# 7COM2001-0901-2024 Responsible Technology

Your team is tasked with conducting conformance testing on a web page that has undergone multiple redesigns over time. This task involves using the WAVE tool to evaluate both the current and archived versions of the website, accessible via the Wayback Machine at archive.org, using the links provided below.

The conformance testing will focus on the listed web pages, comparing their current and archived versions. Your evaluation should identify accessibility issues, assess their severity, and document the changes made between versions. Additionally, you will justify whether these changes have hindered or improved the website's accessibility. Furthermore, your analysis should consider how these changes may impact user retention.

To complete the task, your team must use this template for your report submission. The following requirements must be addressed:

* **Choose the webpage pairings:** Select the pairing you will be analysing (i.e. either Pair 1 or Pair 2).
* **Identify FIVE (5) accessibility issues:** Report each issue using the pre-designed tables included in this template (e.g. Issue 1, Issue 2, etc.).
* **Commercial risk analysis:** Provide a detailed assessment of the potential commercial risks in 500 words.
* **Comparison of the 2024 and 2018 versions:** Critically evaluate the changes between the versions in 800 words.
* **Peer review:** Include a peer review of your team’s work.

Please note that only ONE member of the team is required to submit the completed report.

You have THREE (3) hours.

### Website pairings

Select ONE pair from the list below.

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| Pair | Category | 2024 version | 2018 (archived) version |
| 1 | Fitness | <https://www.fila.com/> | <https://web.archive.org/web/20181130174819/http://www.fila.com/> |
| 2 | News | <https://www.apnews.com/> | <https://web.archive.org/web/20181130224318/https://apnews.com/> |

### Issue 1

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|  | 2024 version | 2018 (archived) version |
| Issue type | Error: Missing form label | Error: Missing form label |
| URL tested | <https://www.fila.com/> | <https://web.archive.org/web/20181130174819/http://www.fila.com/> |
| Location of issue on page (include screenshots) |  |  |
| Justification (why is this an issue) | The absence of a text label in the search box form can lead to the unavailability of the function or purpose of that form control to the end users which are using screen readers. The screen readers will not announce this as a search box available to the users. This means that the screen reader users will not be aware of the search box functionality available to them. | The absence of a text label in the search box form can lead to the unavailability of the function or purpose of that form control to the end users which are using screen readers. The screen readers will not announce this as a search box available to the users. This means that the screen reader users will not be aware of the search box functionality available to them. |
| Recommended remedy | As the form control does not have a label present, use the <label> element to associate it with the correct form control. Make sure the <label> element is non-hidden with a value same as id of unique form control. Also, <label> element should only surround the form control it is associated and should not reference any other element with the same attribute. | As the form control does not have a label present, use the <label> element to associate it with the correct form control. Make sure the <label> element is non-hidden with a value same as id of unique form control. Also, <label> element should only surround the form control it is associated and should not reference any other element with the same attribute. |
| Level of conformance it breaches, with brief justification | **Level A: 1.1.1 Non-text Content**  Input does not have an associated accessible name and text label as search field for user to get aware.  **Level A: 1.3.1 Info and Relationships**  Text labels is not associated with form input for search field.  **Level AA: 2.4.6: Headings and Labels**  Text label for form and interactive controls in this case which is a search input are missing or not informative.  **Level A: 3.3.2 Labels or Instructions**  Inputs are not being identified by labels or instructions that help users know what information to enter in the search field. | **Level A: 1.1.1 Non-text Content**  Input does not have an associated accessible name and text label as search field for user to get aware.  **Level A: 1.3.1 Info and Relationships**  Text labels is not associated with form input for search field.  **Level AA: 2.4.6: Headings and Labels**  Text label for form and interactive controls in this case which is a search input are missing or not informative.  **Level A: 3.3.2 Labels or Instructions**  Inputs are not being identified by labels or instructions that help users know what information to enter in the search field. |

