Access*ible* Computer

USER GUIDE

This computer is equipped with NVDA screen reading software. A screen reader speaks aloud the text you are reading. Request assistance to use the screen reader or view videos—earbuds are available for use.

Turn the screen reader ON:

Press: **Ctrl** + **Alt** + **N**

Or click the NVDA Icon on the desktop

Turn the screen reader OFF:

Press: **Ins** + **Q**

Move this table up or down!

Look for the electric buttons under the front edge.

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Quick Guide

Turn Screen Reader ON / OFF

The screen reader speaks the sentence directly under the cursor.

Just move the mouse pointer to the section you are reading.

Ask staff for earbuds.

Turn the screen reader ON:

Ctrl + **Alt** + **N**

or click the NVDA Icon on the desktop

Turn the screen reader OFF:

Ins + **Q**

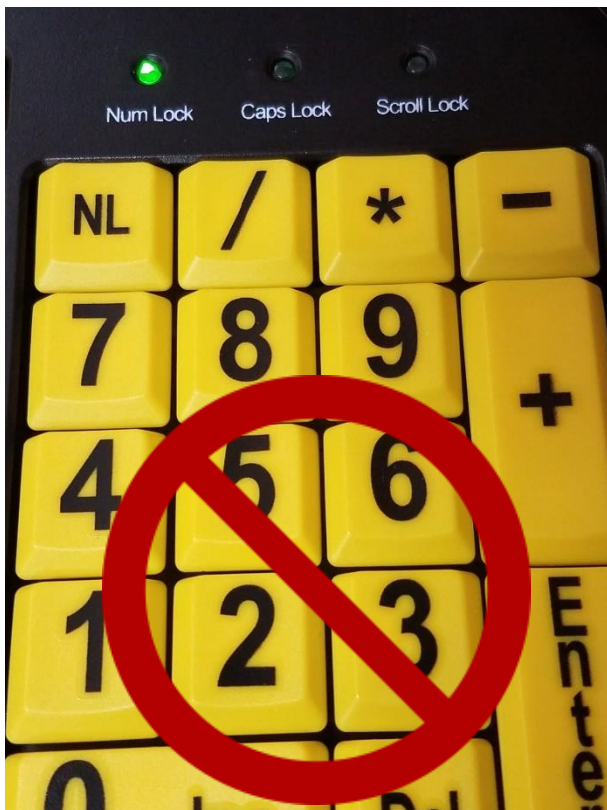To tell the screen reader to read the whole page, press:

Ins + **Down Arrow**

Quick Guide

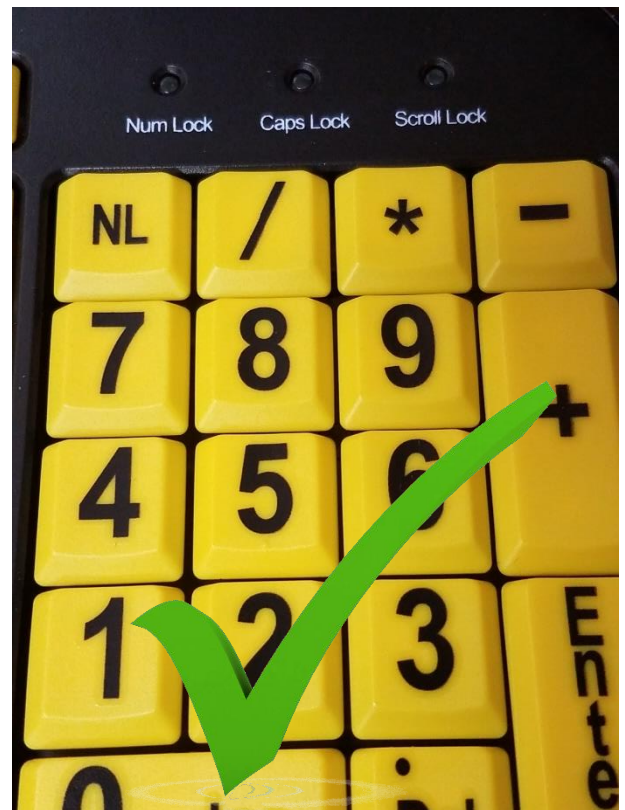## Turn the Number Lock **OFF**

The screen reader works best with the Number Lock OFF

Press the **NL** key to make sure Number Lock is **Off**
(the green light should always be off).


