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Digital Curation Micro-Applications: Digital Lifecycle Management with AutoHotkey

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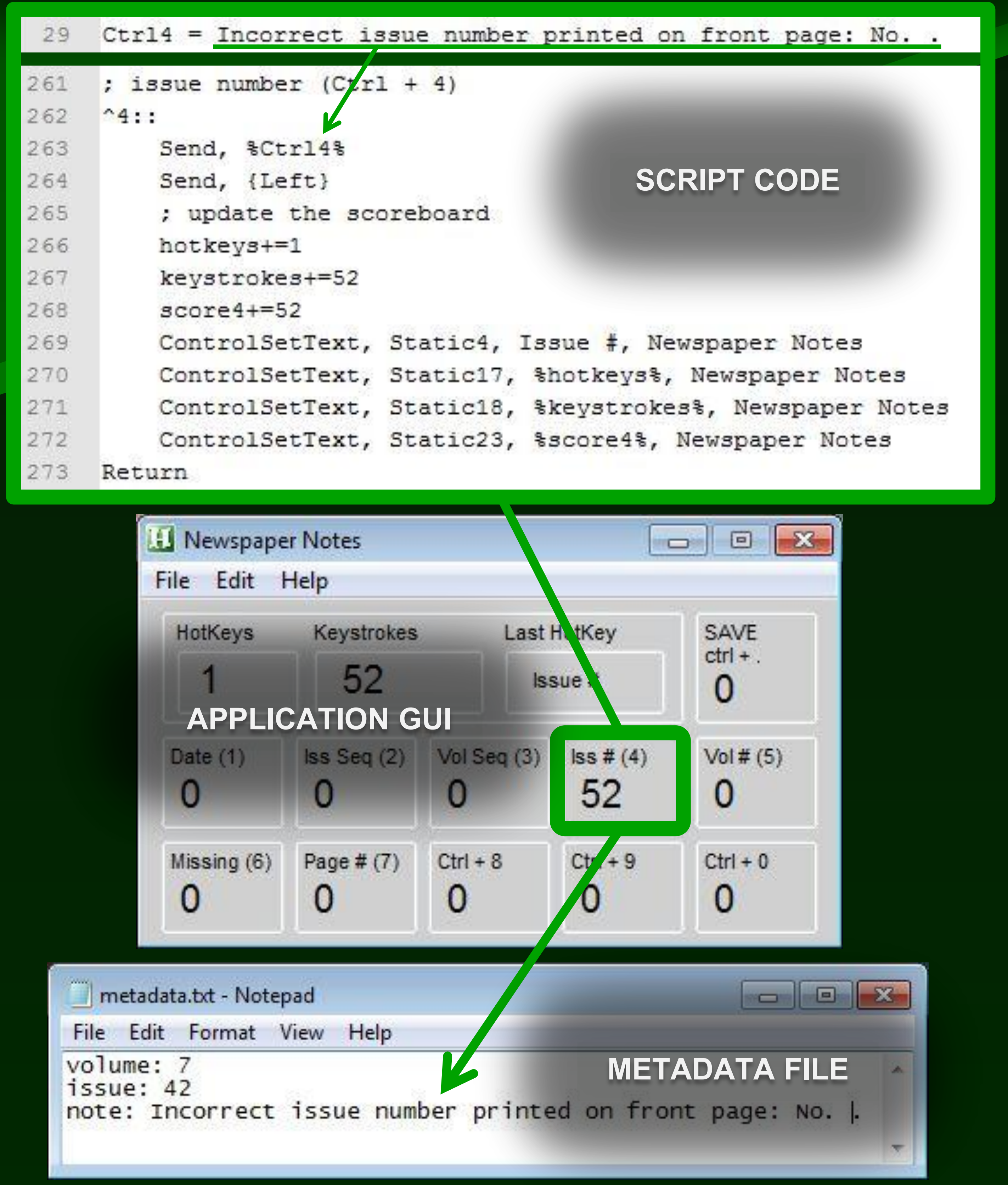
Introduction

Digital curation activities enhance access and retrieval, maintain quality, add value, and facilitate use and re-use over time. This poster demonstrates open source software tools coded with AutoHotkey that the UNT digital libraries group has developed for digital curation during the pre-ingest stage of the digital resource lifecycle.

NewspaperNotes.ahk

Description: digital newspaper metadata creation tool.

