

DMP Research Project: The Cloze Project

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Purpose

- DMP – Distributed Mentor Program: pairs undergraduate females with women professors to create a mentor link
- To be part of a research group and actively participate in current research
- To have a feel of what graduate school would be like

Problem

- A reading comprehension test needed to be integrated into Equuleus, a dynamic hypermedia presentation system designed by the NLKRRG

Goal

- Need a test that can be made “on the fly”
- Create a test that is robust enough to be used in multiple applications
- Create an intuitive user interface for creating and testing the test
- Create a test that could easily be modified to fit user needs

Solution

- The Cloze test is a standard reading comprehension test
- The Cloze test is simple enough to create during one summer and can easily be expanded and modified
- The Java Swing package provided a foundation for the user interface

What Is the Cloze Test?

- A reading comprehension test
 - First sentence left intact
 - Every fifth word omitted
 - Only exact matches counted when grading
 - 60% and above is passing

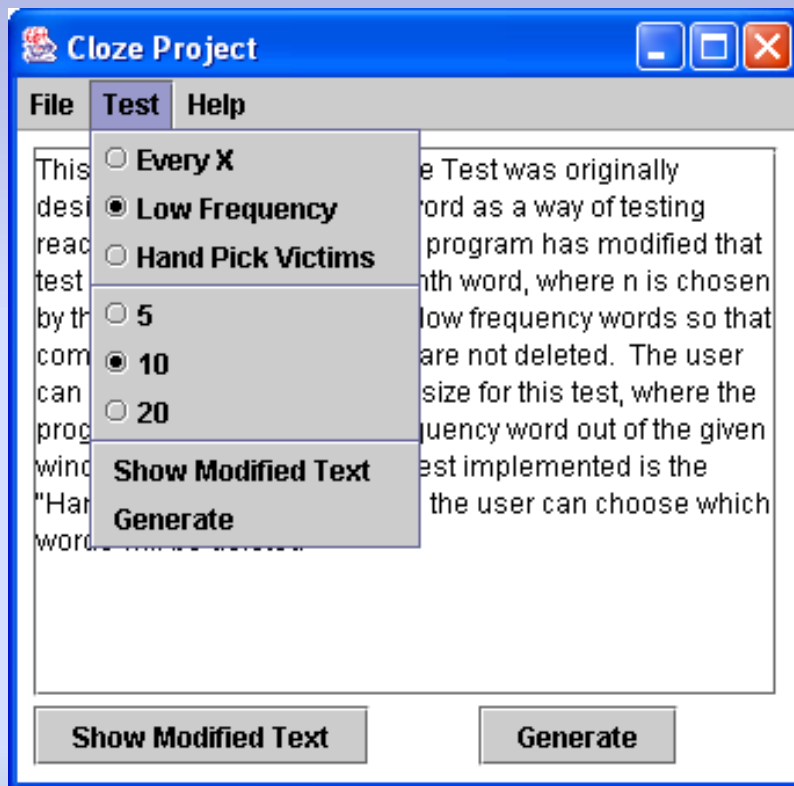
Modifications

- Created three different types of tests
 - Every X: deletes every xth word
 - Low Frequency: deletes one low frequency word in a given window size
 - Hand Pick Victims: allows user to choose which words will be deleted

Overview

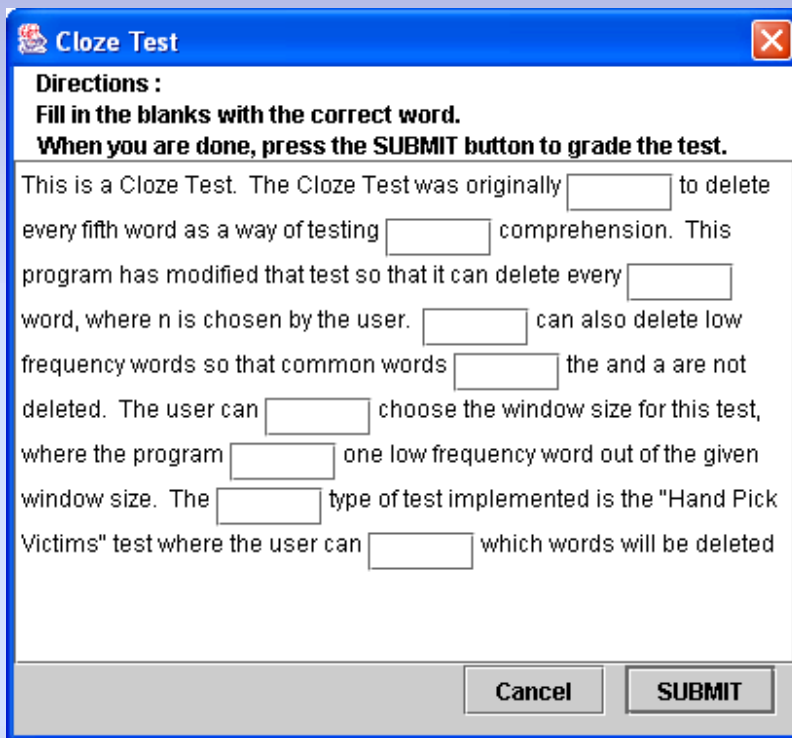
- Three main interface features
 - Main frame with all the options
 - Test frame with empty text fields for answers
 - Capability to choose which words will be deleted
- Back end logic

