SRS Document

0. PREFACE

The Software Requirements Specification defines the software product that is to be built. It sets requirements that must be satisfied by the system design. It is an important document for the success of the project since it clearly outlines what the developers must achieve. This SRS provides a description of features and specifications of a shopping website. The goals and requirements defined in this document must be achieved by the developers, hence if this document specifies a goal or requirements that are ambiguous, the project can encounter problems such as project delay.

1. INTRODUCTION

1.a CONTEXT

This document depicts the requirements of the system to be put together, both functional and non-functional. The specifications contained in this document shall be used to support the production of the system at later stages, in an attempt to minimize the endeavour.

The document elucidates the motivation behind the idea of implementing an entirely new system in contrast to the conventional systems.

1.b PROBLEM SPECIFICATION

Going back and forth from one shop to the other can be cumbersome & time consuming concurrently. Moreover, customers aren't aware of most of the discounts and offers that the shops and street vendors provide. On the contrary, e-shopping provides the facility to sort items according to their prices or discounts available on each of them, making it more viable for the consumers.

A major advantage we witness at the times of this hardship is that it's not safe to visit public places like Shopping Malls or any shop in general due to the contagiousness of the SARS-CoV-2 syndrome. Hence e-shopping or e-commerce websites are the most ideal (optimal if not ideal) solutions easily available at hand.

1.c SCOPE OF THE DOCUMENT

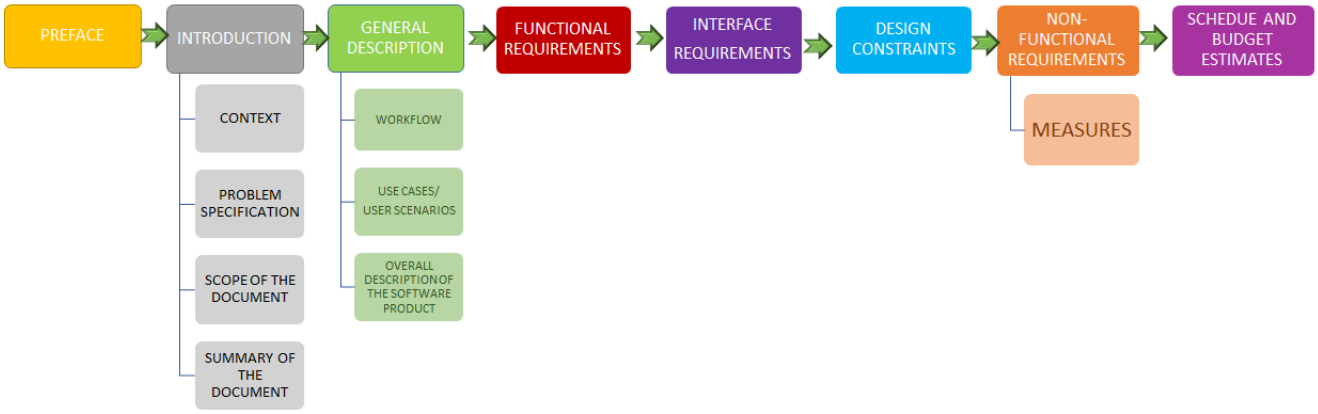
This document is intended for the use of customers. It clearly outlines what the developers must achieve. It also serves as a contract between the customer and the supplier to approve the requirements of the users.

1.d SUMMARY/OVERVIEW OF THE DOCUMENT AND ITS STRUCTURE

This document contains the general description of the website. it also provides the functional and non-functional requirements along with the performance and interface requirements. Moreover, the document talks about the constraints which are to be kept in

mind while designing the website. At last, it contains the most essential part which is needed to work effectively and efficiently on the website which is the schedule and budget.

