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ONLINE RESELLING SYSTEM

1. CASE STUDY:

Online reselling is usually done by a company or individual (merchant) that purchases goods or services with the intention of selling them rather than consuming or using them. They either sell on commission or for profit and in most cases, but not all, the purchase from the registrar and the sale to the ultimate buyer occurs in real time. The Reseller or Store owner has to login to our online reselling platform in order to sell their products via our online shop/platform. He/She has to provide the required details such as location of pickup, their product, its condition and other contact details.

The ultimate buyer can easily search for the product they're looking for in our website, buy and can give reviews about the product/seller. One can even get commission by referring (i.e) by making a customer buy a product with the link generated by him. The product need not be a physical thing. Software and ebooks are two products that are very easy to obtain by resellers. Their digital format makes them ideal for internet distribution. In many cases, such as brandable software, the reseller can obtain even the right to change the name of the software and claim it as one's own and resell it on an ebook shop hosting platform.

In a nutshell, how this system works is, the seller lists the products with images, description, specification, condition and price on our shopping website, customers and businesses place orders for the seller's products. Our shopping site picks the products from the seller and deliver it to the customers. The seller gets paid for their sale. The ultimate buyer can place their order at any time without having to worry if its within business days/hours. Thus, this system aims at providing good service to both the buyer and the seller.

PROBLEM DOMAIN :

(i) Mail Server Problem : Mail servers have a limit to the number of emails that the online reselling stores can send to their customers within a day. This limit can become a major hurdle during holiday season because stores receive thousands of orders in a single day. On an average, on one order, we have to send around three emails to the customer. These include order confirmation email, marketing, and promotional email, feedback and order tracking email.

(ii) Product Images issue : During the festive seasons, stores mix up the product images. This means the image of one product shows up for another product and so on. This happens when sellers upload the feeds in bulk.

(iii) Stock inaccuracy : Although there are tools, the inaccuracies in stock can still occur, especially during the festive/holiday season.

(iv) Product Tracking issue : Unless they have a shipping service with tracking numbers to their customers. This can be major turn off for these customers, as they would decide to never order from the store again.

(v) Web Hosting : Shared hosting has its limits in bandwidth and storage space. This means if the traffic your store gets on a regular basis exceeds even a little, the website will collapse. Slow speed of ecommerce stores is because of the type of hosting it uses.

SOLUTION DOMAIN :

(i) Mail Server Problem : Test the mail server whether it is in-house, by sending 2x more emails of the number of orders that we expect to receive in a day during the holiday season. If you have outsourced the mail server, make sure the company can auto-scale the email server limit within a minute's notice.

(ii) Product Images issue : Manual error checking of all product images and their URLs is the only way to check if the products have the right images.

(iii) Stock inaccuracy : Use an inventory management applications like TradeGecko or Orderhive - that automatically records each order.

(iv) Product Tracking issue : Get third party logistics (3PL) companies to outsource shipping and delivery. This will free the store owners from actually tracking orders as the process will be fully automated.

(v) Web Hosting : Sellers should move their store to reliable ecommerce web hosting such as a managed cloud. A cloud is a reliable, low cost solutions such as dedicated or VPS hosting solutions, but they have a high cost and are rigid.

