



# CSCC01 PHASE 2 REPORT

Team Chihuahuas (#16)

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## State of the Project

We are currently on week 2 of our release plan; this is noted on our release plan/task board located on Trello. Last iteration we started by designing a website interface for the project. We then added the text fields and buttons for the user to enter sources and keywords, but the actual action on the buttons were not implemented yet. For this week, we have actually coded those buttons and configured our database. We will be using CouchDB, which gives us a good interface with web elements and makes the data transmission simpler for our needs.

Also, for this week's iteration we have started to work on our web crawler. We have decided to use the Python library Scrapy due to its current and large developing community and its simplicity. It's still under development but we have already got some results of its searches (See image attached). To create the web crawl, it requires an object that defines the fields/elements you want the crawl to catch. Also, a spider (to do the actual crawl) needs the URL, as well as where the elements are located (using XPath queries). For our initial testing, we used the URLs of New York Times and AlJazeera. One interesting item we discovered is that the RSS pages work really well in retrieving links, as the structure is the same for any RSS feed. We are working to get our crawler working by the end of this week and then integrate it to our website interface, which already has the data sending/retrieval working.

Our original plan is on track so far; we only had to push the button implementations for this week since we did not get the chance to finish them from last week's iteration. They are now fully working and we are working on our web crawler for this week's iteration. Since this is one of our main functionalities of our system, we decided it was better to start working on that as soon as we could.

We are having two weekly meetings in addition to the course's tutorial and it is working pretty well for our group so far. If it was not possible to meet in person, we would meet online on Google Hangouts. We have updated our user stories (immensely) from Phase 1.

- We added multiple roles to our user stories. The researcher and the graduate student more or less have the same functionality, with the differences being the researcher actually controls the sources and keywords.
- Acceptance criteria is including in each user story.
- Business priorities were changed. We are now using a 1-5 scaling, with 1 being the highest priority and 5 being the lowest priority.

Our release plan was redone to now do weekly iterations rather than 2 week iterations. Our librarian programmer persona was recently added and currently one user story is created for him, but we will continually develop this role and incorporate it into our project. We now believe we are on right track on our project development. Our main goals are to get the basic features done first (get the website up and running), then work on some elaborate ones (web crawling, saving and displaying) and finish off with nice-to-have features (log in).

Attached you will find a screenshot of our Website interface and one from our crawler running.

[Web Crawler](#) [Home](#) [About](#)

## News Investigator

[Add Source](#)[Get Sources](#)[Add Keyword](#)[Get Keywords](#)[Delete Keyword](#)

```
Command Prompt
C:\Users\... \Desktop\c01\Crawler\webcrawl\scrapy crawl nyt

2014-10-15 17:34:58-0400 [nytl] INFO: Closing spider <finished>
2014-10-15 17:34:58-0400 [nytl] INFO: Dumping Scrapy stats:
{'downloader/request_bytes': 249,
 'downloader/request_count': 1,
 'downloader/request_method_count/GET': 1,
 'downloader/response_bytes': 10191,
 'downloader/response_count': 1,
 'downloader/response_status_count/200': 1,
 'finish_reason': 'finished',
 'finish_time': datetime.datetime(2014, 10, 15, 21, 34, 58, 535000),
 'item_scraped_count': 25,
 'log_count/DEBUG': 20,
 'log_count/INFO': 7,
 'response_received_count': 1,
 'scheduler/dequeued': 1,
 'scheduler/dequeued/memory': 1,
 'scheduler/enqueued': 1,
 'scheduler/enqueued/memory': 1,
 'start_time': datetime.datetime(2014, 10, 15, 21, 34, 58, 254000)}
2014-10-15 17:34:58-0400 [nytl] INFO: Spider closed <finished>
```

## Iteration Plan

### Iteration Plan – Week 2 - Oct 10 - Oct 16

Legend:

- BP stands for Business Priority (The smaller the number, the higher the priority.)
- DD stands for Developer Days
- PD stands for Programming Days