### Issue 2

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|  | 2024 version | 2018 (archived) version |
| Issue type | Error: Empty Form Label | Error: Empty Form Label |
| URL tested | <https://www.fila.com/> | <https://web.archive.org/web/20181130174819/http://www.fila.com/> |
| Location of issue on page (include screenshots) |  |  |
| Justification (why is this an issue) | The empty form label does not provide any important information which makes it challenging for people who are using screen readers for example visual impaired students. It also does not offer any visible description for sighted users, causing confusion and usability issues. This conflicts with key availability rule and accordingly influence the site's inclusivity. | The empty form label does not provide any important information which makes it challenging for people who are using screen readers for example visual impaired students. It also does not offer any visible description for sighted users, causing confusion and usability issues. This conflicts with key availability rule and accordingly influence the site's inclusivity. |
| Recommended remedy | The developers should ensure that all form labels have a meaningful description that are corresponding to the form’s context. They should also use tools like WAVE to check for any empty form labels. | The developers should ensure that all form labels have a meaningful description that are corresponding to the form’s context. They should also use tools like WAVE to check for any empty form labels. |
| Level of conformance it breaches, with brief justification | **Level of Conformance it Breaches**  **Level A: 1.1.1 Non-text Context**  This requires all non-text context, for example form elements to have a name for example form labels. This level A violation directly affects users using screen readers by hindering the ability to understand what it the form label’s context. Level A violations are critical for basic accessibility, and they must be corrected to meet the WCAG guidelines. | **Level of Conformance it Breaches**  **Level A: 1.1.1 Non-text Context** This requires all non-text context, for example form elements to have a name for example form labels. This level A violation directly affects users using screen readers by hindering the ability to understand what it the form label’s context. Level A violations are critical for basic accessibility, and they must be corrected to meet the WCAG guidelines. |

### Issue 3

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|  | 2024 version | 2018 (archived) version |
| Issue type | Error: Empty Button | Error: Empty Button |
| URL tested | <https://www.fila.com/> | <https://web.archive.org/web/20181130174819/http://www.fila.com/> |
| Location of issue on page (include screenshots) |  |  |
| Justification (why is this an issue) | When the end users who are using screen readers navigates to a button, a clear and descriptive text should be present to explain the functionality of that button. In this case, a descriptive text is missing in the navigation search close button, making it difficult for visually impaired users to know what this button do. | When the end users who are using screen readers navigates to a button, a clear and descriptive text should be present to explain the functionality of that button. In this case, a descriptive text is missing in the navigation search close button, making it difficult for visually impaired users to know what this button do. |
| Recommended remedy | To fix this, add clear text inside the <button> tag or use the value attribute for <input type=’button’> elements. This makes sure the button’s purpose is clear and accessible to everyone, including screen reader users. | To fix this, add clear text inside the <button> tag or use the value attribute for <input type=’button’> elements. This makes sure the button’s purpose is clear and accessible to everyone, including screen reader users. |
| Level of conformance it breaches, with brief justification | **Level A: 1.1.1 Non-text Content** Non-text content like form buttons must have descriptive text (e.g., alt attributes or accessible labels) to convey their meaning to users relying on assistive technologies, ensuring accessibility for visually impaired users.  **Level A: 2.4.4 Link Purpose (In Context)**  Link text and context must clearly indicate the purpose of links, image buttons, or hotspots, ensuring clarity for all users, including screen reader users. | **Level A 1.1.1 Non-text Content** Non-text content like form buttons must have descriptive text (e.g., alt attributes or accessible labels) to convey their meaning to users relying on assistive technologies, ensuring accessibility for visually impaired users.  **Level A: 2.4.4 Link Purpose (In Context)** Link text and context must clearly indicate the purpose of links, image buttons, or hotspots, ensuring clarity for all users, including screen reader users. |

