

RUGGED

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1. Introduction

1.1 Purpose of Document

This is a Requirements Specification document for a new web-based sales system for **RUGGED**. Rugged is a distributor of premium quality camping , hiking and trekking equipment. This website will provide the customers and sellers with a uniquely customized and personalized browsing of the product catalog and the ability to complete product orders on-line. This document describes the scope, objectives and goal of this system. In addition to describing non-functional requirements, this document models the functional requirements with use cases, interaction diagrams, and class models. This document is intended to direct the design and implementation of the target system in an object oriented language.

1.2 Project Summary

Project Name: RUGGED

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1.3 Background

RUGGED is a company that was founded by a group of 6 friends who shared a passion for the great outdoors. They noticed a gap in the market for high-quality, reliable hiking, camping and trekking equipment and decided to fill it by starting their own company. The result was RUGGED, a company that has since become a leading provider of premium quality outdoor gear.

RUGGED's commitment to excellence is evident in every aspect of the company, from its products to its customer service. The company's extensive range of products includes everything from tents and sleeping bags to backpacks, stoves and lanterns. All of RUGGED's products are made from the finest materials and are designed to meet the needs of outdoor enthusiasts, no matter what level of experience they have.

One of the key factors that sets RUGGED apart from its competitors is its fantastic website. RUGGED was the first company to start a website dedicated to outdoor enthusiasts, and it has since become a hub of information and resources for those who love the great outdoors. The website is easy to navigate and is packed full of useful information, including detailed product descriptions, customer reviews, expert advice and much more.

RUGGED's commitment to sustainability is another factor that sets the company apart. The founders recognized the importance of preserving the environment and made it a priority to ensure that all of RUGGED's products are made in an environmentally responsible manner. This includes using environmentally friendly materials and production processes, as well as ensuring that its products are designed to last for many years.

In addition to its fantastic website and commitment to sustainability, RUGGED is also known for its excellent customer service. The company's knowledgeable and friendly staff are always on hand to help customers find the perfect gear for their needs, and to answer any questions they may have about its products. RUGGED's customer-focused approach has helped to establish the company as a trusted and respected provider of outdoor gear.

In conclusion, RUGGED is a company that is dedicated to providing outdoor enthusiasts with premium quality hiking, camping and trekking equipment. With its fantastic website, commitment to sustainability, excellent customer service and innovative designs, RUGGED is a popular choice for outdoor enthusiasts of all levels. Whether you are an experienced hiker or just starting out, RUGGED has everything you need to make your next outdoor adventure a success.

1.4 Project Scope

The scope of the Rugged website project for selling trekking products includes the following:

Website Design and Development: Design and develop a visually appealing, user-friendly website that is optimized for conversions and easy navigation.

Product catalog: Implement a product catalog that allows customers to easily browse and search for products based on different categories, such as type of gear, brand, and price range.

Shopping Cart: Incorporate a shopping cart that allows customers to add products to their cart and proceed to checkout.

Customer Account Management: Implement a customer account management system that allows customers to create an account, view their order history, and manage their personal information.

Order Management: Implement an order management system that allows the website administrator to view, manage, and update customer orders, as well as view sales and product performance reports.

Responsive Design: Ensure that the website is optimized for viewing on different devices, such

as desktop computers, tablets, and smartphones, and that it provides a seamless browsing experience regardless of the device being used.

Maintenance and Support: Provide ongoing maintenance and support to ensure the website remains secure, up-to-date, and functional at all times.

Shipping facilities: Use 3rd party shipping and logistics partners and provide them access to shipping as well as transportation data. Use the data provided by 3rd party shipping apps to provide real time order tracking.

1.5 System Purpose

1.5.1 Users

Customers: Upon implementation of the new system, customers will find site navigation, product identification and product ordering easier. Customers will be able to choose whether to buy directly from RUGGED or buy from one of our sellers.

Retail Sellers: Upon implementation of this system retail sellers will be able to sell directly to customers from across the country and will be able to collect their feedback as well. They will also be provided with a data rich interface consisting of graphs , pi charts, and other helpful visuals that will help them gain better understanding of their business on our website.

RUGGED Influencers: These users will write about their experiences and post them on Rugged forums/blogs. They can also share these on Instagram/FaceBook/other social media platforms.