Number Lock is ON.
Notice Green Light

Number Lock IS OFF

If you need to type a number, use the numbered keys above the letter keys.
Screen readers and MouseKeys require the number lock be off.

Quick Guide

Set screen reader to Spanish

- First, change the Website you are viewing from English to Spanish. *(Both the UI claimant portal and Career One Stop websites fully translate to Spanish)*
- Then turn on the screen reader: press **Ctrl** + **Alt** + **N**
- Next, open NVDA Menu and change configuration. press: **Ins** + **N**
    - Select Configuration profiles ► select Spanish ► Select Manual Activate.
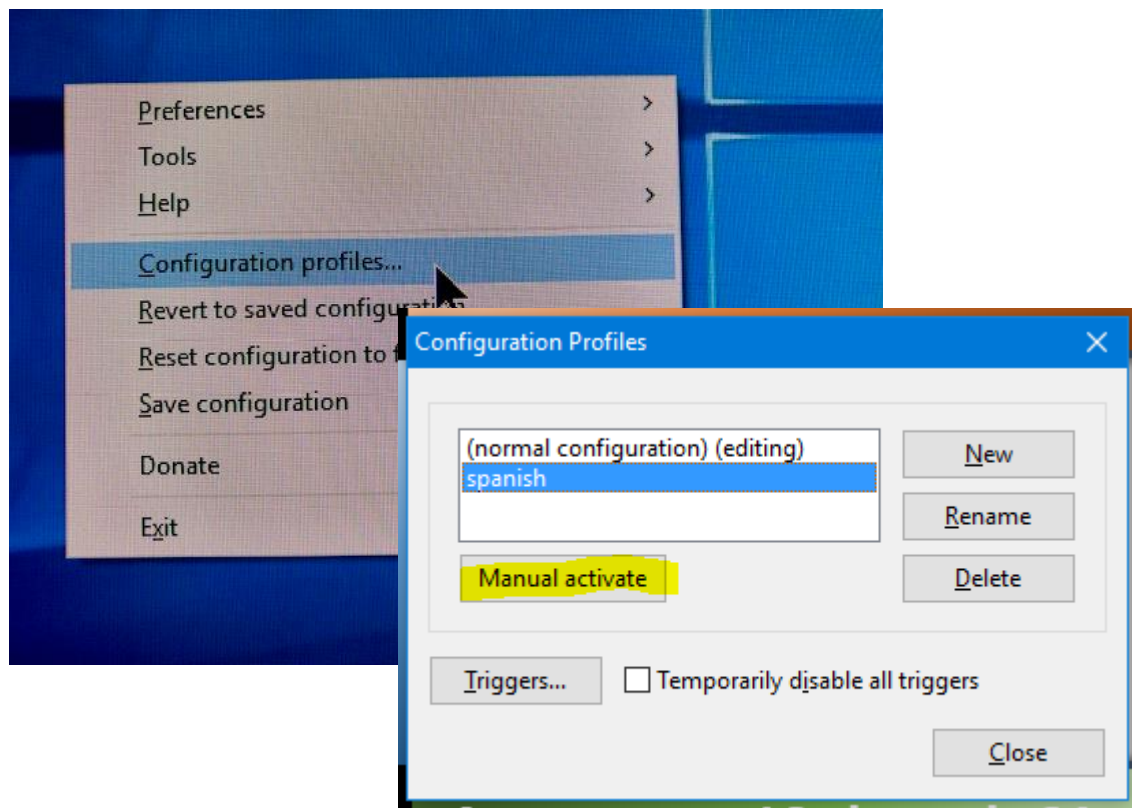

The voice defaults to a preselected, electronic Spanish-speaking voice.

When done, simply turn off the screen reader **Ins** + **Q**
NVDA returns back to the English speaking voice by default the next time it is turned on.

