Test Plan Document

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CSCI 498 Senior Project Construction

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A. Ruby on Rails gem tests:

a. Brakeman:

- Brakeman is a Ruby on Rails gem that detects everything from SQL injection to Cross-Site Scripting.
- ii. In the terminal running: \$ brakeman –summary to produce a full summary of the whole application.
- iii. An example summary:

Loading scanner...

Processing application in /home/cgibson/RR-Project

Processing gems...

[Notice] Detected Rails 7 application

Processing configuration...

[Notice] Escaping HTML by default

Parsing files...

Detecting file types...

Processing initializers...

Processing libs...

Processing routes...

Processing templates...

Processing data flow in templates...

Processing models...

Processing controllers...

Processing data flow in controllers...

Indexing call sites...

Running checks in parallel...

- CheckBasicAuth
- CheckBasicAuthTimingAttack
- CheckCrossSiteScripting
- CheckContentTag
- CheckCookieSerialization
- CheckCreateWith
- $\hbox{-} Check CSRF Token Forgery CVE\\$
- CheckDefaultRoutes
- CheckDeserialize
- $\hbox{-} Check Detailed Exceptions \\$
- CheckDigestDoS
- CheckDynamicFinders
- CheckEOLRails
- CheckEOLRuby
- CheckEscapeFunction
- CheckEvaluation
- CheckExecute
- CheckFileAccess
- CheckFileDisclosure
- CheckFilterSkipping
- CheckForgerySetting
- CheckHeaderDoS
- CheckI18nXSS
- CheckJRubyXML
- CheckJSONEncoding

- CheckJSONEntityEscape
- CheckJSONParsing
- CheckLinkTo
- CheckLinkToHref
- CheckMailTo
- CheckMassAssignment
- CheckMimeTypeDoS
- CheckModelAttrAccessible
- CheckModelAttributes
- CheckModelSerialize
- CheckNestedAttributes
- CheckNestedAttributesBypass
- CheckNumberToCurrency
- CheckPageCachingCVE
- CheckPathname
- CheckPermitAttributes
- $\hbox{-} Check Quote Table Name \\$
- CheckRansack
- CheckRedirect
- CheckRegexDoS
- CheckRender
- CheckRenderDoS
- CheckRenderInline
- CheckResponseSplitting
- CheckRouteDoS

- CheckSafeBufferManipulation
- CheckSanitizeConfigCve
- CheckSanitizeMethods
- CheckSelectTag
- CheckSelectVulnerability
- CheckSend
- CheckSendFile
- CheckSessionManipulation
- CheckSessionSettings
- $\hbox{-} Check Simple Format\\$
- CheckSingleQuotes
- CheckSkipBeforeFilter
- CheckSprocketsPathTraversal
- CheckSQL
- CheckSQLCVEs
- CheckSSLVerify
- CheckStripTags
- CheckSymbolDoSCVE
- CheckTemplateInjection
- CheckTranslateBug
- CheckUnsafeReflection
- CheckUnsafeReflectionMethods
- CheckValidationRegex
- CheckVerbConfusion
- CheckWeakRSAKey

- CheckWithoutProtection
- CheckXMLDoS
- CheckYAMLParsing

Checks finished, collecting results...

Generating report...

== Brakeman Report ==

Application Path: /home/cgibson/RR-Project

Rails Version: 7.0.8.1

Brakeman Version: 6.1.2

Scan Date: 2024-03-20 09:48:45 -0400

Duration: 8.41024466 seconds

Checks Run: BasicAuth, BasicAuthTimingAttack, CSRFTokenForgeryCVE,

ContentTag, CookieSerialization, CreateWith, CrossSiteScripting, DefaultRoutes,

Deserialize, DetailedExceptions, DigestDoS, DynamicFinders, EOLRails,

EOLRuby, EscapeFunction, Evaluation, Execute, FileAccess, FileDisclosure,

FilterSkipping, ForgerySetting, HeaderDoS, I18nXSS, JRubyXML, JSONEncoding,

JSONEntityEscape, JSONParsing, LinkTo, LinkToHref, MailTo, MassAssignment,

MimeTypeDoS, ModelAttrAccessible, ModelAttributes, ModelSerialize,

NestedAttributes, NestedAttributesBypass, NumberToCurrency,

PageCachingCVE, Pathname, PermitAttributes, QuoteTableName, Ransack,

Redirect, RegexDoS, Render, RenderDoS, RenderInline, ResponseSplitting,

RouteDoS, SQL, SQLCVEs, SSLVerify, SafeBufferManipulation, SanitizeConfigCve,

SanitizeMethods, SelectTag, SelectVulnerability, Send, SendFile,

SessionManipulation, SessionSettings, SimpleFormat, SingleQuotes,
SkipBeforeFilter, SprocketsPathTraversal, StripTags, SymbolDoSCVE,
TemplateInjection, TranslateBug, UnsafeReflection, UnsafeReflectionMethods,
ValidationRegex, VerbConfusion, WeakRSAKey, WithoutProtection, XMLDoS,
YAMLParsing