Project Velocity:  $6 + 2(\text{previous iteration}) = 8$

### Tasks from Previous Iteration

1. Add action for the add source/get sources button so that it saves information in database (Kanwar) [PD2]
2. Add action for the add keyword/get keywords button so that it saves information in database (Kanwar) [PD2]

### User Stories Implemented in this Iteration

1. User Story #8 (#8.1 and #8.2) [BP1 DD4]:  
As Alejandro (a researcher), I want to be able to see all the articles from a news source with the given keywords, so that I can better quantify my research.  
As Alex (a grad student), I want to be able to see all the articles from a news source with the given keywords, so that I can better quantify my research.  
Tasks:
  - 1) Use the Scrapy library to get the information (link and title) from a website and store the results in a JSON file (Samson) [PD2]
  - 2) Grab sources from the database as parameters to the crawl (Samson) [PD1]
  - 3) Save the result of the crawl to the database (Samson) [PD1]
2. User Story #13 (#13.1 and #13.2) [BP1 DD2]:  
As Alejandro (a researcher), I want to save the results of the web crawl to a database, so that I can access the data at a later date and provide more data for the librarian to extract.  
As Alex (a grad student), I want to save the results of the web crawl to a database, so that I can access the data at a later date and provide more data for the librarian to extract.  
Tasks:
  - 1) Using that JSON file save it in the database in a new table (Kanwar) [PD1]
  - 2) Display the information in the front-end using CouchDB's HTTP API (Kenny) [PD1]
3. User Story #7 [BP3 DD1]:  
As Alejandro (a researcher), I want to be able to delete the sources and keywords monitored by the program, so that I can exclude irrelevant news sources.  
Tasks:
  - 1) Add action for the delete keyword and delete source (Kanwar) [PD1]

## Task Board

Please see our Trello page ("CSCC01 Team 16") for the Task Board. If you do not have access to it, please contact one of the team members.

## Burndown Chart

Please visit the following page for the burndown chart.

<https://www.burndownfortrello.com/share/iq8ugmsnxt>

## CRC Model

abstract		User	
User		Grad Student	
name login viewTable viewGraph	Table, Graph	requestSources viewTwitterInfo	News Source
Researcher		Librarian	
User		User	
addSources addKeywords addTwitterHandle deleteSources deleteKeywords grantPermissions viewTwitterInfo	Article Crawler, News Source, Keyword List, Twitter Handle List, Twitter Crawler	exportData	Article Parser
Hyperlink		Mention	
url newsSource	Article Parser, Article	newsSource	ArticleParser
Quote		News Source	
newsSource	Article Parser	url twitterHandle articleList	Grad Student, Researcher, Article, Twitter Handle List
Article		Twitter Handle List	
name url hyperlinkList quoteList mentionList	News Source, Keyword List, Hyperlink, Quote, Mention	name	Twitter Crawler,

Table		Graph	
displayRelationships getData	User, Article Parser	drawGraph getData	Table, Twitter Crawler, User
Keyword List		Article Crawler	
keywords	Article	findArticles	News Source, Article, Keyword List
Article Parser		Twitter Crawler	
findHyperlink findMention findQuote formatData	Hyperlink, Mention, Quote, Table, Librarian	findTweets	Twitter Handle List, Keyword List

## Improving on Phase 1

### Personas

Dr. Alejandro Paz – Researcher



Dr. Alejandro Paz, 30 years, is an Assistant Professor of Anthropology at the University of Toronto Scarborough. He is a calm and serene man, with a relaxed personality. He doesn't have a strict routine since he believes that life may be enjoyed along with work duties. Besides his teaching and researching duties, he usually plays soccer and baseball in his neighbourhood at Scarborough.

Dr. Paz has graduate affiliations in the departments of Anthropology and Linguistics, teaching courses in both departments. His researches include a variety of topics, including Language in Transnational and Global Contexts, Media and Publics, Translation and Commensuration, Pragmatics and Interaction and Israel in the Middle East. His current works are based on extensive ethnographic, archival and linguistic fieldwork in Israel and Palestine.