The structure can be seen as:



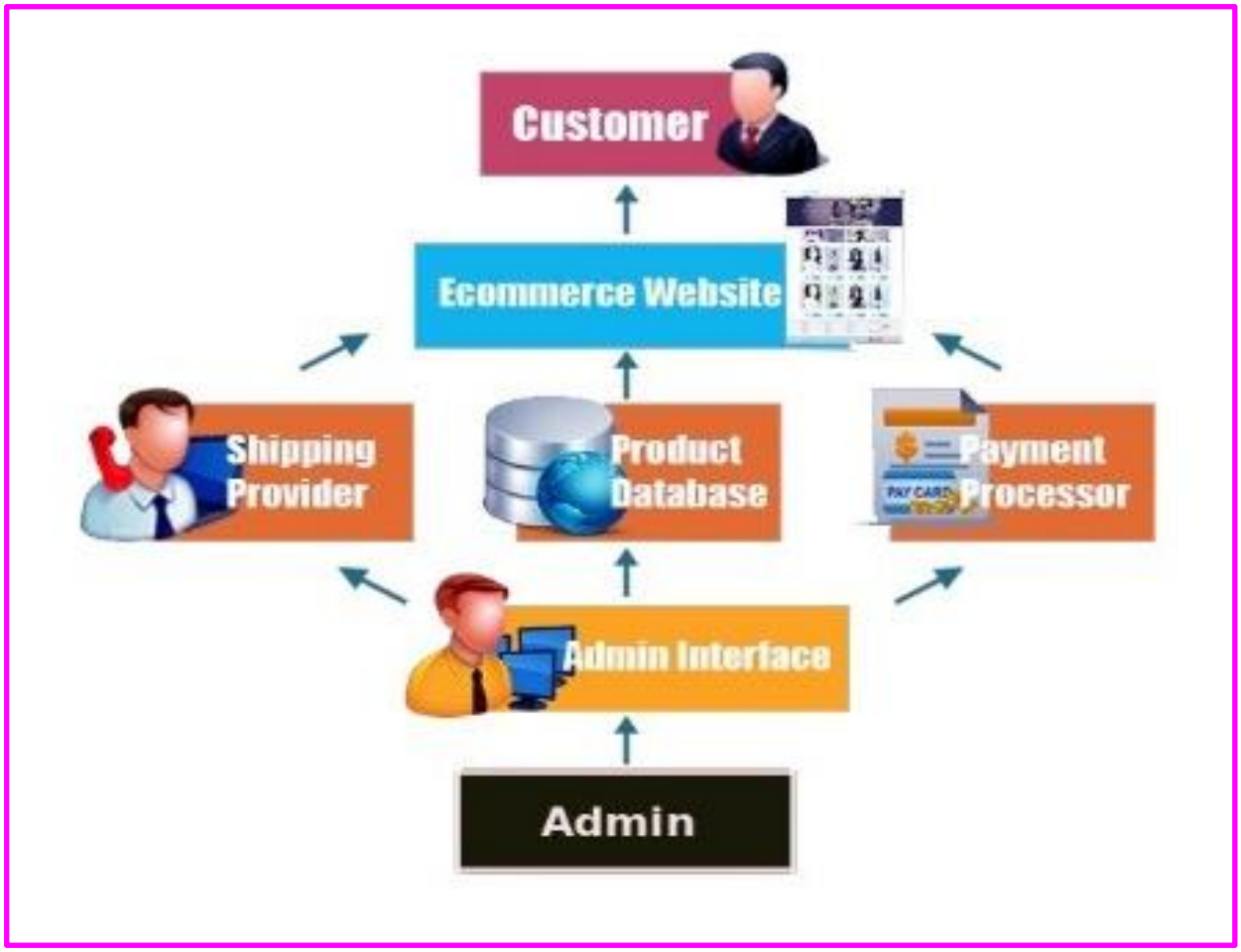
2. GENERAL DESCRIPTION

2.a WORKFLOW

The waterfall model is used for this project as the tasks are divided into linear sequential phases and each phase depends on the previous one.

