Software Requirements Specification

Hazer

Customer-to-Customer eCommerce Platform

Version 1.0

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# Revision History

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Table 1 Revision History

# Introduction

## Purpose

Consumer-to-Consumer, the old form of eCommerce has facilitated in large part by websites offering free classified advertisements, auctions, forums, and individual pages for start-up entrepreneurs. C2C is a form of eCommerce, used well before internet appeared. Recently C2C is supported by big organizations. Since its existence, it has gone through tremendous changes in technology as well as increase in market size and revenue from year to year.

Therefore, there is a desperate requirement for a platform, from where an individual can grow itself as an entrepreneur. Providing domestic products to rise in real-time market, chances to earn with Zero investment and time.

The purpose of this document is to describe the (**Hazer – A customer-to-customer ecommerce solution)** product. This document contains the information about the application's requirements, both functional and nonfunctional.

This document provides**:**

* A description of the environment in which the application is expected to operate.
* A definition of the application's capabilities.
* A specification of the application's functional and nonfunctional requirements.
* A brief explanation of the system’s interfaces.
* A definition of the constraints and dependencies.

## Document Conventions

The document is created based on the IEEE template [1] for Software Requirements Specification Documents. The font style used is “Times New Roman” and the font size is “12px”.

## Intended Audience and Reading Suggestions

The document is intended for both, the stakeholders and developers, of the system. It contains information for each member of the intended audience, but it is likely that certain sections are of more interest for each type of audience member. Those interested in the functionality of the software should read section 2 (i.e. Overall Description) in order to learn more about the capabilities of the software. Section 3 (i.e. External Interface Requirements) is designated for the audience interested in the interface requirements of the software. Finally, those interested in the development process should read the entire document.

## Product Scope

The “Hazer” is a web-based system, which helps people to advertise and sell their products such as, handicrafts and other domestic services. That a common person creates and other common person needs e.g. (Homemade Food, Clothes and Stitching etc.). Moreover, of course, we can never have homemade Food and handicrafts in market. The domestic handicrafts like embroidery etc. are very rare and too much costly to purchase these days. Hazer will allow customers to sell their products, and interested customers to buy these products online in relatively less price.

The system will be free to use initially, and needs internet to work. The system will act as a middleware. The system is intended to generate study plans only for Computer Science field.

## References

[1] IEEE Template for System Requirement Specification Documents: https://goo.gl/39vqU7

# Overall Description

## Product Perspective

Hazer is being developed for everyone who is interested to earn some money by using its skills and can sale their products on a bigger market place. Hazer is capable of maintaining their online shops allowing other users to buy stuff from the seller. Hazer is a platform, which is developed to give opportunity to the students, housewives, and other skilled workers to sell their handy crafts and other services online to those who are in great need of it.

## Product Functions

Hazer will have the following functionalities:

1. Authenticating user with secure oauth 2.0 service or third party oauth 2.0 service. (e.g. Facebook, Google)
2. Allowing user choose from categories to access their desired service providers.
3. Maintaining user location to enhance consumer accessibility to the producer.

(i.e. Providing Google maps service to get location and detecting nearby sellers)

1. Maintaining producer’s shops to advertise and sell their products.
2. Allowing consumer to view the list of products offered by the producer to buy stuff from there.
3. Maintaining customer reviews and ratings, for recommendation to enhance user experience.
4. Providing real time service tracking of the status of the orders placed by the consumers.

## User Classes and Characteristics

Users of Hazer are those who wants to earn something from their skills and things what they have to help other people with who are in need. For example, a graphic designer student can create graphics for the customers, boost its knowledge / understanding to real-time market, practicing to the abundant level of accuracy, learn to deal with the customer, earn some pocket money to spend on it little expenses, learn to be an entrepreneur.

The consumer can have their desired products or services on just one click, with lower rates than market. With great quality and quick response.

Users need to login to the system using their respective credentials, in order to use the system. Each user will have its own account and shop.

Following is the table of stakeholders’ profile:

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| **Sr. No** | **Name of Stakeholder** | **Role of Stakeholder** | **Responsibility of Stakeholder** |
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Table 2 - Table of stockholders

## Operating Environment

The Hazer is a web-based system and can be accessed from all famous browsers, i.e. Google Chrome, Mozilla Firefox, Microsoft Edge, etc.

