Potter Plots

Basic Information

Our project is called Potter Plots, an easy way to visualize the *Harry Potter* series and all of its interesting pieces. The project directory can be found [here](#).

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Background and Motivation

During class, Alex showed us a visualization that plotted the interactions of *Les Miserables* characters that clearly showed the different groups throughout the book. Jessica was very intrigued by this visualization. Being a huge *Harry Potter* fan, she wanted to do something like the *Les Miserables* visualization for *Harry Potter*. She thought it would be interesting to graphically see aspects of the series that people, including herself, have fallen in love with.

Project Objectives

There are currently few visualizations of the Harry Potter series that actually look at the content of the books. There are quite a few funny ones that look at [hotness through the movie series](#) or [the annoyingness of Harry through the series](#), but even less that

actually take a serious look at the source material. We thought it would be interesting to look at what J.K. Rowling herself wrote and see what that can tell us about the series.

In particular, we plan to provide an overview of all of the books, and then more detailed information for each book itself. We plan to show the spells, number of deaths, locations mentioned, word count, battles, and horcruxes present in each book. Showing these pieces of information that are essential to the the series will help anyone, whether fanatic or casual reader, get a deeper understanding of the series and the trends that occur throughout.

Being huge *Potter* fans ourselves, we are excited to find out correlations between books based on these details. We are particularly excited about showing horcruxes throughout the series. There has been much discussion on horcruxes and their location and owners throughout the series, but it will be interesting to see these in a timeline rather than just in text. Being able to use data that we are excited about will make this project a joy to work on and learn from.

Data

Our data primarily comes from the *Harry Potter* books themselves. We were able to find .txt files of each of the books from glozman.com. We plan on showing the earnings of the books and movies in our overview, so we will be using data from The Huffington Post for that.
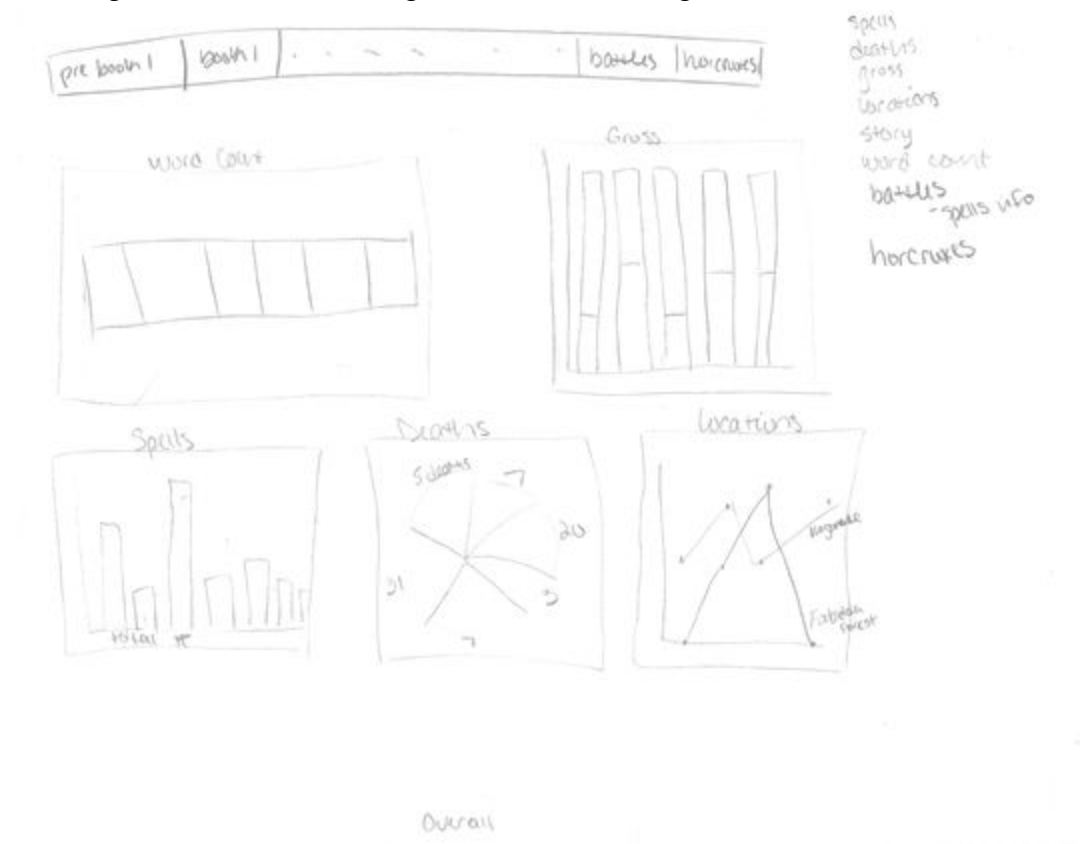
Data Processing

