#### NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS

#### School of Science

#### **Information Technologies in Medicine and Biology**

**Direction:** *Bioinformatics* 

### Accessibility of Information Systems and the World Wide Web

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Date: 07/01/2017

#### **Assignment 3**

Accessibility Website Evaluation: Every student is assigned to evaluate a website of a big Greek University (<a href="http://www.cut.ac.cy/">http://www.cut.ac.cy/</a>) and write a website accessibility report. You can take as reference a pdf file given in e-class. Notice to add at least one fullpage with your personal comments and your personal evaluation of the webpage that you evaluate. The pages that you should take as a reference for your evaluation are:

- Home page
- Schools and Departments
- Library
- Telephone Directory (Search engine)
- Announcements / News

#### **Suggested Evaluation Tools:**

- Overall Assessment: WAVE <a href="http://wave.webaim.org/">http://wave.webaim.org/</a>
- WCAG 2.0 Conformity Check evaluation: AChecker <a href="http://achecker.ca/">http://achecker.ca/</a>
- Color Contrast and Color Brightness Test Evaluation: AccessColor http://www.accesskeys.org/
- XHTML and CSS Validation: a) W3C Markup Validation Service <a href="http://validator.w3.org/">http://validator.w3.org/</a> and b) W3C CSS Validator <a href="http://jigsaw.w3.org/">http://jigsaw.w3.org/</a>

#### **Assignment Description in Greek:**

#### Αξιολόγηση Προσβασιμότητας Ιστοθέσης

Κάθε φοιτητής/τρια θα αξιολογήσει τον ιστότοπο ενός μεγάλου Ελληνικού Πανεπιστημίου γράφοντας μια αναφορά προσβασιμότητας ιστότοπου. Υπόδειγμα μιας αναφοράς προσβασιμότητας υπάρχει στο >> Έγγραφα >>Πρόσθετο Εκπαιδευτικό Υλικό >> Τυπική Αναφορά Ελέγχου Προσβασιμότητας Ιστοθέσης.pdf. Σημαντική είναι η προσθήκη τουλάχιστον μιας πλήρους σελίδας κειμένου με τα προσωπικά σας σχόλια και την προσωπική σας αξιολόγηση των ιστοσελίδων που ελέγξατε ως προς την προσβασιμότητα.

Τεχνολογικό Πανεπιστήμιο Κύπρου: <a href="http://www.cut.ac.cy/">http://www.cut.ac.cy/</a>

Οι σελίδες που θα επιλεγούν ως δείγματα για την αξιολόγηση της προσβασιμότητας κάθε ιστότοπου είναι:

- Αρχική Σελίδα
- Σχολές και Τμήματα
- Βιβλιοθήκη
- Τηλεφωνικός κατάλογος (φόρμα αναζήτησης)
- Ανακοινώσεις-Νέα

### Προτεινόμενα εργαλεία αξιολόγησης:

- Συνολική Αξιολόγηση (Overall Assessment): WAVE <a href="http://wave.webaim.org/">http://wave.webaim.org/</a>
- Αξιολόγηση Συμμόρφωσης με τις οδηγίες WCAG 2.0 (WCAG 2.0 Conformity Check): AChecker <a href="http://achecker.ca/">http://achecker.ca/</a>
- Αξιολόγηση Φωτεινότητας και Αντίθεσης Χρωμάτων (Color Contrast and Color Brightness Test): AccessColor <a href="http://www.accesskeys.org/">http://www.accesskeys.org/</a>
- Αξιολόγηση Εγκυρότητας Κώδικα XHTML και CSS (XHTML and CSS Validation): α) W3C
   Markup Validation Service <a href="http://validator.w3.org/">http://validator.w3.org/</a> και β) W3C CSS
   Validator <a href="http://jigsaw.w3.org/">http://jigsaw.w3.org/</a>

Most of people take the way they use a computer daily for granted. A keyboard, mouse and monitor seems necessary, even natural. Yet, many people must rely on other means of interacting with a computer. In this assignment, we were assigned to use some evaluation tools for some very common websites that are used from disabled students, who get in trouble because of the absence and lack of design that is respective for these groups of people. I was assigned to evaluate the website of the second bigger university of Cyprus, the Technical University of Cyprus, located in the centre of the city of Limassol.

