Internet Access with ScreenReaders

High Tech Center Training Unit

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Foothill – De Anza Community College District
California Community Colleges

Internet Access with ScreenReaders

10:00 AM   **Introduction**
Objectives

Web-based Content
Read words, lines, paragraphs
Read forms
Read tables
Read frames

11:45 AM   **Lunch**

1:00 PM   **Exploring Web Pages**

2:30 PM   **Break**

2:45 PM   **Activities with Web Pages**

4:00 PM   **Questions & Answers**

4:30 PM   **End**

Objectives

Participants will be able to:

1. Identify guidelines and standards as it relates to publishing content on the web;

2. Differentiate between the different Cursor Types and how to navigate a web page;

4. Use ScreenReaders to navigate Web based content with Internet Explorer and Firefox.

JAWS and Internet Explorer

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Table of Contents

JAWS and Internet Explorer

Introduction

Internet Explorer is a suite of tightly integrated programs that connects a computer to the information that is available through the Internet and Intranets. Internet Explorer not only acts as a browser to display the data, but it also helps the user find, incorporate, and interact with that data. These applications run under Microsoft Windows.

Getting Started

Make sure that IE is installed properly on and running correctly. It is recommended not to install the Active Desktop component with IE. If the IE toolbar is used, include text labels on the buttons. Default IE settings include text labels.

Open the Internet Explorer settings panel:
1. Open the IE **Tools** menu with **Alt T**.
2. Tap o to go to Internet Options.
3. Enter **Alt E** to move to the **Accessibility** button in this dialog box.
4. Make sure "**Ignore Colors**..." is selected.
5. Close this panel by selecting the **OK** button.
6. Use **Control Tab** to get to the **Advanced** settings tab.
7. Under the **Accessibility** section, make sure the following are checked:
8. Always expand ALT text for images
9. Move system caret with focus
10. Under the **Browsing** section, make sure the following options are **NOT** checked:
    a. Show Channel bar at startup
    b. Show friendly URLs
    c. Use smooth scrolling
    d. Enable page transitions

JAWS Keystrokes for Internet Explorer

JAWS for Windows supports Microsoft Internet Explorer. Use the following commands for navigating in form fields:

F	Move To Next Form Field
Shift + F	Move To Prior Form Field
Ctrl Insert End	Move To Last Form Field

Note: These keystrokes only work in Virtual PC Cursor mode. Once you have located the desired form field, JAWS will automatically switch to Forms Mode. To exit Forms Mode, press Num Pad Plus.

Screen follows the Virtual PC Cursor
The screen tracks the location of the Virtual PC cursor.

Persistence of Settings in List of Links
If the user filters or organizes their list in the Link List dialog, this setting will remain until they change it or exit JFW. The default setting that ships with JFW is All Links in Tab Order.

Improvements to Links List
The status line contains the URL for selected link. This enables the user to determine which of several links with the same text name they want to activate or move to, i.e., which "Click Here" is the right one to select

Graphic Announcement Toggle
The user has the ability to turn off the announcement of graphics that are not links. The user is able to toggle this through the HTML Settings Dialog in the Configuration Manager. The choices are: No Graphics, Tagged Graphics, and All Graphics. The default setting is All Graphics.

ALT Text and Screen Text Toggle
Often, the ALT Text of links on a Web page is different from the text shown on the screen. Depending on the Web page, either can be more descriptive. The user has the choice to select which of these they would like JFW to seek as the primary text to speak.

If the user selects Screen Text, JFW will use the screen text if it exists, otherwise, it will use the ALT Text. If neither exists it will use the URL.

If the user selects ALT Text, JFW will always use the ALT Text, if available, otherwise, it will revert to the screen text. If neither exists it will use the URL.

The user is able to toggle this temporarily through the Verbosity dialog, or permanently through the HTML Settings dialog in the Configuration Manager.

JAWS Keystrokes for Internet Explorer

Insert A
AddressBar
Reads the Address bar while maintaining the place on the page.

Insert AA
moves the JAWS cursor to the address bar.