There are not really any places that has all of the data we plan on visualizing already defined, most likely the reason why there has not been visualizations on the series before now. We will be handling a lot of the processing ourselves in the first weeks of the project. We plan on finding the following information for each book:

- Spells Verbally Cast
- Deaths
- Locations Mentioned
- Characters and Interactions Per Chapter
- Word Count
- Battles (including who is battling and spells cast)
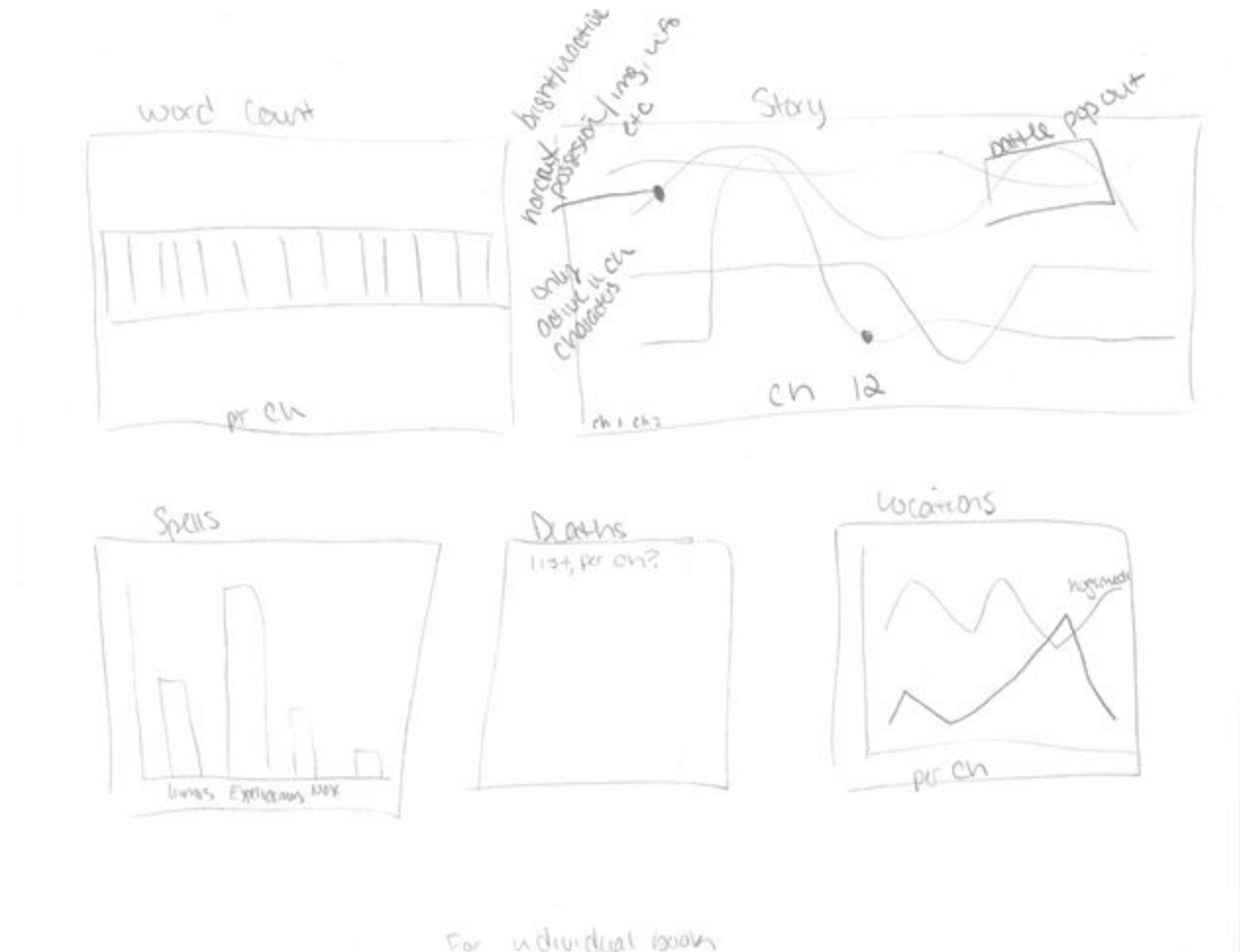- Horcruxes (locations and owners, if any)