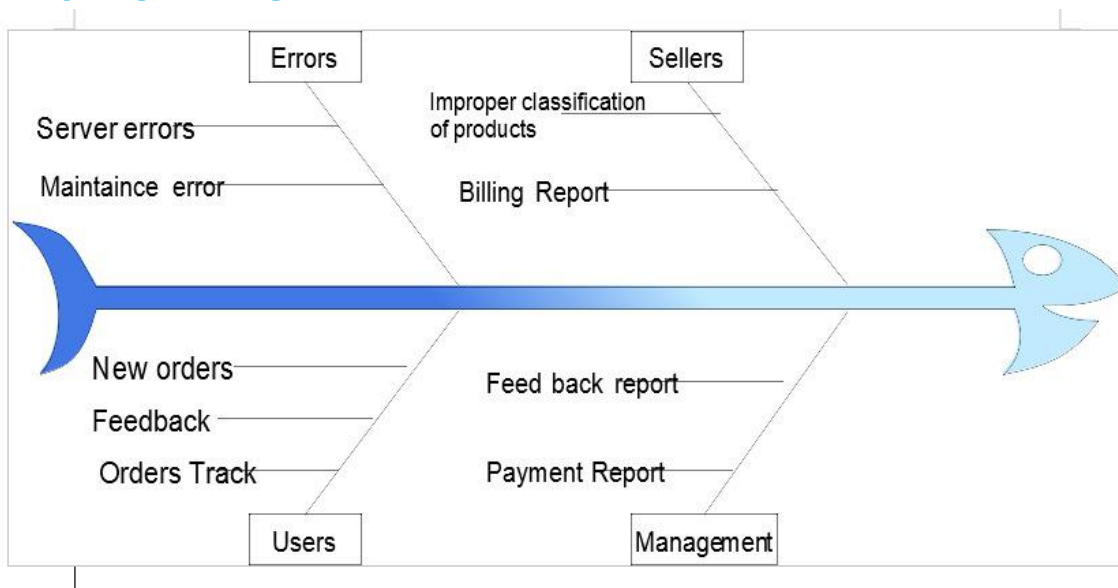
FIVE STEP PROBLEM ANALYSIS :

STEP 1 : The Problem Definition

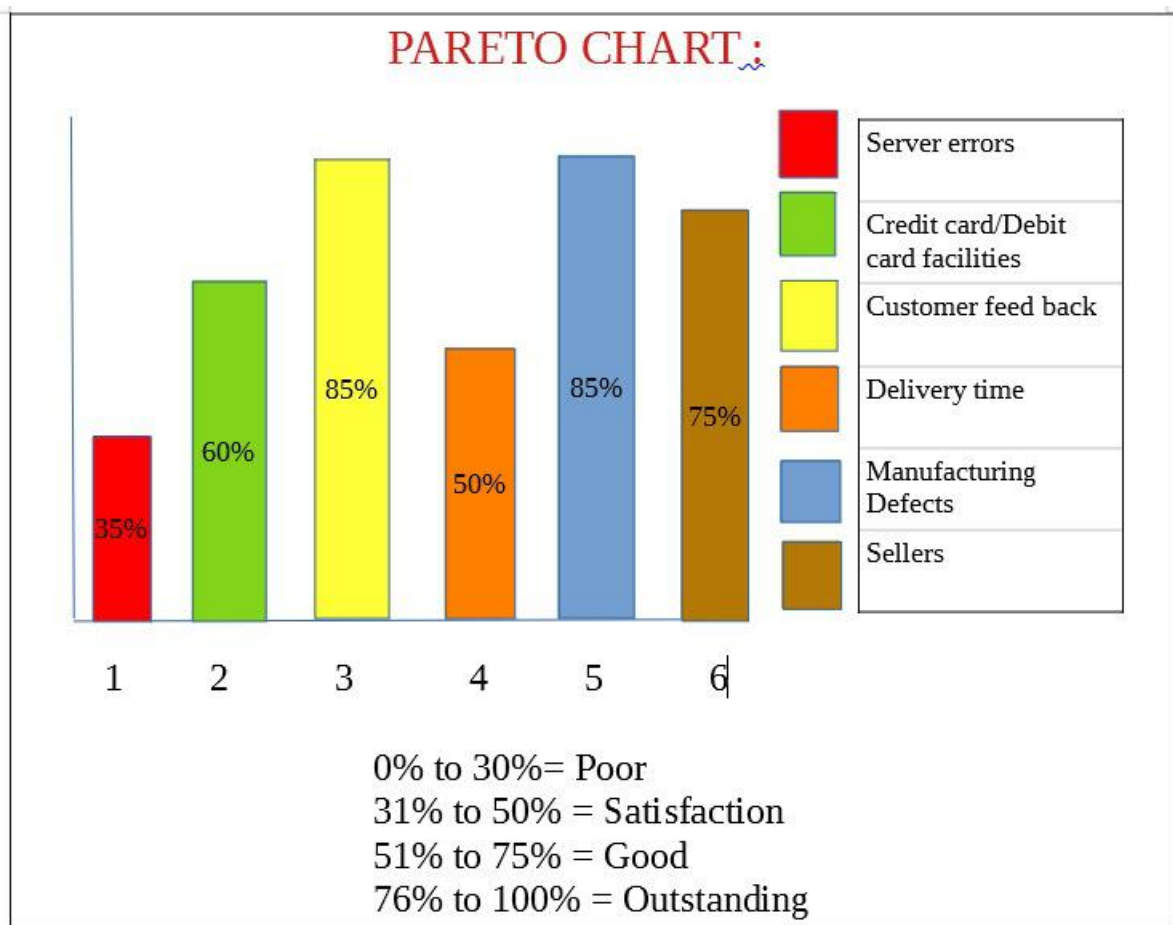
Element	Description
The problem of...	Web hosting, stock inaccuracy, product tracking issue, mail - server issue, product images issue.
Affects...	Customers, sellers, shipping and customer service
And results in...	Customer dissatisfaction and decreased profitability.
Benefits of a solution...	<ul style="list-style-type: none">❖ Improved reporting of the location/status of the product.❖ Efficiency in querying details.❖ User queries and answers are maintained.❖ Ultimately higher profitability, reliability and customer satisfaction.