### Issue 4

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|  | 2024 version | 2018 (archived) version |
| Issue type | Error: Multiple Form Label | Error: Multiple Form Label |
| URL tested | <https://www.fila.com/> | <https://web.archive.org/web/20181130174819/http://www.fila.com/> |
| Location of issue on page (include screenshots) |  |  |
| Justification (why is this an issue) | The error occurs because a single form control has more than one <label> element linked to it. This creates confusion for assistive technologies like screen readers, as they may not know which label to read aloud to users. | The error occurs because a single form control has more than one <label> element linked to it. This creates confusion for assistive technologies like screen readers, as they may not know which label to read aloud to users. |
| Recommended remedy | Remove Extra Labels: Ensure each form control, like checkbox, has only one <label> elements for the id="landscapeModalToggle". Retain the most relevant label and remove any unnecessary ones. | Remove Extra Labels: Ensure each form control, like checkbox, has only one <label> elements for the id="landscapeModalToggle". Retain the most relevant label and remove any unnecessary ones. |
| Level of conformance it breaches, with brief justification | **Level A: 1.1.1 Non-text Content**  If multiple labels are associated with a form control, assistive technology might not properly identify the label, violating this guideline. It can lead to a lack of clear information for screen reader users.  **Level A: 1.3.1 Info and Relationships**  Multiple labels confuse the relationships between the form control and its description. This breaks the intended information flow, making it difficult for users relying on assistive technology to understand the form.  **Level AA: 2.4.6 Headings and Labels**  When a form control has multiple labels, it becomes unclear which one is the correct description. This violates the need for clear and concise labels, making navigation harder for users.  **Level A: 3.3.2 Labels or Instructions**  Multiple labels create confusion about which instruction is relevant. Users may struggle to understand what action is expected from them, violating this guideline. | **Level A: 1.1.1 Non-text Content**  If multiple labels are associated with a form control, assistive technology might not properly identify the label, violating this guideline. It can lead to a lack of clear information for screen reader users.  **Level A: 1.3.1 Info and Relationships**  Multiple labels confuse the relationships between the form control and its description. This breaks the intended information flow, making it difficult for users relying on assistive technology to understand the form.  **Level AA: 2.4.6 Headings and Labels**  When a form control has multiple labels, it becomes unclear which one is the correct description. This violates the need for clear and concise labels, making navigation harder for users.  **Level A: 3.3.2 Labels or Instructions**  Multiple labels create confusion about which instruction is relevant. Users may struggle to understand what action is expected from them, violating this guideline. |

### Issue 5

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|  | 2024 version | 2018 (archived) version |
| Issue type | Error: Linked image missing alternative text | Error: Empty Missing Heading |
| URL tested | <https://www.fila.com/> | <https://web.archive.org/web/20181130174819/http://www.fila.com/> |
| Location of issue on page (include screenshots) |  |  |
| Justification (why is this an issue) | The image of the product does not have an alternative text associated. The images must always have a descriptive alternative text. As the image is wrapped inside a link without an alternative, the screen reader will not be able to announce to the user the specific purpose or function of the link. | Some users, particularly, those who are relying on keyboards or screen readers often navigates using headings. An empty heading will present confusion, potentially causing confusion and disrupt navigation. |
| Recommended remedy | An appropriate alternative text should be added to the image so that the function of the link can be easily announced to the user by screen reader. | Ensure that all headings provide clear and meaningful content. |
| Level of conformance it breaches, with brief justification | **Level A: 1.1.1 Non-text Content**  The product image does not have appropriate equivalent alternative text.  **Level A: 2.4.4 Link Purpose (In Context)**  The purpose of this link cannot be determined as it is missing the alternative text on the image which is wrapped inside the href element. | **Level A: 1.3.1 Info and Relationships** Content is structured using semantic HTML (like headings, lists, and landmarks) to convey meaningful relationships, helping assistive technologies interpret the page correctly.  **Level A: 2.4.1 Bypass Blocks** This guideline requires a mechanism (like a "skip" link) that allows users to bypass repetitive content, enabling easier navigation, particularly for keyboard and screen reader users.  **Level AA: 2.4.6 Headings and Labels** Headings and labels must clearly describe the content they represent, avoiding duplication unless context makes the distinction clear, ensuring easy identification and understanding for users navigating the page. |

### Commercial risk (up to 500 words)

Consider the findings from the conformance testing of the 2024 version to identify potential commercial risks. Provide a clear justification for each risk, explaining how it could impact the business.