Alt D (an IE 5/6 keystroke)
Selects the text on the Address bar.
Type in a new address, or copy or cut and paste to the clipboard.

Ctrl Insert Home
FocusToFirstField
Moves to the first input field in the page and speaks it. If no form field is found, JFW reports, "Input Field Not Found."

Alt Left Arrow or Backspace
GoBack
Loads the previously opened Web page and says the line the user was on prior to leaving this page.

Alt Right Arrow
GoForward
Loads the next opened Web page and announces it. JFW places the Virtual PC cursor at the top of the page and says the first line. This is useful when browsing pages.

Ctrl F
IE Find
Calls up the Find dialog.

Tab
MoveToNextLink
Moves to the next hypertext link or control in the page. Activate a link by tapping **Enter**.

Insert Enter
MoveToNonLinkText
Moves to the next block of non-linked text that is larger than 50 characters. (when using the virtual cursor)

Shift Tab
MoveToPriorLink
Moves to the prior hypertext link or control in the page. Activate the link by tapping **Enter**.

M
NextFrame
Moves to the frame and says the frame label.

Shift M
PriorFrame
Focuses and reads the previous frame in the HTML order.

Insert Esc
RefreshScreen
Refreshes the screen and updates the state of information of the Off Screen Model.

Ctrl Insert Down Arrow
ReadCurrentScreen
Reads the body of the page from the top with the JAWS cursor.
Note: This is only available in non-virtual cursor mode.

Ctrl Page Down
ReadNextScreen
Reads the next screen: does a PageDown and begins reading with the JAWS cursor.
Note: This is only available in non-virtual cursor mode.

Ctrl PageUp
ReadPriorScreen
Reads the prior screen. Does a PAGE UP and begins reading with the JAWS cursor.
Note: This is only available in non-virtual cursor mode.

Insert F5
ReformatDocument
Reformats multiple column pages to be more readable with speech. Rearranges multiple column pages to read in a linear fashion. IE columns are read one after another. **Note**: This is only available in non-virtual cursor mode.

Insert Tab
SaySelectedLink
Says the focused link or control. If in a dialog, speaks the current control. If in a Web page, announces the link or control with focus.

Insert F9
SelectAFrame
Brings up a dialog containing a list of the frames present in the page. Select a frame from the list and press **Enter**. The focus moves to the frame selected and speaks its content.

Insert F
SelectALink
Brings up a JFW dialog containing all of the links present on the page. Select a link by using the Arrow keys or the first letter of the link. Press **Enter** to open the selected link. TAB between the various controls in the Select A Link dialog.

Insert F8
IE Tool Bar access
Allows access to the IE toolbar. While in IE, brings up a dialog box that contains a list of every button that appears on the toolbar. In this dialog, select one of the buttons on the toolbar and press **Enter** to choose it.

Insert Z
Virtual PC Cursor Toggle
Toggles the Virtual PC cursor mode **On** or **Off**. When in a web document, this command toggles between the Conventional mode and the Virtual PC cursor interface.

Helpful Hints

When working in Internet Explorer with JFW, the user works in one of three modes: Virtual PC cursor mode, Forms mode, or Conventional mode.

It is not possible to use the Context Detection (**Insert F**) option when using the virtual cursor.

Virtual PC Cursor Mode
The Virtual PC cursor is activated automatically when IE .0 opens, and JFW begins speaking the text on the screen as soon as the page finishes loading. If the newly opened page is loaded, JAWS announces the presence of frames, links, and forms on the page. JAWS will announce if there are no frames, links, or forms on the page.

The Virtual PC cursor works in the Internet Explorer environment in much the same way that the PC cursor does in other applications. The Virtual PC cursor responds to normal screen reading keys in the same way, but there is no visual indication on the area of the screen that is being read. In addition, the screen does not automatically scroll, so to bring up text that is out of screen range, use **Insert Esc**.

Caution: Manually starting to read before the loading has finished often results in less than all of the text being available.

When reading a Web page with the Virtual PC cursor, select text using the standard Windows text selection keys (e.g., **Shift Right Arrow** to select a character; **Control Shift Right Arrow)** to select word ; there is no visual feedback of what is being selected. The SaySelectedText script (**Insert Shift F2**) speaks the text that has been selected.