1.5.2 Locations

The system will be available to any potential customer using the Internet. RUGGED employees , influencers and sellers will also use the system from any location and will be able to access restricted areas of the site through a password protection scheme.

1.5.3 Responsibilities

The primary responsibilities of the new system:

- provide customers direct access to up-to-date, accurate product information on which they can make a decision to buy
- customize product offerings to specific users
- allow differential access to web pages based on type of user
- allow customers to place an order through the website
- allow customers to become influencers by writing blogs about their experience with our equipment
- allow sellers to maintain information about their products directly
- allow sellers to get high precision data (related to their sales on our website)in graphical and excel format.
- send order information directly to Shipping 3rd party companies.

Other desired features of the new system:

- a consistent "look and feel" throughout the website
- full-text searches of the web pages a user has permission to access
- on-line help in website navigation
- password protection scheme for non-public web pages
- translation of a web page to another language

1.5.4 Needs

This system is needed in order to service the expected increase in demand for camping ,hiking and trekking equipment. The new system will allow RUGGED to rapidly increase sales without a large and expensive increase in the number of offline retail stores and other customer support employees.

1.6 Overview of Document

The rest of this document gives the detailed specifications for the new sales system. It is organized as follows:

- Section 2: **Functional Objectives** Each objective gives a desired behavior for the system, a business justification, and a measure to determine if the final system has successfully met the objective. These objectives are organized by priority. In order for the new system to be considered successful, all high priority objectives must be met.
- Section 3: **Non-Functional Objectives** This section is organized by category. Each objective specifies a technical requirement or constraint on the overall characteristics of the system. Each objective is measurable.
- Section 4: **Context Model** This section gives a text description of the goal of the system, and a pictorial description of the scope of the system in a context diagram. Those entities outside the system that interact with the system are described.
- Section 5: **Use Case Model** The specific behavioral requirements of the system are detailed in a series of use cases. Each use case accomplishes a business task and shows the interaction between the system and some outside actor. Each use case is described with both text and an interaction diagram. An interface prototype is also shown. The system use case diagram depicts the interactions between all use cases and system actors.

2. Functional Objectives

2.1 High Priority

1.The system shall allow for on-line product ordering by either the customer. For customers, this will eliminate the current delay between their decision to buy and the placement of the order. This will reduce the time a sales agent spends on an order by 15%.

2. This system will ensure that the valuable time of customers is saved . The customer will then use that saved time to explore our website more thereby increasing user engagement and the probability that the user will buy multiple products will increase drastically.

- 3.Customer account management: Customers should be able to create and manage their own accounts, including the ability to view their order history, update their information, and manage their preferences.
- 4.Shopping cart and checkout: This allows customers to add products to their shopping cart and proceed to checkout, where they can enter their shipping and payment information and complete their purchase.
- 5.Payment gateway integration: An e-commerce platform must have integration with various payment gateways to allow customers to make secure online payments using their preferred payment method.
- 6.Product catalog management: This includes the ability to add, edit, and manage products and their related information, such as product descriptions, images, prices, and categories.
- 7.Customer support: An e-commerce platform should have a customer support system, including a FAQ section and live chat or email support, to assist customers with their questions and concerns.

2.2 Medium Priority

- 1.Search and filtering: An effective search and filtering system is essential for customers to easily find the products they are looking for.
- 2.Marketing and promotions: An e-commerce platform should have the ability to create and manage promotions and discounts, as well as offer loyalty programs and reward points.
- 3.Analytics and reporting: An e-commerce platform should have built-in analytics and reporting tools to provide insights into customer behavior and sales performance, as well as to help with decision-making and strategy planning.

2.3 Low Priority

- 1.Mobile optimization: With an increasing number of customers shopping on mobile devices, it's important for an e-commerce platform to be optimized for mobile devices, with a responsive design that adapts to different screen sizes.
- 2.The system shall allow the user's status to be stored for the next time he returns to the web site. This will save the user x minutes per visit by not having to reenter already supplied data.
- 3.The system shall provide marketing with customer navigation information. This information will allow marketing to determine what information prompts a purchase and help target potential customers more effectively. This will increase annual revenue by \$x in additional sales.

