/images/parchment4.jpg&#39;); margin: 10px;" storify-loaded="true"><div style="
24   background-color: #F0F0F0; left:140px; position:absolute; top:50px; padding: 10px; width: 500px; border: solid; z-index:0">
25   <h1>Please wait</h1><p align="center" class="normalsans"><strong>The text you requested is loading.<br>
26   This shouldn't take more than a minute, depending on<br>
27   the speed of your Internet connection.<br>
28   </strong></p>
29   <p align="center"></p><p class="normalsans" style="font: 11px; margin-left: 80px; margin-right: 80px;">The last of all the Romans,
31   fare thee well!<br><br>&nbsp; &nbsp; &nbsp; - <i>Julius Caesar</i>, Act V Scene 3</p></div>
32 <div id="pagebody">
33   <!-- begin container -->
34 <div id="container" style="background-color: #F0F0F0; border: 1px solid black; z-index: 100; position: absolute; width: 760; margin-bottom: 10px;">
35   <div align="left" class="header">
36     <table style="background-image: url(/images/oss_new_logo.png); background-repeat: no-repeat;" height="50" cellpadding="0" cellspacing="0"
37     border="0" width="100%">
38       <tbody><tr><td><form id="simplesearch" name="simplesearch" method="post" action="https://www.opensourceshakespeare.org/search/
39           search-results.php"></form>

```

3) Pull out just the character's lines.

Use the search function to get a document with just each character's names and lines.

For Sublime, I did a search for "CharID," hit Ctrl+L to expand the selection to the line. I then copied these lines, started a new file, and pasted them in.

4) Pull out just the character's IDs.

Use regular expressions to pull out just the character's names into a long list.¹

Do a search for `^ . *?CharID=` with regular expressions turned on. You should see it highlight everything on each line before the character ID. Hit the Delete key (or replace it with nothing) to deletes everything before the character's ID on each line.

```

<ul><li class="playtext"><strong><a href="https://www.opensourceshakespeare.org/views/plays/characters/charlines.php?CharID=francisco&amp;
WorkID=hamlet">Francisco</a>. </strong><a name="3"></a>Nay, answer me. Stand and unfold yourself.

<ul><li class="playtext"><strong><a href="https://www.opensourceshakespeare.org/views/plays/characters/charlines.php?CharID=bernardo&amp;
WorkID=hamlet">Bernardo</a>. </strong><a name="4"></a>Long live the King!

<ul><li class="playtext"><strong><a href="https://www.opensourceshakespeare.org/views/plays/characters/charlines.php?CharID=francisco&amp;
WorkID=hamlet">Francisco</a>. </strong><a name="5"></a>Bernardo?

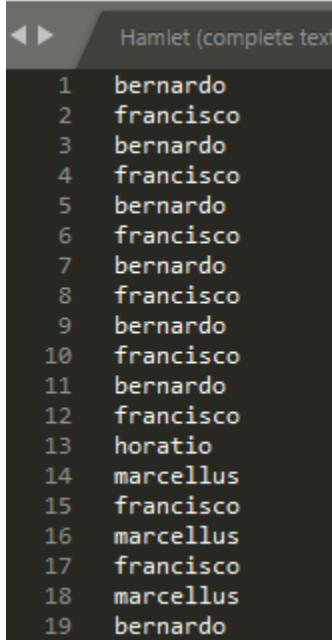
```

¹ Technically this will be slightly incorrect because you haven't accounted for the act or scene breaks, so the graph will technically show the last character of a scene speaking to someone who's part of the next scene. It's relatively easy to fix this by splitting the text up into scenes at some point in the process. However, let's just do it the quick way for now--it only changes the data slightly.

Now do a search for \& . * and delete/replace with nothing, still with regular expressions turned on. This selects and deletes everything after the character's ID

