



ACCESSIBILITY INTEGRATION IN THE DEVELOPMENT LIFECYCLE POLICY

Version 0.4

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On the Date: 10th April 2023



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1. Introduction

This document outlines Stackle's processes and procedures for implementing accessibility into our development lifecycle. Our goal is to create an inclusive and accessible learning environment for all users by following best practices and adhering to the Web Content Accessibility Guidelines (WCAG) 2.1 Level AA.

1.1. Accessibility Training

All development team members at Stackle receive mandatory accessibility training to ensure they are familiar with accessibility principles, guidelines, and best practices. This training covers topics such as inclusive design, assistive technologies, and common accessibility barriers.

1.2. Design and Planning

During the design and planning stages, our team incorporates accessibility considerations into user experience (UX) designs, wireframes, and mockups. Designers and developers work together to ensure that accessibility is an integral part of the product's foundation.

1.3. Development

Developers at Stackle follow best practices and coding standards that promote accessibility. They use semantic HTML, proper ARIA attributes, and accessible JavaScript techniques to ensure that our digital products are compatible with assistive technologies and can be easily navigated by all users.

1.4. Accessibility Testing

Accessibility testing is integrated into our quality assurance processes. Automated testing tools like Lighthouse are used to identify potential issues, while manual testing is conducted to ensure compliance with WCAG 2.1 Level AA. Our team also seeks input from users with diverse abilities and incorporates their feedback to enhance the accessibility of our products.

1.5. Remediation

If any accessibility issues are identified during testing, our development team works diligently to address these concerns and ensure that our products meet the required accessibility standards. We maintain an issue-tracking system to document and monitor the progress of remediation efforts.

1.6. Documentation and Communication

Accessibility requirements and progress are documented and communicated to stakeholders throughout the development lifecycle. This ensures that everyone involved in the project is aware of accessibility goals and expectations.

1.7. Continuous Improvement

Stackle is committed to ongoing improvement in accessibility. We periodically review and update our processes and procedures to ensure that we stay up-to-date with evolving accessibility standards and best practices.

By following these processes and procedures, Stackle ensures that accessibility is an integral part of our development lifecycle, helping us create an inclusive and accessible learning experience for all users.

2. Accessibility Training at Stackle

At Stackle, we understand the importance of equipping our development team members with the knowledge and skills necessary to create accessible digital products. To achieve this, we have designed a comprehensive accessibility training program that covers essential topics and best practices. The training is mandatory for all development team members and is regularly updated to stay current with industry standards and advancements.

2.1. Training Overview

The accessibility training program at Stackle is structured to cover various aspects of accessibility, including inclusive design, assistive technologies,

and common accessibility barriers. The curriculum is divided into the following key modules:

2.1.1. Introduction to Web Accessibility

This module provides an overview of the importance of web accessibility, the moral and legal obligations, and the benefits of creating inclusive digital products. It introduces the Web Content Accessibility Guidelines (WCAG) and explains the different conformance levels (A, AA, and AAA).

2.1.2. Inclusive Design Principles

This module focuses on the principles of inclusive design, which helps ensure that our digital products cater to a diverse range of users, including those with disabilities. Topics covered include designing for various input methods, creating clear and consistent navigation, and designing with flexibility in mind to accommodate different user preferences and assistive technologies.

2.1.3. Understanding Assistive Technologies

In this module, participants learn about various assistive technologies used by people with disabilities to access digital content, such as screen readers, magnifiers, and voice input software. The training covers how to design and develop digital products that are compatible with these technologies, as well as best practices for testing compatibility.

2.1.4. Common Accessibility Barriers

This module explores common accessibility barriers that users may encounter and provides guidance on how to address them. Topics covered include proper use of headings and landmarks, creating meaningful link text, providing alternative text for images, ensuring sufficient color contrast, and designing accessible forms.

