Software Requirements Specification

for

Ethical Shopping

Version 1.0 approved

Prepared by -
Nikhil Kr. Chaudhary
Ashutosh Rath
Garvit Babbar
Ritav Jash
Asmita Mitra
Triranga Senapati

KIIT Deemed University

2023-08-05

Table of Contents

Revision History

Name	Date	Reason For Changes	Version

1. Introduction

1.1 Purpose

In today's world, consumers are becoming increasingly conscious of the impact their purchasing decisions have on the environment and society. One area of concern is the use of animal testing and cruelty in the production of goods. This project aims to develop a machine learning model that can accurately identify brands that do not engage in animal cruelty, providing consumers with the information they need to make ethical purchasing decisions.

The model will be trained on a dataset of known cruelty-free and non-cruelty-free brands, using features such as company policies, certifications, and public statements. We will also develop a user-friendly interface that allows consumers to easily search for and identify cruelty-free brands. This will empower consumers to make informed decisions and support companies that prioritise animal welfare.

1.2 Document Conventions

1.3 Intended Audience and Reading Suggestions

1.4 Product Scope

Overall, this project has the potential to make a significant impact on the ethical consumerism movement by providing consumers with the tools they need to make informed decisions and support cruelty-free brands. It also has the potential to encourage more companies to adopt cruelty-free practices in order to meet consumer demand.

1.5 References

2.   Overall Description

2.1   Product Perspective

This is a new product based on the idea of supporting the cruelty free brands in their businesses, there are several types of products that people buy from respective product manufacturers but the said manufacturers may not be using the best and organic practices or methods that cause less harm to the flora and fauna. The product may be an essential need of the human species but if these practices keep on going we might destroy the overall balance of the nature and hence destroy the only place that welcomes us in our present civilisation level, the Earth. With our product we will help the potential buyers to buy from the better companies who are compassionate for the same.

2.2   Product Functions

This product will help its users to buy from the recommended brands that use cruelty free methods for manufacturing or producing their products. An easy to understand UI will be in play and the users will be able to see best cruelty brands for different kinds of products.

2.3   User Classes and Characteristics

• Regular Users: Consumers looking for ethical products.
• Admin Users: Responsible for content management.

2.4   Operating Environment

The product is a web application that can be run on any modern web browser without the need of any new software, however internet connection is required.

2.5   Design and Implementation Constraints

• Compliance with web standards (HTML5, CSS3, JavaScript).
• Use of responsive web design for various devices.

2.6   Assumptions and Dependencies

• Availability of machine learning models.
• Stable hosting and database services.

3. External Interface Requirements

3.1 Web User Interface (Web UI):

- The web user interface will be accessible through standard web browsers such as Chrome, Firefox, Safari, and Edge.
- Users will access the platform via a URL, and the interface should be responsive to various screen sizes and devices, including desktops, laptops, tablets, and smartphones.
- The web UI will be designed with user-friendly navigation, intuitive menus, and clear visual cues to enhance user experience.

3.2. Data Input and Output:

Users will input data through input fields. Data output will include search results, product details, user profiles, and reports, presented in a clear and readable format.

4. System Features

4.1 Brand Search
  - Users can search for brands based on ethical criteria.

4.2 Brand Classification
  - Machine learning classifies brands.

4.3 Brand Details
  - Display brand information, certifications, and policies.

5. Other Nonfunctional Requirements

5.1 Performance Requirements

5.1.1. Response Time:

  - The system should respond to user interactions (e.g., searching for cruelty-free brands or products) within 2 seconds on average.
  - The web application's pages should load in under 3 seconds on standard internet connections.

5.1.2. Mobile Responsiveness:

  - The web application should provide an optimized user experience on mobile devices, with pages loading within 3 seconds on 4G or equivalent mobile networks.

5.1.3. Error Handling:

- Error messages should be informative and user-friendly, helping users understand and resolve issues.
- Error pages should load quickly.

5.2   Safety Requirements

5.2.1. Brand/Product Verification:

- Implement a robust verification process for brands and products claiming to be cruelty-free to ensure accuracy.
- Regularly review and update the list of verified cruelty-free brands and products to maintain trust with users.

5.2.2. Ethical Standards Compliance:

- Ensure that the system promotes and adheres to ethical standards related to cruelty-free products and environmentally responsible practices.

5.2.3. User Education:

- Provide educational resources about cruelty-free practices and their environmental impact to help users make informed choices.

5.2.4. Feedback Mechanism:

- Implement a feedback mechanism to allow users to report ethical concerns, issues with products, or problems with the platform's functionality.

5.2.5. Compliance with Legal Regulations:

- Ensure that the platform complies with all relevant legal regulations related to product labeling, user data protection, and ethical advertising practices.

5.3   Software Quality Attributes

5.3.1. Usability:

- The system should have a user-friendly and intuitive interface, making it easy for users to find cruelty-free brands and products.
- Ensure that navigation is straightforward, and the layout is visually appealing.