Since Dr. Paz doesn't have a strict routine as a professor and researcher, when he is not teaching he can be either in his research lab in the Anthropology departments where he manages a research team with a graduate student or at his house, where he has a huge office to work on his researches from home.

Dr. Paz has great computer skills, being able to easily answer emails and write notes through his iPhone, and use a variety of computer software packages to collect, analyze and organize information and data in his MacBook, which he then present to other members of his department, either in a written report or oral presentation. He is also very familiar with websites and browsers, since the core of his researches are based on web-displayed information.

One of Dr. Paz's main needs now is to be able to stay updated in the world's ethnographic and transnational news and conflicts. Not only to be aware of what is happening but also to have reliable sources so that he can work through some of them in order to develop his researches. He needs a software that connects news sources in such a way that both the connection between the news and the sources are strictly reliable, coming from well-known news agencies and serious journalists. According to Dr. Paz, that would increase the productivity of his researches and be a valuable tool for his department in the future.

#### Alex Ferguson – Graduate Student



Alex Ferguson, 25 years, is a Graduate Student of the Anthropology Department at the University of Toronto Scarborough. He has a serious personality and is very hard-working and energetic. He always wants to be on schedule and get things done, no matter how hard he has to work on them. One of his main hobbies is fishing, which he believes is a good way to free his mind from his intense work scheduling.

Mr. Ferguson got a BSc in Anthropology at University of British Columbia. He was awarded as Alumni student for being outstanding scholarly during his undergraduate years. He specialized in Socio-Cultural Anthropology, emphasizing his interests in Middle East region.

Currently working with Dr. Alejandro Paz at the Anthropology Department at UTSC, Alex's main responsibilities involve defining research parameters and expanding the knowledge of that research field by discovering a unique approach to different global conflicts/news to help Dr. Paz in his projects.



That requires a lot of time looking for trustable sources and reliable connections between them to make resourceful articles.

With good skills in computer usage, being able to use applications to manage his researches such as word processors and web browsers, Alex's work would be facilitated by a software that could make those connections between news sources and crawl the web looking for specific keywords and news relationships that would help him build solid articles for Dr. Paz to work in.

#### Andrew Stanley – Librarian



Andrew is a 33-year-old librarian. He is a very systematic person and can seem aggressive to any person or object not following his methods of organization. Though uptight about procedures, he does not mind not having a set routine of tasks, as long as everything he does is neat, efficient, and can be documented up to his standards. Andrew is single, and whenever he isn't working at the university library, he is usually keeping up with the news and researching new occurrences brought up in them.

Andrew works in a library at a university, ensuring everything is in its proper space, which is very important in his setting. All materials must be in its proper section to better cater to the students, and he must also know this system completely, in order to answer questions from them quickly and accurately.

While the majority of the books in his current workplace are in English and of purely academic nature, Andrew previously worked in a public library, where he was exposed to many books of a variety of backgrounds and languages while he was returning them to their proper shelves, and read any he found interesting. This majorly contributed to the many languages Andrew can communicate in, some very fluently. It also contributed to the many cultures and activities in the world, sparking his interest to how they form or link together.

The library systems are mainly on a computer, which Andrew has learned to be very skilled with. He is always at one of the administrative library computers during work unless he is returning books, even staying at his post while eating lunch. He has also taken to using his computer skills off work to read the news and research on the web, which he finds fascinating at the volume of information on it.

### Robert Queen – Librarian Programmer



Robert is a 27-year-old programmer currently working at University of Toronto's library. He is a systematic worker and wants to have an organized environment to work in. Usually, Robert has a routine of tasks to perform on library's systems and he always want them to be efficient and well documented in maintainable standards. He is single and likes to swim when he is not working on codes and library duties.

Robert's main tasks are to extend, maintain and improve the functionality of the library systems. He has to ensure that all systems are working properly and are efficiently used. In that way, Robert has an extensive knowledge about the systems and is responsive to give all support to the librarians in terms of its usage.