When a page with frames first comes up, all frames are readable in sequential order. Check with **Insert F1** and JAWS announces: "The page contains frames."

As the user enters a frame, JAWS says its name, e.g., "Navigation Frame," JAWS announces the frame name and "end" when the user leaves a frame.

Ctrl Home brings the top of the document into view on the visual screen, **Ctrl End** brings the bottom of the document into view on the visual screen, **PageDown** moves down 24 lines, and **PageUp** moves up 24 lines. **SayAll (Insert 2** on numpad) in line mode reads the document from top to bottom. To stop this reading, tap Ctrl to stop the SayAll function. JAWS positions the cursor near the last item read.

When reading text on a Web page, each link appears to be on its own line, even though this may not be true on the screen. Visited links are identified as "visited." They are also properly categorized as visited in the Links List dialog. **Note**: When JAWS reads "strange things," the following is probably occurring: when JFW encounters a link that does not have any text associated with it, one of two things is announced. If the link is a CGI link, the name of the graphic is spoken. Otherwise, the last directory component and the file name of the URL is spoken instead.

To quickly skip past headers, press **Insert Enter**. This moves the user down through the page to the first text of at least 50 characters that is not a link. When it arrives at the text, the current line is read.

When the cursor is on a line with a link, pressing **Enter** or **Numpad Slash** activates that link. Subsequently, pressing **Backspace** moves back to the last position on the last page read.

When using the virtual cursor and a link on the screen that has an ALT tag is encountered; JAWS will read the ALT tag.

How to Turn Virtual Cursor On and Off
It is not possible to use the reformat option (**Insert F5**) in Internet Explorer (IE) when the virtual cursor is in use. Therefore, if the user wishes to work in the web environment using the JAWS interface of version 3.30, which allows reformatting of web pages, it is necessary to turn off the virtual cursor.

1. With Internet Explorer open, enter Insert 6. The configuration file for IE, browseui.jcf, is opened by the Configuration Manager. (To make this change throughout all applications, load the default configuration file from the Configuration Manager file menu and then do the following.)

2. Enter Alt S to open the Set Options menu.
3. Tap a for Advanced Options.
4. Enter Alt V to toggle the virtual cursor state off.
5. Save the browseui.jcf file by entering Ctrl S.
6. Close the Configuration Manager with Alt F4.

Note: To toggle between Virtual PC cursor and PC cursor, press **Insert Z**.

Forms Mode

With the Virtual PC cursor positioned on a form field, JAWS should be in Forms Mode by default. If JAWS is not in Forms Mode for some reason, press **Enter** (not **Num Pad Slash**) key to switch to **Forms Mode**. JAWS will announce "Forms Mode On," and speak the name of the control which has cursor focus. At this juncture, tap **Enter** to activate the PC cursor at the current control.

Possible example: If the user is on a button, the button is pressed. If the user is on a checkbox, the state of the checkbox is toggled. If on a radio button that is unchecked, then the radio button is checked; however, if it was already checked, it remains unchanged. In an edit box, the PC cursor is placed at the top of the edit field. In a combo box, the first item is selected.

Tab and **Shift Tab** must be used to move between fields in forms mode. When using these keys for navigation, the natural tab order is used, including any links that may appear between fields. As JAWS lands on the different controls, it announces the new control, such as a link or a field.

While in forms mode it is possible to edit fields using the PC cursor as done normally.

To exit Forms Mode, press **Num Pad Plus** to return to the Virtual PC cursor.

Note: JFW remains in Forms Mode until the virtual PC cursor is activated or a new page is displayed, whichever comes first. **Insert Esc** also returns the user to virtual cursor mode and moves the position of the virtual PC cursor to the first control on the current page.

Tip: Return to the Virtual PC cursor using the **NumPad Plus**. This turns Forms Mode off.