5.3.2. Performance:

- Response times should be fast to provide users with a smooth and responsive experience.
- Pages should load quickly, and search results should be returned promptly.

5.3.3. Availability:

- Ensure that the system is available 24/7, with minimal scheduled maintenance windows.
- Implement monitoring and alerting to detect and address issues proactively.

5.3.4. Compatibility:

- The web application should be compatible with various web browsers (e.g., Chrome, Firefox, Safari) and devices (desktop, mobile, tablet).
- Ensure cross-browser and cross-platform compatibility.

5.3.5. Maintainability:

- Ensure that the codebase is well-organized, modular, and documented to facilitate future maintenance and updates.
- Implement version control and a structured development process.

5.3.6. Testability:

- Develop the application with testability in mind, making it easy to create and execute tests for various components.
- Implement unit testing, integration testing, and user acceptance testing.

5.3.7. Ethical Compliance:

- The system should adhere to ethical guidelines and practices related to cruelty-free products and environmentally responsible choices.

5.3.8. Feedback Mechanisms:

- Implement feedback mechanisms to gather user feedback and continuously improve the platform based on user suggestions and needs.

5.4   Business Rules

5.4.1. Cruelty-Free Verification Rule:

- Brands and products listed on the platform must adhere to recognized cruelty-free standards and practices.
- Brands and products that cannot provide proof of cruelty-free status may not be featured on the platform.