We will be using other resources to help us find some of this information. Resources such as harrypotter.wikia.com will help us identify certain things that we should look for in our txt files. We can then use search functionalities in word processors to determine count of things occurring or more information on things that we determine are necessary for us to show.

Visualization Design

Sketch 1: This shows what a user would see when first visiting the site. At the top is a navigation bar, listing all of the different detailed views they could see. For the overall view, we would show each view by book. So each rectangle in the word count graph is for each book, a bar in the gross chart is for one book, etc. Each book and its information could be colored by the color the book is (*Sorcerer's Stone*: purple, *Chamber of Secrets:* red, *Prisoner of Azkaban:* teal, *Goblet of Fire:* brown, *Order of the Phoenix:* blue, *Half-Blood Prince*: green, *Deathly Hallows:* orange). Hovering over a book in the word count view will highlight the corresponding pieces in the other views. Clicking on a tab in the navigation bar will change the data to show the data for that tab.
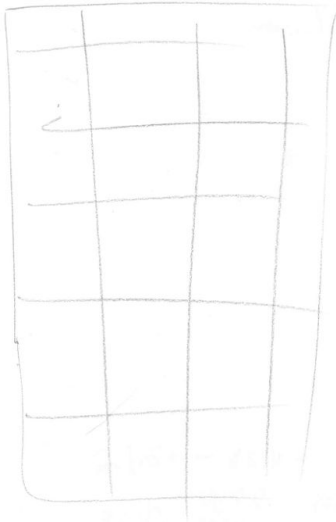
Sketch 2: This is the individual book view. It is very similar to the overall view, but with slight differences. Each view shows chapter information. Chapters are traversed by clicking on the chapter in the word count view. This changes the spells, deaths, locations, and story view. The story view shows the characters in each chapter and their interactions with each other. We may add horcrux and battle information here.
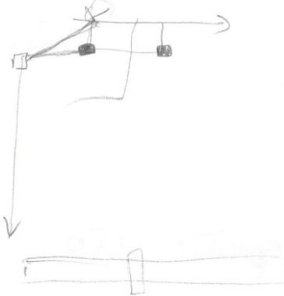
Sketch 3: An idea for how to show battles. This has battles in a matrix, with individual block making connections. These blocks would be coordinated by color determining overpower, winning, or even.
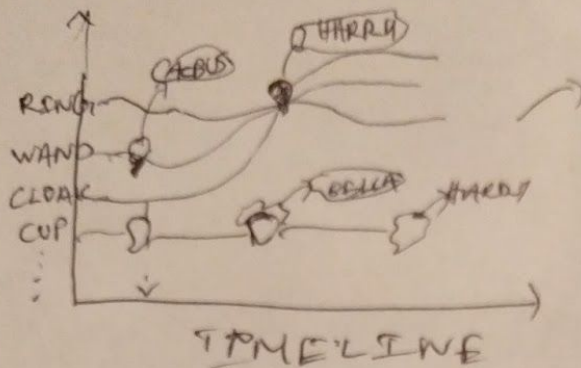
Battles