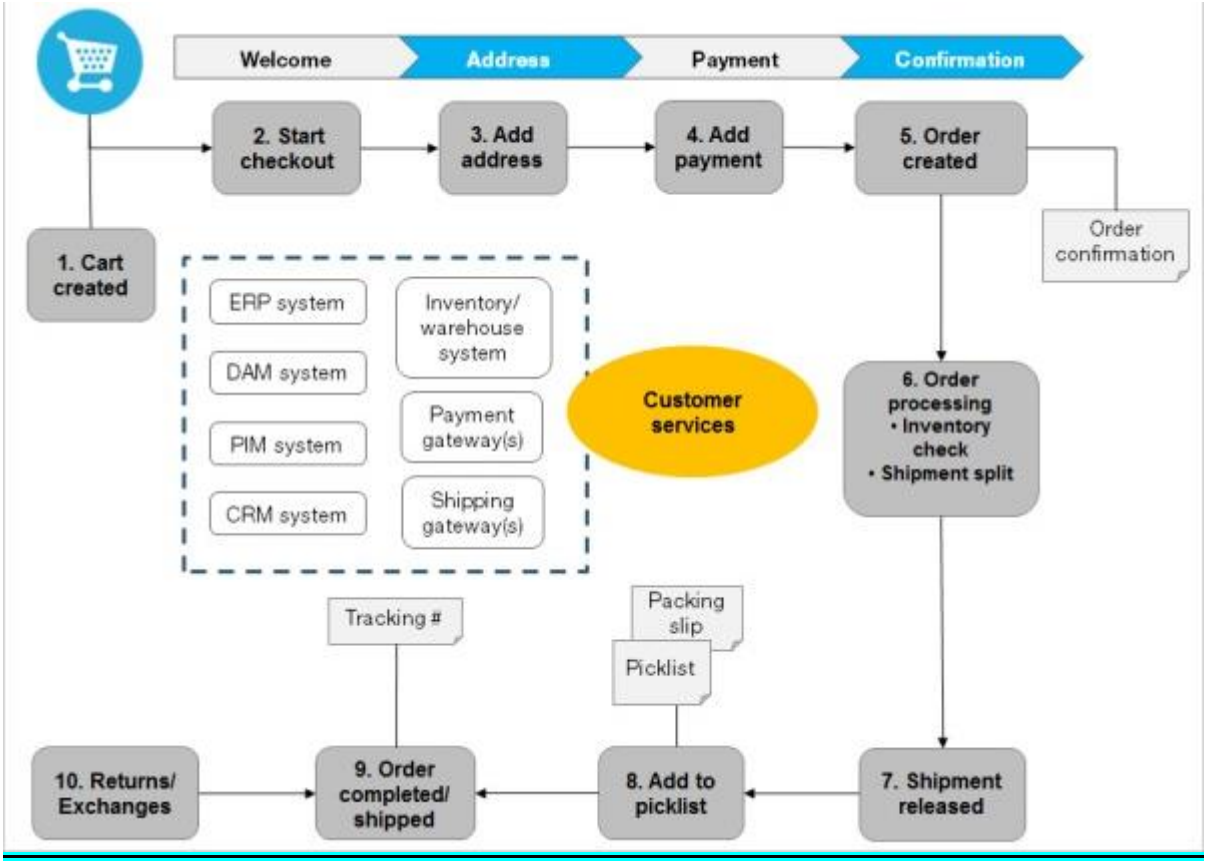
i) BASIC WORKFLOW

The Customer, Shipping Provider & the Admin interacts directly with the shopping website (Ecommerce website). Shipping Provider enters details like the Inventory location and other relevant details. Customers enter details like the shipping address, payment details/credentials. All these details are then temporarily stored in the database where the admin approves the order. Once the admin approves, the order is placed and the Shipping Provider will get to know about the order that has been placed so they can make arrangements accordingly. The customer after selecting a particular Online Payment Provider or Gateway will be directed to the Payment Gateway where he/she is supposed to enter the payment credentials.