To start with, this is also rude of me as an evaluator, but even for common non-disabled people like me, this website is totally a mess. This is also the reason I chose to evaluate it, because it happened to search for some faculty stuff for my PhD and finally I had to navigate for about 10 minutes, from which the 9½ was totally a waste of time. Worth mentioning, that a contact of mine told me that it has been redesigned and in this 1<sup>st</sup> semester of 2017 the new website will be launched. I hope that the design will not be only for the "common" non-disabled people, but also for the disabled ones. As you will find out from the next paragraph the errors that were found were too many. They looked something like this shown in Figure 1.

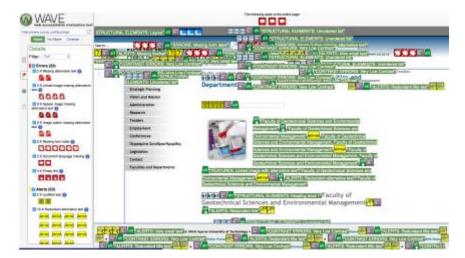


Figure 1: Accessibility Errors in webpage

I started the evaluation in the 5 most visited pages of the university (Home page, Schools and Departments, Library, Telephone Directory (Search engine), Announcements / News) with **WAVE**, the first evaluation tool, evaluating the overall assessment. There the results respectively for the five webpages are shown in the following 5 figures (Figure 2-6).



Figure 2: Evaluation summary for Home page



Figure 3: Evaluation summary for Schools page



Figure 4: Evaluation summary for Library page

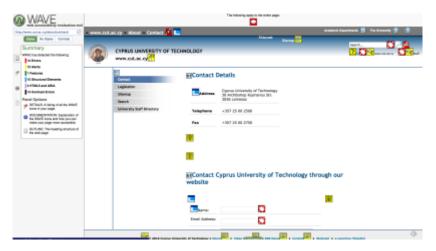


Figure 5: Evaluation summary for Contact page



Figure 6: Evaluation summary for News/Announcements page

As it is obvious there are hundreds of errors in all this pages, and a lot of them are repeated in all pages and a lot of times in each page. To make it easier for this report to evaluate and indicate this errors with our main purpose to give this report to the university and take care of fixing them, we digged a bit more to each of the errors and found the following by using the documentation. I am going to indicate each one, what it means, why it matters, how to fix it and where it was found and how many times:

Errors (80 in home page, 11 in schools page, 27 in library page, 14 in contact page, 21 in announcements page):



Title: Missing alternative text

Meaning: Image alternative text is not present.

<u>Why It Matters</u>: Each image must have an alt attribute. Without alternative text, the content of an image will not be available to screen reader users or when the image is unavailable.

<u>How to Fix It</u>: Add an alt attribute to the image. The attribute value should accurately and succinctly present the content and function of the image. If the content of the image is conveyed in the context or surroundings of the image, or if the image does not convey content or have a function, it should be given empty/null alternative text (alt="").

Found: 8x in Home page, 1x in school page, 5x in library page, 1x in contact page,



<u>Title</u>: Linked image missing alternative text

Meaning: An image without alternative text results in an empty link.

Why It Matters: Images that are the only thing within a link must have descriptive alternative text. If an image is within a link that contains no text and that image does

not provide alternative text, a screen reader has no content to present to the user regarding the function of the link.

<u>How to Fix It</u>: Add appropriate alternative text that presents the content of the image and/or the function of the link.

<u>The Algorithm... in English</u>: An image without alternative text (missing alt attribute or an alt value that is null/empty or only space characters) is within a link that contains no text and no images with alternative text.

<u>Found</u>: 54x in Home page, 2x in school page, 12x in library page, 2x in contact page, 10x in announcements page



<u>Title</u>: Image button missing alternative text

Meaning: Alternative text is not present for a form image button.

<u>Why It Matters</u>: Image buttons provide important functionality that must be presented in alternative text. Without alternative text, the function of an image button is not made available to screen reader users or when images are disabled or unavailable.