5.4.2. Verified Brand/Product Rule:

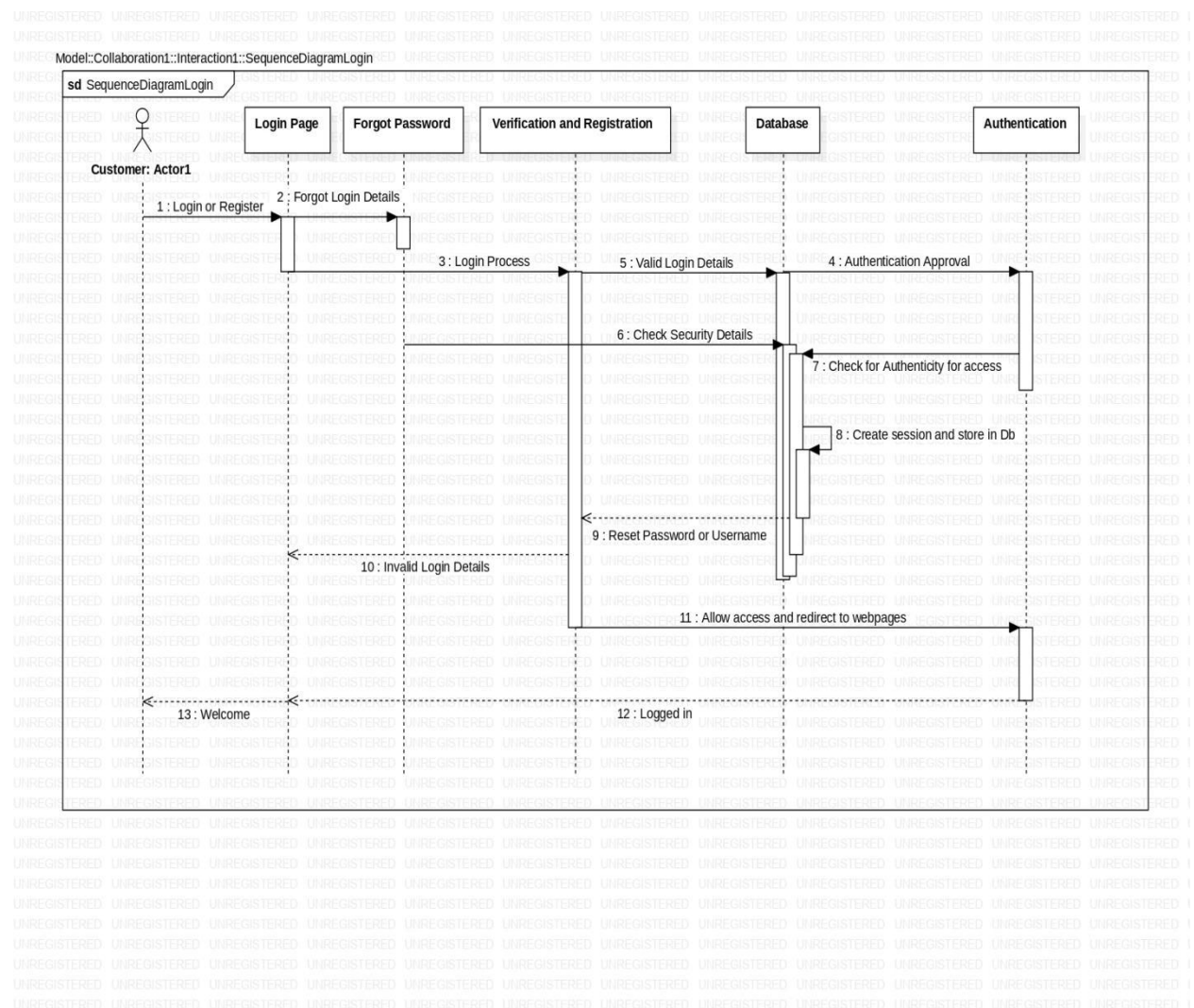- Brands and products that meet cruelty-free and ethical standards should receive a verified badge or label on the platform.
- Verification status should be regularly reviewed and updated.
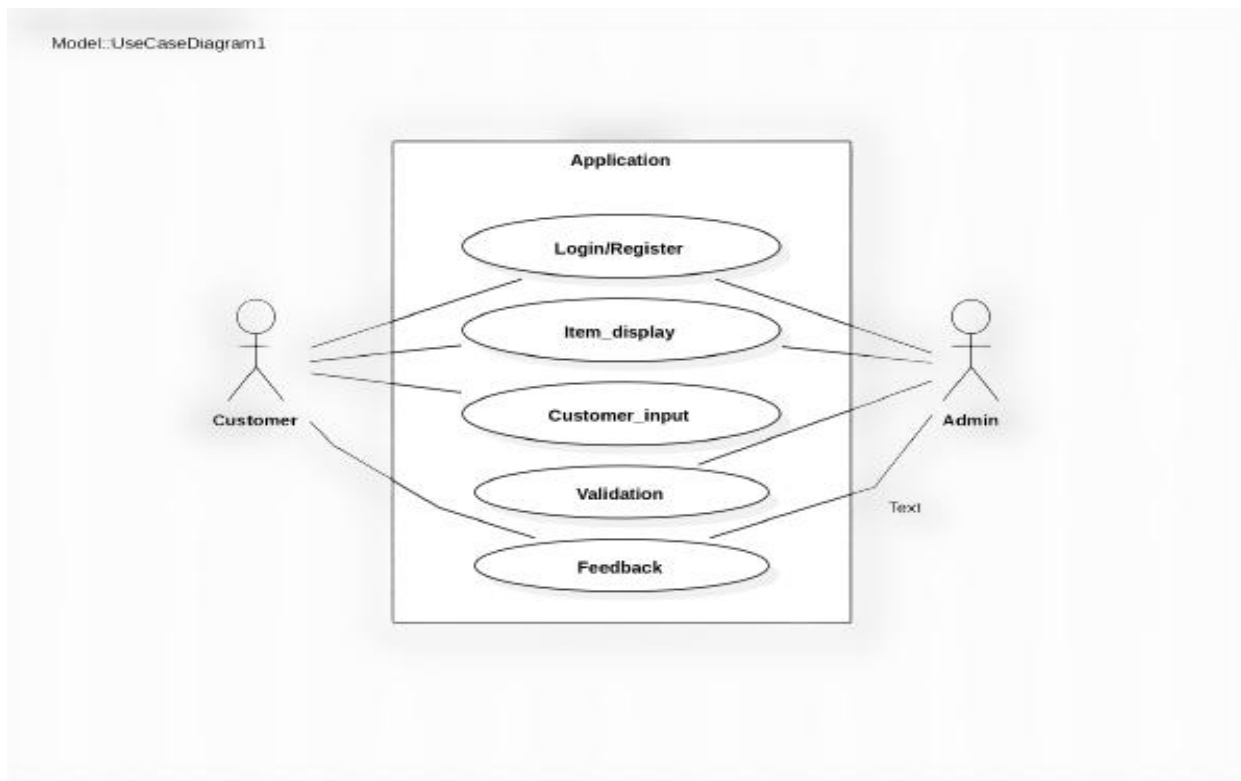
5.4.3. User Reporting Rule:

- Users should have the ability to report inaccurate information, unethical practices, or abusive behavior on the platform.
- Reported issues should be addressed promptly through moderation.

Appendix B: Analysis Models

Sequence Diagram:

Model::Collaboration1::Interaction1::SequenceDiagramLogin

sd SequenceDiagramLogin

Actors and lifelines: Customer: Actor1, Login Page, Forgot Password, Verification and Registration, Database, Authentication

1 : Login or Register
2 : Forgot Login Details
3 : Login Process
5 : Valid Login Details
4 : Authentication Approval
6 : Check Security Details
7 : Check for Authenticity for access
8 : Create session and store in Db
9 : Reset Password or Username
10 : Invalid Login Details
11 : Allow access and redirect to webpages
13 : Welcome
12 : Logged in

Use Case Diagram:

Model::UseCaseDiagram1

Application

Login/Register

Item_display

Customer_input

Validation

Feedback

Customer

Admin

Text

ER Diagram:

username

password

Login

Name

Mobile

User

HAS

Role

username

Address

Email

Permission

Manage

username

password