KEYBOARD COMMANDS

WINDOWS COMMANDS

Description:	Command:
Magnifier ON:	⊞ + =/+
Zoom IN:	⊞ + =/+
Zoom OUT:	⊞ + -/_
Lens View:	Ctrl + Alt + L
Resize Lens:	Ctrl + Alt + R
Full Screen View:	Ctrl + Alt + F
Invert Colors:	Ctrl + Alt + I
Magnifier OFF:	⊞ + Esc

SCREEN READER COMMANDS

TO:	Press:
Start reading:	Insert +Down Arrow
Stop reading:	Ctrl
Reread current line:	Insert + Up Arrow
Read previous line:	Up Arrow
Read next line:	Down Arrow
Read next character:	Right Arrow
Read previous character	Left Arrow
Read next word:	Ctrl + Right Arrow
Read previous word:	Ctrl + Left Arrow

How Do I?

Make webpages bigger:

Ctrl + **=/+**

Make webpages smaller:

Ctrl + **-/_**

Turn On Magnifier:

Windows logo key [⊞] Plus **=/+**

Turn Off Magnifier:

Windows logo key [⊞] + **Esc**

Turn High Contrast ON or OFF:

Left Alt + **Left Shift** + **PS**

General Instruction Guide

1 Introduction

To help make our services easier for everyone to use, this computer is equipped with screen reading software and improved accessibility features.

Accessibility features make it possible to view websites with or without a mouse, magnify text, and increase visual contrast for easier viewing.

A screen reader verbalizes, "or speaks," everything on the computer. This feature enables people with visual, reading or learning impairments to more easily use a computer. Screen readers are also helpful for anyone who has difficulty reading information on the computer, including non-native English speakers.

If you are new to screen readers or unfamiliar with accessibility features, plan to spend time reading through this guide to become more comfortable with this computer.

Tips to Remember:

If using the screen reader, ask the front desk for earbuds.

1.1 What I need to know to get started.

- This guide explains the Microsoft features that might make this computer easier for you to use. Instructions on how to use the following features can be found in section two of this guide:

  - **Magnifier Tool**
  - **MouseKeys Function**
  - **Sticky Keys**
  - **High Contrast Settings**

- Another feature that might make this computer easier for you to use is a screen reader called NVDA. NVDA stands for Non Visual Desktop Access. Instructions on how to use the screen reader are located in section three of this guide.

- NVDA is free, you can download it for free on your computer at home. It has the best support of all existing screen readers.

- Many people, including sighted users find screen readers helpful when using a computer.

- When using NVDA and/or using the keyboard function called MouseKeys, **make sure the Num Lock key is off.**

- When surfing the web, you may choose to use the browser called Mozilla Firefox. Mozilla has the best accessibility support for some applications. However, Internet Explorer also works very well with the NVDA screen reader, so use the browser that you are most familiar or comfortable with.

The browser, Microsoft Edge, does not have the best accessibility support and is not recommended.

- Sighted computer users and some low-vision computer users are more comfortable using a mouse to navigate a website.

- People with visual impairments or impaired dexterity make use of keyboard commands to navigate a website. NVDA works with both keyboard commands and/or a mouse.

- NVDA relies heavily on the use of keyboard commands to navigate and read the screen. **As a new user, you only need a few commands to get started.** The NVDA section of this guide provides complete instruction on keyboard commands.

- Keyboard commands often require you to press several keys at once. When we refer to these commands, we use the plus sign +, to indicate that you hold down the first key, press the second key and then let go of both keys. The first key is called the *modifier key* as it changes how the second key behaves. **Shift** , **Alt** , **Ctrl** and ⊞ keys are all modifiers.

- ## Keys to Remember

NL key	**Number Lock** (Num Lock)
Ins key	**Insert**
Ctrl key	**Control**
PS key	**Print Screen**
⊞	**Windows Logo**

2 Microsoft Accessibility Features

This section explains the Microsoft features that may make this computer easier for you to use. Accessibility features make it possible to view websites with or without a mouse, use the keyboard with one hand, magnify text and increase visual contrast for better viewing.