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| The accessibility issues identified poses significant risks to both user experience and business performance. Key issues, such as the absence of alternative text for linked images, missing form labels, and empty buttons, not only create barriers for users relying on assistive technologies but also expose the platform to financial and legal consequences.  One critical issue is the lack of alternative text for linked images. Alternative text (alt text) is essential for users with visual impairments who rely on screen readers to navigate a website. Without this feature, these users are unable to interpret linked images, leading to an incomplete or frustrating browsing experience. In an e-commerce context, this exclusion can significantly impact customer engagement. Users who cannot access product images may be discouraged from completing purchases, resulting in lower conversion rates. For e-commerce platforms, this means a loss of potential sales, which can have a severe financial impact.  Another pressing concern is missing or empty form labels. Forms are integral to the online shopping experience, particularly during the checkout process. When labels are missing or improperly linked to their corresponding fields, users relying on assistive technologies face confusion, which may lead to data entry errors or abandoned transactions. This is especially damaging for high-traffic e-commerce platforms, where cart abandonment rates can rise substantially. The more users struggle with poorly labelled forms, the more likely they are to abandon their purchases, directly affecting revenue. Inconsistent or unclear labels can further complicate the checkout process, increasing the likelihood of errors that disrupt transactions.  Empty buttons also pose a significant accessibility risk. Buttons that lack descriptive labels are unreadable for users with screen readers, preventing them from completing actions like adding items to the cart or proceeding to checkout. This lack of clarity decreases transaction completion rates, leading to lost revenue and reduced customer satisfaction. Users who cannot effectively interact with a site are likely to abandon it, negatively impacting sales and overall platform usability.  Beyond these usability challenges, the platform faces legal risks due to non-compliance with accessibility regulations. In regions such as the United States, accessibility is mandated under the Americans with Disabilities Act (ADA), which requires websites to be accessible to individuals with disabilities. Failure to comply with these standards can lead to costly lawsuits and fines. Legal consequences can further burden the business, both financially and in terms of its public image.  Furthermore, poor accessibility can harm a brand’s reputation. Negative perceptions regarding inclusivity and user experience can drive customers away, diminishing brand loyalty and customer retention. Over time, these factors can result in a decline in market share and reduced revenue potential.  In conclusion, accessibility issues have far-reaching consequences. The lack of alt text, missing form labels, and empty buttons negatively affect user experience, leading to lower conversion rates, higher abandonment, and lost revenue. Additionally, these issues expose the platform to legal and reputational risks that could harm the business in the long term. |

### Comparison (up to 800 words)

Compare and critically evaluate the 2024 and 2018 versions of the website, focusing on changes that have either improved or hindered accessibility. Additionally, assess the potential impact of these changes on user retention.