STEP 2 : The Root Causes :

FISH BONE DIAGRAM :



PARETO CHART :



STEP 3 : Users and Stakeholders :

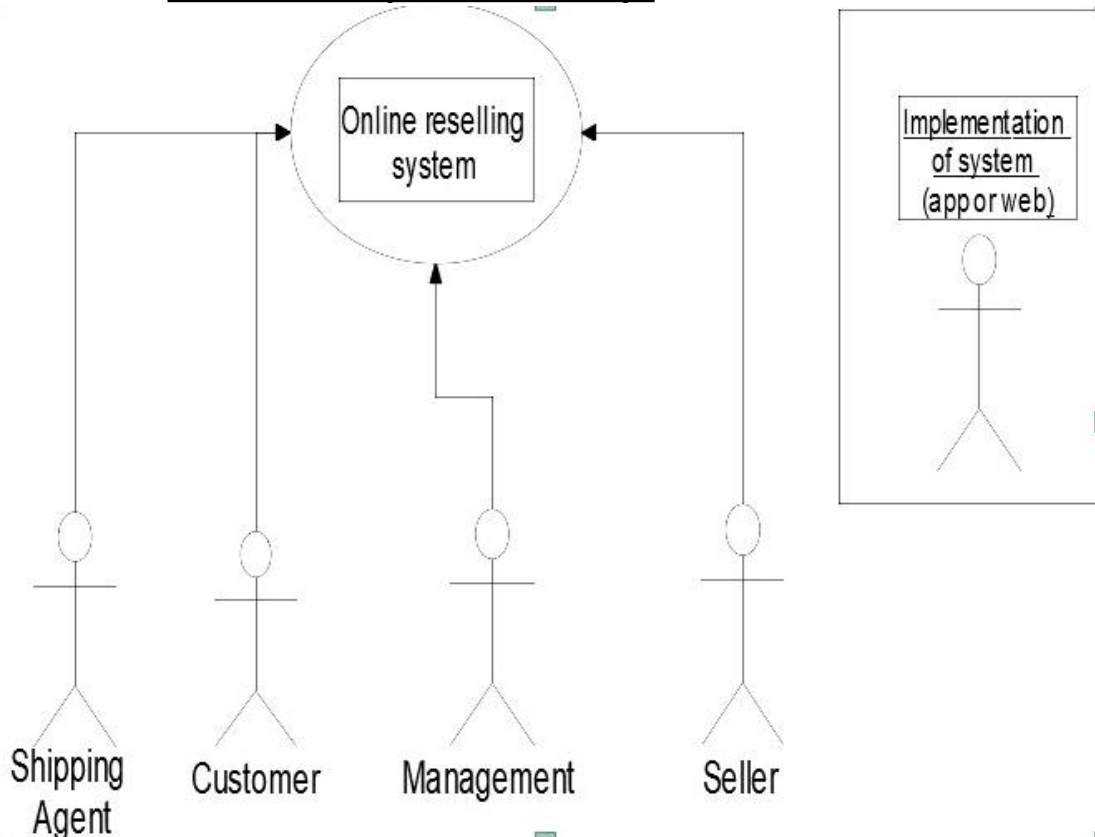
USERS :