== Overview ==

Controllers: 12

Models: 8

Templates: 51

Errors: 1

Security Warnings: 0

- B. Useability Tests:
 - 1. User Questionnaire:

== Warning Types ==

- 1. Name
- 2. Overall Satisfaction:
- 3. Ease of Use:
 - How easy was it to learn how to use?
 - Were you able to accomplish your goals using?
- 4. Features and Functionality:

- Which features of did you find most useful?
- Are there any features you feel are missing from the website?
- Did you encounter any difficulties using specific features?
- 5. Performance and Reliability:
 - How would you rate the performance speed of the website?
 - How reliable do you find information?
- 6. Design and User Interface:
 - How visually appealing do you find the design of the website?
 - Is the user interface of the website clear and easy to navigate?
 - Do you have any suggestions for improving the design or user interface?
- 7. Future Improvements:
- 8. Additional Feedback:
- 2. User Feedback:
- 1. Bobby Gibson (Client)
- 2. Overall Satisfaction:

Overall, I'm quite satisfied with my experience on the website. The useability of the features available and the ease of navigating through different sections contribute to my positive impression.

3. Ease of Use:

The website was super easy to use. I was able to navigate through the different pages effortlessly and find exactly what I was looking for. The layout was clean

and organized, making it simple to locate information. Overall, my experience on the website was seamless and enjoyable. Along with all of the Admin functionality with viewing revenue and sales all at once.

4. Features and Functionality:

There were some areas of the website that could be adjusted with further prototyping and development. For example, the overall visual design could be enhanced to improve the user experience and make the website more visually appealing. With continued prototyping and development, these adjustments could help optimize the website for better functionality and user engagement. The Admin features are intuitive and functionally engaging. It is mainly the front-end that needs some work.

5. Design and User Interface:

The design is super easy to use, and there are more ways to make the design even simpler in future development. By continually seeking feedback and iterating on the design, future updates can continue to enhance the user experience and make the design process as straightforward as possible.

6. Future Improvements:

In future improvements to the website, having a more user-friendly interface will be a top priority. This will include streamlining the navigation and search functions to make it easier for users to find the information they are looking for quickly and efficiently. Additionally, incorporating interactive features such as chatbots or virtual assistants could further enhance the user experience and provide more personalized assistance. Overall, the goal is to create a website that is not only visually appealing but also highly functional and intuitive for all visitors.

- 7. Additional Feedback: None.
- 1. Narie Gibson (Client)
- 2. Overall Satisfaction:

My experience using the website was very positive. The design was visually appealing, and the user interface made it easy to navigate and find what I needed. The color scheme and layout enhanced my overall experience as well. Customer support was prompt and helpful, resolving any technical issues in a timely manner. I would definitely recommend this website to others and have no suggestions for improvement at this time.

3. Ease of Use:

The website is simple to use, and all the information was easily found.

Whether there are first-time visitors or regular users, the layout and navigation are intuitive, making it a breeze to find what you are looking for.

The clear headings and organized categories help streamline the user experience, ensuring that you can quickly access the information you need without any hassle.

4. Features and Functionality:

Features and functionality of the website include a user-friendly interface, seamless navigation, and a variety of interactive tools to enhance the overall user experience. Additionally, the website regularly updates its content to provide users with the latest information and

resources in their area of interest. Overall, the features and functionality of the website are designed to meet the diverse needs and preferences of its users, making it a valuable and dynamic online platform.

5. Design and User Interface:

In terms of design, I personally find the website to be quite visually appealing. The color scheme is modern and easy on the eyes, and the layout is clean and organized. However, I do think that there could be some improvements made to the user interface. For example, I found it a bit confusing to navigate through the different sections of the website, and I think that some clearer labeling and navigation tools could help make the user experience more seamless. Additionally, I think that adding some interactive elements or multimedia content could enhance the overall user experience and make the website more engaging.

6. Future Improvements:

Overall, I found the website to be user-friendly and easy to navigate. The design was visually appealing, and the features were quite useful in helping me accomplish my goals. However, I did encounter a few difficulties with certain features not working properly. In terms of performance, the website was fast and reliable, providing accurate information. Moving forward, I would suggest improving the functionality of certain features and possibly enhancing the overall design for a more modern look.

7. Additional Feedback: None.

I would also recommend incorporating more interactive elements to engage users and make the website more dynamic. Additionally, providing clearer instructions or tutorials for utilizing certain features could be beneficial for users who may be unfamiliar with the platform. Overall, I believe that with some minor adjustments and enhancements, the website has the potential to become even more user-friendly and appealing to a wider audience.

