# Software Requirements Specification

# for

# DENIM EXPRESS

Version 1.0 approved

<Software Engineering CS 301>

<24th September 2018>

Contributors:

|  |  |  |
| --- | --- | --- |
| Name | Enroll-Number | Section |
| Syed Tasleem | U101116FCS141 | S-6 |
| 1. Venkat | U101116FCS148 | S-6 |
| Tavva G N R S N Prudhvith | U101116FCS142 | S-6 |
| V. Jashwanth | U101116FCS151 | S-6 |

Mentors:

*Mr. Amit Kumar Sir.*

*Mr. Chaitanya Surabhi.*

Table of Contents

Table of Contents [ii](#__RefHeading___Toc441230970)

Revision History [ii](#__RefHeading___Toc441230971)

1. Introduction [1](#__RefHeading___Toc441230972)

1.1 Purpose [1](#__RefHeading___Toc441230973)

1.2 Document Conventions [1](#__RefHeading___Toc441230974)

1.3 Intended Audience and Reading Suggestions [1](#__RefHeading___Toc441230975)

1.4 Product Scope [1](#__RefHeading___Toc441230976)

1.5 References [1](#__RefHeading___Toc441230977)

2. Overall Description [2](#__RefHeading___Toc441230978)

2.1 Product Perspective [2](#__RefHeading___Toc441230979)

2.2 Product Functions [2](#__RefHeading___Toc441230980)

2.3 User Classes and Characteristics [2](#__RefHeading___Toc441230981)

2.4 Operating Environment [2](#__RefHeading___Toc441230982)

2.5 Design and Implementation Constraints [2](#__RefHeading___Toc441230983)

2.6 User Documentation [2](#__RefHeading___Toc441230984)

2.7 Assumptions and Dependencies [3](#__RefHeading___Toc441230985)

3. External Interface Requirements [3](#__RefHeading___Toc441230986)

3.1 User Interfaces [3](#__RefHeading___Toc441230987)

3.2 Hardware Interfaces [3](#__RefHeading___Toc441230988)

3.3 Software Interfaces [3](#__RefHeading___Toc441230989)

3.4 Communications Interfaces [3](#__RefHeading___Toc441230990)

4. System Features [4](#__RefHeading___Toc441230991)

4.1 System Feature 1 [4](#__RefHeading___Toc441230992)

4.2 System Feature 2 (and so on) [4](#__RefHeading___Toc441230993)

5. Other Nonfunctional Requirements [4](#__RefHeading___Toc441230994)

5.1 Performance Requirements [4](#__RefHeading___Toc441230995)

5.2 Safety Requirements [5](#__RefHeading___Toc441230996)

5.3 Security Requirements [5](#__RefHeading___Toc441230997)

5.4 Software Quality Attributes [5](#__RefHeading___Toc441230998)

5.5 Business Rules [5](#__RefHeading___Toc441230999)

6. Other Requirements [5](#__RefHeading___Toc441231000)

Appendix A: Glossary [5](#__RefHeading___Toc441231001)

Appendix B: Analysis Models [5](#__RefHeading___Toc441231002)

Appendix C: To Be Determined List [6](#__RefHeading___Toc441231003)

Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason For Changes** | **Version** |
|  |  |  |  |
|  |  |  |  |

# Introduction

## Purpose

*This document aims to specify the requirements for GMU. The GUI that we are building is to serve as the guide to devolopers and our project is intended to give complete solutions to vendors and as well as customers to browse through the site without going to the shop and also shop owner to sale the product.*

## Document Conventions

*This document uses the Conventions:*

Db – data base

ER – Entity Relationship

UC – Use case Diagrams

**Enter** – Commands written in bold

GMU – Garment manufacturing Unit

GUI – Graphical User Interface

## Intended Audience and Reading Suggestions

*This document is written for researchers, software devolopers, advanced practitioners, and documentation writers, etc. Initially, read the Product perspective and get to know about the project, then go for External Interface Requirements and System features.*

## Product Scope

*The purpose of the online garment Unit is to create a convenient and easy-to-use application for customers, trying to buy. The system is based on a relational database with its garment management. We will have a database server supporting few of major cities around the India as well as we give important message for flash sale. Above all, we hope to provide a comfortable user experience along with the best pricing available.*

## References

* *Reference for web scripting* [*https://www.w3schools.com*](https://www.w3schools.com/)
* *HTML and CSS: design and build web sites by Jon Duckett.*
* *Fundamentals of database systems by ramez elmarsi and shamkant b.navathe.*

# Overall Description

## Product Perspective

*The product is supposed to be an open source. It is a web-based system implementing client-server model. This GMU provides simple mechanism for users to view garments.*