These features include the following:

- **Sticky Keys**
- **MouseKeys**
- **Magnifier**
- **High Contrast**

2.1 Sticky Keys

The function, *Sticky Keys*, is automatically enabled on this computer.

Sticky Keys is designed for anyone who has difficulty holding down two or more keys at a time. When a keyboard shortcut requires a key combination, such as Ctrl+Alt+Del, *Sticky Keys* lets you enter the key combinations with one hand, pressing one key at a time instead of pressing them simultaneously.

Tip to Remember:

Sticky Keys can be turned on or off by pressing the Shift key on the keyboard quickly five times in a row.

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Let's practice: **Turning Sticky Keys on and off.**

- ▪ Press the **Shift** key 5 times quickly. This turns the Sticky Keys feature on or off. You can tell if the Sticky Keys feature is on or off by looking for at the blue task bar in the far bottom, right corner of your screen.

ON: **OFF:**
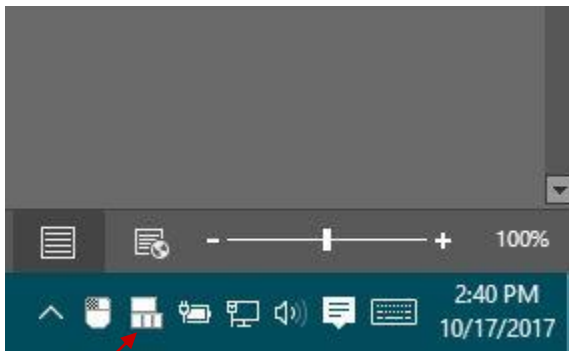
Sticky Keys symbol appears   No Sticky Keys Symbol
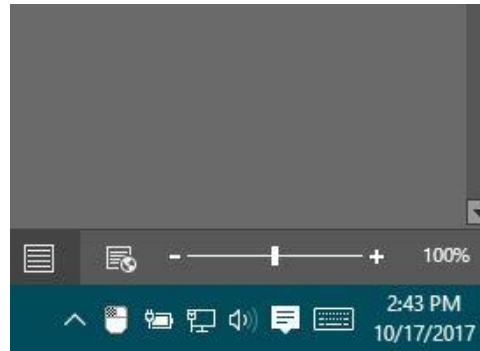
This next exercise uses the command (Ctrl + Alt + Del) to take you to the sign-out screen. Once you get there, just select CANCEL to return to this guide.

- ▪ With Sticky Keys on, press the following key combination, one key at a time: Press **Ctrl** key and release, press the **Alt** key and release, press the **Del** key and release. This takes you to the sign out screen. Now, select **Cancel.**

- ▪ Next, press the Shift key again, five times quickly. This will turn off **Sticky Keys**. This time when you press the same combination, one key at a time, nothing happens. You must press and hold the keys simultaneously: Press and hold down the **Ctrl** key, press and hold down the **Alt** key, press the **Del** key and release all three keys at the same time. This takes you to the sign out screen. Select **Cancel** .

Remember to turn Sticky Keys back on by pressing the shift key 5 times.

2.2 MouseKeys

If you have difficulty using the mouse to navigate the computer, you can use the numeric keypad–instead of the mouse—to move the pointer. Most people with vision impairments who need screen readers navigate a computer typically do not use a mouse. They use keyboard commands to control the system focus (**black blinking cursor**) and MouseKeys move the mouse pointer (the large I shaped symbol). Others use both the mouse and the keyboard to control the screen reading software.

If you use the mouse to navigate the computer, the screen reader speaks the text directly under the mouse pointer.

Things to know when using MouseKeys or the screen reader:

Make sure the NL key is toggled OFF at all times. The term "toggle" means to switch from "on to off" or "off to on".

When the NL key is toggled on, the keys function as number keys on a traditional numeric keypad.

When the NL key is toggled off, the keys act as directional and function keys. Now these keys move the mouse pointer in various directions.

The NVDA screen reader relies heavily on the use of directional function keys on keypad and also requires that NUM Lock is off.

If you need to type a number, use the number row above the lettered keys.

Use the numbered keys above the letter keys when you need to type a number.