<u>How to Fix It</u>: Add appropriate alternative text that presents the function of the image button (e.g., <input src="button.gif" type="image" alt="Submit search">).

<u>The Algorithm... in English</u>: An image button (<input type="image">) does not have an alt attribute or has an alt value that is null/empty (alt="") or only space characters.

<u>Found</u>: 1x in Home page, 1x in school page, 1x in contact page, 1x in announcements page,



Title: Missing form label

Meaning: A form control does not have a corresponding label.

<u>Why It Matters</u>: If a form control does not have a properly associated text label, the function or purpose of that form control may not be presented to screen reader users. Form labels also provide visible descriptions and larger clickable targets for form controls.

<u>How to Fix It</u>: If a text label for a form control is visible, use the <label> element to associate it with its respective form control. If there is no visible label, either provide an associated label, add a descriptive title attribute to the form control, or reference the label(s) using aria-labelledby. Labels are not required for image, submit, reset, button, or hidden form controls.

The Algorithm... in English: An <input> (except types of image, submit, reset, button, or hidden), <select>, or <textarea> does not have a properly associated label text. A properly associated label is: a <label> element with a for attribute value that is equal to the id of a unique form control, a <label> element that surrounds the form control, does not surround any other form controls, and does not reference another element with its for attribute, a non-empty title attribute, or a non-empty arialabelled by attribute.

<u>Found</u>: 3x in Home page, 3x in school page, 10x in library page, 6x in contact page, 3x in announcements page



Title: Document language missing

Meaning: The language of the document is not identified.

<u>Why It Matters</u>: Identifying the language of the page allows screen readers to read the content in the appropriate language. It also facilitates automatic translation of content.

<u>How to Fix It</u>: Identify the document language using the <a href="html">html lang="en">).

<u>The Algorithm... in English</u>: The <a href="html">html</a> lang> attribute is missing or is empty.

<u>Found</u>: 1x in Home page, 1x in school page, 1x in contact page, 1x in announcements page



Title: Empty heading

Meaning: A heading contains no content.

<u>Why It Matters</u>: Some users, especially keyboard and screen reader users, often navigate by heading elements. An empty heading will present no information and may introduce confusion.

How to Fix It: Ensure that all headings contain informative content.

<u>The Algorithm... in English</u>: A heading element is present that contains no text (or only spaces) and no images with alternative text.

Found: 1x in Home page, 1x in announcements page



Title: Empty link

Meaning: A link contains no text.

Why It Matters: If a link contains no text, the function or purpose of the link will not be presented to the user. This can introduce confusion for keyboard and screen reader users.

<u>How to Fix It</u>: Remove the empty link or provide text within the link that describes the functionality and/or target of that link.

<u>The Algorithm... in English</u>: An anchor element has an href attribute, but contains no text (or only spaces) and no images with alternative text.

<u>Found</u>: 12x in Home page, 2x in school page, 2x in contact page, 4x in announcements page



<u>Title</u>: Spacer image missing alternative text

<u>Meaning</u>: A layout spacer image (which should have null/empty alternative text) does not have an alt attribute.

<u>Why It Matters</u>: Spacer images are used to maintain layout. They do not convey content and should be given null/empty alternative text (alt="") so they are not presented to users and are ignored by screen readers.

<u>How to Fix It</u>: If the image is a spacer image, give the image null/empty alternative text (alt=""). Alternatively, consider using CSS instead of spacer images to control positioning and layout.

<u>The Algorithm... in English</u>: An image is missing an alt attribute and has a width or height of 3 pixels or less or has a file name starting with "spacer.\*", "space.\*", or "blank.\*".

Found: 1x in school page, 1x in contact page, 1x in announcements page

Alerts (34 in Home page, 26 in school page, 13 in library page,13 in contact page, 39 in announcements page)



<u>Title</u>: Redundant alternative text

Meaning: The alternative text for an image is the same as nearby or adjacent text.

Why It Matters: Alternative text that is the same as nearby or adjacent text will be presented multiple times to screen readers or when images are unavailable.