```
francisco&WorkID=hamlet">Francisco</a>. </strong><a name="3"></a>Nay, answer me. Stand and unfold yourself.|  
bernardo&WorkID=hamlet">Bernardo</a>. </strong><a name="4"></a>Long live the King!|  
francisco&WorkID=hamlet">Francisco</a>. </strong><a name="5"></a>Bernardo|  
bernardo&WorkID=hamlet">Bernardo</a>. </strong><a name="6"></a>He.|
```

You should have a nice list of characters like this. This is all of the characters in the order they speak in the play:

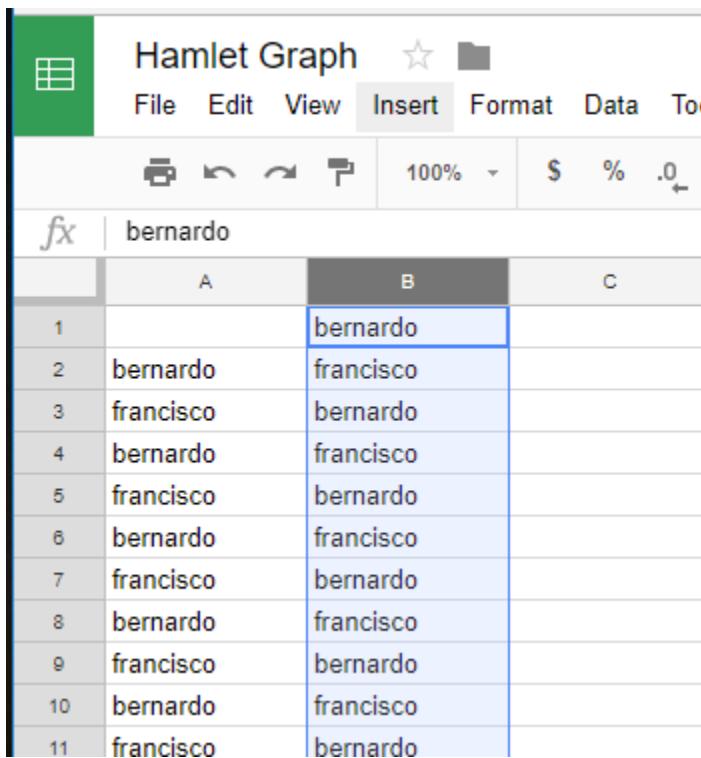


```
1 bernardo  
2 francisco  
3 bernardo  
4 francisco  
5 bernardo  
6 francisco  
7 bernardo  
8 francisco  
9 bernardo  
10 francisco  
11 bernardo  
12 francisco  
13 horatio  
14 marcellus  
15 francisco  
16 marcellus  
17 francisco  
18 marcellus  
19 bernardo
```

(Side note: You may have to clean up the first line a bit and/or get rid of empty lines. You can clean up the empty lines with a search for ^\n .)

5) Make your spreadsheet

Go over to [Google sheets](#) and start a new file for your edges table. This is really simple, actually. Just copy your full character list from Sublime twice: Once with the cursor on A2, once with the cursor on B1.



	A	B	C
1		bernardo	
2	bernardo	francisco	
3	francisco	bernardo	
4	bernardo	francisco	
5	francisco	bernardo	
6	bernardo	francisco	
7	francisco	bernardo	
8	bernardo	francisco	
9	francisco	bernardo	
10	bernardo	francisco	
11	francisco	bernardo	

Now you have an Edges chart--you'll basically be drawing a line between each character and the character who speaks after them. The network is formed based on those connections, so that characters who speak next to each other are formed closer, and characters who speak more have larger nodes.

6) Clean it up.

Deleting the b1 "bernardo" and add source and target column titles.

	A	B
1	Source	Target
2	bernardo	francisco
3	francisco	bernardo
4	bernardo	francisco
5	francisco	bernardo
6	bernardo	francisco
7	francisco	bernardo
8	bernardo	francisco

You'll also need to go all the way down to the bottom to delete the leftover character name.

1135	horatio	fortinbras
1136	fortinbras	horatio
1137	horatio	fortinbras
1138	fortinbras	

Add 1000 more rows at bottom.

Make sure you've named your spreadsheet. You're ready to go!

7) Make your Fusion table

Use [Google Fusion](#) to make your table. "Create a Fusion Table," and select "Google Spreadsheets." It should be the first one.

Select a spreadsheet

Spreadsheets

Spreadsheets

Files

Or paste a web address here:

Select **Cancel**

Keep the settings that names are in "Row 1," add a title and description for general good data management purposes.

8) Make the graph!

So initially Fusion tables doesn't look that exciting. But hit that little orange plus sign to "add chart."

Hamlet Graph

Uses Open Source Shakespeare to make network graph.

Edited at 12:28

And suddenly:

Hamlet Graph

Uses Open Source Shakespeare to make network graph.
Edited at 12:34

File Edit Tools Help Rows 1 Cards 1 Chart 1 +

Filter No filters applied

Saved 1,136 rows

Configure network graph

Show link between 33 of 33 nodes

Source Target

Appearance

Link is directional

Color by columns

Weight by

No numeric columns

This visualization is in Labs Learn more Change tooltip... Done

It should default to "network graph" if you've named everything right, but if not, you can change in it the right corner. And there you go--Hamlet in a little circle of admirers. That guy talks to everybody.

9) Bonus: You can embed these!

If you've got a website that accepts iFrames, you can embed the visualization in your website. You have to make it public first (Share button) and then Tools -> Publish to get iFrame.

Enjoy, all!

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