NL ON:

NL OFF:

Numbers pass through:

Navigation control:
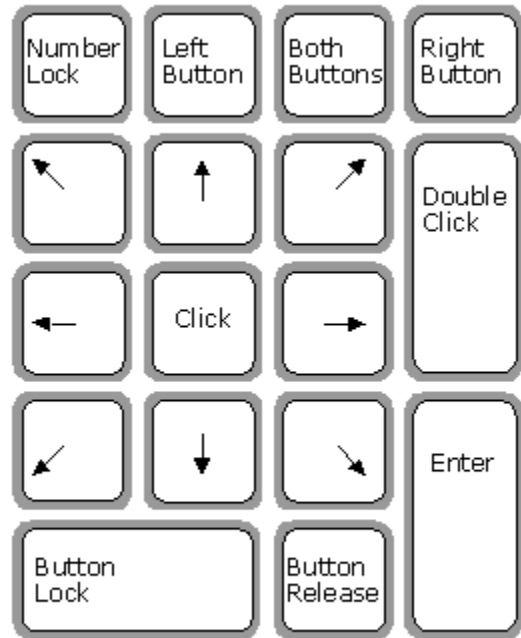
Numeric Keypad

MouseKeys

Let's practice:

- When moving the mouse pointer with MouseKeys, holding down the **Ctrl** key as you press a MouseKey speeds up the movement of the mouse pointer and holding down the **Shift** key slows it down.

- On the numeric keypad, press any of the numbered keys immediately surrounding the **5** key to move the mouse pointer in the direction that is indicated by the arrows on the diagram above.

- You can use the **5** key for a single-mouse button click and the **+** sign key for a double click.
- If the screen reader is currently reading, press the Ctrl key to pause it now.
- Notice where the system carat is located on the screen. The system carat is the blinking black cursor. Also notice where the mouse pointer is on the screen. The mouse pointer is the large I shaped symbol. Controlling the system carat and the mouse pointer are important when using a screen reader.
- To use MouseKeys to move the system carat also called the system focus, use the keypad to move the mouse pointer to the last word in this sentence. Press the number **5** key now. Notice that this moves the system carat to the mouse pointer. Now, Press the **+** key. Notice that the word is now selected. Press the **5** key again to release it.
- You can also move the system carat (Black Blinking Cursor) with the arrow keys.

2.3 Magnifier Tool

Magnifier is a tool that enlarges part—or all—of your screen so you can see words and images better. It comes with a few different settings, so use it the way that suits you best.

Let's practice:

To turn the magnifier on:

- Press and hold ⊞ key, then press the **=/+** key.

Another way you can open the magnifier is to use the mouse to click on the magnifier icon located in the task bar at the bottom of your screen.

To zoom in:

- Press and hold the hold ⊞ key, then press the **=/+** key again.

To zoom out:

- Press and hold ⊞ the key, then press the **-/_** key.

To turn the magnifier off:

- Press the ⊞ key, the press the **Esc** key.
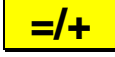
2.4 Adjusting Magnifier Views

The commands to adjust the views only work when the magnifier is on. Once the magnifier is opened, you can change the way it magnifies and switch between full-screen or lens view.

In full–screen view, your entire screen is magnified. You probably won't be able to see the whole screen at the same time when it is magnified, but as you move your mouse around the screen, you can see everything.

In lens view, when you move around the screen, it's like moving a magnifying glass. Only the content under the lens is magnified.

Let's practice: Turn the magnifier on and then change the view.

Commands	Press and hold 1st key		Press and hold 2nd key		Press 3rd key
Turn On	⊞	+	=/+		
Lens View	Ctr	+	Alt	+	L
Adjust size	Ctrl	+	Alt	+	R
Full-screen View	Ctrl	+	Alt	+	F
Turn Off	⊞	+	Esc		

Remember, the above commands to adjust the views only work when the magnifier is **activated and running**.

2.5 Color Contrast

Some people cannot read text on a computer screen if there is not sufficient contrast between the text and background. This sentence, written in light grey text on a light background, is an example of insufficient contrast and is very difficult for many people to read.