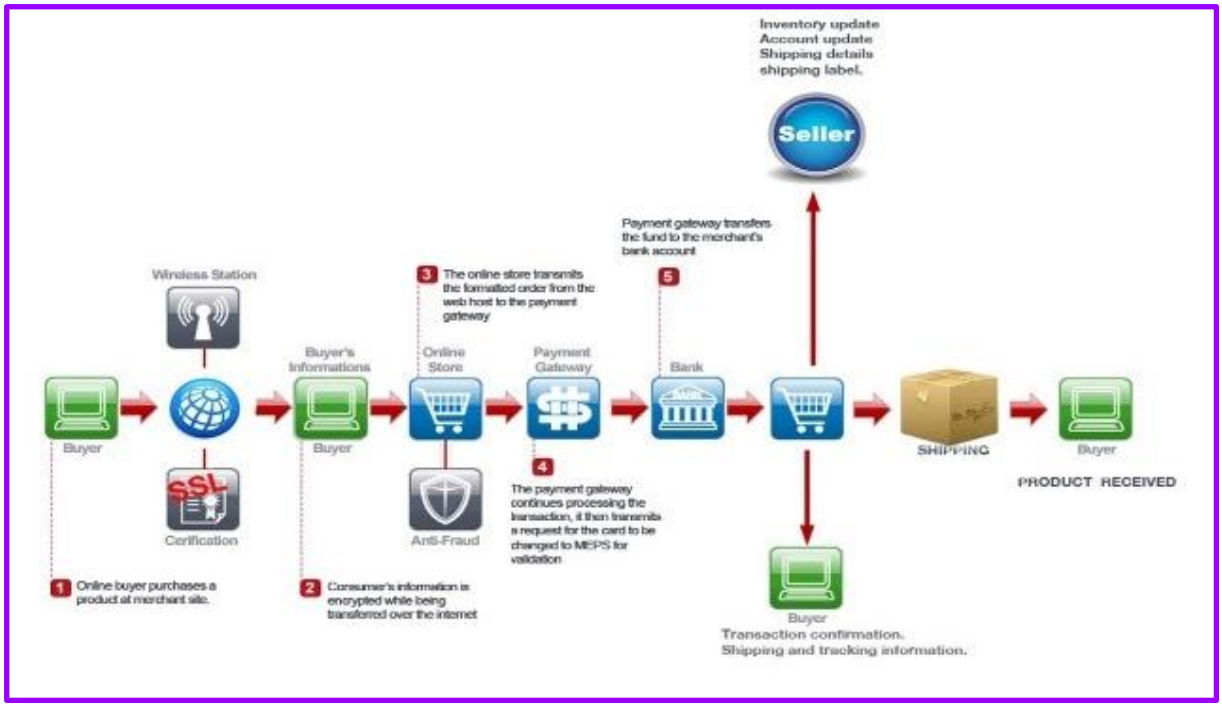
ii) <u>SHOPPING CART WORKFLOW:</u>

Users have an “Add to Cart” option for every item available. They can keep adding products to the cart and upon successfully adding all the products to the cart, they can check out the products which they want to buy. After that, the users need to provide the address on which the product needs to be delivered and then they will be redirected for payment. Once the payment is done, order is created and the confirmation is sent to the user after which the product is shipped. It is added to the picklist from where the order can be reached to the user. After the order is delivered, it can also be returned or exchanged in a particular duration if user wants.