Graduated in Computer Science at University of Waterloo and having completed a voluntary work at the city's public library, Robert has a background of a library's environment and how their software help them serve the customers in a better way. He values the importance of maintainable software and contributes to keep them well documented and organized to facilitate eventual contributors work.

With great skills in web programming and object-oriented languages, Robert can easily identify and solve issues related to the library system's code. He has an extensive knowledge of software engineering best practices and always uses them during his work duties. Also, as one of his main tasks, he is a very good tester and is responsive for the quality assurance of the library's systems. He does not mind to work on other people's code, as long as they follow good practices of programming and document well their work.

## User Stories

User Story Number, Business Priority (BP) & Developer Days Estimate (DD)	Description
<b>1</b> BP4 DD1	<p>As Alejandro (a researcher), I want different permissions levels for the users, so that they only have access to the functions they require for the execution of their duties.</p> <ul style="list-style-type: none"> <li>- Only an admin can grant admin rights</li> <li>- Researcher will be granted admin (add, modify, delete) access</li> <li>- Grad student, and librarian will be granted edit/read/add access</li> </ul> <p><u>Acceptance criteria:</u> Librarian can't remove sources, e.g.</p>
<b>2</b> BP4 DD2	<p>As Alex (a grad student), I want to request a list of sources to monitor, so that I can expand the number of sources monitored by my research.</p> <ul style="list-style-type: none"> <li>- Only a researcher can approve the request</li> <li>- The researcher will get a notification of the request in real-time</li> </ul> <p><u>Acceptance criteria:</u> A list of sources to monitor is created and is readable.</p>
<b>3.1</b> BP3 DD1	<p>As Alejandro (a researcher), I want to be able to create an account using a form, so that I can access the program properly.</p> <p>Rectangular box containing the following info:</p> <ul style="list-style-type: none"> <li>- Username and Password</li> <li>- Link for signing up</li> <li>- Link for "Forgot Password"</li> </ul> <p><u>Acceptance criteria:</u> An account is created and can access the program properly.</p>
<b>3.2</b> BP3 DD1	<p>As Alex (a grad student), I want to be able to create an account using a form, so that I can access the program properly.</p> <p>Rectangular box containing the following info:</p> <ul style="list-style-type: none"> <li>- Username and Password</li> <li>- Link for signing up</li> <li>- Link for "Forgot Password"</li> </ul> <p><u>Acceptance criteria:</u> An account is created and can access the program properly.</p>
<b>3.3</b> BP3 DD1	<p>As Andrew (a librarian), I want to be able to create an account using a form, so that I can access the program properly.</p> <p>Rectangular box containing the following info:</p> <ul style="list-style-type: none"> <li>- Username and Password</li> <li>- Link for signing up</li> <li>- Link for "Forgot Password"</li> </ul> <p><u>Acceptance criteria:</u> An account is created and can access the program properly.</p>