2.1.5. Accessible Coding Practices

In this module, participants learn how to write accessible HTML, CSS, and JavaScript code. Topics include the use of semantic HTML,

proper ARIA attributes, keyboard accessibility, and techniques for creating accessible, dynamic content using JavaScript.

2.1.6. Testing and Evaluation

This module covers accessibility testing methods and tools, including both automated and manual testing. Participants learn how to use tools like Lighthouse and WAVE for automated testing, as well as techniques for manual testing, such as keyboard testing and using screen readers.

2.1.7. Ongoing Learning and Resources

The training concludes with a list of resources for further learning and staying up-to-date with accessibility advancements. Participants are encouraged to continuously expand their knowledge and skills in web accessibility.

By providing comprehensive accessibility training to our development team members, Stackle ensures that they have the necessary skills and knowledge to create digital products that cater to the needs of all users, including those with disabilities.

For more on this please see the [Accessibility Training](#) document.

3. Design and Planning: Accessibility in UX, Wireframes, and Mockups

During the design and planning stages at Stackle, our team prioritises accessibility to ensure that all users can seamlessly interact with our products. Designers and developers collaborate to incorporate accessibility considerations into user experience (UX) designs, wireframes, and mockups. This approach guarantees that accessibility is an integral part of the product's foundation from the very beginning. The following steps detail our design and planning process:

3.1. User Personas and Scenarios

Our team creates diverse user personas and scenarios, including individuals with varying abilities and disabilities. These personas help us

understand the needs, preferences, and potential challenges of our users, ensuring that our products cater to a wide range of accessibility requirements.

3.2. Inclusive Design Principles

Designers at Stackle adhere to inclusive design principles, which guide the creation of products that can be easily used by everyone. These principles include:

- a. Equitable use: Designing products that are usable by people with diverse abilities.
- b. Flexibility in use: Accommodating a wide range of individual preferences and abilities.
- c. Simple and intuitive use: Ensuring products are easy to understand, regardless of the user's experience or cognitive ability.
- d. Perceptible information: Presenting information in ways that can be easily perceived by all users, regardless of sensory abilities.
- e. Tolerance for error: Minimising the consequences of accidental or unintended actions.

3.3. Accessible UX Design

Our UX designers focus on creating intuitive and accessible user interfaces. They consider factors such as colour contrast, font size, readability, and keyboard navigation to ensure that our products are easy to use for individuals with visual, auditory, cognitive, and motor impairments.

3.4. Wireframes and Mockups

During the wireframing and mockup stages, designers incorporate accessibility features such as:

- a. Clear and consistent navigation structures.
- b. Descriptive labels and headings.
- c. Visible focus indicators for keyboard users.

- d. Proper use of semantic elements and ARIA attributes.

Designers work closely with developers to ensure that accessibility features are accurately translated from the wireframes and mockups into the final product.

3.5. Collaboration and Reviews

Throughout the design and planning process, designers and developers collaborate to discuss and review accessibility considerations. Regular meetings and design critiques help identify potential accessibility issues early on, allowing the team to address them proactively.

By incorporating accessibility considerations into the design and planning stages, Stackle ensures that our products are built on a solid foundation that prioritises an inclusive and accessible user experience for all.

4. Development: Accessible Coding Practices and Techniques

At Stackle, our developers adhere to best practices and coding standards that promote accessibility. By implementing accessible coding techniques, we ensure that our digital products are compatible with assistive technologies and can be easily navigated by all users, including those with disabilities. The following sections provide an in-depth overview of the key aspects that our developers focus on during the development process.

4.1. Semantic HTML

Semantic HTML is the foundation of accessible web content. Our developers use appropriate HTML elements and attributes to convey the structure and meaning of the content. This helps screen readers and other assistive technologies understand the content and present it in a user-friendly manner. Some examples of semantic HTML elements used by our developers include:

1. Heading elements (h1, h2, h3, etc.) for organizing content hierarchically.

2. Landmark elements (header, nav, main, aside, footer) to identify different sections of a page.
3. List elements (ul, ol, li) for presenting lists.
4. Table elements (table, th, tr, td) for tabular data.