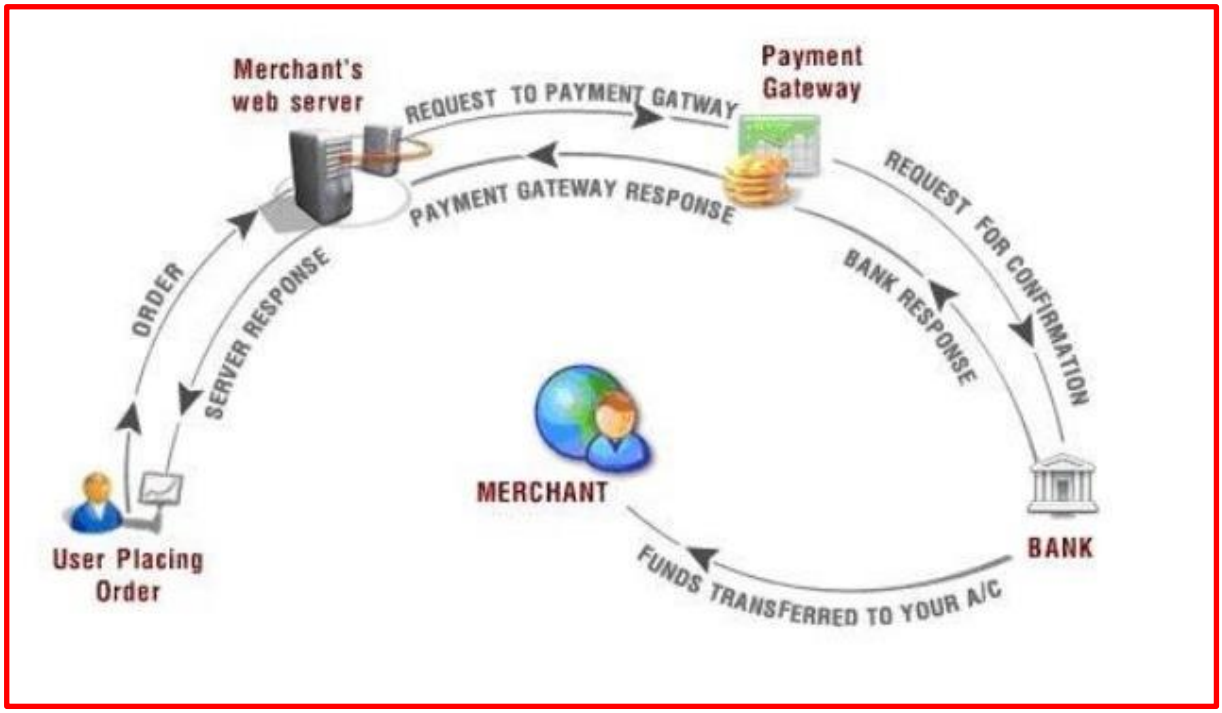
iii) TRANSACTION WORKFLOW

The buyer purchases the products online by clicking on “Buy product”. Then, he/she is redirected to the payment gateway where the money is transferred to the merchant’s bank account. As soon as the payment is received, the confirmation of the transaction is given to the customer after which shipping is carried out and the product is delivered to the customer.