<p><b>4.1</b> BP3 DD1</p>	<p>As Alejandro (a researcher), I want to be able to log in and out of my account, so that I can access the program properly.</p> <ul style="list-style-type: none"> <li>- Display an informational message if the username is not recognized</li> <li>- Lock the account if the password is entered incorrectly five times</li> </ul> <p><u>Acceptance criteria:</u> The user can log in into the program and access it properly.</p>
<p><b>4.2</b> BP3 DD1</p>	<p>As Andrew (a librarian), I want to be able to log in and out of my account, so that I can access the program properly.</p> <ul style="list-style-type: none"> <li>- Display an informational message if the username is not recognized</li> <li>- Lock the account if the password is entered incorrectly five times</li> </ul> <p><u>Acceptance criteria:</u> The user can log in into the program and access it properly.</p>
<p><b>4.3</b> BP3 DD1</p>	<p>As Alex (a grad student), I want to be able to log in and out of my account, so that I can access the program properly.</p> <ul style="list-style-type: none"> <li>- Display an informational message if the username is not recognized</li> <li>- Lock the account if the password is entered incorrectly five times</li> </ul> <p><u>Acceptance criteria:</u> The user can log in into the program and access it properly.</p>
<p><b>5.1</b> BP1 DD3</p>	<p>As Alejandro (a researcher), I want to be able to add sources to the program, so that I can increase and accommodate the new sources needed by my research.</p> <ul style="list-style-type: none"> <li>- Add it one at a time or specify a list of comma-separated URLs</li> <li>- Ensure it's a valid URL</li> <li>- Ensure the news source is not already in the list of sources</li> </ul> <p><u>Acceptance criteria:</u> The source is added to the list of monitored sources by the program.</p>
<p><b>5.2</b> BP1 DD3</p>	<p>As Alex (a grad student), I want to be able to add sources to the program, so that I can increase and accommodate the new sources needed by my research.</p> <ul style="list-style-type: none"> <li>- Add it one at a time or specify a list of comma-separated URLs</li> <li>- Ensure it's a valid URL</li> <li>- Ensure the news source is not already in the list of sources</li> </ul> <p><u>Acceptance criteria:</u> The source is added to the list of monitored sources by the program.</p>
<p><b>6.1</b> BP1 DD2</p>	<p>As Alejandro (a researcher), I want to be able to specify the list of keywords that I want to monitor in the list of given news sources, so that I can get the information on the relationships between these news sources needed to complete my research.</p> <ul style="list-style-type: none"> <li>- Add it one at a time or specify a list of comma-separated words</li> <li>- Ensure that the length of the keyword is not 0</li> <li>- Ensure that the keyword doesn't contain anything except a-z or space or hyphen. Example: "test;" won't be allowed.</li> </ul> <p><u>Acceptance criteria:</u> A keyword, for example "Israel", is added to the list. A keyword, for example ";Israel", isn't added to the list.</p>

<p><b>6.2</b></p> <p>BP1 DD2</p>	<p>As Alex (a grad student), I want to be able to specify the list of keywords that I want to monitor in the list of given news sources, so that I can get the information on the relationships between these news sources needed to complete my research.</p> <ul style="list-style-type: none"> <li>- Add it one at a time or specify a list of comma-separated words</li> <li>- Ensure that the length of the keyword is not 0</li> <li>- Ensure that the keyword doesn't contain anything except a-z or space or hyphen. Example: "test;" won't be allowed.</li> </ul> <p><u>Acceptance criteria:</u> A keyword, for example "Israel", is added to the list. A keyword, for example ";Israel", isn't added to the list.</p>
<p><b>7</b></p> <p>BP3 DD1</p>	<p>As Alejandro (a researcher), I want to be able to delete the sources monitored by the program, so that I can exclude irrelevant news sources.</p> <ul style="list-style-type: none"> <li>- Ensure the role has admin privilege</li> <li>- Have a cross button beside the news source for easy deletion</li> <li>- Remove the news source from the interface or show it as a strikethrough</li> </ul> <p><u>Acceptance criteria:</u> The source is removed (or strikethrough-ed) when you click on the cross button.</p>
<p><b>8.1</b></p> <p>BP1 DD4</p>	<p>As Alejandro (a researcher), I want to be able to see all the articles from a news source with the given keywords, so that I can better quantify my research.</p> <ul style="list-style-type: none"> <li>- Ensure only articles containing the defined keywords are displayed</li> <li>- Display the result in a tabular format for easy viewing</li> <li>- Display the number of hits i.e. the articles containing the given keywords for analysis purposes</li> </ul> <p><u>Acceptance criteria:</u> Articles with the defined keywords are displayed in a table</p>
<p><b>8.2</b></p> <p>BP1 DD4</p>	<p>As Alex (a grad student), I want to be able to see all the articles from a news source with the given keywords, so that I can better quantify my research.</p> <ul style="list-style-type: none"> <li>- Ensure only articles containing the defined keywords are displayed</li> <li>- Display the result in a tabular format for easy viewing</li> <li>- Display the number of hits i.e. the articles containing the given keywords for analysis purposes</li> </ul> <p><u>Acceptance criteria:</u> Articles with the defined keywords are displayed in a table</p>
<p><b>9.1</b></p> <p>BP1 DD5</p>	<p>As Alejandro (a researcher), I want to see all the hyperlinks to other news sources for a particular article, so that I can better understand the relationships.</p> <p><u>Acceptance criteria:</u> Upon clicking on an article in the table, a list of specified Israeli-English sources that appeared from the article through a hyperlink will be shown.</p>
<p><b>9.2</b></p> <p>BP1 DD5</p>	<p>As Alex (a grad student), I want to see all the hyperlinks to other news sources for a particular article, so that I can better understand the relationships.</p> <p><u>Acceptance criteria:</u> Upon clicking on an article in the table, a list of specified Israeli-English sources that appeared from the article through a hyperlink will be shown.</p>