3. Non-Functional Objectives

3.1 Reliability

- The system shall be completely operational at least 95% of the time.
- Down time after a failure shall not exceed 5 hours.

3.2 Usability

- A user who already knows what product he is interested in should be able to locate and view that page in 20 seconds.
- The number of web pages navigated to access product information from the top page should not exceed 5.

3.3 Performance

- The system should be able to support x simultaneous users.
- The mean time to view a web page over a 56Kbps modem connection shall not exceed seconds.
- Searching and loading time for our website will be minimal.

3.4 Security

- The system shall provide password protected access to web pages that are to be viewed only by sellers and RUGGED Influencers.
- Transaction data must be transmitted in encrypted form.

3.5 Supportability

- The system should be able to accommodate new products and product lines without major reengineering.
- The system will work on most web browsers.

3.6 Online Users Documentation and Help

- The system shall provide a web page that explains how to navigate the site. This page should be customized based on what pages that user is allowed to access.
- This help page should be accessible from all other pages.

3.7 Purchased Components

- A website search engine will be needed.

3.8 Interfaces

- Customer Profile Dashboard
- Seller Dashboard Portal
- RUGGED Influencers Blogging Portal

4. The Context Model

4.1 Goal Statement

The goal of the system is to allow RUGGED to increase sales revenue by 45% over the next 1 year with only a 30% increase in sales and 15% increase in customer service staff by

- allowing complete and accurate customer and order information to be captured directly from the customer.
- providing customers and sales agents fast access to up-to-date and accurate product information.

4.2 System External

- Customer: A customer is any user of the system that has not identified himself as an SBE employee. A customer may search for public product information by keyword, access whitepapers for a particular product, order a product or request assistance from a sales agent. A customer who provides personal information will get search and query results customized to his preferences.
- Seller: The seller is a user and has been verified as a RUGGED seller. The seller may update product information and prices for those products for which he/she is responsible.
- Shipping: The Shipping department is informed of purchases so that it can process the order and update Inventory.
- Marketing: The Marketing department is responsible for creating demand for RUGGED products. It will receive website navigation data to use in planning marketing strategies.

5. The Use Case Model

5.1 Use Case Description (for selected cases)

Notes:

- For all use cases, the user can cancel the use case at any step that requires user input. This action ends the use case.
- Any data collected during that use case is lost. For all use cases that require a logged in user, the current login session is updated during the use case to reflect the navigation paths through the use case.

Login

| | |
|-------------------------|---|
| Use Case | Login for Customer/Seller/Influencer |
| Basic Flow | <ul style="list-style-type: none">• User access the website.• User clicks on the "Login" button.• User enter their email and password• System validates the customer/seller/influencer credentials and logs them in. |
| Alternate Flow | <ul style="list-style-type: none">• If the customer/seller/influencer forgets their password, they can click on "Forgot Password" and reset it by entering their email.• If the email is not registered, the system will display an error message. |
| Preconditions | The customer/seller/influencer should have a valid username and password, to log in.. |
| Postconditions | The customer/seller/influencer is logged in and has access to their account features. |
| Extension Points | None |

Sign Up

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|-------------------------|---|
| Use Case | Signup for Customers |
| Basic Flow | <ul style="list-style-type: none">• Customer clicks on the sign up button on the website.• Customer enter their personal details and create a password.• The system validates the information and creates a new account for the customer. |
| Alternate Flow | <ul style="list-style-type: none">• In case of invalid information, the system displays an error message.• In case of an already registered email, the system displays an error message. |
| Preconditions | The customer should have a valid email and password, or a valid email to sign up. |
| Postconditions | A new account is created for the customer. |
| Extension Points | The customer can update their personal information and password at any time. |

Place Order

| Use Case | Place Order for Customers |
|------------------|---|
| Basic Flow | <ul style="list-style-type: none">• Customer selects a product and adds it to their cart.• Customers review their cart and proceed to checkout.• Customers enter their shipping information and payment details.• System confirms the order and displays a confirmation page.• System sends a confirmation email to the customer. |
| Alternate Flow | <ul style="list-style-type: none">• If the customer is not logged in, they will be prompted to login or sign up before proceeding to checkout.• If the payment details are incorrect, the system will display an error message. |
| Preconditions | The customer should have a valid account and have products in their cart. |
| Postconditions | The customer's order is confirmed and the payment is processed. |
| Extension Points | None |