iv) PAYMENT GATEWAY WORKFLOW

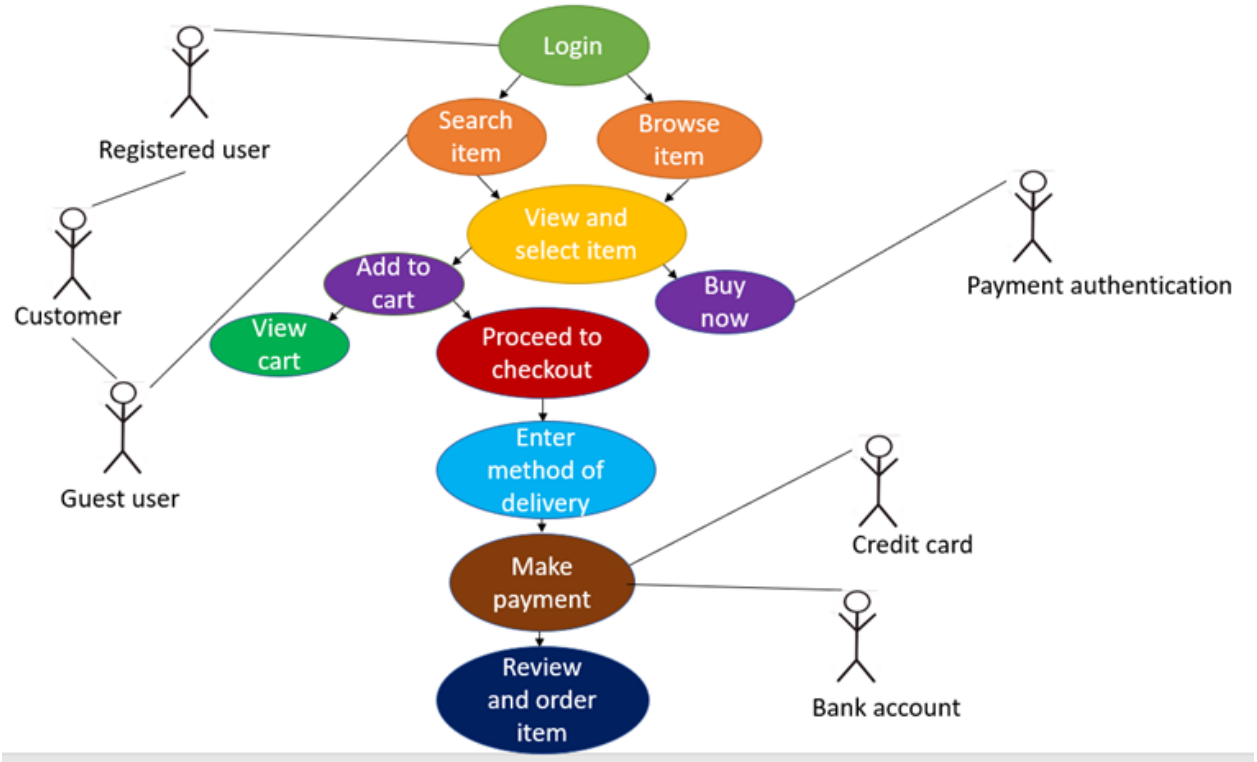
Once the user clicks on the “proceed to checkout” button, he/she is directed to the Online Payment Service Provider’s Gateway where users enter their desired payment details/credentials. Some Merchant Web Servers even provide an option in Online Payment Gateways to choose from (e.g., CCAvenue, RazorPay, Paytm, PayUmoney, Cashfree, etc.). After the completion of the transaction, the user is displayed the status of the transaction, whether successful or not. Upon completion of the transaction, the user is then redirected to the Merchant Server for further actions that user may want to perform.



2.b <u>USE-CASES/ USER SCENARIOS</u>

Use cases	Description
Login	Login as registered user to the website
Search items	Used by customer to find products.
Browse items	Customer can browse the item catalogue with the help of this.
View and Select item	Users can find and select product to purchase
Buy item now	Quick way for registered users to easily order an item
Add to shopping cart	Add a selected item to the shopping cart

View shopping cart	View items in the shopping cart
Proceed to checkout	Select this option to get to the payment and checkout
Enter method of delivery	Used by customer to specify where item will be delivered
Make payment	Make payment for the item in the shopping cart
Review and order item	Review and order item in the shopping



2.c OVERALL DESCRIPTION OF THE SOFTWARE PRODUCT

The online shopping system allows the users to use the website to make purchases online. The users can browse the website as a guest user or log in as a registered user. The browse and search items can be used by the customer if the customer only wants to find and see some products. The users can further search for items, browse catalogue, view and select these items, add them to the shopping cart and view the shopping cart. All these use cases are extending use cases because they provide some optional functions allowing customers to find items while browsing and searching is the primary use case.

The make purchase option allows the customer to either use the "buy item now**"** option with one click payment authentication and verification (available only to registered users) to place the order or go through the checkout use case. During checkout, customers provide the shipping address, and then specific the method of payment which can be done either by using a credit card or with a bank account. After providing the payment method, the customer will review and order the item.

3. FUNCTIONAL REQUIREMENTS

1) **Minimum steps to make a purchase:** To make a purchase, a minimum number of steps should be required so that it is not cumbersome for the users and they can easily purchase. It can be done just by logging into the Gmail/Facebook account and then after selecting the product, clicking on the "buy now" option.

2) **Login:** Users will have to input their username, password as well as the captcha code displayed on their screen in the respective fields. Alternatively, users can also login with the help of their Gmail/Facebook accounts.

3) **Changing password:** The user should be able to change the password whenever required by getting an email to confirm that the user associated with the account is trying to change the password.