Some people with visual impairments, including many older people who lose contrast sensitivity from ageing, need higher contrast to see the computer screen. The next two sentences are examples of high contrast:

- **Dark text on a light background.**
- **Bright text on a dark background**.

While some people need high contrast, others with reading disabilities such as dyslexia, need low luminance. Bright colors make reading difficult for them. The next sentence shows an example of low luminance:

- Dark text on a tinted background.

2.6 High Contrast Settings

You can easily adjust the screen by turning high contrast on and off by using the same keystroke command.

High Contrast Command	Press and hold 1st key		Press and hold 2nd key		Press 3rd key
Turn On	**Left Alt**	**+**	**Left Shift**	**+**	**PS**
Turn Off	**Left Alt**	**+**	**Left Shift**	**+**	**PS**

However, not all content is easier to read when the High Contrast function is activated. You might prefer to use the magnifier function and the color converter in the magnifier. This way, only the content under the lens is affected.

Let's Practice: See which function works best for you:

First, turn the high contrast on and off using the keystroke combination below to see how it affects the screen.

High Contrast Command	Press and hold 1st key		Press and hold 2nd key		Press 3rd key
Turn On	**Left Alt**	+	**Left Shift**	+	**PS**
Turn Off	**Left Alt**	+	**Left Shift**	+	**PS**

Next, make sure you turned off the high contrast feature, and then turn on the magnifier in lens view and invert the colors.

Magnifier Commands	Press and hold 1st key		Press and hold 2nd key		Press 3rd key
Turn On	⊞	+	**=/+**		
Lens View	**Ctrl**	+	**Alt**	+	**L**
Invert Colors	**Ctrl**	+	**Alt**	+	**I**
Turn Off	⊞	+	**Esc**		

Which one do you like best?

3 NVDA Screen Reader

NVDA is free; you can download it for free on your computer at home. It has the best support of all existing screen readers. Many people, including sighted users find screen readers helpful when using a computer. NVDA (No Visual Desktop Access) speaks the text on a computer screen in a computerized voice. You can control what information is read aloud and can also convert the text into Braille if a "Braille Display" is connected to the PC. You control what is being read through the use of keyboard commands. You can also use the mouse to control what is being read.

Although NVDA relies heavily on the use of keyboard commands to navigate and read the screen, it also reads when using a mouse to control the screen.

As a new user, you only need to know a few keyboard commands to get started.

Turn the screen reader ON:
Ctrl + **Alt** + **N**   **or click the NVDA Icon on the desktop**

Turn the screen Reader OFF:
Ins + **Q**

- ▪ The screen reader speaks the sentence directly under the mouse pointer.

3.1 The NVDA Modifier Key

NVDA uses a special modifier key called the NVDA key.

The NVDA key is set to the **Insert** key by default. The NVDA key does not do anything on its own. It simply acts as a modifier to change the way other keys function. As we mentioned earlier, when using keys in combination to enter a command, the proper way press the keys is to hold down all of the modifier keys first and then press the single key once before letting go of all the keys at the same time. For example;

- The command to read everything starting from your current position of the page is **Insert** + **Down Arrow**. To tell NVDA to read everything, you would hold down the NVDA modifier key (which is always the Insert key) and then press the Down Arrow key once before letting go of all the keys.

- The command to re-read the previous paragraph is **Ctrl** + **Up Arrow** . To read the previous paragraph, you would hold down the Ctrl key and then press the Up Arrow key once before letting go of all the keys.

Let's Practice:

Using the modifier key to read the time.

- Hold down the **Insert** key, NVDA should say nothing at this point.

- Press the **F12** key and then let go of both keys. NVDA will report the time.

3.2 How Screen Readers Read Text

This section presents a list of ways that screen readers generally read and pronounce text.

- When using a screen reader, there is a big difference between using the keyboard and the mouse to navigate a website. When navigating with a keyboard, access to links on the screen is sequential: You have to tab through all of the links one by one before reaching a link you want. In contrast, if you can see the screen and you can use the mouse, you can move the cursor directly to the link you want to click.

- Screen readers use different reading modes to read content. Generally, **Browse mode** is the default navigation mode for reading websites and read only documents.