3 blocks

red - overpower
green - winning
yellow - even

gray out when lost/inactive
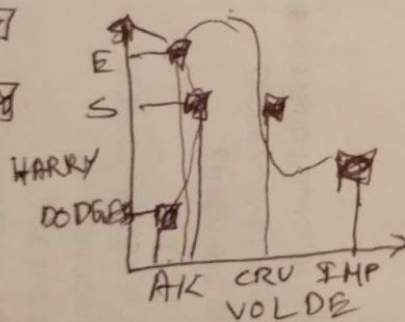
Spells

HORCRUXES & HALLOWS

RING
WAND
CLOAK
CUP

TIMELINE

CLICKING ON ONE
HIGHLIGHTS IT,
SHOWING
DETAILS OF EACH
PERSON WHEN
HOVERING OVER
ICON.

BATTLES IDEA #2

CH #1 | HARRY |
CH #2 | VOLDEMORT |

E
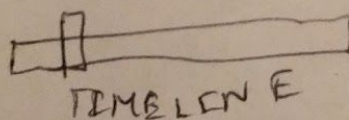S

HARRY
DODGES

AK   CRU   IMP
      VOLDE

BATTLES IDEA #3

SIDE 1
| HARRY |
RON
HERM
NEVILLE

SIDE 2
LUCIUS
BELLA
NOTT
| GOYLE |

STUP

CRUCIO   CRU

TIMELINE

Sketch 4: An idea for how to show possession of horcruxes and hallows. Each line represents a single item. Horcruxes are colored differently from hallows and a different color for intersections. The timeline is spit on events where the possession or state changes(active/destroyed). The possession is encoded by icons representing the person and a tooltip on hovering.
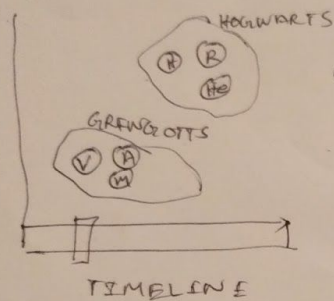
Sketch 5: An idea for how battles can be depicted where characters can be chosen using drop down boxes and the battle they fought against each other is visualised as a line graph where the axes have ticks which are the spells each character casts.

Sketch 6: An idea for how battles should be depicted where the characters are split into sides and are connected by spells they cast at each other. Characters are added and removed as they become active/inactive,

Sketch 7: An idea for how storyline should be depicted where the characters are circles which are grouped by the location they are in at that point in the timeline.
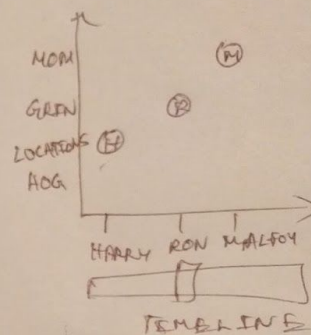
Sketch 8; An idea where importance of the characters is depicted by the number of mentions but this visualization would be bad because the mentioned are skewed in the dataset.
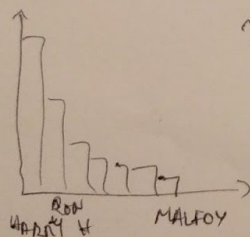
STORY LINE   IDEA ②

HOGWARTS
(H) (R)
(He)

GRINGOTTS
(V) (A)
(M)

CHARACTERS FADE
WHEN THEY ARE NOT
MENTIONED.