<p><b>10.1</b></p> <p>BP2 DD5</p>	<p>As Alejandro (a researcher), I want to see all the quotes in a particular article, so that I can better understand the relationships.</p> <p><u>Acceptance criteria:</u> Upon clicking on an article in the table, a list of specified Israeli-English sources that appeared from the article through a quote will be shown.</p>
<p><b>10.2</b></p> <p>BP2 DD5</p>	<p>As Alex (a grad student), I want to see all the quotes in a particular article, so that I can better understand the relationships.</p> <p><u>Acceptance criteria:</u> Upon clicking on an article in the table, a list of specified Israeli-English sources that appeared from the article through a quote will be shown.</p>
<p><b>11.1</b></p> <p>BP2 DD5</p>	<p>As Alejandro (a researcher), I want to see all the mentions to other news sources for a particular article, so that I can better understand the relationships.</p> <p><u>Acceptance criteria:</u> Upon clicking on an article in the table, a list of specified Israeli-English sources that appeared from the article through a mention will be shown.</p>
<p><b>11.2</b></p> <p>BP2 DD5</p>	<p>As Alex (a grad student), I want to see all the mentions to other news sources for a particular article, so that I can better understand the relationships.</p> <p><u>Acceptance criteria:</u> Upon clicking on an article in the table, a list of specified Israeli-English sources that appeared from the article through a mention will be shown.</p>
<p><b>12</b></p> <p>BP1 DD4</p>	<p>As Andrew (a librarian), I want to be able to export the data to best practice formats, so that I can ensure compatibility and archive the data for future use.</p> <p><u>Acceptance criteria:</u> After logging in, click on the export button to save the results of the most recent search (the librarian can specify a time interval as well). The application will prompt the librarian to save the data to the computer.</p>
<p><b>13.1</b></p> <p>BP1 DD2</p>	<p>As Alejandro (a researcher), I want to save the results of the web crawl to a database, so that I can access the data at a later date and provide more data for the librarian to extract.</p> <ul style="list-style-type: none"> <li>- news source</li> <li>- url or screenshot</li> <li>- article name</li> <li>- number of times it references articles</li> <li>- number of times it is being referenced</li> <li>- date article created</li> <li>- author</li> <li>- any relevant keywords</li> </ul> <p><u>Acceptance criteria:</u> After doing a web crawl, click on the save results button to place the data in the database.</p>

