LING 120, Fall 2017
Language and Computers

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Class outline

1. Continuing from where we left
2. Review of Topic 4 (by asking more questions!)
3. Time to choose mid-term topics for teams

Grep and Egrep - tools to search large files/folders using regular expressions

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- Brief demo of using egrep:

```
egrep 'Stockmann' pg2446.txt
egrep '[[:digit:]]' pg2446.txt
egrep 'Petra|Horster' pg2446.txt
egrep 'Petra|Horster' pg2446.txt | wc
egrep 'th(e|i)s' pg2446.txt
egrep 'th(e|i)s*' pg2446.txt
```

Regular Expressions: Practice

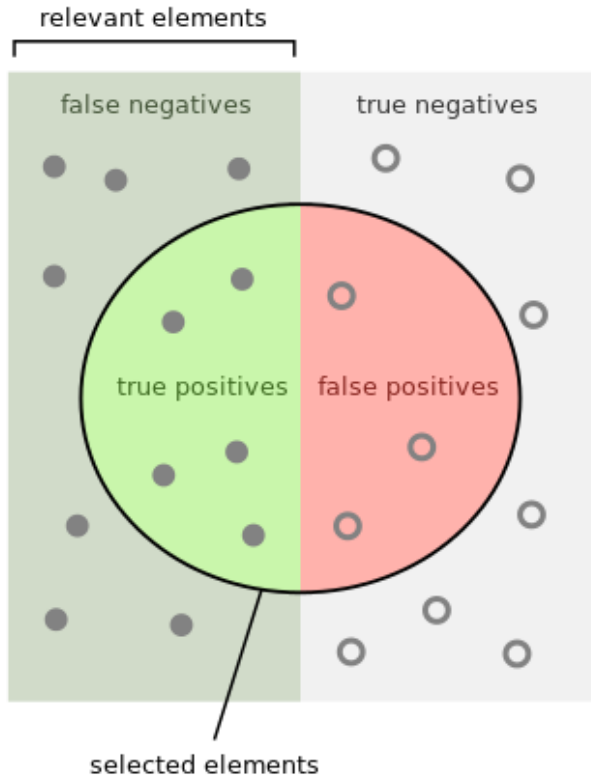
Work in groups of 3 people, download pg2446.txt from `https://goo.gl/gSnhGD`, and answer the following questions using regular expressions.

- Whose name occurs more at the beginning of a line - Dr Stockmann or Mrs Stockmann? How many times?
- What is the difference between *egrep 't.s' pg2446.txt* and *egrep 't.*s' pg2446.txt*?
- In general, what will the pattern *joh?n* identify? How will you verify?
- What will *egrep -o 'Stockmann' pg2446.txt* do? Why? What happens if you remove the -o?
- How many times do Stockmann and Petra appear in the same line in this file?

Note: Regular expressions cheatsheets, egrep help can be found by searching online.

Review: Precision and Recall

source: Wikipedia page on the topic: `https://goo.gl/4gdNRd`



How many selected items are relevant?

Precision =

How many relevant items are selected?

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Review: Precision and Recall

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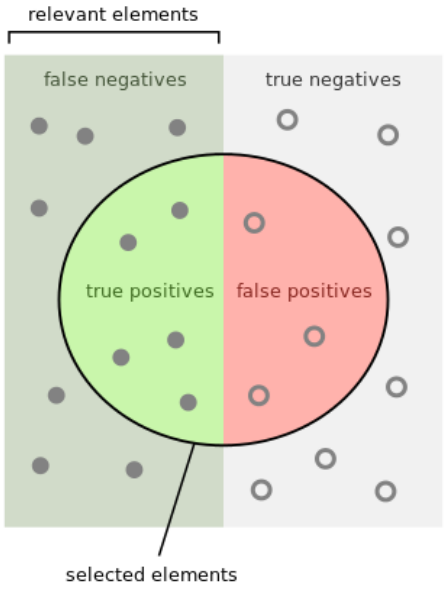

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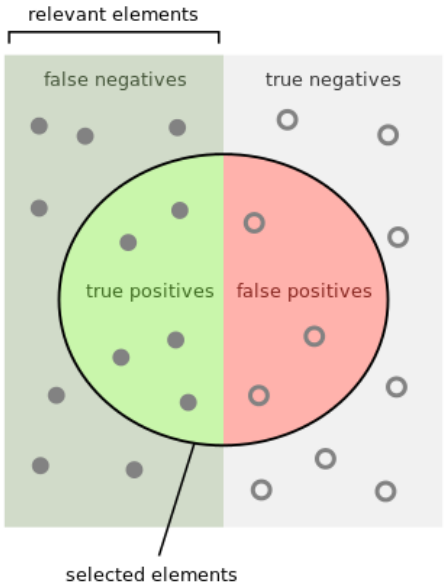

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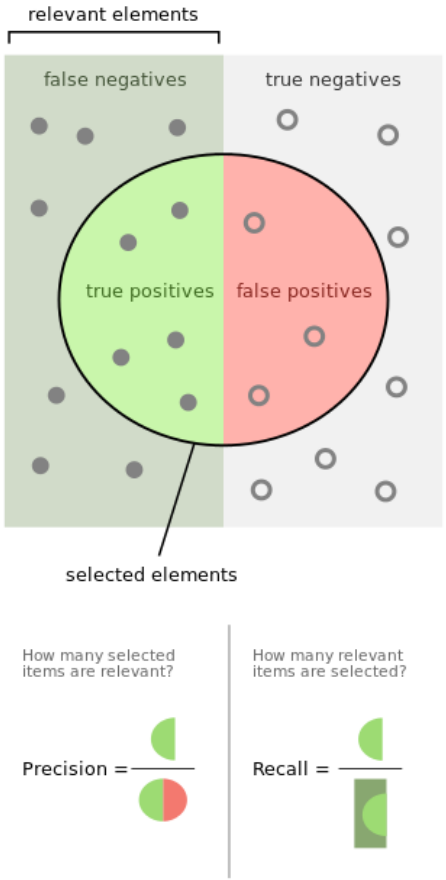

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- Identifying cases where a cancer curing drug has a side effect of nausea
- Identifying cases where a cancer curing drug has a side effect of death
- Let us say there is a Zombie apocalypse and you are building a safe zone for the non-Zombies. What is a high recall scenario here? What is desirable?

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- Why google does not support a full fledged regular expression search

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- Why google does not support a full fledged regular expression search
  - `https://www.youtube.com/watch?v=lYiTIDgejas`
- There used to be a Code Search platform by Google which indexed publicly accessible software code - that allowed regular expression search.

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- Professional world: Software engineers, Search Engine Optimizers (yes, that is a title!), Search/Ad relevance evaluators, etc.

Today's attendance exercise

- Group according to your mid-term teams.
- Look at the list of topics and choose one for your team after discussion.
- Start thinking about how to distribute work, what to present etc.
- Return your topic choice along with team member names to me - that is your attendance for today.
- People who are absent today will just not participate in choosing. Don't worry about that.

Next Week

- Introduction to Natural Language Processing - language related issues that trouble a computer
- No assigned readings!
- Start working on Assignment 3
- Start thinking about your mid-term presentation