The Hazer system is also subject to work with some existing APIs, i.e. Facebook Oauth 2.0 API, Google maps and System API etc. These APIs will be used to let the user have its own unique identity to the system.

## Design and Implementation Constraints

Following are the design and implementation constraints of Hazer;

1. Hazer will be developed using competitive web development framework.
2. Users can access Hazer from any computer that has Internet browsing capabilities and an Internet connection.
3. This system will be accessible only on the tablets, computers and laptops, and smartphones.

## User Documentation

The basic video tutorial of the system will be provided, explaining the functionalities of the system. Online user help and guidance will also be provided. Additionally, the team developing the software would potentially be available in case of questions or problems with the system once it starts being used by the users.

## Assumptions and Dependencies

The following is a list of assumptions that would affect the software requirements if they turned out to be false:

* There are no issues related to different versions of frameworks used to develop the system.
* The user will follow the guidelines of the system to sell their products, false products and services will not be allowed on the system

The following is a list of dependencies that would affect the software requirements of the project:

* The user authentication will be depending upon the list of third party Oauth platforms that user is choosing from.

In future, Hazer will be integrated with other web-based systems, which are as following:

1. Easy paisa and other Payment gateways they are supported nationally and internationally.
2. Third party delivery services like TCS or other international service to provide product delivery, across the cities and countries.

# External Interface Requirements

## User Interfaces

## Hardware Interfaces

Since the system does not have any designated hardware, it does not have any direct hardware interfaces.

## Software Interfaces

Hazer will be a web-based system, which will use certain self-made and already existing APIs (i.e. Facebook, Google, etc.).

The system will consist on three their architecture and Micro service architecture to increase accessibility and to enhance the response time.

In future, the project will be integrated with the third party Delivery services and international payment gateways.

## Communications Interfaces

The communication between the different parts/modules of the system is important since they depend on each other. However, in what way the communication is achieved is not important for the system.

# System Features

Hazer features are listed in the following section. These features must be implemented in order to have a fully functioning system. However, there are no additional features yet required for the system.

The features of the Hazer are:

1. Authenticating user with secure Oauth 2.0 Service.
2. Choose from categories to access to desired service providers.
3. Maintaining user location to enhance consumer accessibility.
4. Maintaining producers Shops to sell products.
5. View the list of products offered by the producer to buy stuff.
6. Maintaining customer reviews and ratings for the recommendation.
7. Providing real time service tracking of the status of the orders.

## Authenticating user with secure Oauth 2.0 Service

1. The client shall require the user credentials to log user in to the system.

R 4.1.1.1 The system shall allow user to login using its cell number and password.

1. Then system shell be send the data to the server and the server will respond back with an access token.
2. Then client shall save the access token to the local storage for future usage.
3. The client then require for the other profile information (first name, last name, email and profile picture) and send the data to the server.
4. The system shall be able to save the data to the database to authenticate user with this information next time.
5. The client shell require the username and password and send to the server to authenticate the user to get the other information.
6. The server shell respond with an access token and a refresh token the client the will be able to access the user specific information by sending the request with a header of the access token to the server.

## Choose from categories to access to desired service providers

1. After Authentication/Registration, the user will be able to see the category list displayed on the screen.
2. The user shall be able to pick one of the categories.
3. The system shall drag user to the list of service providers / sellers / producers laying in the categories.
4. The system shall be able to fetch and display all the required information regarding to the specific seller.
5. The User can be either seller or buyer at the same time.
6. The system shall be able to detect if the user is a seller or buyer then system shall ask user to become a seller if it is not a seller at the moment.
7. The user shall fill out the one time registration form to become a seller

R 4.2.7.1. The system shall require for shop name.

R 4.2.7.2. The system shall require choosing a category.

