

1. **User cannot always access the toolbar (containing highlight, notetaking, ect) at all times**
 - a. Severity: Major
 - b. Nielson Heuristics: User control & Freedom, Consistency
 - c. Details: It would be much better if the user was allowed to edit the document at all times without first having to highlight the text to bring up the editing toolbar. Also, if you want to add notes to a specific spot it is hard to tell whether the notes will start after or before the highlighted text.
2. **Hard to tell whether a user is currently editing the page or not**
 - a. Severity: Major
 - b. Nielson Heuristics: Visibility
 - c. Details: Without reading some tutorial/documentation on it, the typical user wouldn't realize a box with an orange dashed border signaled that someone else was editing the page. They would be confused why they wouldn't be able to edit the page. A solution to this problem could be to write "Bob is editing..." at the top of that box or something similar.

LISP redirects here. For the Internet protocol, see [Locator/Identifier Separation Protocol](#).

Lisp (historically, LISP) is a family of **computer programming languages** with a long history and a distinctive, fully parenthesized **Polish prefix notation**.^[1] Originally specified in 1958, Lisp is the second-oldest **high-level programming language** in widespread use today; only **Fortran** is older (by one year). Like Fortran, Lisp has changed a great deal since its early days, and a number of **dialects** have existed over its history. Today, the most widely known general-purpose Lisp dialects are **Common Lisp**, **Scheme**, and **Clojure**.

Lisp was originally created as a practical mathematical notation for computer programs, influenced by the notation of **Alonzo Church's lambda calculus**. It quickly became the favored programming language for **artificial intelligence (AI)** research. As one of the earliest programming languages, Lisp pioneered many ideas in **computer science**, including **tree data structures**, **automatic storage management**, **dynamic typing**, and the **self-hosting compiler**.

The name *LISP* derives from "LIST Processing". **Linked lists** are one of Lisp languages' major **data structures**, and Lisp **source code** is itself made up of lists. As a result, Lisp programs can manipulate source code as a data structure, giving rise to the **macro** systems that allow programmers to create new syntax or even new **domain-specific languages** embedded in Lisp.

The interchangeability of code and data also gives Lisp its instantly recognizable syntax. All program code is written as **s-expressions**, or parenthesized lists. A function call or syntactic form is written as a list with the function or operator's name first, and the arguments following; for instance, a function *f* that takes three arguments might be called using `(f arg1 arg2 arg3)`.

Lisp	
Paradigm(s)	Multi-paradigm: functional, procedural, reflective, meta
Appeared in	1958
Designed by	John McCarthy
Developer	Steve Russell, Timothy P. Hart, and Mike Levin
Typing discipline	Dynamic, strong
Dialects	Arc, AutoLISP, Clojure, Common Lisp, Emacs Lisp, ISLISP, Newlisp, Scheme, SKILL
Influenced	IPL

3. **Erase function is not clearly defined**
 - a. Severity: Major
 - b. Nielson Heuristics: Consistency, matching the real world, error and safety
 - c. Details: It's much more intuitive to de-underline something by highlighting an underlined portion and pressing the underline button again. It's less intuitive to have to press the erase button for this. Usually erase is equivalent to delete, so user will be confused about how the erase functions, especially for erasing options such as note-taking, ect
4. **View and Editing colors do not match**
 - a. Severity: Minor
 - b. Nielson Heuristics: Consistency
 - c. Details: At the dashboard where it says "view" and "editing", it would be nice to have these colors match with the colors of the dashed borders for each person. For example, as in the figure below, Sam's edited sections could be in orange and Bob's edited sections could be in yellow

WebAnnotator View: Sam | Edit: Bob

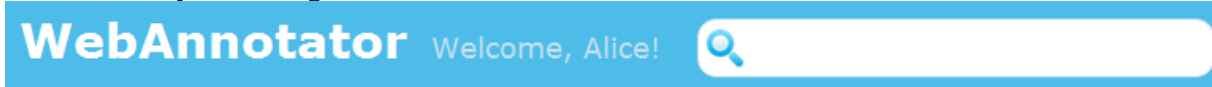
 - d.
5. **Notes section disrupts the flow of the original document**
 - a. Severity: Major
 - b. Nielson Heuristics: Consistency & Standards

- c. Details: Long paragraphs of notes can be added in the middle of a sentence or at the end of document, obstructing the flow of the original document and possibly making it very difficult to read (see below). A solution could possibly be adding a small notepad icon wherever you want to add notes. Clicking on this icon could expand it, allowing you to edit/view the note.