- 1. Madison Marshall
- 2. Overall Satisfaction: I'm somewhat satisfied, but there's definitely room for improvement.
- 3. Ease of Use: It's fairly easy to use, but I had trouble finding certain features.
- 4. Features and Functionality: The product descriptions could be more detailed.
- Design and User Interface: The design is decent, but it feels a bit cluttered.Simplifying the layout would be beneficial.
- 6. Future Improvements: Adding more filter options and improving product descriptions would enhance the user experience.
- 7. Additional Feedback: None.
- 1. Evan Hack
- 2. Overall Satisfaction: I love the website! It's so easy to find what I need.

- 3. Ease of Use: Learning to navigate it was a breeze. However, sometimes the adding things to the cart function doesn't yield accurate results.
- 4. Features and Functionality: I really appreciate the wishlist feature. It helps me keep track of items I'm interested in.
- 5. Design and User Interface: The design is sleek and modern. I do think the checkout process could be more streamlined.
- 6. Future Improvements: I'd love to see more variety in product offerings
- 7. Additional Feedback: None.
- 1. Grace Molloy
- 2. Overall Satisfaction: I'm generally satisfied, but there's room for improvement.
- 3. Ease of Use: It took me a bit to get the hang of it, but once I did, it was smooth sailing.
- 4. Features and Functionality: The footer came in handy when I forgot how to go back to the home page.
- Design and User Interface: It's decent, but some sections feel cluttered.
 Simplifying the layout would be beneficial.
- 6. Future Improvements: Adding more detailed product descriptions would be helpful.
- 7. Additional Feedback: None.

- 1. Dylan Bettencourt
- 2. Overall Satisfaction: I'm extremely satisfied! It is a great start for a future product.
- 3. Ease of Use: It's incredibly easy to navigate. I've never had any issues.
- 4. Features and Functionality: I love variety of products. The feature is super easy to use.
- 5. Design and User Interface: The design is beautiful and user-friendly. I have no complaints.
- 6. Future Improvements: Maybe adding more variety in product offerings would be beneficial.
- 7. Additional Feedback: None.

- 1. Ruby Allen
- 2. Overall Satisfaction: I'm satisfied, but there are some areas that need attention.
- 3. Ease of Use: It's relatively easy to use, but I encountered some bugs while navigating.
- Features and Functionality: The product size options are helpful.
 However, the loading times are quite slow and did not work for all the products.
- 5. Design and User Interface: The design is clean, but the layout could be more intuitive.

- Future Improvements: Improving site speed and fixing bugs should be prioritized.
- 7. Additional Feedback: None.
- 1. Jocelyn Lillie
- 2. Overall Satisfaction: It's alright, but I've seen better.
- 3. Ease of Use: It's not the most intuitive website I've used. I had to spend some time figuring things out.
- Features and Functionality: The product categories options are helpful.
 However, the home page just seems really long.
- 5. Design and User Interface: The design is a bit dated. It could use a modern overhaul.
- 6. Future Improvements: Improving site speed would enhance the user experience.
- 7. Additional Feedback: None.
- 1. Emily Knox
- 2. Overall Satisfaction: I'm very pleased with the website. It is an simple website for shopping.
- 3. Ease of Use: It's incredibly user-friendly. I had no trouble navigating it from the get-go.

- 4. Features and Functionality: I love the 'cart' feature. It makes it easy to pick up where I left off.
- 5. Design and User Interface: The design is clean and attractive. Everything is where it should be.
- 6. Future Improvements: Maybe incorporating customer reviews directly on the product pages would be beneficial.
- 7. Additional Feedback: None.
- 1. Maggie Parker
- 2. Overall Satisfaction: I'm extremely satisfied! It's exceeded my expectations.
- 3. Ease of Use: It's incredibly easy to navigate. I had no issues whatsoever.
- 4. Features and Functionality: I absolutely love the products page. It's a game-changer.
- 5. Design and User Interface: The design is stunning. It's visually appealing and well-organized.
- 6. Future Improvements: Maybe adding more payment options would be beneficial.
- 7. Additional Feedback: None.

C. Summary

- 1. Usability Tests Overview
 - a. Evaluate product's ease of use and user-friendliness.
 - b. Involves observing real users' interactions.

- c. Identifies usability issues or improvement areas.
- d. Includes task definition, user observation, feedback collection, and analysis.
- e. Aids in understanding user perception and interaction.
- f. Leads to enhancements improving user satisfaction and experience.

2. Brakeman Configuration:

- a. Configure Brakeman settings, including any custom rules or exclusions tailored to the applications requirements.
- b. Ensure that Brakeman is integrated into the development workflow, such as being included in continuous integration pipelines.
- c. Run Brakeman against the Rails application to scan for security vulnerabilities.
- d. Review the generated report to identify any potential issues detected by Brakeman.
- e. Prioritize and categorize the identified vulnerabilities based on their severity and impact on the application.

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