- Sellers
- Customers
- Shipping Agent

OTHER STAKEHOLDERS :

- Buyers
- Companies
- Sellers
- Warehouses

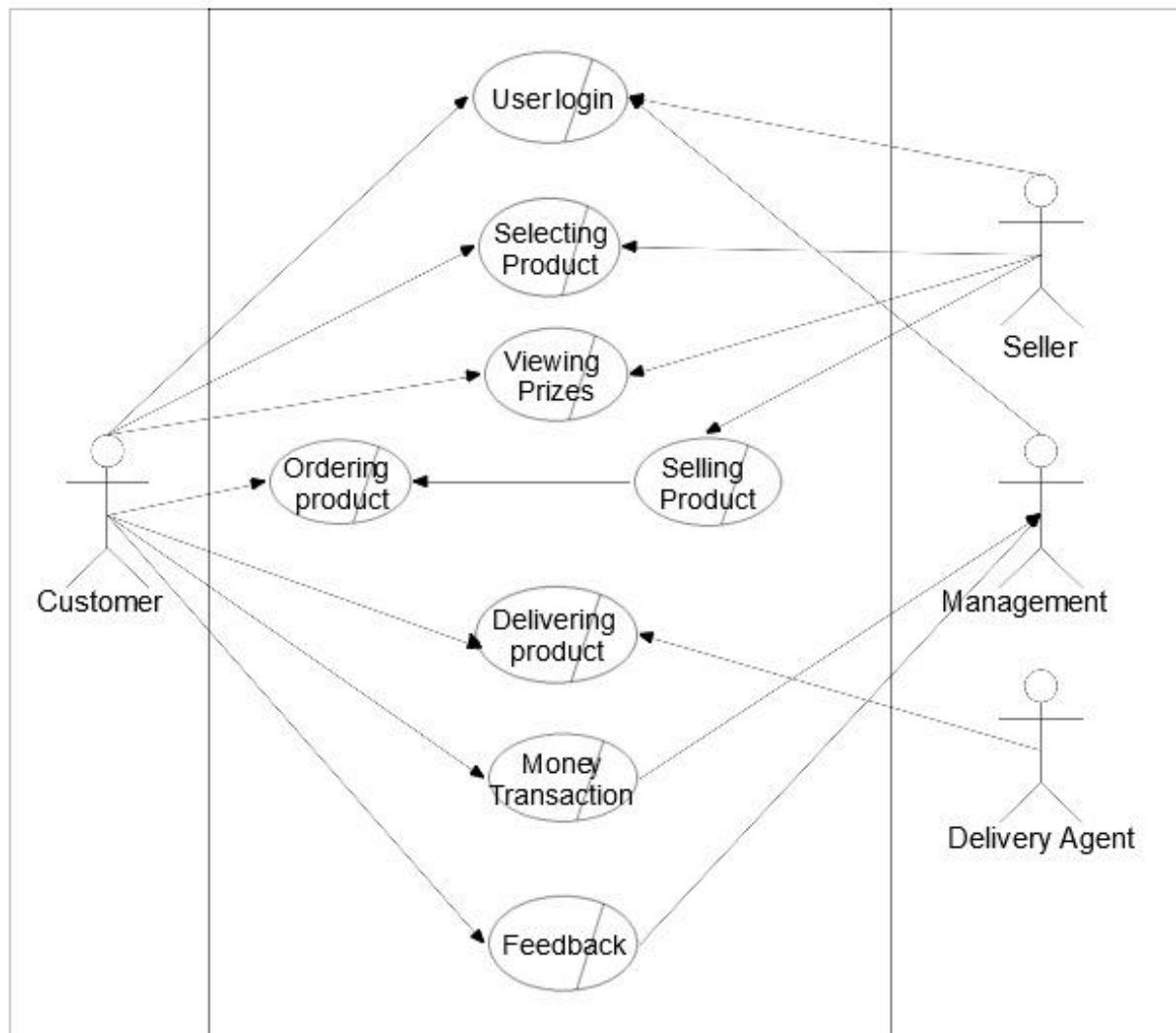
STEP 4 : The solution system boundary :