- In **Browse mode**, keyboard commands are intercepted and modified by the screen reader allowing users to navigate a virtual representation rather than a screen representation of the page's content and structure. For example, in Browse mode, you can press the up or down arrow keys to move the cursor up or down a line in the page to have it read. You can also

press the **L** key to move to the next link, or press **Insert** + **F7** to call up a list of all the links on the page. Pressing the **H** key in browse mode moves the cursor from heading to heading.

- In **Focus mode,** keyboard commands can be passed directly through to the browser, allowing users to do such things as type text into form fields. Pressing the **H** key in focus mode passes the letter H to the text field.

- Screen readers automatically switch from **BROWSE** mode to **FORM** mode when you click into a form.

- Screen readers pause for periods, semi-colons, commas, question marks, and exclamation points.

- Screen readers generally pause at the end of paragraphs.

- Screen readers try to pronounce acronyms and nonsensical words if they have sufficient vowels/consonants to be pronounceable; otherwise, they spell out the letters. For example, NASA is pronounced as a word, whereas NSF is pronounced as "N. S. F." The acronym ADA is pronounced as a word, even though as an acronym for the Americans with Disabilities Act, most humans say "A. D. A." Knowing how

screen readers read content is important when designing accessible documents.

- Screen readers read letters aloud as you type them, but say "star" for password fields.

- Screen readers announce the page title (the <title> element in the HTML markup) when first loading a web page.

- Screen readers will read the alternate text of images, if alt text is present.

- Screen readers ignore images without alternative text and say nothing, but users can set their preferences to read the file name.

- If the image without alternative text is a link, screen readers will generally read the link destination or may read the image file name.

- Screen readers announce headings and heading levels.

- The page may not scroll down while you read, so you may hear content being read by NVDA that isn't visible. You can scroll down the page with your mouse or with the down arrow on the keyboard.

- In addition, experienced users often like to speed up the reading rate to 300 words per minute, which is more than the inexperienced listener can easily understand. In fact, when many people hear a screen reader for the first time, at the normal rate of about 180 words per minute, they complain that it reads too quickly. It takes time to get used to a screen reader, but the interesting thing is that once users get used to it, they can race through content at speeds that can amaze sighted individuals. You can slow it down to the speed you find most comfortable.

3.3 Browse and Focus Mode

- NVDA has two operating modes, Browse mode and Focus mode. It is important to understand the difference between these two modes.

- When you open a webpage, NVDA defaults to Browse mode. In Browse mode, most keys you press on the keyboard are going to control the screen reader in some way. So, if you are in Browse mode when you open a webpage and you press the **L** key, it will navigate the screen reader to the next link on the page. This is something you can only do in browse mode. If you are in a Word Document and you are in Focus mode, when you press the **L** key, it would type the letter L into the document.

- When you enter a form field within a webpage, NVDA automatically changes to Focus mode. In Focus mode, any key you press will be typed into the form.

3.4 Input Help Mode

NVDA's help mode allows you to explore the keyboard to learn what each keystroke command does. While in input mode, NVDA simply reports the command associated with the key press and does not actually preform the action—so it is safe in this mode to press whatever you would like to find out its name or what it does. The only exception to this is the `NL` key. Pressing the `NL` key, even in input help mode toggles **Number Lock** from off to on or on to off.

Remember, **Number Lock** `NL` should always be off when using this computer, because the screen reader uses the number pad in its **"off"** state for many commands when reading a website.

To turn ON the Input Help mode, press the `Ins` key (the default NVDA key) plus the number `1` key (on the number row above the q) before releasing the NVDA key.

To turn OFF the Input Help mode, press the `Ins` key plus the number `1` key (on the number row above the q) again.

Let's Practice:

1. Press **Ins** + **1** . NVDA will report "Input Help on".

2. Press **Ins** + **F12** . We know from our previous exercise that this reports the time, but now that we are in help mode, NVDA reports the name of the keystroke and what it does. If you try the combination again but this time press the **F12** key twice very quickly, it will report that this function reads the current date. Try it now.