<u>How to Fix It</u>: Change either the alternative text or the adjacent text to eliminate the redundancy. In most cases, you can give the image empty/null alternative text (alt="") because the content of the image is already provided in context through text. Linked images may often be combined with the adjacent text into one link, in which case the image may be given null/empty alternative text (alt="").

<u>The Algorithm... in English</u>: The alternative text is the same as text that is within 15 characters of the image.

Found: 12x in Home page, 7x in school page,



Title: Missing fieldset

Meaning: A group of check boxes or radio buttons is not enclosed in a fieldset.

<u>Why It Matters</u>: A fieldset provides a visual and structural grouping of related form elements. It is typically necessary for groups of check boxes or radio buttons where a higher level description (called a legend) is necessary to understand the function of the check boxes or radio buttons. The description will be identified by a screen reader only if provided in a fieldset legend.

<u>How to Fix It</u>: Determine whether the grouping of check boxes or radio buttons has or needs text that explains the purpose of the check boxes or radio button grouping. If so, mark up the group within a fieldset and put the group description in a legend element.

<u>The Algorithm... in English</u>: Two or more checkbox or radio input elements within a form have the same name value, but are not enclosed in a fieldset.

<u>Found</u>: 1x in Home page, 1x in school page, 1x in contact page, 1x in announcements page



Title: Redundant link

Meaning: Adjacent links go to the same URL.

<u>Why It Matters</u>: When adjacent links go to the same location (such as a linked product image and an adjacent linked product name that go to the same product page) this results in additional navigation and repetition for keyboard and screen reader users.

<u>How to Fix It</u>: If possible, combine the redundant links into one link and remove any redundant text or alternative text (for example, if a product image and product name are in the same link, the image can usually be given alt="").

The Algorithm... in English: Two adjacent links go to the same URL.

<u>Found</u>: 12x in home page, 9x in school page, 2x in library page, 1x in contact page, 22x in announcements page



Title: Noscript element

What It Means: A <noscript> element is present.

<u>Why It Matters</u>: Content within <noscript> is presented if JavaScript is disabled. Because nearly all users (including users of screen readers and other assistive technologies) have JavaScript enabled, <noscript> cannot be used to provide an accessible version of inaccessible scripted content.

<u>How to Fix It</u>: Ensure that scripted content is accessible. The <noscript> content will be presented to very few users, but must be accessible if used.

The Algorithm... in English: A <noscript> element is present.

Found: 1x in home page,



Title: Tabindex

Meaning: A positive tabindex value is present.

<u>Why It Matters</u>: Tabindex values of 1 or greater specify an explicit tab/navigation order for page elements. Because it modifies the default tab order, cause confusion, and result in decreased keyboard accessibility, it should be avoided.

<u>How to Fix It</u>: If the natural tab order is already logical, remove the tabindex. Otherwise, consider restructuring the page so that tabindex is not needed. If tabindex is maintained, ensure that the resulting navigation is logical and complete.

<u>The Algorithm... in English</u>: A tabindex attribute is present and has a positive value.

Found: 5x in home page, 4x in announcements page



Title: Very small text

Meaning: Text is very small.

Why It Matters: Text which is very small is difficult to read, particularly for those with

low vision.

How to Fix It: Increase the text to a more readable size.

<u>The Algorithm... in English</u>: Text is present that is sized 10 pixels or smaller.

<u>Found</u>: 4x in home page, 3x in school page, 3x in contact page, 4x in announcements page



Title: Redundant title text

Meaning: Title attribute text is the same as text or alternative text.

<u>Why It Matters</u>: The title attribute value is used to provide *advisory* information. It typically appears when the users hovers the mouse over an element. The advisory information presented should not be identical to or very similar to the element text or alternative text.

<u>How to Fix It</u>: In most cases the title attribute can be removed, otherwise modify it to provide advisory, but not redundant information. Note that the title text may or may not be read by a screen reader and is typically inaccessible to sighted keyboard users.

<u>The Algorithm... in English</u>: A title attribute value is identical to element text or image alternative text.

<u>Found</u>: 4x in home page, 5x in school page, 8x in library page, 5x in contact page, 8x in announcements page



Title: Justified text

Meaning: Fully justified text is present.