R 4.2.7.3. The system shall require for images and cover image for the shop

R 4.2.7.4. The system shall as user for the location input / detect user location itself by using GPS system

## Maintaining user location to enhance consumer accessibility.

1. The system shall be able to access the user location from device.
2. The client then send the coordinates to the server and the server will store them into the database for each user.
3. According to [R.4.2.7] the system shall ask user to select between (using its current location or saving the custom location)
4. The system then send the coordinate to the server and the server will store them to the database.
5. The system shall save the coordinates of the user shop with the reference of the user and user shop as in [R 4.2.7.3]

## Maintaining producers Shops to sell products

1. The system shall be able to let the user maintain their shops by updating their products services and service categories.
   1. The shall be able to allow user to create sub categories in their shop related to main categories present in the system. (e.g. a plumber will be map with the plumbing service category and a food seller will be map with a food category. Although the user will be having a main category but will be allow to create multiple sub categories to work in)
   2. The system shell be able to allow a cook to sell food and clothes also by creating a sub category in its shop
2. The system shell be able to advertise the top rated businesses

## View the list of products offered by the producer to buy stuff

1. The system shall be able to display sellers shop to the buyer depending upon the location of the user.
   1. The system shall be able to get the current latitude and longitude of the buyer and sender the list of the nearest seller.
   2. User can also change the search radius of the sellers.
2. The system shall be able to display the list of sub categories of created by the seller.
3. The system shall be able to display the products related to these sub categories.
4. The system shall allow user to choose the categories to view the services in that category.
5. The system shall allow user to start a new order on each of the available service.
6. The system shall be able to change the product/service availability status.

## Maintaining customer reviews and ratings for the recommendation

1. The system shall be able to maintain the current seller’s rating
   1. The system shall be able to provide weekly monthly and total rating of the seller.
   2. The system shall be able to calculate the rating of the seller by taking average of every rating.
2. The system shall be able to recommend the top sellers of the specific category.
3. The system shall be able to recommend the sellers by calculating the highest rated seller among the sellers in category.
4. The system shall be able to receive rating in star form 1 star represents bad rating and 5 star represents excellent rating.

## Providing real time service tracking of the status of the orders

1. The system shall be able to provide tracking to the placed order.
2. The system shall be able to calculate the total time from starting an order to the ending of the order in real time.
3. The system will notify the seller in case of any order in real-time.
4. The system shall be able to use full duplex data transmission communication.
5. The system shall be able to use web sockets for real time server-to-client and client-to-client communication.
6. The system shall be able to calculate the total cost of the service used by the customers.

# Other Nonfunctional Requirements

## Performance Requirements

Performance should not be an issue because almost all of our server queries involve small pieces of data. Hazer requires a system with an internet connection having reasonable speed and performance depends on the internet speed. Therefore, as a result, the internet speed requirements are more demanding. The Hazer implements pre rendered data algorithms to enhance the user experience and speed up the data retrieval.

## Safety Requirements

Hazer will not affect data stored outside of its servers nor will it affect any other applications  
installed on the user’s computer. It cannot cause any damage to the system or its internal components. There is a bug tracker available where users can report any bugs they have encountered, so that the developers can fix it in the next release.

## Security Requirements

Since Hazer is password protected, this will be the only method to authenticate the user’s identity. Only the user with the valid credentials will be allowed to use the system. Hazer Implements data encryption to the private data. Which can only be accessible to the owner.

## Software Quality Attributes

The graphical user interface (GUI) of Hazer is to be designed with usability as the first priority. This web-based system will be presented and organized in a manner that is both visually appealing and easy for the user to navigate. Due to its well-designed and easy to use interface, both experts and typical users can use it. However, users must already have a basic knowledge of computer and internet before using it.

# Other Requirements

There are no other requirements of the system. If there are any other requirements identified later, they will be included in this document in the respective version.

Appendix A: Glossary

Hazer -- Customer-to-Customer ecommerce platform

GUI – Graphical user interface

Encryption – Conversion of data to a format that no one can read it except the system

Web Browser – A web browser is a [software application](https://en.wikipedia.org/wiki/Software_application) for retrieving, presenting and traversing information resources on the [World Wide Web](https://en.wikipedia.org/wiki/World_Wide_Web).

Stakeholder – A person, group or organization with an interest in a project.

Developer – A software developer is a person concerned with facets of the software development process, including the research, design, [programming](https://en.wikipedia.org/wiki/Computer_programming), and testing of [computer software](https://en.wikipedia.org/wiki/Computer_software).

API – Application Programming Interface; is a set of [subroutine](https://en.wikipedia.org/wiki/Subroutine) definitions, [protocols](https://en.wikipedia.org/wiki/Protocol), and tools for building [application software](https://en.wikipedia.org/wiki/Application_software).

Oauth – Oauth is an advanced authentication service that is used in three-tier architecture.

Appendix B: Analysis Models

The sequence diagrams, class diagrams and the activity diagrams of Hazer will be made at the design time of the project.