*The following are the main features that are included in GMU are:*

* *1***.Product Details**
  + *It includes various categories of shopping along with the description of the garments, the number of clothes available etc.*

* *2.***Customer Description**
  + *It includes customer code, name, address and phone number. This information may be used for keeping the records of the customer for any other kind of information.*
* *3.***Discussion Forum**
  + *It provides users with a platform to discuss and help each other with their problems*

## Product Functions

*The major functionalities of the GMU are:*

**2.2.1Registration**

*If customer wants to buy the product then he/she must be registered, unregistered user can’t go to the shopping cart.*

*2.2.2* **Login**

*Customer logins to the system by entering valid user id and password for the shopping.*

*2.2.3* **Changes to Cart**

*Changes to cart means the customer after login or registration can make order or cancel order of the product from the shopping cart.*

*2.2.4* **Logout**

*After the payment or surf the product the customer will logged out.*

*2.2.5* **Report Generation**

*After all transaction the system can generate the portable document file (.pdf) and then sent one copy to the customer’s Email-address and another one for the system data base to calculate the monthly transaction.*

*2.2.6* **Technical Issues**

*This system will work on client-server architecture. It will require an internet server and which will be able to run PHP application. The system should support some commonly used browser such as IE etc*

*.*

## 2.3 User Classes and Characteristics

* **Customer**
  + *He or she is a verified user of website who is intended to buy a product from the seller via the Flipkart platform. The customer must have a username and password to make a purchase. The person is regularly updated and fed with latest offers and discounts according their interest.*
* **Seller**
  + *He or she is a verified person who is allowed to sell items over the platform. Seller’s details are stored on database and all the products are listed under him that he is ready to sell or are available. He is responsible to set products details, price, and quantity.*
* **Administrator**
  + *He or she is responsible for monitoring functions and procedures on platform. Administrator is responsible to provide valid information of a purchase to the concerned authority in case of any dispute between the customer and seller or in case of exchange.*

*The Characteristics would be:*

* **Product Details**
  + *It is used to view the product details from the database*
* **Add New Products**
  + *It is used to add a product into the database and it includes searching a product details and removing a product from database*
* **Update New Products**
  + *It is used to update the product details from the database.*

*Users should be able to see the cost and add the product to cart for future purpose. Customer will have the access to the functions present on the screen. It is considered that the user do have the basic knowledge of operating the internet and to have access to it. The administrator is expected to be familiar with the interface of the tech support system.*

## Operating Environment

*This is a web-based system and hence will require the operating environment for a client and server GUI.*

*Recommended browsers are Chrome, Firefox, Safari and Internet Explorer 8 or higher.*

|  |  |  |
| --- | --- | --- |
|  | **Client System** | **Server System** |
| Operating System | *Windows/Linux/Android/iOS* | *Windows/Linux* |
| Processor | *Intel or AMD* | *Intel or AMD* |
| Hard Disk | *1 GB* | *1 TB* |
| RAM | *256* | *8 GB* |

## Design and Implementation Constraints

*The user interface shall be implemented using any tool or software package like Java Applet, MS Front Page, Enterprise Java-Beans (EJB) etc. on following languages.*

**Client-side Programming Language:**

|  |  |
| --- | --- |
| **HTML5** | *HTML5 is the fifth revision of the HTML standard* |
| **CSS** | *Cascading Style Sheets define style rules in a separate CSS file* |

*Decision regarding which database to use should be taken considering the fact that data being exchanged or stored is large, and the appropriate data management system will yield efficient performance.*

## 2.5 User Documentation

* *Contact Us*
* *Notifications*

*For any online tutorials or software you can see the reference above in 1.5 and*

[*www.geeksforgeeks.com*](http://www.geeksforgeeks.com/) *is also a good website for learning html, css and javascript.*

**2.6 Assumptions and Dependencies**

* If you didn’t get any mail after purchasing you can contact us immediately via phone or email.
* The customer and seller must have basic knowledge of computers and English language.
* Each User must have a User ID and password.
* Each Seller must have Seller ID and password.
* There must be an Administrator.
* Internet connection is a must.
* Proper browsers should be installed in the user’s system.