TIMELINE

STORYLINE IDEA #3

MOM   (M)
GRIN
LOCATIONS (H)   (R)
AOG

HARRY RON MALFOY

TIMELINE

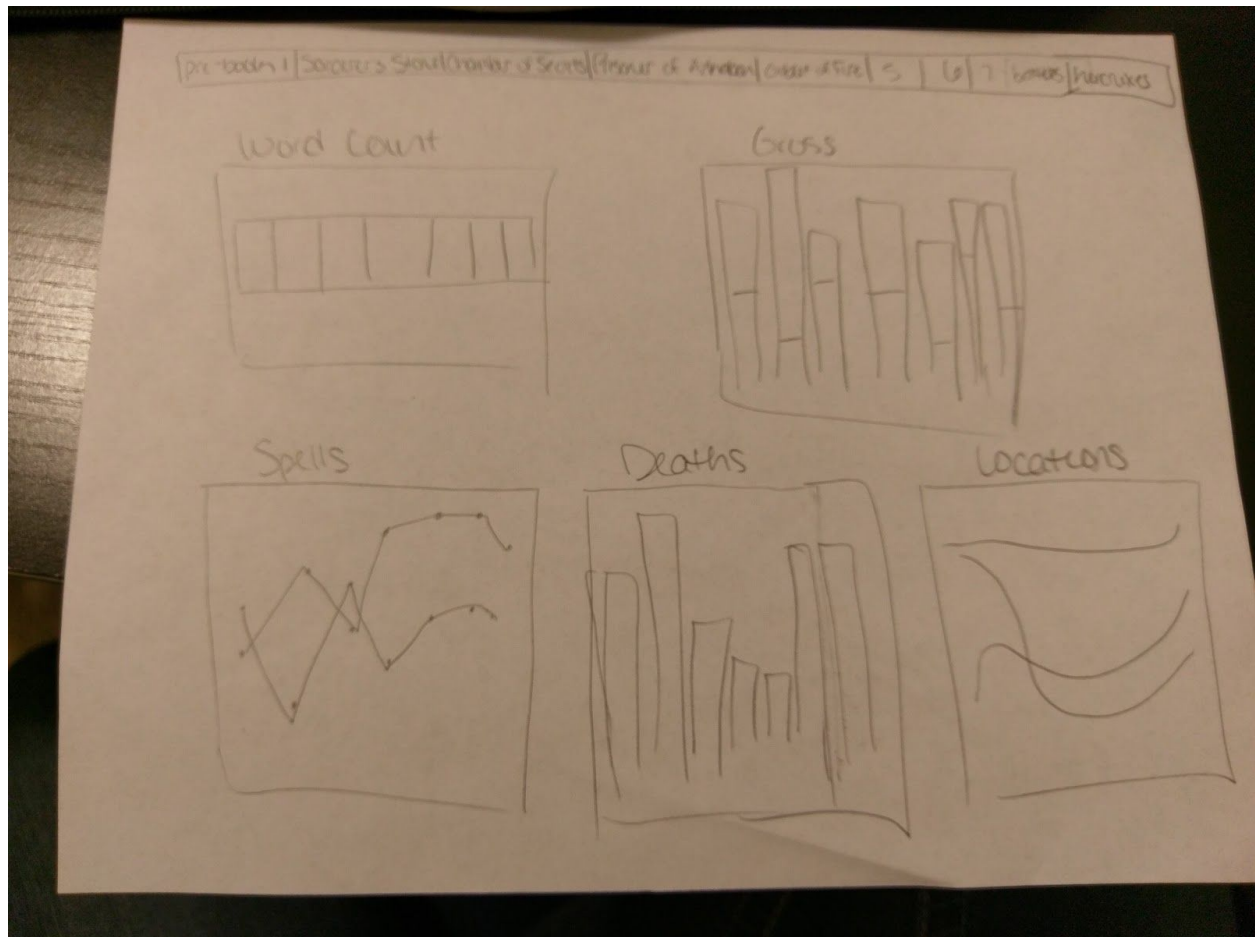CHARACTERS BY MENTIONS (IMPORTANCE)