Why It Matters: Large blocks of justified text can negatively impact readability due to varying word/letter spacing and 'rivers of white' that flow through the text.

How to Fix It: Remove the full justification from the text.

The Algorithm... in English: A , <div>, or element has more than 500

characters and is styled with text-align:justify. Found: 1x in school page, 3x in contact page,



Title: Unlabeled form element with title

Meaning: A form control does not have a label, but has a title.

<u>Why It Matters</u>: The title attribute value for unlabeled form controls will be presented to screen reader users. However, a properly associated text label provides better usability and accessibility and should be used unless the purpose of the form control is intuitive without the label.

How to Fix It: If a visible text label is available for the form control, associate the text label to the form control using the label element. This provides additional functionality for end users because if the label is clicked it will set focus to the form control. If the form control is intuitive without a <label>, the title attribute value may be used. Note that the title attribute value will not generally be read by a screen reader if the control has a label and may not be available to sighted users, particularly keyboard-only users.

<u>The Algorithm... in English</u>: An <input> (except types of image, submit, reset, button, or hidden), <textarea>, or <select> element has a non-empty title attribute value and is missing a label or valid aria-labelledby reference.

Found: 1x in library page,



Title: Link to PDF document

Meaning: A link to a PDF document is present.

<u>Why It Matters</u>: Unless authored with accessibility in mind, PDF documents often have accessibility issues. Additionally, PDF documents are typically viewed using a separate application or plug-in, and can thus cause confusion and navigation difficulties.

<u>How to Fix It</u>: Ensure the PDF document is natively accessible. Additionally, inform the user that the link will open a PDF document. Because PDF documents may have limitations in accessibility (particularly for complex content) and require a separate program, HTML content should often be used in place of or in addition to the PDF document.

The Algorithm... in English: A link to a .pdf file is present

Found: 1x in library page,

## Features (32 in home page, 8 in school page, 15 in library page, 1 in contact page, 11 in announcements page)



Title: Null or empty alternative text

Meaning: Alternative text is null or empty (alt="").

<u>Why It Matters</u>: If an image does not convey content or if the content of the image is conveyed elsewhere (such as in a caption or nearby text), the image should have empty/null alternative text (alt="") to ensure that it is ignored by a screen reader and is hidden when images are disabled or unavailable.

<u>How to Fix It</u>: Ensure that the image does not convey content or that the content of the image is conveyed in nearby text (e.g., a caption).

The Algorithm... in English: An image has alt="".

<u>Found</u>: 9x in home page, 2x in library page, 10x in announcements page



<u>Title</u>: Linked image with alternative text

Meaning: Alternative text is present for an image that is within a link.

<u>Why It Matters</u>: Including appropriate alternative text on an image within a link ensures that the function and purpose of the link and the content of the image is available to screen reader users or when images are unavailable.

How to Fix It: Ensure that the alternative text presents the content of the image and/or the function of the link. If the full content and function of the link is presented in text within the link (an image and a text caption both within the same link, for example), then the image should generally be given empty/null alternative text (alt="") to avoid redundancy.

<u>The Algorithm... in English</u>: An image element has non-empty alternative text, is within a link, and no other text (or images with alternative text) is present within the link.

<u>Found</u>: 23x in home page, 8x in school page, 13x in library page, 1x in contact page, 1x in announcements page



Title: Alternative text

What It Means: Image alternative text is present.

<u>Why It Matters</u>: Alternative text presents the content or function of an image to screen reader users or in other situations where images cannot be seen or are unavailable.

<u>How to Fix It</u>: Ensure that the alternative text conveys the content and function of the image accurately and succinctly. The alt attribute should be equivalent, accurate, and succinct.

<u>The Algorithm... in English</u>: A non-empty alt attribute is present on an image. <u>Found</u>:

Structural Elements (51 in home page, 26 in school page, 45 in library page, 13 in contact page, 24 in announcements page)



<u>Title</u>: Layout table

Meaning: A layout table is present.