4.2. ARIA Attributes

Accessible Rich Internet Applications (ARIA) is a set of attributes that help improve the accessibility of dynamic content and user interface components. Our developers use ARIA attributes to provide additional information about elements that may not be conveyed through semantic HTML alone. Some examples of ARIA usage at Stackle include:

1. ARIA roles to define the role of an element (e.g., button, navigation, search).
2. ARIA states and properties to communicate the current state of an interactive element (e.g., aria-expanded, aria-checked).
3. ARIA labels and descriptions to provide accessible names and descriptions for elements when the native HTML attributes are insufficient (e.g., aria-label, aria-describedby).

4.3. Accessible JavaScript Techniques:

At Stackle, our developers ensure that JavaScript-driven interactions and features are accessible to all users. They implement accessible JavaScript techniques that consider various factors, such as keyboard navigation, focus management, and dynamic content updates. Some key accessible JavaScript techniques used by our developers include:

1. Ensuring that all interactive elements are keyboard navigable by using the appropriate HTML elements or adding the necessary event listeners and attributes (e.g., tabindex).
2. Managing focus when opening and closing modals or other dynamic content to ensure that keyboard users do not lose their place on the page.

3. Providing appropriate notifications to screen readers when content is updated dynamically using techniques like ARIA live regions.

By following these accessible coding practices and techniques, developers at Stackle create digital products that are compatible with assistive technologies and can be easily navigated by all users, including those with disabilities. This approach helps us create a more inclusive and accessible learning experience for everyone.

5. Accessibility Testing

Accessibility testing plays a crucial role in our quality assurance processes at Stackle. We use a combination of automated testing tools, manual testing, and user feedback to identify potential issues and ensure compliance with WCAG 2.1 Level AA. By incorporating diverse testing approaches, we can provide a more comprehensive assessment of our digital products' accessibility and make the necessary improvements.

5.1. Automated Testing

Automated testing tools, such as Lighthouse, axe, and WAVE, help us quickly identify potential accessibility issues in our digital products. These tools scan our web pages and applications for violations of accessibility guidelines, such as improper use of semantic elements, missing alternative text for images, and incorrect ARIA attributes. Automated testing provides a solid foundation for identifying issues, but it is not sufficient on its own, as it may not catch all accessibility barriers.

5.2. Manual Testing

To supplement automated testing, our team conducts manual accessibility testing. This involves navigating our digital products using only a keyboard, testing with various assistive technologies (such as screen readers and magnifiers), and verifying that content is perceivable and understandable for all users. Manual testing helps us identify issues that automated tools may miss, ensuring a more thorough evaluation of our products' accessibility.

5.3. Assistive Technology Testing

Our team tests our digital products using popular assistive technologies, such as screen readers (e.g., JAWS, NVDA, VoiceOver), screen magnifiers, and speech recognition software (e.g., Dragon NaturallySpeaking). This testing ensures that our products are compatible with the tools used by individuals with disabilities and helps us identify any issues that may hinder their user experience.

5.4. User Testing and Feedback

To gain a deeper understanding of the accessibility of our digital products, we actively seek input from users with diverse abilities. By involving users with disabilities in the testing process, we can identify potential barriers and areas for improvement that may not be apparent through automated and manual testing alone. We incorporate user feedback into our ongoing accessibility initiatives, using their insights to refine our products and create a more inclusive user experience.

5.5. Test Documentation and Issue Tracking

All testing results, including identified issues and their severity, are documented and tracked using an issue-tracking system. This documentation ensures that our development team is aware of any outstanding accessibility concerns and can prioritise their remediation efforts accordingly.

5.6. Remediation and Retesting

Once accessibility issues have been identified, our development team works diligently to address them and bring our digital products into compliance with WCAG 2.1 Level AA. After implementing any necessary changes, we retest the affected areas to confirm that the issues have been resolved and that our products meet the required accessibility standards.