Check Order Status

| Use Case | Checking Order Status for Customers |
|------------------|--|
| Basic Flow | <ul style="list-style-type: none">• Customers logs in• Customer clicks on Order Section .• Customers clicks on the order they want to check the status of. |
| Alternate Flow | <ul style="list-style-type: none">• If there is no order, it shows empty. |
| Preconditions | The customer should be logged in and there must be an order |
| Postconditions | none |
| Extension Points | None |

Order Replacement

| Use Case | Order replacement for Customers |
|------------------|---|
| Basic Flow | <ul style="list-style-type: none">• Customer logs into the RUGGED website.• Customer navigates to their order history.• Customer selects the order they want to replace.• Customer provides the reason for replacement.• Customer selects the new item they want to receive.• Customer confirms the replacement request.• RUGGED team reviews the replacement request.• RUGGED team approves/declines the replacement request.• Customer receives a notification about the status of the replacement request.• If approved, customer receives the new item and returns the original item.• Customer's account is updated with the new item. |
| Alternate Flow | <ul style="list-style-type: none">• Replacement request is declined.• Customer receives a notification about the decline and reason for decline. |
| Preconditions | Customers must have an account with RUGGED .Order must be within the replacement policy period. |
| Postconditions | <ul style="list-style-type: none">• Replacement request is processed.• Customer's account is updated with the new item.• Customer receives a notification about the status of the replacement request. |
| Extension Points | <ul style="list-style-type: none">• Ability to request a replacement for multiple items in the same order.• Option to track the return shipment of the original item.• Option to upgrade to expedited shipping for the replacement item. |

Wishlist & Target Advertisement

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| Use Case | Targeted advertisement for sellers and customers. |
| Basic Flow | <ul style="list-style-type: none">• Customers log into their account on the website.• System retrieves the customer's wish list, favorites, location and purchase history.• System displays targeted advertisements based on the customer's wish list, favorites, location and purchase history.• System displays targeted advertisements for the seller's products based on the customer's wish list, favorites, location and purchase history. |
| Alternate Flow | N/A |
| Preconditions | <ul style="list-style-type: none">• Customer and seller both have accounts on the website.• Seller has opted in for targeted advertisement.• Seller has products listed on the website. |
| Postconditions | <ul style="list-style-type: none">• Customers see advertisements based on their wish list, favorites, location, and purchase history.• Sellers have opted-in for targeted advertisements and can see their advertisement analytics.• Sellers have to pay an additional fee for targeted advertisements. |
| Extension Points | None |

Search Products

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|-------------------|---|
| Use Case | Searching from a List of Products for Customer/Seller |
| Basic Flow | <ul style="list-style-type: none">• Customer or seller accesses the search bar on the website.• Customer or seller inputs keywords or product name they are looking for.• Relevant results are displayed based on the keywords or product name entered.• Customers or sellers can further refine the search results using filters such as product category, brand, price range, etc.• Customer or seller selects the desired product from the search results.• Customer or seller is redirected to the product page for further information. |

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| Alternate Flow | <ul style="list-style-type: none"> • If the search results do not match the keywords entered, a prompt will be displayed suggesting similar keywords or product names. • If there are no results for the keywords entered, a prompt will be displayed indicating that there are no matching results. |
| Preconditions | <ul style="list-style-type: none"> • Customer or seller has access to the internet. • Customer or seller has an account on the website. • Customer or seller is logged into their account. |
| Postconditions | <ul style="list-style-type: none"> • Customer or seller is able to find the desired product. • Customer or seller is redirected to the product page for further information. |
| Extension Points | <ul style="list-style-type: none"> • The search results can be sorted based on relevance, price, popularity, etc. • The customer or seller can save the search results for future reference. |