The application simplifies data entry by automatically typing values from a local data entry standard. In the example below, Ctrl + 4 triggers the "Incorrect Issue Number" hotkey.



```
Ctrl4 = Incorrect issue number printed on front page: No. .
```

```
; issue number (Ctrl + 4)
^4::
    Send, %Ctrl4%
    Send, {Left}
    ; update the scoreboard
    hotkeys+=1
    keystrokes+=52
    score4+=52
    ControlSetText, Static4, Issue #, Newspaper Notes
    ControlSetText, Static17, %hotkeys%, Newspaper Notes
    ControlSetText, Static18, %keystrokes%, Newspaper Notes
    ControlSetText, Static23, %score4%, Newspaper Notes
Return
```

Newspaper Notes

HotKeys 1	Keystrokes 52		Last HotKey Issue #	SAVE ctrl + . 0
Date (1) 0	Iss Seq (2) 0	Vol Seq (3) 0	Iss # (4) 52	Vol # (5) 0
Missing (6) 0	Page # (7) 0	Ctrl + 8 0	Ctrl + 9 0	Ctrl + 0 0

metadata.txt - Notepad

```
volume: 7
issue: 42
note: Incorrect issue number printed on front page: No. .
```

AutoHotkey Basics

AutoHotkey (AHK) is free and open source software for the Windows operating system which helps digital curators to create customized micro-applications for digital lifecycle management. Developers write scripts that embed multiple keystrokes and system commands in a single key combination, or hotkey. In addition to a portable version for script developers who frequently change workstations, AutoHotkey allows users to create executable files from source scripts for use on any Windows computer. The AutoHotkey scripting language supports programming constructs (e.g., variables, loops, conditionals) and dynamic graphical user interfaces (GUIs).

Simple Scripts

```
; Create a New Folder

; plain text file
; .AHK extension
; comment with semicolons

; define the hotkey: Win + k
#k::

; file menu key command
Send, {AltDown}f{AltUp}

; 200 millisecond delay
Sleep, 200

; send keys to create folder
Send, w
Sleep, 200
Send, f
```

```
; Rename a File

; keep old file name
; and add new text

; hotkey: Ctrl + r
^r::

; rename selected file
Send, {F2}
Sleep, 200

; move to start of string
Send, {Home}
Sleep, 200

; type the new text
; e.g. beginning of a date
Send, 2013
```

```
; Open First File
; in Selected Folder

; hotkey: Alt + o
!o::

; open selected folder
Send, {Enter}
Sleep, 400

; move to first file
Send, {Down}
Sleep, 100
Send, {Up}
Sleep, 100

; open file with the
; default application
Send, {Enter}
```

Summary

Simple AutoHotkey scripts are particularly useful for large projects that require repetitive file management actions. More complex scripts provide batch processing capabilities for those who are unfamiliar with command line equivalents. Custom AutoHotkey applications streamline repetitive tasks associated with the creation of digital objects and their associated metadata so that digital curators can focus on image quality and descriptive content.

AutoHotkey Documentation: http://www.autohotkey.com/docs/

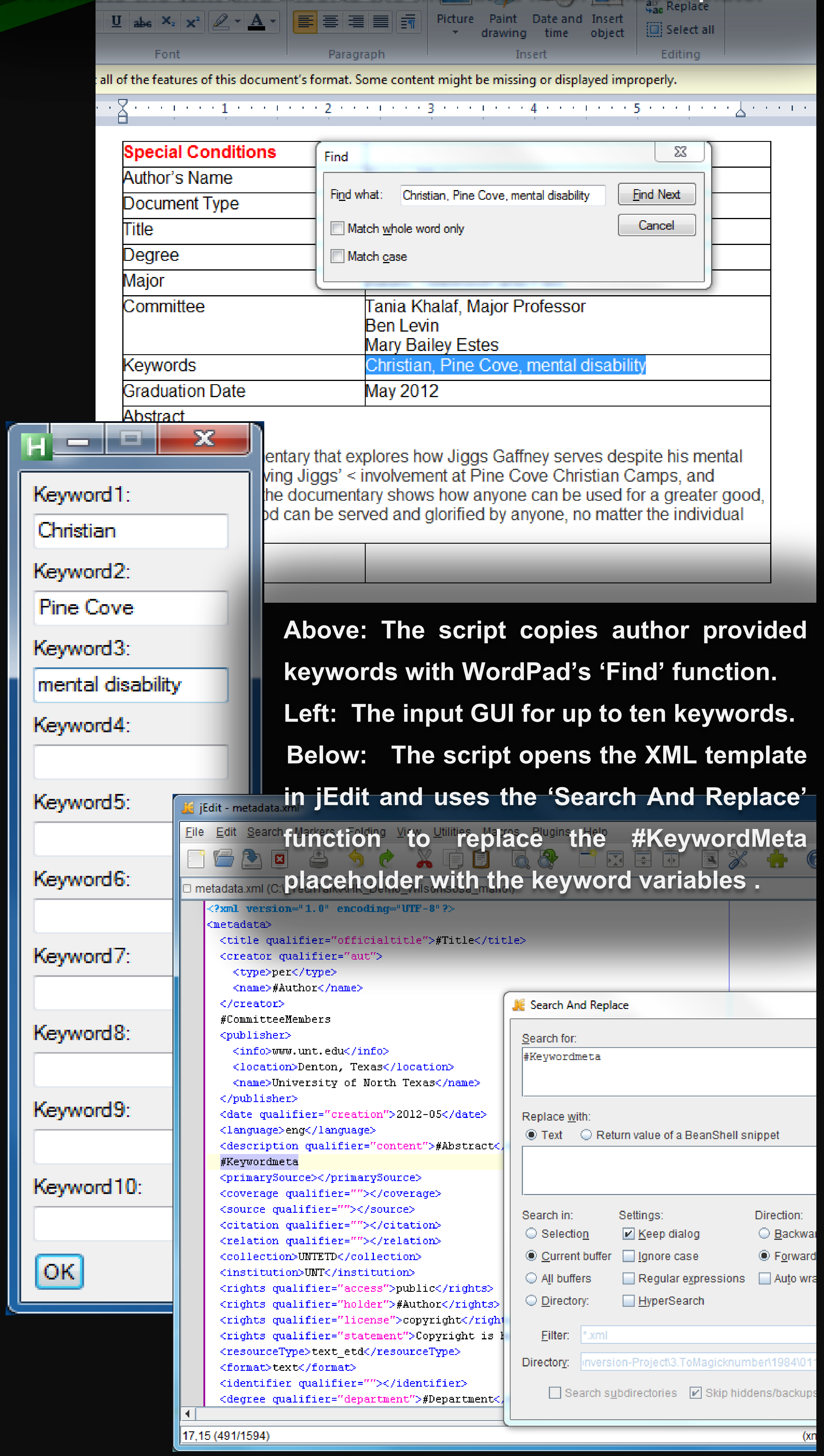
NewspaperNotes.ahk: https://github.com/drewhop/AutoHotkey/wiki/NewspaperNotes