Lisp (programming language) asdfasfdasfdasfdasfdasfdasfd asdfasfdasfd fdsasdf sdfasdf asdfasfd asdf asdf asdf asdf asdfasfdashfwaehfriwa;flksajf;lajfguage)

6. Really great “pages saved” page (details below)

- a. Severity: (None) Positive
- b. Nielson Heuristics: Flexibility & efficiency
- c. Details: Great use of the search bar (which I was very impressed actually worked!) as it allows the user to very easily and efficiently sift through tens of documents. Great use of icons in order to symbolize what type of document was being edited. Great highlighting of documents that the mouse was currently hovering over.



d.

7. Adding a paragraph of notes destroys the formatting of the original document

- a. Severity: Major
- b. Nielson Heuristics: Error & Safety
- c. Details: When users adds a lot of notes to the document it stretches the border of what they are editing so it extends to be off the page. Additionally, if the section is contained in a section being edited by another user, it also destroys the formatting of the other user’s section. See below for an example. Note how the contents box is stretched way longer than it should be due to the notes I’m taking.



d.

8. Highlighting/underlining the notes makes it look exactly the same as the original document highlighted/underlined

- a. Severity: Minor
- b. Nielson Heuristics: Visibility
- c. Details: When you write notes then highlight or underline them, it makes it look just like you highlighted/underlined the original document. This is

because when you underline, the underline covers part of the dashed orange border which represents the notes. Possible solution: change the colors of highlighting on a note, or go with the expandable note icon I mentioned earlier.

9. Underlining and the dashed border around the notes overlay on top of one another inconsistently

- a. Severity: Minor
- b. Nielson Heuristics: Visibility, consistency
- c. Details: When you underline notes, sometimes the underline covers the border but sometimes the border covers the underline. In the example below, it seems like the underline only begins halfway through the highlighted text, but in actuality, the entire notes section is underlined and highlighted but only part of it shows up because it's covered by the border of the notes

Lisp (programming language) asdfasfdasdfasdfasdfasdfasdf asdfasdfasdf fdsasdf sdfasdf asdfasfd asdf asdf asdf asdfasdfasdfwaehfriwa;flksajf;lajfguage)

10. Good user feedback when hovering over icons and sections of text

- a. Severity: (None) Positive
- b. Nielson Heuristics: Visibility
- c. Details: When mouse hovers over icons, they changed colors to represent that the user was highlighting that icon. The same applied to sections of text in the document the user wanted to edit. This is very good feedback as makes it easier for the user to know where their mouse is at all times, and which section they will edit if they start highlighting

11. Dashboard is inconsistent in between different pages

- a. Severity: Major
- b. Nielson Heuristics: Consistency
- c. Details: On the normal editing page, the dashboard looks like:



but when you click on the "WebAnnotator" icon, it brings you to a dashboard that looks like:



Maybe allow the user to check documents to be shared or saved.

12. Good use of pleasing colors and font for the dashboard and related icons

- a. Severity: Positive
- b. Nielson Heuristics: Visibility
- c. Details: Colors were simple and limited to a few good choices (blue and white, light green). Font and spacing on the dashboard made text easy and pleasing to read.

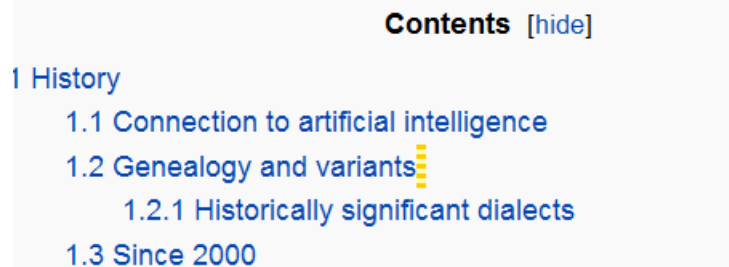
13. "Share" button may be confusing as it could imply sharing the document with the public as one would a picture

- a. Severity: Minor
- b. Nielson Heuristics: Recognition & recall, consistency
- c. Details: I actually didn't realize the share button was to add editors and viewers, and for some reason thought it was to share the page with friends, similar to the way a share button that you would usually find on a website

which shares a link/pic to facebook, twitter, ect. Because of this, I was confused for a while there were two columns for “edit” and “view.” Also it was hard to tell if the document will be sent to all people in the edit and view column again, or if it will only send to newly added people. Maybe instead of share, could add button for “add editors”.

14. User cannot completely delete a note that they wrote

- a. Severity: Major
- b. Nielson Heuristics: Error & Safety
- c. Details: User cannot delete a note, instead they delete all the text in the note but leave the border. See below for an example of the leftover border:



- d. 1.3 Since 2000

15. Good user feedback in the edit toolbar

- a. Severity: Positive
- b. Nielson Heuristics: Visibility, error prevention
- c. Details: I really like how the toolbar is slightly transparent at first, but when the user hovers over a particular icon it turns completely opaque. This is good feedback to make sure the user knows which functionality they are selecting currently and also helps them make less mistakes.