Blog Post & Product Sharing

| | |
|-----------------------|---|
| Use Case | Share the Products and Blog Post of RUGGED Influencers on various social media platforms |
| Basic Flow | <ul style="list-style-type: none"> • Influencer logs into the RUGGED website. • Influencer selects the "Write Blog" option. • Influencer writes a blog post about using RUGGED products. • Influencer selects the "Share on Social Media" option. • Influencer selects one or more social media platforms. |
| Alternate Flow | <ul style="list-style-type: none"> • N/A |
| Preconditions | <ul style="list-style-type: none"> • Influencer must have a valid account • Influencer must have an active account on the selected social media platform(s) in order to share the blog post. |
| Postconditions | <ul style="list-style-type: none"> • Influencer is directed to the blogging portal and is taken to a page where they can write and publish a blog post. • Blog post is saved as a draft or published |

| | |
|-------------------------|--|
| | <ul style="list-style-type: none"> • Influencer is presented with a list of social media platforms to share the blog post on • Blog post is shared on selected social media platforms |
| Extension Points | <ul style="list-style-type: none"> • Influencer can add images or videos to the blog post to make it more engaging • Influencers can add tags to categorize the blog post. • Influencer can add a custom message to accompany the blog post on social media |

Analytical Report of Sellers

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|-------------------------|---|
| Use Case | Generate Statistical and Graphical Report for Sellers |
| Basic Flow | <ul style="list-style-type: none"> • Seller logs in to the account. • Seller clicks on the “Reports” section in his Dashboard. • Seller is presented with a list of different reports they can view. • Seller selects the “Analytical and Graphical Report” option. • Report is displayed. |
| Alternate Flow | <ul style="list-style-type: none"> • In case the seller does not have access to the “Reports” section, the seller will be prompted to get in touch with customer support for assistance. |
| Preconditions | <ul style="list-style-type: none"> • Seller must have an account with RUGGED. Seller must have made at least one sale through the platform. |
| Postconditions | <ul style="list-style-type: none"> • Seller has access to a comprehensive report of their sales and products on the RUGGED platform. • Seller has a clear understanding of which products are selling the most and when. • Seller has a visual representation of their profits. |
| Extension Points | <ul style="list-style-type: none"> • Seller can export the report in various file formats such as PDF, CSV, etc. • Seller can see the comparison in form of a graphical representation. |

Export Analytical Report

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|-------------------------|--|
| Use Case | Export Analytical Report in Various File formats |
| Basic Flow | <ul style="list-style-type: none">• Seller logs in to the account.• Seller clicks on Reports section.• Seller is presented with different reports.• Seller selects an option "export report".• Rugged website reviews and check for the correct format.• After ensuring correct format,download option is displayed on the screen using download links. |
| Alternate Flow | None. |
| Preconditions | <ul style="list-style-type: none">• Seller must have an account with RUGGED. Seller must have made at least one sale through the platform. |
| Postconditions | <ul style="list-style-type: none">• Seller has access to a comprehensive report of their sales and products on the RUGGED platform. |
| Extension Points | None |

Charge Customers

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|-----------------------|--|
| Use Case | Charge Customers |
| Basic Flow | <ul style="list-style-type: none">• The use case begins when a user selects "Credit Card" as a payment option, while in use case Place Order• The system requests the credit card number, type and expiration date• The user enters the information.• The system verifies that the credit card is valid for the amount to be charged and completes the credit card transaction.• The system stores the payment details and returns a success message |
| Alternate Flow | If the credit card cannot be validated the use case ends, returning a failure message |

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|-------------------------|--|
| Preconditions | The system is executing use case Place Order |
| Postconditions | The customer has been charged for the order |
| Extension Points | None |

Bill Customers

| | |
|-------------------------|--|
| Use Case | Billing Customer |
| Basic Flow | <ul style="list-style-type: none"> • The use case begins when a user selects "Bill me" as a payment option, while in use case Place Order • The system requests the billing address. • The user enters the billing address. • The system stores the payment details. |
| Alternate Flow | none |
| Preconditions | The system is executing use case Place Order and the customer is authorized for billing |
| Postconditions | Accounting can bill the customer for this order |
| Extension Points | none |

Chat Support

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|-------------------------|--|
| Use Case | Chat Support |
| Basic Flow | <ul style="list-style-type: none">• The use case starts when the customer asks for assistance• Customer select the query from given options• Based on the selected query the automatically generated reply will be sent• If customer ask to chat with individual, a person from chat support will reply |
| Alternate Flow | none |
| Preconditions | The customer should be logged in. |
| Postconditions | none |
| Extension Points | None |