3. Some other commands you'll want to learn while in help mode:

Ins key + **Down Arrow** Reads from beginning to end, whether you are reading a document or reading a webpage.
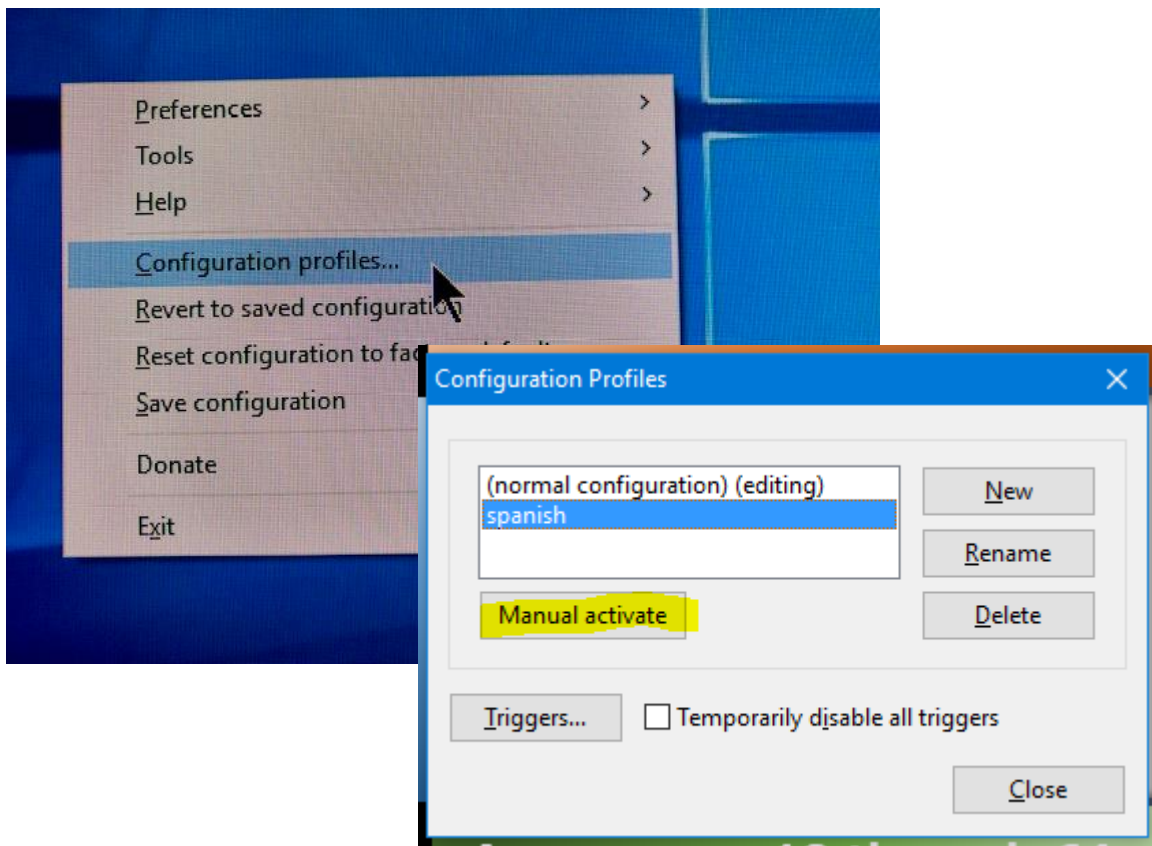
Ins key + **Up Arrow** Rereads the current line

Ins key + **Spacebar** Toggles (or switches) between browsing or focus mode.

4. Toggle out of Help mode now:

Press **Ins** + **1** (on the number row above the q)

3.5 Change Voice to Spanish

- First, change the Website you are viewing from English to Spanish. *(Both the UI claimant portal and Career One Stop websites fully translate to Spanish)*
- Then turn on the screen reader: press **Ctrl** + **Alt** + **N**
- Next, open NVDA Menu and change configuration. press: **Ins** + **N**
  - Select Configuration profiles► select Spanish ►Select Maual Activate.

The voice defaults to a preselected, electronic Spanish-speaking voice.

When done, simply turn off the screen reader **Ins** + **Q**

NVDA returns back to the English speaking voice by default the next time it is turned on.