Main Frame



- Menu bar allows for easy navigation
- Shows all options making it intuitive to use
- Allows user to save and load already created tests

Test Frame



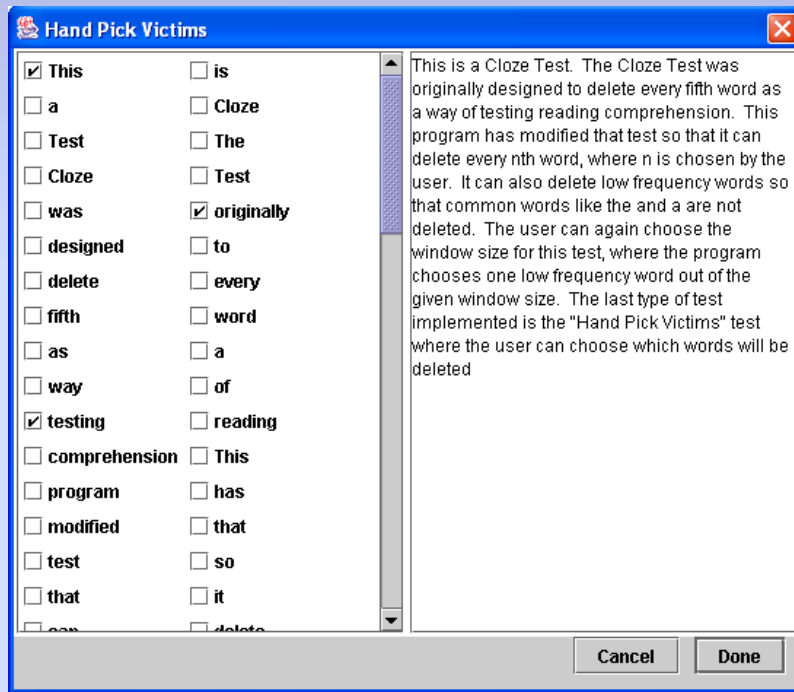
Cloze Test [Close]

Directions :
Fill in the blanks with the correct word.
When you are done, press the SUBMIT button to grade the test.

This is a Cloze Test. The Cloze Test was originally to delete every fifth word as a way of testing comprehension. This program has modified that test so that it can delete every word, where n is chosen by the user. can also delete low frequency words so that common words the and a are not deleted. The user can choose the window size for this test, where the program one low frequency word out of the given window size. The type of test implemented is the "Hand Pick Victims" test where the user can which words will be deleted

- Allows user to view the delimited text in order to see the chosen words
- Allows user to generate and take a test

Choosing Words



- Lets user check the words to be deleted
- Show full text so user can see words in full context

Back End Logic

- Takes the text, the type of test, and the window size (or in the case of “Hand Pick Victims”, the actual words) and delimits them so the test knows which words to replace with a text box
- Low Frequency
 - makes a frequency count of all the words in the text (or file, if one is specified)
 - Chooses one word out of the window size that has been deemed ‘low frequency’ to delete
 - Low frequency if words’ frequency count is less than the median frequency count

Results

- The Cloze test that I implemented is a robust test that can be integrated into other applications with minimal code
- Easy to use user interface
- Easy to modify and add new types of tests

Other Work This Summer

- Annotated 16 dialogs both semantically and functionally
- Started work on generating Spanish text
- Created a website documenting my summer research experience
 - <http://tigger.cs.uwm.edu/~jones>

In Conclusion

- Better understanding of Java, and its Swing package
- Knowledge of useful tools available on the World Wide Web
 - Java tutorials on the Sun Microsystems page
 - JBuilder personal edition, available without charge
- Confidence in my programming ability
- Spent time with other women in my field