4) The products added to cart by the user should be stored temporarily in a database till the user doesn't buy the product or remove that product from the list.

4. INTERFACE REQUIREMENTS

User Interface:

Each part of the user interface intends to be as user friendly as possible. The fonts and buttons used will be intended to be very fast and easy to load on web pages. The pages will be kept light in space so that it won't take a long time for the page to load. The user interface for the software shall be compatible with any browser so that the user can access the system.

Software Interface:

The application should support all major web browsers that will make it convenient for the user to access our system with ease. The back-end should be quite efficiently designed.

Hardware Interface:

The hardware requirement at the user end is really simple and the website can also run on the hardware that can run a basic simple browser, although the hardware should be good enough during peak times for the web server.

Communication Interface:

The Website Under system shall send an email confirmation to the customer that the items they ordered will he delivered to the shipping address along with user identification.

5. PERFORMANCE REQUIREMENTS

The application should be able to operate on all major web-browsers with all of its fundamental functions. It should not slow-down the system even at peak hours without affecting the quality of service of the system.

The loading time of each page/interface from the Product Module should be consistent with the other pages already in Moodle. Each page/interface should load in less than a minute.

The website should allow multiple users to access it. The maximum number of users shall be 100 users at one time.

The memory usage should be low so that users can more easily view the website on a smartphone.

6. DESIGN CONSTRAINTS

- The website will be able to run on all browsers.
- The site will support screen reader software for disabled people.
- The users will be able to zoom in or out as they interact with a web page, changing the size of text and images.

7. NON-FUNCTIONAL REQUIREMENTS

7.a MEASURES

Security: The system automatically logs out all customers after a period of inactivity. The system's back-end servers shall only be accessible to authenticated administration. Sensitive data will be encrypted before being sent over the internet which might not be secured.

Reliability: The reliability of the overall program depends on the reliability of the separate components. The main pillar of reliability of the system is the backup of the database which is continuously maintained and updated to reflect the most recent changes

Availability: The stem bold be available at all times, meaning the user can access it using a web browser, only restricted by the down time of the server on which she system ans. In case of a hardware figure or database corruption, a replacement page will be shown, Also in case of a hardware flue or database corruption, brick at the database could be retrieved from the server and saved by the administrator.

Usability: The system must support Mobility (e.g., phones and tablets). It must support all current versions and any previous supported versions of modern web browsers including Internet Explorer, Firefox, Chrome and Safari.

Compatibility: the system should be compatible with current Web standards.

Accessibility: the website should be designed and developed so that people with disabilities can use it and hence, it is easily accessible to all the people.

8. SCHEDULE AND BUDGET ESTIMATES

The schedule is as follows:

WEEK 1:

The topic for the project was decided and relevant searches were done on the internet to explore more and meet the requirements of the users. To make the task of designing the website easy, Gantt chart was made which contains a brief description of the schedule and provides a timeline for each part of the project so that it is completed on time.

WEEK 2:

The designing phase of the project would take place. Firstly, a sitemap would be created which would be helpful in creating the front-end pages/templates for the website.

WEEK 3:

The writing and reviewing of content and selection of the required technologies along with back-end model designing will be done. Also, in this duration, installing of the required frameworks would take place along with setting up the virtual environment and creating a GitHub repository.

WEEK 4 ,5 & 6:

The most important phase of the project starts here. It is about programming the website: both front-end and back-end. The webpages will be created along with the back-end programming needed for authentication features, payments etc.

WEEK 7:

Now, after finishing writing code and completing the website finally, it would be tested so that if any bugs are there, they can be fixed and the final updates/changes can be done.

Finally, the website undergoes deployment and is launched with the help of heroku app.

Budget Estimates:

The estimated budget is shown below. (The abbreviation LPA is used for Lakhs Per Annum)

Programmer:	Rs. 30 LPA
Designer:	Rs. 20 LPA
Developer:	Rs. 35 LPA
Tester:	Rs. 25 LPA
Project manager:	Rs. 40 LPA
TOTAL:	**Rs. 150 LPA**