<u>Why It Matters</u>: While tables are primarily intended for the presentation of tabular information or data, they are often used to control page layout and formatting. Layout tables can introduce reading and navigation order issues and must not contain header () cells.

<u>How to Fix It</u>: Ensure that the table is indeed a layout table and that it does not contain tabular data. If it is a data table, provide appropriate header () cells. Verify that the reading and navigation order of table content (based on underlying source code order) is logical.

<u>The Algorithm... in English</u>: A element is present that does not contain any header () cells.

<u>Found</u>: 27x in home page, 1x in school page, 4x in contact page, 12x in announcements page



Title: Heading level 1

Meaning: A first level heading (<h1> element) is present.

<u>Why It Matters</u>: Headings facilitate page navigation for users of assistive technologies. They also provide semantic and visual meaning and structure to the document. First level headings should contain the most important heading(s) on the page (generally the document title).

<u>How to Fix It</u>: Ensure that the text in question is truly a heading and that it is structured correctly in the page outline.

The Algorithm... in English: An <h1> element is present.

<u>Found</u>: 4x in home page, 8x in school page, 2x in contact page, 3x in announcements page



<u>Title</u>: Unordered list

Meaning: An unordered (bulleted) list ( element) is present.

Why It Matters: Ordered lists present a group of related, parallel items. Users of many assistive technologies can navigate by and within lists.

<u>How to Fix It</u>: Ensure that an unordered (bulleted) list is appropriate for the context. If list items are sequential or numbered, an ordered list () is likely more appropriate.

The Algorithm... in English: A element is present.

<u>Found</u>: 19x in home page, 14x in school page, 17x in library page, 6x in contact page, 8x in announcements page



Title: Inline Frame

What It Means: An inline frame (<iframe>) is present.

<u>Why It Matters</u>: The content of an inline frame is read as if it were part of the page that contains it. The content of the iframe must be accessible. A title attribute value for the iframe will generally be read by a screen reader when the iframe is encountered.

<u>How to Fix It</u>: Ensure that the content within the iframe is accessible. Optionally, a title attribute value can be added to provide a brief, advisory description of the iframe.

The Algorithm... in English: An <iframe> element is present.

<u>Found</u>: 1x in home page, 3x in school page, 1x in contact page, 1x in announcements page



<u>Title</u>: Heading level 2

What It Means: A second level heading (<h2> element) is present.

<u>Why It Matters</u>: Headings facilitate page navigation for users of assistive technologies. They also provide semantic and visual meaning and structure to the document.

<u>How to Fix It</u>: Ensure that the text in question is truly a heading and that it is structured correctly in the page outline.

The Algorithm... in English: An <h2> element is present.

Found: 13x in library page,



<u>Title</u>: Heading level 3

What It Means: A third level heading (<h3> element) is present.

<u>Why It Matters</u>: Headings facilitate page navigation for users of assistive technologies. They also provide semantic and visual meaning and structure to the document.

<u>How to Fix It</u>: Ensure that the text in question is truly a heading and that it is structured correctly in the page outline.

<u>The Algorithm... in English</u>: An <h3> element is present.

Found: 6x in library page,



<u>Title</u>: Ordered list

What It Means: An ordered (numbered) list ( element) is present.

Why It Matters: Ordered lists present a group of related sequential items. Users of assistive technologies can navigate by and within lists.

<u>How to Fix It</u>: Ensure that an ordered (numbered) list is appropriate for the context. If list items are parallel or the order of the items is not important, an unordered list () is likely more appropriate.

The Algorithm... in English: An element is present.

Found: 1x in library page,

# HTML5 and ARIA (7 in home page, 4 in schools page, 4 in library page, 7 in announcements page)



Title: ARIA

Meaning: An ARIA role, state, or property is present.

Why It Matters: ARIA provides enhanced semantics and accessibility for web content.

<u>How to Fix It</u>: Ensure the ARIA role, state, or property is used correctly. Use standard HTML accessibility features when possible. Be aware that support for ARIA is limited in older browsers and assistive technologies.

<u>The Algorithm...</u> in English: An ARIA role, state, or property is present, excluding landmark roles, aria-labelledby, or aria-describedby which have distinct icons.