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| While the 2024 version of the platform is an improvement for accessibility in many ways, there are still challenges with some aspects of the platform, as in 2018. An improved colour contrast is one of the more notable enhancements. A lot of the text elements, particularly those situated over the background image, had insufficient contrast in 2018 to prevent those with visual impairments or colour deficiency from reading content. However, the 2024 version has addressed most, if not all, of these problems while key text elements follow WCAG 2.1 Level AA contrast guidelines. Just Readability is an improvement that improves the reading quality of the site, making the site easier to read generally, especially people with low vision or colour contrast sensitivity. Maintaining user engagement and reducing bounce rate, which is where users leave a site without much content, can be done with better readability so users can consume content without strain.  Another big update is the addition of alt text to images. However, in 2018 the product images in many instances did not have alt text, which made them inaccessible to screen reader users who rely on these descriptions to understand visual content. In the 2024 version, most of the product images come with alt text, so that the product images have some meaningful description to make the product more accessible for visually impaired users. This fix makes it easier for people with screen readers to surf your store and access the important product information they need. Adding alt text makes for an inclusive environment that can earn trust and create repeated visits from people who know they feel heard and cared for.  An improved semantic HTML structure in the 2024 version is also a benefit. Inconsistent HTML elements, which confused screen readers, were the 2018 site's downfall. In the 2024 version, done by providing a more structured and logical HTML structure. As a result, users that depend on assistive technologies to use the site will find it easier to navigate this site, thereby making the overall experience more accessible. Websites that are structured well not only give your users a better browsing experience, but also a high probability of coming back.  However, accessibility challenges persist in the 2024 version of this site. The empty form labels are an issue. While overall the platform has made improvements in other areas, WAVE testing revealed that some of form labels are still present yet lack meaningful content. This is a significant barrier for users who rely on screen readers because they come face to face with form fields which they cannot be able to identify. This can irritate users sometimes and they may not get to finish the tasks like form submits. Therefore, this frustration results in higher abandonment rate and less user retention.  The challenge with multiple labels on some form inputs presents itself. This redundancy can be confusing for screen reader users since they get conflicting information trying to complete forms. This can impede users from reaching high level actions, such as purchasing something or registering for an account, consequently harming retention rates.  In fact, the version of 2024 also includes the complex navigation elements, such as dynamic dropdown menu. Unfortunately, these elements are not accessible at all because we lack proper ARIA roles and focus management. This oversight renders navigating the site for the screen reader audience and keyboard user alike difficult; however, it results in further frustration for screen reader users with mobility impairments.  Some contrast issues are left to resolve in the 2024 version. Improvements have been made to primary text elements, but buttons, and other secondary elements, have yet to meet the WCAG contrast guidelines. For users with low vision, this may be a problem since they’d have less than optimal usability of the site. There would also be negative impression about the site — which would prevent them from returning.  There were many severe accessibility gaps in the 2018 version, like a lack of responsive design, missing alt text, poorly labelled forms, and non-standard navigation. While the enhancements on the 2024 version including more responsive design, better colour contrast and addition of alt text made the site more inclusive and comfortable to use, so more user retention should be secured.  Yet, other improvements are hampered by these remaining accessibility challenges like empty labels, multiple labels, and navigation inconsistencies, which may diminish the retention benefits of other improvements. |

### Peer review

Please list all team member details, and what their main role and responsibilities were.

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| Student ID | Student Name | Role and responsibilities |
| 1. 23055819 | Jaskeerat Singh Tungal | Team Leader: Task Management, File Consolidation, Report Review and Submission |
| 1. 22010064 | Gracy Agarwal | Document Contributor: Issue & Remedy Analysis, Report Draft and Formatting |
| 1. 23080213 | Chetan Singh Rathore | Analysis Contributor: Issue & Remedy Analysis and Commercial Risk Analysis |
| 1. 23073422 | Kanchan Purushottam Aher | Analysis Contributor: Issue & Remedy Analysis and Review Comparison Analysis |
| 1. 23005213 | Mayur Kaduba Sapkal | Review and Collaborator: Research and Update Standard Guidelines and Collaboration |
| 1. 23089700 | Amanpreet Manmohan Ahluwalia | Analysis Contributor and Collaborator: Draft Comparison Analysis and Finalize Issues and Remedies |
| 1. 23068822 | Laban Mahihu | Analysis Contributor and Reviewer: Draft Comparison Analysis and Report Review |
| 1. 23013839 | Muhammad Faizan Tariq | Analysis Contributor: Issue & Remedy Analysis and Review Commercial Risk Analysis |