By integrating accessibility testing into our quality assurance processes and using a combination of automated tools, manual testing, and user feedback, we can create a more inclusive and accessible learning experience for all users of Stackle's digital products.

6. Remediation

If any accessibility issues are identified during testing, our development team at Stackle works diligently to address these concerns and ensure that our products meet the required accessibility standards. Our remediation process consists of the following steps:

6.1. Issue Identification

When an accessibility issue is detected through automated testing, manual testing, or user feedback, the development team is notified of the problem. The issue is then documented with relevant information, including the nature of the issue, the affected product or feature, and any associated WCAG success criteria.

6.2. Prioritisation

Accessibility issues are prioritized based on factors such as severity, impact on user experience, and alignment with our accessibility goals. Critical issues that pose significant barriers to users are given the highest priority, while other issues are addressed based on their potential impact.

6.3. Issue Assignment

Once an issue has been prioritised, it is assigned to the appropriate developer or team to address the problem. Clear expectations and deadlines are established to ensure that the issue is resolved in a timely manner.

6.4. Issue Resolution

The assigned developer or team works to resolve the identified accessibility issue by modifying the code, design, or content as needed. They collaborate with other team members, including designers and testers, to ensure that the changes effectively address the issue and do not introduce new problems.

6.5. Verification

Once the issue has been resolved, the changes are thoroughly tested to confirm that the issue has been effectively addressed and that the product remains compliant with WCAG 2.1 Level AA guidelines. This may include re-running automated tests, manual testing by team members, or soliciting feedback from users with disabilities.

6.6. Documentation and Closure

Upon successful verification, the resolved issue is documented in our issue-tracking system, noting the changes made, the date of resolution, and any additional relevant information. The issue is then closed, and stakeholders are informed of the resolution.

6.7. Continuous Monitoring and Improvement:

After an issue has been resolved, Stackle remains committed to monitoring the product for any new or recurring accessibility concerns. We also continually review and update our processes, tools, and training to ensure that we stay ahead of evolving accessibility standards and best practices.

By following this remediation process, Stackle ensures that any identified accessibility issues are effectively addressed, helping us create an inclusive and accessible learning experience for all users.

7. Documentation and Communication:

Accessibility requirements and progress play a crucial role in the development lifecycle at Stackle. By properly documenting and communicating these aspects, we ensure that all stakeholders are informed and aligned with our accessibility goals and expectations. The following outlines the steps and methods we employ to achieve effective documentation and communication:

7.1. Requirement Gathering and Documentation

During the initial stages of a project, we gather accessibility requirements in collaboration with designers, developers, project managers, and other stakeholders. These requirements, based on WCAG 2.1 Level AA guidelines,

are documented in detail and shared with all relevant parties. This ensures a clear understanding of accessibility expectations right from the beginning of the project.

7.2. Incorporating Accessibility into Project Plans

Accessibility requirements are integrated into project plans, schedules, and resource allocations. This helps to ensure that sufficient time and resources are dedicated to achieving accessibility goals, and stakeholders can monitor progress throughout the development lifecycle.

7.3. Regular Status Updates and Meetings

Regular status updates and meetings are held to keep all stakeholders informed about the progress of accessibility efforts. These updates may include information about completed tasks, identified accessibility issues, and ongoing remediation efforts. This open communication helps to maintain a culture of accountability and allows stakeholders to address any concerns or challenges promptly.

7.4. Sharing Test Results and Feedback

Accessibility test results and user feedback are documented and shared with stakeholders. This allows the team to gain insights into the effectiveness of their accessibility efforts and make informed decisions about any necessary adjustments to the project plan or design.

7.5. Accessibility Review Meetings

Periodic accessibility review meetings are conducted to assess the overall progress of accessibility efforts and discuss any outstanding issues or concerns. These meetings provide an opportunity for stakeholders to collaborate on solutions, share best practices, and ensure that accessibility remains a top priority throughout the development lifecycle.