Link List Dialog

When in IE , bring up the Link List dialog by pressing **Insert F**. This brings up the Links List view. By default this list is sorted in tab order and shows all links. This List view lists the links on the current page according to the filter and sort order set by the other controls in this dialog. Each time it comes up, it defaults to listing all links in tab order. If the links have the same name but point to different locations, each one is listed in this list view.

Visited links are determined by what IE indicates as a visited link. If IE keeps in memory what links have been visited in the (for example) last 10 days, a link will display as visited until the 10 days are up. It is possible for the user to adjust the time IE keeps links as visited.

The Links List dialog has a display area where in the lower portion of the dialog box. Three radio buttons affecting link display are placed there:
All Links, which if selected shows all links.
Visited Links Only, which if selected shows visited links.
Unvisited Links, which if selected shows unvisited links.

The Links List dialog has radio buttons which allow the user to set the way the Links List dialog box displays links. In **Tab Order**, which if selected, lists the links in tab order; and **Alphabetically**, which if selected lists the link alphabetically.

There are also three buttons which assist the user in navigating: **Move To Link** which if selected moves to a link; and **Activate Link** which if selected moves to an activated link; and **Cancel**, which if selected closes the Links List dialog.
  Alt M
  Move to Link button
  When activated, closes the dialog box and moves the Virtual PC cursor to that link on the current Web page. Use the navigational keys to explore around the link.

  Enter
  Activate Link button
  Closes the Link List dialog box and activates the selected link. It is also the default button.

The Display group box allows the user to select the radio button to filter the displayed list to display all links (default), visited links only, or unvisited links. t is possible to tab to this group box or use hot keys to change the settings without leaving the list view. Hot keys to change the link display are as follows:

ALT L   Display All Links
ALT V   Display Visited Links Only
ALT U   Display Unvisited Links

The links list can have the links appear in or alphabetically. Tab to this group box or use hot keys to change the settings without leaving the list view. Hot keys are as follows:

ALT T   Display links in tab order (default)
ALT P   Display links in alphabetical order

In the Links List dialog it is possible to close the dialog box and return to current position on a web page by activating the Cancel button with **Alt C** or tapping **Esc**.

Working in Conventional Mode (as in IE 4.01)

Note: To temporarily toggle between Virtual PC cursor and PC cursor, press **Insert Z**.

By turning off the Virtual Cursor, it is possible to navigate in IE using the JAWS cursor and reformatting options that were used by JFW in IE 4.01. This functionality is not available if the Virtual PC cursor mode is enabled. To find out more about how the JAWS conventional mode works, see the JFW Help topic "Using JAWS with Popular Applications" section.

Web Based Activities to Learn to Use JAWS

The High Tech Center Training Unit has developed a series of web pages designed to be used with JAWS:
http://www.htctu.net/trainings/manuals/tutorials/readweb/start.htm

Reading Web Pages with JAWS - Internet Explorer

Reading Letters and Words

Read next character	Right arrow
Read previous character	Left arrow
Read current character	Num Pad 5
Read next word	Insert Right Arrow
Read previous word	Insert Left Arrow
Read current word	Insert Num Pad 5

Reading Lines and Sentences

Read next line	Down Arrow
Read prior line	Up Arrow
Read current line	Insert Up Arrow
Read next sentence	Alt Down Arrow
Read prior sentence	Alt Up Arrow
Read current sentence	Alt Num Pad 5

Reading Paragraphs and Pages

ACTION	KEYSTROKE
Read next paragraph	Ctrl Down Arrow
Read prior paragraph	Ctrl Up Arrow
Read current paragraph	Ctrl Num Pad 5
Move to top of page	Ctrl Home
Move to bottom of page	Ctrl End
Read to end of page	Insert Down Arrow