ETD_Metadata.ahk: https://github.com/thebraino/AutohotKey.git

ETD_Metadata.ahk

Description: author-created metadata re-formatting tool.

The application harvests thesis or dissertation metadata provided by the author in a Word document. Using WordPad, jEdit, variables, loops, and AutoHotkey GUIs, the tool automatically reformats the text and inserts the metadata in an XML template.



all of the features of this document's format. Some content might be missing or displayed improperly.

Special Conditions	
Author's Name	
Document Type	
Title	
Degree	
Major	
Committee	Tania Khalaf, Major Professor Ben Levin Mary Bailey Estes
Keywords	Christian, Pine Cove, mental disability
Graduation Date	May 2012
Abstract	
entary that explores how Jiggs Gaffney serves despite his mental ving Jiggs' < involvement at Pine Cove Christian Camps, and he documentary shows how anyone can be used for a greater good, od can be served and glorified by anyone, no matter the individual	

Find

Find what: Christian, Pine Cove, mental disability

☐ Match whole word only

☐ Match case

Find Next | Cancel

Keyword1: Christian

Keyword2: Pine Cove

Keyword3: mental disability

Keyword4:

Keyword5:

Keyword6:

Keyword7:

Keyword8:

Keyword9:

Keyword10:

OK

```
<?xml version="1.0" encoding="UTF-8"?>
<metadata>
  <title qualifier="officialtitle">#Title</title>
  <creator qualifier="aut">
    <type>per</type>
    <name>#Author</name>
  </creator>
  #CommitteeMembers
  <publisher>
    <info>www.unt.edu</info>
    <location>Denton, Texas</location>
    <name>University of North Texas</name>
  </publisher>
  <date qualifier="creation">2012-05</date>
  <language>eng</language>
  <description qualifier="content">#Abstract</
  #Keywordmeta
  <primarySource></primarySource>
  <coverage qualifier=""></coverage>
  <source qualifier=""></source>
  <citation qualifier=""></citation>
  <relation qualifier=""></relation>
  <collection>UNTETD</collection>
  <institution>UNT</institution>
  <rights qualifier="access">public</rights>
  <rights qualifier="holder">#Author</rights>
  <rights qualifier="license">copyright</right
  <rights qualifier="statement">Copyright is 
  <resourceType>text_etd</resourceType>
  <format>text</format>
  <identifier qualifier=""></identifier>
  <degree qualifier="department">#Department</
```

Search And Replace

Search for: #Keywordmeta

Replace with: ● Text ○ Return value of a BeanShell snippet

Search in: ○ Selection ● Current buffer ○ All buffers ○ Directory:

Settings: ☑ Keep dialog ☐ Ignore case ☐ Regular expressions ☐ HyperSearch

Direction: ○ Backwar ● Forward ☐ Auto wra

Filter: *.xml

Directory: nversion-Project\3.ToMagicknumber\1984\01

☐ Search subdirectories ☑ Skip hiddens/backups

Above: The script copies author provided keywords with WordPad's 'Find' function.

Left: The input GUI for up to ten keywords.

Below: The script opens the XML template in jEdit and uses the 'Search And Replace' function to replace the #KeywordMeta placeholder with the keyword variables .