# External Interface Requirements

## User Interfaces

*Some of the Interfaces for the product could be :*

*1.Login Page*

*2.Registration Form*

*3.Add to cart option for saving the products.*

*4.Maintain Customer Profile.*

* *The user interface for the software shall be compatible to any browser such as Internet Explorer, Mozilla or Netscape Navigator by which user can access to the system.*

## Hardware Interfaces

*Since the application must run over the internet, all the hardware shall require to connect internet will be hardware interface for the system. As for e.g. Modem, WAN – LAN, Ethernet Cross-Cable. The system require Database also for the store the any transaction of the system like MYSQL etc. system also require DNS (domain name space) for the naming on the internet. At the last user need web browser for interact with the system.*

* *Windows, Ubuntu.*
* *The device needs Internet to use this system.*
* *A browser which supports CGI, HTML & Javascript.*

## 3.3 Software Interfaces

*You need an OS to support this system and for user friendliness and Also need a Database to store all the information about the user profile, product added to the cart, etc. For this project we chose HTML, CSS, JAVASCRIPT and Server side scripting language as PHP.*

# *3.4* Communications Interfaces

*The protocol that we have been using is HTTP for communications and also whenever the customer purchased a particular product he will also get an email.*

# System Feature

## 4.1 Registration

4.1.1 **Description and Priority**

*If customer wants to buy the product then he/she must be registered, unregistered user can’t go to the shopping cart. This feature is important for the customer to add any items to the cart. The priority is “A”.*

4.1.2 **Stimulus/Response Sequences**

If he is a Registered Customer then he/she is allowed to view the products, view the offers and can also add items to the shopping cart.

An unregistered customer can only view the items but cannot add items to the cart.

4.1.3 **Functional Requirements**

REQ-1: *The new user need to be registered to add items to the cart.*

REQ-2: *If the customer enters invalid credentials for registration, he is not allowed to enter into the system.*

REQ-3: *The registered customers can purchase the items through cash-on- delivery.*

**4.2 Login**

**4.2.1 Description and Priority**

*After registering into the system the user should login into the system. As this is one of the important feature, this is of high priority “A”.*

**4.2.2 Stimulus/Response Sequences**

*A customer can view the items after successful login and can add items into the cart and later he can buy using cash-on-delivery.*

**4.2.3 Functional Requirements**

REQ-1: Only the registered user can only be allowed to login.

REQ-2: If the user enters invalid inputs, he is not allowed to enter into the system.

**4.3 Wish-list**

**4.3.1 Description and Priority**

*Wish-list allows customers to save items and return at a later date to purchase those items. This is of high priority “A”.*

**4.3.2** **Stimulus/Response Sequences**

*In general, Wish-list allows customers to manage the items the way the want, the result is higher satisfaction.*

**4.3.3 Functional Requirements**

REQ-1: Only after successful login user can only be allowed to add items to the wish-list.

REQ-2: Customers buy gifts for special occasions, which is why we chose to have a shopping carts that makes the process easier.

**4.4 Check-out**

**4.4.1 Description and Priority**

*If the customer want to buy a product, he can go to check-out and order through cash-on-delivery. As this is one of the important feature, this is of high priority “A”.*

**4.4.2 Stimulus/Response Sequences**

*When buyers are ready to buy, some websites make them wait for a long time even the buyer is ready to purchase the product but our system makes it as simple as possible.*

**4.4.3 Functional Requirements**

REQ-1: In order to checkout, the product should be available in the website.

REQ-2: The customer need to enter a valid address to order the product.

**4.5 Cancellation Policy**

**4.5.1 Description and Priority**

*It is an essential feature of any e-commerce website and it should be clearly visible and well-written or illustrated. Priority is “B”.*

**4.5.2 Stimulus/Response Sequences**

*Customer can cancel the order any time, it can be after/before the delivery of the product.*

**4.5.3 Functional Requirements**

REQ-1: If a customer cancel’s the order, he can’t undo the cancellation.

REQ-2: The customer gets an e-mail after the cancellation of the product.

**4.6 Return Policy**

**4.6.1 Description and priority**

*It is also an essential feature of any e-commerce website and it should be clearly visible and well-written or illustrated. Priority is “B”.*

**4.6.2 Stimulus/Response Sequences**

*A customer can only allowed to return the product after the delivery of the product. He should mention the reason of the return.*

**4.6.3 Functional Requirements**

REQ-1: In order to return the product, tags should be in place.

REQ-2: It reassures buyers that if they are unhappy with the product or just need a different size, the brand is there for them.

**4.7 Product Reviews**

**4.7.1 Description and priority**

*No matter how well online stores promote their own products, reviews by the customers will have a greater impact. So, the priority is “A”.*

**4.7.2 Stimulus/Response Sequences**

*A customer who have ordered the product is allowed to review the product.*

**4.7.3 Functional Requirements**

REQ-1: ~60% of the customers buy the products based on the reviews and ratings.

REQ-2: You might think that having negative reviews is a sale killer. But, products with negative reviews are seen as censored and, in turn, shoppers will assume the positive reviews are fake.

**4.8 Special Offers**

4.8.1 Description and priority

Looking for a way to woo new customers or existing customers you haven’t seen in a while? Then this is the best way to promote your products in the online market place via email, text, social media, etc. So, the priority is “A”.