<p><b>13.2</b></p> <p>BP1 DD2</p>	<p>As Alex (a grad student), I want to save the results of the web crawl to a database, so that I can access the data at a later date and provide more data for the librarian to extract.</p> <ul style="list-style-type: none"> <li>- news source</li> <li>- url or screenshot</li> <li>- article name</li> <li>- number of times it references articles</li> <li>- number of times it is being referenced</li> <li>- date article created</li> <li>- author</li> <li>- any relevant keywords</li> </ul> <p><u>Acceptance criteria:</u> After doing a web crawl, click on the save results button to place the data in the database.</p>
<p><b>14.1</b></p> <p>BP2 DD4</p>	<p>As Alejandro (a researcher), I want to see the results of the web crawl in a table, so that I obtain an overall status/general report.</p> <ul style="list-style-type: none"> <li>- user story can also pertain the grad student as well</li> </ul> <p><u>Acceptance criteria:</u> After logging in, click display data button to display the contents of the database in table format.</p>
<p><b>14.2</b></p> <p>BP2 DD4</p>	<p>As Alex (a grad student), I want to see the results of the web crawl in a table, so that I obtain an overall status/general report.</p> <ul style="list-style-type: none"> <li>- user story can also pertain the grad student as well</li> </ul> <p><u>Acceptance criteria:</u> After logging in, click display data button to display the contents of the database in table format.</p>
<p><b>15.1</b></p> <p>BP3 DD3</p>	<p>As Alejandro (a researcher), I want to filter the results of the table, so that I can be more efficient in my analysis/research on the data.</p> <ul style="list-style-type: none"> <li>- filter by news source [drop down]</li> <li>- - filter by keywords [drop down]</li> </ul> <p><u>Acceptance criteria:</u> While looking through the data table, type in keyword/news source in textbox and click filter button to show only relevant data.</p>
<p><b>15.2</b></p> <p>BP3 DD3</p>	<p>As Alex (a grad student), I want to filter the results of the table, so that I can be more efficient in my analysis/research on the data.</p> <ul style="list-style-type: none"> <li>- filter by news source [drop down]</li> <li>- - filter by keywords [drop down]</li> </ul> <p><u>Acceptance criteria:</u> While looking through the data table, type in keyword/news source in textbox and click filter button to show only relevant data.</p>

<p><b>16.1</b></p> <p>BP3 DD3</p>	<p>As Alejandro (a researcher), I want to search the results of the table, so that I can be more efficient in my analysis/research on the data.</p> <ul style="list-style-type: none"> <li>- search by article name</li> <li>- search by keywords</li> <li>- search by author</li> </ul> <p><u>Acceptance criteria:</u> While looking through the data table, type in keywords/article name/author and sort by the relevance of the data.</p>
<p><b>16.2</b></p> <p>BP3 DD3</p>	<p>As Alex (a grad student), I want to search the results of the table, so that I can be more efficient in my analysis/research on the data.</p> <ul style="list-style-type: none"> <li>- search by article name</li> <li>- search by keywords</li> <li>- search by author</li> </ul> <p><u>Acceptance criteria:</u> While looking through the data table, type in keywords/article name/author and sort by the relevance of the data.</p>
<p><b>17.1</b></p> <p>BP4 DD2</p>	<p>As Alejandro (a researcher), I want to sort the results of the table, so that I can be more efficient in my analysis/research on the data.</p> <ul style="list-style-type: none"> <li>- sort by number of times it references articles from monitored sources</li> <li>- sort by number of times it is being referenced</li> <li>- sort by date article created</li> </ul> <p><u>Acceptance criteria:</u> While looking through the data table, select a sort option from a box of radio buttons and sort the table by that method.</p>
<p><b>17.2</b></p> <p>BP4 DD2</p>	<p>As Alex (a grad student), I want to sort the results of the table, so that I can be more efficient in my analysis/research on the data.</p> <ul style="list-style-type: none"> <li>- sort by number of times it references articles from monitored sources</li> <li>- sort by number of times it is being referenced</li> <li>- sort by date article created</li> </ul> <p><u>Acceptance criteria:</u> While looking through the data table, select a sort option from a box of radio buttons and sort the table by that method.</p>
<p><b>18.1</b></p> <p>BP2 DD3</p>	<p>As Alejandro (a researcher), I want to view each article being referenced over time in a line graph, so that I am more efficient in my analysis of the data.</p> <ul style="list-style-type: none"> <li>- article on y-axis</li> <li>- time on x-axis</li> </ul> <p><u>Acceptance criteria:</u> A line graph is displayed for a particular article of the user's choice, showing the number of times it has been referenced every day by our source list.</p>