<u>Found</u>: 5x in home page, 2x in school page, 5x in announcements page



Title: ARIA label or description

Meaning: An aria-label, aria-labelledby, or aria-describedby attribute is present.

<u>Why It Matters</u>: ARIA labels and descriptions allow elements to be associated with other content. These labels and descriptions will generally be read by screen readers. They may be used when HTML associations (label, alternative text, etc.) are not sufficient.

<u>How to Fix It</u>: Ensure the aria-labelledby or aria-describedby attribute references an element that provides a correct label or description. When possible, use standard HTML <label> or other markup to make the association.

<u>The Algorithm... in English</u>: An aria-label, aria-labelledby, or aria-describedby attribute is present.

Found: 2x in home page, 2x in announcements page



Title: ARIA tabindex

Meaning: A tabindex value of 0 or less is present.

Why It Matters: Tabindex can facilitate keyboard navigation for interactive elements. A tabindex attribute value of 0 places an item into the keyboard navigation order (i.e., you can navigate to it using the Tab key). A value of less than 0 (typically -1) removes an element from the keyboard flow (you cannot Tab to it), but allows it to receive programmatic focus (e.g., via scripting).

<u>How to Fix It</u>: Ensure that tabindex is being used correctly by navigating and interacting with the elements using only the keyboard. Positive tabindex values specify a distinct tab order and should typically be avoided.

<u>The Algorithm... in English</u>: A tabindex attribute is present and has a value of 0 or less.

Found: 2x in school page,



<u>Title</u>: Header

Meaning: A <header> element or banner landmark is present.

<u>Why It Matters</u>: Headers identify page introduction or navigation. They typically surrounds the site or page name, logo, top navigation, or other header content. Headers facilitate page semantics and navigation.

<u>How to Fix It</u>: Ensure the header surrounds and defines page header content.

<u>The Algorithm... in English</u>: A <header> element or role="banner" is present.

Found: 1x in library page,



Title: Footer

<u>Meaning</u>: A <footer> element or contentinfo landmark is present.

<u>Why It Matters</u>: Footers identify a footer for the page or a page section. It typically identifies authorship, related links, copyright date, or other footer content. Footers facilitate page semantics and navigation.

<u>How to Fix It</u>: Ensure the element surrounds and defines page or page section footer content.

<u>The Algorithm... in English</u>: A <footer> element or role="contentinfo" is present. <u>Found</u>: 1x in library page,



Title: Aside

Meaning: An <aside> element or complementary landmark is present.

Why It Matters: An aside identifies secondary, related, or complementary content. It is typically presented in a sidebar.

<u>How to Fix It</u>: Ensure the aside surrounds and defines secondary, related, or complementary content.

<u>The Algorithm... in English</u>: An <aside> element or role="complementary" is present. <u>Found</u>: 2x in library page,

# Contrast Errors (70 in home page, 33 in school page, 88 in library page, 15 in contact page, 37 in announcements page)

Now that it is obvious that there exist a lot of problems in this page I am going to create a table and place all the error numbers inside while also I'm going to use all the other proposed tools to create a bigger picture of the problems and to the divisions they appeal to:

			Website (in assignment's ordering)				
	Tools		home	schools	library	contact	news
Overall assessment	WAVE	Errors	80	11	27	14	21
		Alerts	34	26	13	13	39
		Features	32	8	15	1	11
		Structural	31	26	45	13	24
		ARIA	7	9	4	0	4
		contrast	70	33	88	15	37
WCAG 2.0 Conformity Check evaluation	AChecker	Known problems	96	38	166	51	56
		Likely problems	1	0	0	0	0
		Potential problems	538	260	409	165	306
		HTML validation	126	17	117	19	48
		CSS validation	0	24	37	24	23
XHTML and CSS Validation	W3C Markup	Errors	126	17	117	19	48
	Validation	Warnings	12	1	123	6	3
	W3C CSS	Errors	-	24	37	24	23
	Validator	Warnings	-	20	443	20	20

#### Links

http://wave.webaim.org/

http://achecker.ca/

http://validator.w3.org/

http://jigsaw.w3.org/