**4.8.2 Stimulus/Response Sequences**

When shoppers realize they’re getting a special deal, it motivates them to buy more and spend more time searching the site.

4.8.3Functional Requirements

REQ-1: These offers serve a dual purpose -they encourage customers to take advantage of “good deal” while also helping other E-Commerce sites to compete with other online marketplace.

REQ-2: Our system will display all the offers in the header section or in between the products.

**4.9 Replacement Policy**

**4.9.1 Description and Priority**

Sometimes, however, when your order arrives you may realize that the product isn’t exactly what you expected. It may not be the right size or color or in rare cases it is defective or damaged. What do you do now? Here, comes the Denim Express Replacement Policy. So, the priority is “A”.

**4.9.2 Stimulus/Response Sequences**

Customer can replace the product with identical product without any refund.

**4.9.3 Functional Requirements**

REQ-1: At most cases, replacement product will be delivered to the customer at the same time as he picks up the product.

REQ-2: As soon as the customer fills out the form (that is, a request) he will get an e-mail at your registered email address.

**4.10 Search & Browse**

4.10.1 Description and Priority

Visitors to online have a need for speed- and it starts with time-saving search.

They can visit the blog of Denim express to know about it. So, the priority is “A”.

4.10.2 Stimulus/response Sequences

Consumers expect online stores to allow them to search and browse for a product and quickly find the product they want. If there is no search feature then customer will simply decide to look somewhere else.

4.10.3 Functional Requirements

REQ-1: Customers can also navigate via categories using thumbnails, images and brand distinctions.

REQ-2: The searched products should be available in the system.

# Other Nonfunctional Requirements

## Performance Requirements

* *The product shall be based on web and has to be run from a web server.*
* *The product shall take initial load time depending on internet connection strength which also depends on the media from which the product is run.*
* *The performance shall depend upon hardware components of the client/customer*

***RELATIONSHIPS:*** *Which connect entities and represent meaningful dependencies between them.*

## Safety Requirements

*If there is extensive damage to a wide portion of the database due to catastrophic failure, such as a disk crash, the recovery method restores a past copy of the database that was backed up to archival storage (typically tape) and reconstructs a more current state by reapplying or redoing the operations of committed transactions from the backed up log, up to the time of failure.*

## Security Requirements

Security systems need database storage just like many other applications. However, the special requirements of the security market mean that vendors must choose their database partner carefully.

## Software Quality Attributes

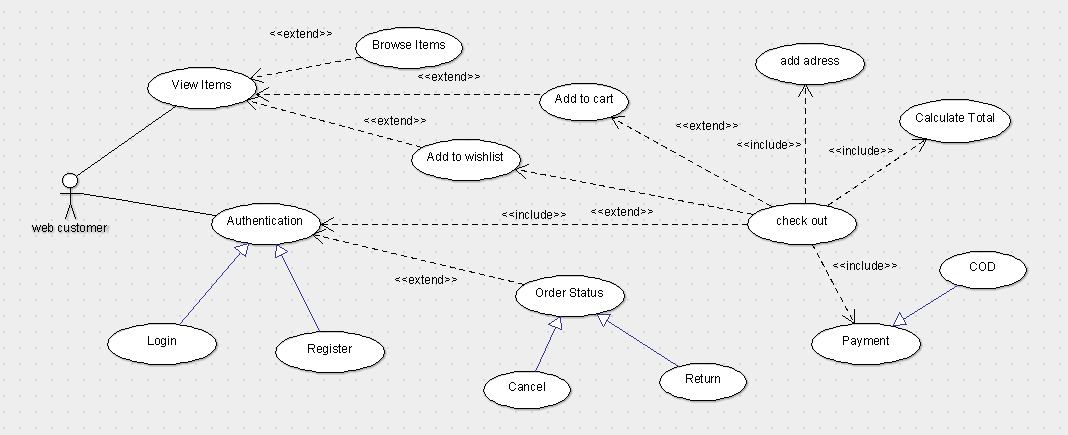
* **AVAILABILITY**
  + *The GARMENTS should be available most of the time and it should be clearly mentioned if not available.*
* **CORRECTNESS**
  + *The clothes should reach customer from correct source and should reach the correct destination.*
* **MAINTAINABILITY**
  + *The administrators and CLOTHES in chargers should maintain correct availability of clothes.*

## Business Rules

*A business rule is a server-side script that runs when a record is displayed, inserted, updated, or deleted, or when a table is queried.*

*Use business rules to accomplish tasks like automatically changing values in form fields when certain conditions are met, or to create events for email notifications and script actions.*

**Note***: Business rules can make use of scripts to take actions on records in the database. However, there are several other scripting options available on the platform, such as client scripts and UI actions.*

**USE -CASE DIAGRAM**