Reading Web Page Tables with JAWS

ACTION	KEYSTROKES
Reads the row and column coordinates, followed by the cell contents and then the appropriate row and column headings.	Ctrl Alt Num Pad 5 **Press Alt after Ctrl and release Alt before Ctrl**
Moves to the next cell in the same row and then announces the column heading followed by cell contents and then the column number.	Ctrl Alt Right Arrow
ThisMoves to the previous cell in the same row and then announces the column heading followed by cell contents and then the column number.	Ctrl Alt Left Arrow
Moves to the cell below the current cell and reads the row heading followed by cell contents and then the row number.	Ctrl Alt Down Arrow
Moves to the cell above the current cell and then announces the row heading followed by cell contents and then the row number.	Ctrl Alt Up Arrow
Moves to first cell in current table and reads row and column coordinates followed by contents of the cell.	Ctrl Alt Home
Moves to the last cell in current table and reads row and column coordinates followed by contents of the cell.	Ctrl Alt End

Using JAWS to Read Forms

Moves to the first input field in the page and speaks it. If no form field is found, JAWS reports, "Input Field Not Found."	Ctrl Insert Home
With the Virtual PC cursor positioned on a form field, enters Forms Mode and speaks the name of the control which has cursor focus. Press **Enter** to activate the PC cursor at the current control	Enter
To move to next field in forms mode. When using these keys for navigation, the natural tab order is used, including any links that may appear between fields. As JAWS lands on the different controls, it announces the new control, such as a link or a field.	F
To move to previous field in Forms Mode	Shift F
To move to last form field	Ctrl Insert End
To exit Forms Mode and return to the Virtual PC cursor	Num Pad Plus

Reading frames with JAWS

JAWS is capable of identifying the presence of frames on a web page and moving to the location of each frame. Use normal JAWS web keystrokes for reading the content of the frame.

Announce the presence of frames on the page	Insert F1
Bring up a dialog box containing a list of the frames present on the page. Use the Up/Down arrow keys to select a frame from the list and press ENTER. The focus will move to the frame selected and speak its content.	Insert F9
Move to next frame	M
Move to previous frame	Shift M

Reformatting web pages with JAWS

Complex web pages can be automatically reformatted for better screen reader access. Press Insert z to turn off the Virtual PC cursor then press Insert F5 to reformat the screen.

Display all page links with JAWS

- For a quick display of all links on the active web page in their tab order, press Insert F
- Use the Up and Down Arrow keys to navigate the list and hear the link names
- Use the Enter key to go to a selected link.

Basic Web Navigation

JAWS and Internet Explorer 6 provide a variety of ways to perform basic web page navigation. The following keystrokes outline some of these basic functions.

Move to and read address bar	Insert a
Move JAWS cursor to address bar	Insert a a (quickly)
Select address bar	Alt d
Search page content	Ctrl Insert f
Next web page	Alt Right Arrow
Previous web page	Alt Left Arrow

Notes:

Using Internet Explorer with Window-Eyes

Window-Eyes interfaces with the Internet Explorer web browser to bring screen-reading functionality to the Web. As with other Windows-based applications, Window-Eyes utilizes the pre-programmed shortcut key combinations that already exist within the Internet Explorer web browser. There are additional commands, however, that take advantage of Microsoft Active Accessibility (MSAA) and provide for a more enhanced user experience. MSAA commands allow the user to navigate based on hyperlinks, form elements, or tables on the web page. Important Internet Explorer and MSAA commands will be provided below.

Microsoft Internet Explorer Hotkey Commands

Tab
Move forward through the items on a Web page, the Address bar, and the Links bar.

Shift + Tab
Move back through the items on a Web page, the Address bar, and the Links bar.

Alt + Home
Go to your Home page.

Alt + Right Arrow
Go to the next page (move one page forward).

Alt + Left Arrow
Go to the previous page (move one page back).

Shift + F10
Display a shortcut menu for a link.

Ctrl + Tab or F6
Move forward between frames.

F5 or Ins + \ (Backslash)
Refresh the current Web page. Use Ins + \ to reload the page when using Window-Eyes in order to reload the page into the MSAA buffer.

Ctrl + F5
Refresh the current Web page, even if the time stamp for the Web version and your locally stored version are the same.

Ctrl + O or Ctrl + L
Go to a new location.

Alt + D
Move to the Address bar.

Ctrl + N
Open a new browser window.

Ctrl + W
Close the current browser window.

Ctrl + E
Open the Search bar in Internet Explorer.