7.6. Post-Implementation Accessibility Reports

Once a project is completed, a comprehensive accessibility report is prepared, summarising the project's compliance with WCAG 2.1 Level AA guidelines, any identified issues, and the steps taken to address them. This

report is shared with stakeholders to demonstrate Stackle's commitment to accessibility and to inform future projects.

By documenting and communicating accessibility requirements and progress throughout the development lifecycle, Stackle ensures that all stakeholders are aware of accessibility goals and expectations. This collaborative approach fosters a culture of inclusivity and continuous improvement, enabling us to create accessible learning experiences for all users.

8. Post-Implementation Accessibility Reports

8.1. Continuous Improvement

Stackle is committed to ongoing improvement in accessibility. As part of our dedication to creating an inclusive and accessible learning environment, we continuously strive to enhance our processes and procedures. This ensures that we stay up-to-date with evolving accessibility standards, best practices, and emerging technologies that can improve the user experience for all learners.

8.2. Regular Reviews

Our team conducts regular reviews of our accessibility processes and procedures to identify areas for improvement. These reviews consider internal and external feedback, industry developments, and updates to accessibility standards such as WCAG.

8.3. Performance Metrics

We monitor key performance metrics related to accessibility, such as user feedback, accessibility issue resolution rates, and compliance with WCAG guidelines. These metrics help us measure our progress and identify areas that require further attention.

8.4. Industry Research and Collaboration

Stackle actively participates in accessibility-related research, conferences, and forums to stay informed about the latest trends, technologies, and best practices in the field. We collaborate with accessibility experts,

disability advocacy groups, and other organisations to share knowledge and learn from their experiences.

8.5. User Feedback

We encourage and value input from users with diverse abilities, as their feedback is crucial in helping us identify and address accessibility issues. We continuously incorporate user feedback into our development process and use it to inform our ongoing improvement efforts.

8.6. Staff Training and Development

Stackle is committed to the ongoing professional development of our team members. We provide regular accessibility training and updates to ensure that our staff remains knowledgeable about current best practices and accessibility requirements.

8.7. Technology Adoption

As new technologies and tools emerge, Stackle evaluates their potential for enhancing accessibility in our products. By staying at the forefront of technological advancements, we can continue to improve the accessibility and overall user experience of our digital offerings.

8.8. Policy Updates

We periodically review and update our accessibility policies to ensure they align with current best practices and industry standards. This includes updating our accessibility statement, internal guidelines, and any other relevant documentation.

By embracing continuous improvement, Stackle demonstrates a strong commitment to accessibility and ensures that our products and services cater to the diverse needs of all users. This proactive approach helps us maintain a high level of accessibility compliance and fosters an inclusive learning environment.

9. Summary

The Accessibility Integration in the Development Lifecycle Policy at Stackle outlines our commitment to creating inclusive and accessible learning experiences for all users. This policy details the processes and procedures we follow to integrate accessibility into our development lifecycle, ensuring compliance with the Web Content Accessibility Guidelines (WCAG) 2.1 Level AA.

Key components of the policy include:

1. Mandatory accessibility training for all development team members to ensure familiarity with accessibility principles and best practices.
2. Integration of accessibility considerations into the design and planning stages, making it an essential part of the product's foundation.
3. Adherence to accessibility-focused coding standards during development to ensure compatibility with assistive technologies and ease of navigation for all users.
4. Comprehensive accessibility testing, including automated and manual techniques, to identify and remediate any accessibility issues.
5. Diligent remediation of identified accessibility issues, with progress documented and monitored using an issue-tracking system.
6. Clear documentation and communication of accessibility requirements and progress to stakeholders throughout the development lifecycle.
7. A commitment to continuous improvement, including regular reviews and updates of processes, staff training, technology adoption, and policy updates to stay current with evolving accessibility standards and best practices.

By implementing this policy, Stackle demonstrates a strong dedication to accessibility and inclusivity, ensuring our digital products cater to the diverse needs of all users.