RON
HARRY H   MALFOY

This would be
ineffective & would
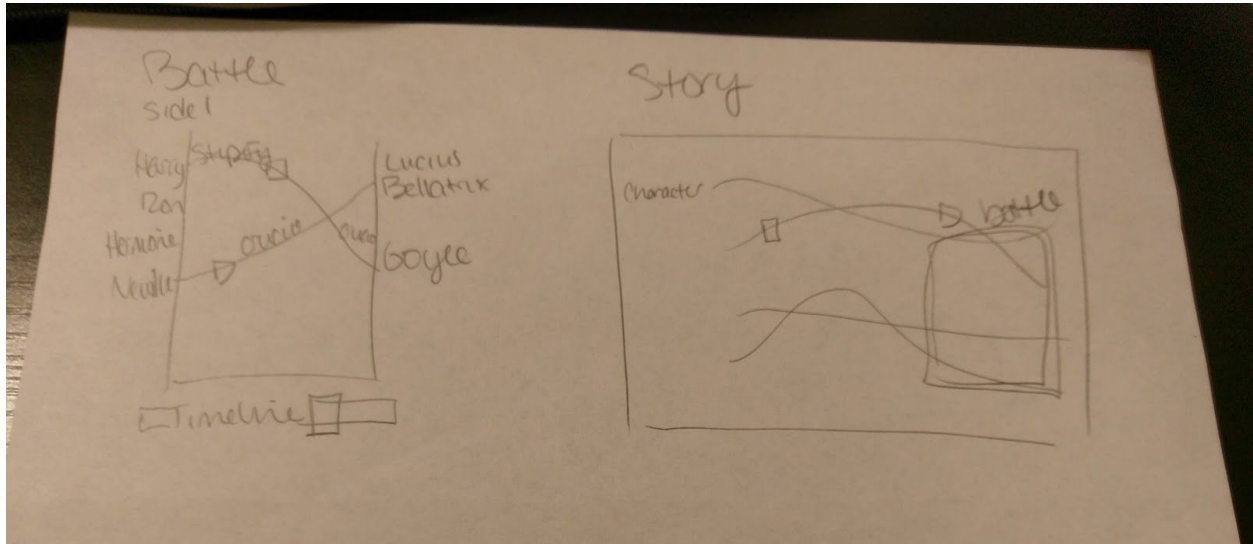not convey
much information

FINAL DESIGN:

Our final design incorporates the above sketches. We changed the bottom row of views because we thought that they would better showcase our data. Locations are shown with relation to other locations per each book, deaths are bar charts, and spells are shown as line charts. We thought this would make our data more readable.

We thought that the battle shown as two sides with spells being cast between them would be best to show the relation between characters. You can move through the battle with the timeline scale at the bottom to also get a sense of the duration of the battle. Our storyline view will have lines for each character interacting with each other, with icons for horcruxes and battles shown so users can find more information.

Must-Have Features

Overview of All Books
- Word Count
- Spell Count
- Number of Deaths
- Location Count
- Gross Revenue (Books + Movies)

For Individual Books
- Word Count per Chapter
- Spell Count
- Deaths
- Location Count
- Story and Character Tracking per Chapter

Optional Features

- Views for All Battles

- Views for All Horcruxes
- Views for Pre- *Sorcerer's Stone*
- Horcrux Information in Individual Book View
- Battle Information in Individual Book View
- Peverell Family Tree and Deathly Hallows View

Project Schedule

The schedule we have decided on for our project is as follows:
- Week of 10/24: Complete Project Proposal document and work on parsing data from the .txt files of the books. Jessica will work on spell count, character tracking per chapter, gross, and horcruxes. Srivatsan will work on word count, deaths, battle information, and location count. Pre-*Sorcerer's Stone* and Deathly Hallow information will be completed if extra time.
- Week of 10/30: Finish data compilation by 10/31. Start developing the website. Jessica will work on word count and spell views, while Srivatsan will work on navigation, death, and location views.
- Week of 11/6: Complete the rough layout of the website by the **first milestone** on 11/11.
- Week of 11/13: Work on fully fleshing out all data views other than the storyline view and work on process book.
- Week of 11/20: Finish all data views but storyline view by 11/20. Start working on storyline view and finishing up process book. Jessica will work primarily on the process book, but will help Srivatsan with the storyline view as needed.
- Week of 11/27: Finish storyline view by 11/28. Record screen capture on and finish process book by 11/30 and prepare for **final due date of 12/2**.