Ctrl + I
Open the Favorites bar.

Ctrl + H
Open the History bar.

Window-Eyes Hotkey Commands for Microsoft Internet Explorer

Left Arrow
Move left one character. If used in combination wth Ctrl key, move left one word.

Right Arrow
Move right one character. If used in combination wth Ctrl key, move right one word.

Up Arrow
Move up one line.

Down Arrow
Move down one line.

Ctrl + Home
Move to beginning of document.

Ctrl + End
Move to end of document.

Ins + Tab
Opens dialog box for all hyperlinks, tables, and frames on web page.

Tab
Next hyperlink or control on page.

Shift + Tab
Previous hyperlink or control on page.

Table Reading Commands

Ctrl + Plus sign
Turn on Table reading mode.

Ctrl + Minus sign
Turn off Table reading mode.

Ins + Directional Arrow
Move one table cell in the direction of the arrow (Up, Down, Left, Right).

Ctrl + Shift + H
Announce table row and column information.

Ctrl + Shift + S
Speak Summary will identify the number of lines on a web page, presence of Frames, Tables, and Flash animation.

Enter
Will activate a hyperlink or button. Enter will also turn off the MSAA mode in order to complete a web-based form. Once MSAA mode is disabled, you can input text into the form input field.

Ctrl + Shift + A
Turn on MSAA mode. After disabling MSAA mode in order to complete a web-based form, it is necessary to turn on MSAA mode again in order to navigate around the web page. If you are submitting the form, MSAA mode will turn on again (default setting) upon visiting the next web page.

Windows® Keyboard Commands

General keyboard-only commands

F1	Starts Windows Help
F10	Activates menu bar options
SHIFT+F10	Opens a shortcut menu for the selected item (this is the same as right-clicking an object
CTRL+ESC	Opens the **Start** menu (use the ARROW keys to select an item)
CTRL+ESC or ESC	Selects the **Start** button (press TAB to select the taskbar, or press SHIFT+F10 for a context menu)
ALT+DOWN ARROW	Opens a drop-down list box
ALT+TAB	Switch to another running program (hold down the ALT key and then press the TAB key to view the task-switching window)
SHIFT	Press and hold down the SHIFT key while you insert a CD-ROM to bypass the automatic-run feature
ALT+SPACE	Displays the main window's **System** menu (from the **System** menu, you can restore, move, resize, minimize, maximize, or close the window)
ALT+- (ALT+hyphen)	Displays the Multiple Document Interface (MDI) child window's **System** menu (from the MDI child window's **System** menu, you can restore, move, resize, minimize, maximize, or close the child window)
CTRL+TAB	Switch to the next child window of a Multiple Document Interface (MDI) program
ALT+*underlined letter in menu*:	Opens the menu
ALT+F4	Closes the current window
CTRL+F4	Closes the current Multiple Document Interface (MDI) window
ALT+F6	Switch between multiple windows in the same program (for example, when the Notepad **Find** dialog box is displayed, ALT+F6 switches between the **Find** dialog box and the main Notepad window)

General folder/shortcut control

F4	Selects the **Go To A Different Folder** box and moves down the entries in the box (if the toolbar is active in Windows Explorer)
F5	Refreshes the current window.
F6	Moves among panes in Windows Explorer
CTRL+G	Opens the Go To Folder tool (in Windows 95 Windows Explorer only)
CTRL+Z	Undo the last command
CTRL+A	Select all the items in the current window
BACKSPACE	Switch to the parent folder

Windows Explorer tree control

Numeric Keypad *	Expands everything under the current selection
Numeric Keypad +	Expands the current selection
Numeric Keypad -	Collapses the current selection.
RIGHT ARROW	Expands the current selection if it is not expanded, otherwise goes to the first child
LEFT ARROW	Collapses the current selection if it is expanded, otherwise goes to the parent