<p><b>18.2</b></p> <p>BP2 DD3</p>	<p>As Alex (a grad student), I want to view each article being referenced over time in a line graph, so that I am more efficient in my analysis of the data.</p> <ul style="list-style-type: none"> <li>- article on y-axis</li> <li>- time on x-axis</li> </ul> <p><u>Acceptance criteria:</u> A line graph is displayed for a particular article of the user's choice, showing the number of times it has been referenced every day by our source list.</p>
<p><b>19.1</b></p> <p>BP1 DD3</p>	<p>As Alejandro (a researcher), I want to see how sources are being referenced in a directed graph, where the nodes are the articles, and the edge representing an article referencing another article, so that I can analyze the data and understand how sources are being referenced.</p> <p><u>Acceptance criteria:</u> A directed graph is displayed, with every article having an outward edge to any articles it references.</p>
<p><b>19.2</b></p> <p>BP1 DD3</p>	<p>As Alex (a grad student), I want to see how sources are being referenced in a directed graph, where the nodes are the articles, and the edge representing an article referencing another article, so that I can analyze the data and understand how sources are being referenced.</p> <p><u>Acceptance criteria:</u> A directed graph is displayed, with every article having an outward edge to any articles it references.</p>
<p><b>20.1</b></p> <p>BP1 DD1</p>	<p>As Alejandro (a researcher), I want to add a list of Twitter handles to monitor, so that I can accommodate the expanding needs of my research.</p> <p><u>Acceptance criteria:</u> A list of Twitter handles is created, and is readable</p>
<p><b>20.2</b></p> <p>BP1 DD1</p>	<p>As Alex (a grad student), I want to add a list of Twitter handles to monitor, so that I can accommodate the expanding needs of my research.</p> <p><u>Acceptance criteria:</u> A list of Twitter handles is created, and is readable</p>
<p><b>21.1</b></p> <p>BP1 DD2</p>	<p>As Alejandro (a researcher), I want to see the number of tweets by people on a topics with certain keywords, so that I can see which topic is the most famous.</p> <ul style="list-style-type: none"> <li>- timeline for x-axis</li> <li>- number of tweets on y-axis</li> </ul> <p><u>Acceptance criteria:</u> A line graph is displayed for a particular keyword of the user's choice, showing the number of times the topic has been tweeted from the list of twitter handles to monitor.</p>
<p><b>21.2</b></p> <p>BP1 DD2</p>	<p>As Alex (a grad student), I want to see the number of tweets by people on a topics with certain keywords, so that I can see which topic is the most famous.</p> <ul style="list-style-type: none"> <li>- timeline for x-axis</li> <li>- number of tweets on y-axis</li> </ul> <p><u>Acceptance criteria:</u> A line graph is displayed for a particular keyword of the user's choice, showing the number of times the topic has been tweeted from the list of twitter handles to monitor.</p>

<p><b>22</b></p> <p>BP1 DD1</p>	<p>As Alejandro (a researcher), I want to delete Twitter handles from the list, so that I can accommodate the expanding needs of my research.</p> <p><u>Acceptance criteria:</u> The Twitter handle specified by the user is removed from the monitor list and will no longer be monitored by the program</p>
<p><b>23</b></p> <p>BP1 DD1</p>	<p>As Robert (a librarian programmer), I want to have well documented code, so that I can easily extend and maintain the current system.</p> <p><u>Acceptance criteria:</u> The source code of the project follows good software engineering practices and it's easy to understand.</p>

## System Design

The best way to describe the application is an investigator.

- The investigator will get all the information from the researcher.
- The investigator will investigate the topic and look for information coming from other topics/people/sources.
- For the facts to be reliable they need to come directly from the source. The investigator will continue to search for other people until the original source is found.
- Once all the relationships between articles are found, the investigator will create a report for the researcher.
- The report can be shared with other people (with permission from the researcher), like graduate students, and also archived for future use.

## Release Plan

Please see our Trello page ("CSCC01 Team 16") for the Task Board. If you do not have access to it, please contact one of the team members.

## Release Plan Video

Our release plan video is located in the Git repository under "Course Related Items/Release Planning Video".