Microsoft Natural Keyboard keys

Windows Logo	**Start** menu
Windows Logo+R	**Run** dialog box
Windows Logo+M	Minimize all
SHIFT+Windows Logo+M	Undo minimize all
Windows Logo+F1	Help
Windows Logo+E	Windows Explorer
Windows Logo+F	Find files or folders
Windows Logo+D	Minimizes all open windows and displays the desktop
CTRL+Windows Logo+F	Find computer
CTRL+Windows Logo+TAB	Moves focus from Start, to the Quick Launch toolbar, to the system tray (use RIGHT ARROW or LEFT ARROW to move focus to items on the Quick Launch toolbar and the system tray)
Windows Logo+TAB	Cycle through taskbar buttons
Windows Logo+Break	**System Properties** dialog box
Application key	Displays a shortcut menu for the selected item

Quick Guide: Using JAWS & IE

Commands to do things:

To Bring up Links Box	Insert F7
To Bring Up Frames Box	Insert F9
Go to Address Bar	Alt D
To Stop Speech	Ctrl
To Read All from Cursor	Insert 2 (on numeric keypad)
To hear same thing	Left Shift
To hear next thing	Right Shift
To make speech faster	Page Down
To make speech slower	Page Up
To Skip to Body-text	Insert Enter (on numeric keypad)
To Read Body-text	Insert 2
To Read Line-by-Line	Down Arrow or 2 on numeric keypad
To Select Text	Ctrl Shift plus Right Arrow key, or End key, or Down Arrow key
To Read Selected Text	Insert Shift Down Arrow
To Copy selected Text	Ctrl C
To Move Copied Text	Ctrl V in WordPad or Word, etc.
To Move to 1st Forms Field	Ctrl Insert Home, tap Enter on number-keypad to enter edit mode; enter text
To Move to Next F-Field	Tab (or F)
To Move to Prev. F-Field	Shift Tab (or Shift F)
To Turn Virtual Cursor Off or On	Insert Z
To Reformat Web Page	Insert F5
To Move Back and Forth Between Viewed Pages	Alt Left Arrow or Alt Right Arrow
Refresh Screen	Insert Escape

Navigation Commands:

Description	Quick Key
Next Visited Link	V
Prior Visited Link	SHIFT+V
Next Unvisited Link	U
Prior Unvisited Link	SHIFT+U
Next Heading	H
Prior Heading	SHIFT+H
Next Heading at Level	1 through 6
Prior Heading at Level	SHIFT+1 through 6
Next Paragraph	P
Prior Paragraph	SHIFT+P
Next List	L
Prior List	SHIFT+L
Next Table	T
Prior Table	SHIFT+T
Next Non Link Text	N
Prior Non Link Text	SHIFT+N
Next Same Type Element	S
Prior Same Type Element	SHIFT+S
Next Different Type Element	D
Prior Different Type Element	SHIFT+D
Step Past Element	E
Step Before Element	SHIFT+E
Read Current Row	R
Read Next Row	WINDOWS KEY+DOWN ARROW
Read Prior Row	WINDOWS KEY+UP ARROW
Read Row to Cell	LEFT SHIFT+R
Read Row from Cell	RIGHT SHIFT+R
Read Current Column	C
Read Column to Cell	LEFT SHIFT+C
Read Column from Cell	RIGHT SHIFT+C

I. **HTCTU web site**

   A. **Find out when next training is and associated details**

   B. **How many Headings and links are on the Tutorials page?**

   Tasks
   1. Open a web browser
   2. Use screen reader commands to navigate HTCTU site
   3. Go to list of trainings
   4. Identify next available training, list appropriate details (date, title, learning objectives/goals)
   5. Go to "Training Manuals and Tutorials" page
   6. Write down how many headings and links are present on this page

   Materials
   1. Windows Keyboard Commands

II. **Market Survey**

   A. **Visit five (5) college websites and gather four (4) pieces of information. In the process, consider the experience and identify what you think are some best practices and common problems for students using a screen reader.**

   Tasks
   1. Open a web browser
   2. Locate five (5) different college websites (or choose from the provided list)
   3. **Find the following:**

      a. **Campus general contact information**

      b. **library hours**

      c. **first and last day of classes**

      d. **DSPS Office Phone Number**

   Materials
   1. Windows Keyboard Commands