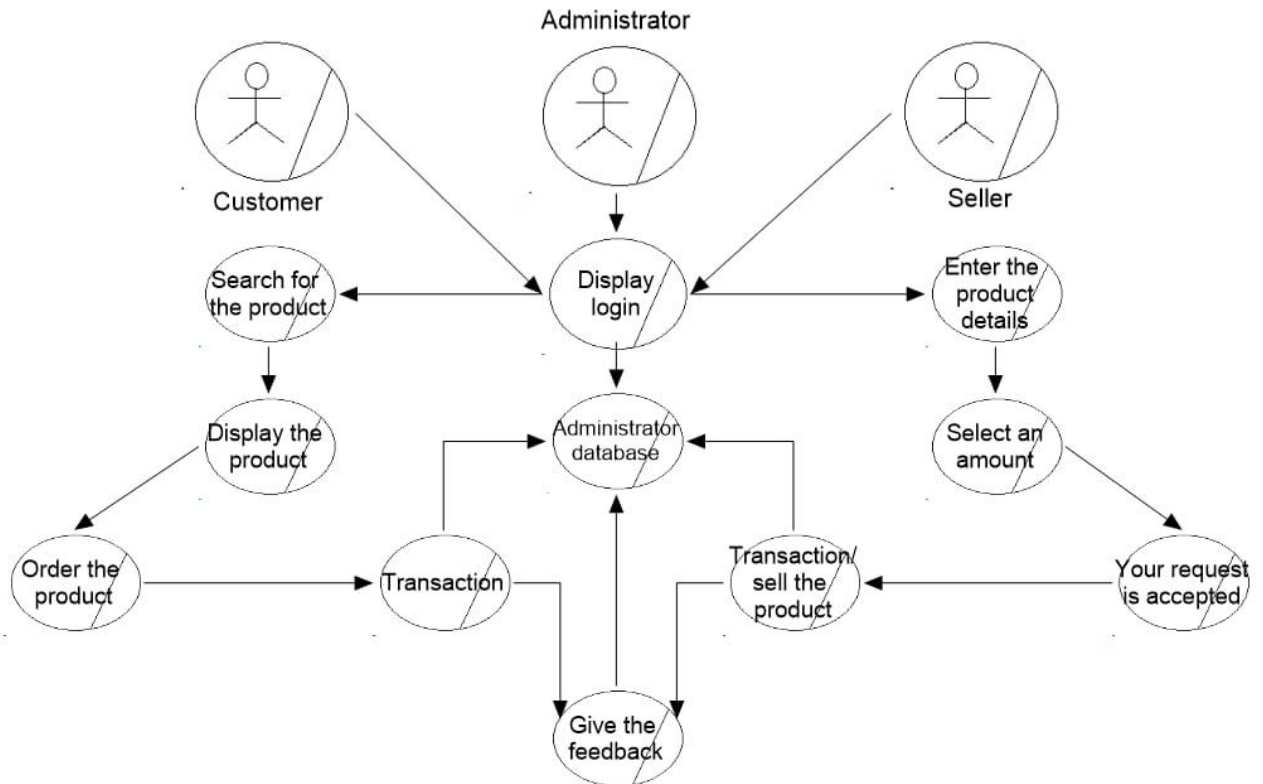
STEP 5 : Constraints to be imposed on solutions:

SOURCE	CONSTRAINT	RATIONALE
Operation	Firewall should be implemented	Data loss is a great threat due to cyber attack
Systems	Work on many server teams	Server errors, system and errors
Technology mandate	A new object-oriented methodology should be used	This will increase the productivity and increase the reliability of the software
System server	Maintainability of the server	Proper server maintenance and handling required
System efficiency	Many errors or bug fixing and update the systems	Powerful and efficiency system with firewall

BUSINESS USECASE MODEL :



BUSINESS OBJECT MODEL :



1. Requirement Gathering Techniques:

Document Analysis

Document Analysis is a useful gathering technique when compared to the brainstorming. In the below documents the assist is a user in giving questions in a part of validating the requirement gathering.

Brainstorming

Brainstorming is used in requirements gathering to gather the random ideas from a user. Brainstorming is a technique used to find all the solution for the problems and gives an idea to the user. It gives the solution for various discreet possibilities for the user convince.

Focus Group

A focus group is a gathering of people user representatives for a item to gain its feedback. The feedback is about the opportunities, needs, and problems to determine the requirements gathering.

Observation

The observation will covers the case study of the users . By watching users, a process flow and opportunities is used for requirement gathering. Passive observation will give better feedback to the user on the other side the active observation works in a best for obtaining an understand over for the requirement gathering. The user can use any of these approaches to uncover the implicit requirements gathering that are often overlooked.

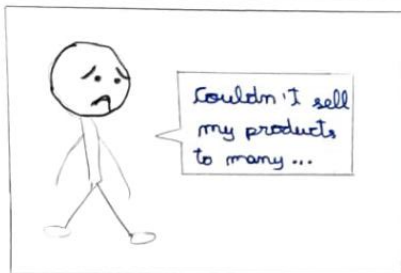
Prototyping

Prototyping is one of the very helpful at gathering feedback. The poor prototypes make a good listening tool. The customer review whether a design approach would satisfy the user. Prototypes Can be done with very effectively fast sketches of storyboards and with the user interfaces. Prototypes in some situations are also used as official requirements to the user view.

2. Passive Story Boarding :

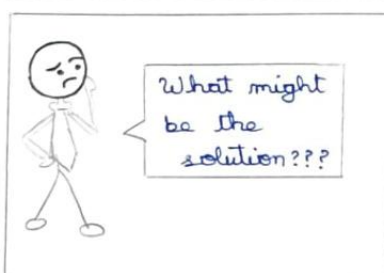
Seller:

PROBLEM EXPERIENCED



The seller is experiencing a pain point, where they couldn't sell their products to many customers.

SOLUTION SEARCH



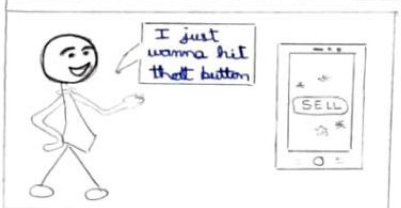
Seller is searching for a way to sell his products with ease & in a big scale.

SYSTEM DISCOVERY



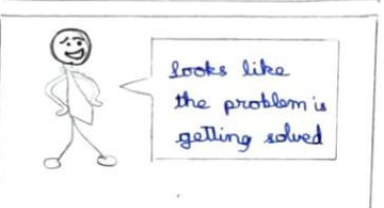
Seller has found our online reselling system wherein he can sell his products.

SYSTEM EXPERIENCED



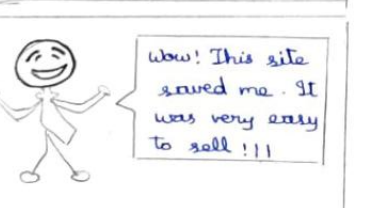
The seller realized that he just wants to provide info about the product & click the button 'SELL'.

PROBLEM ALLEVIATED



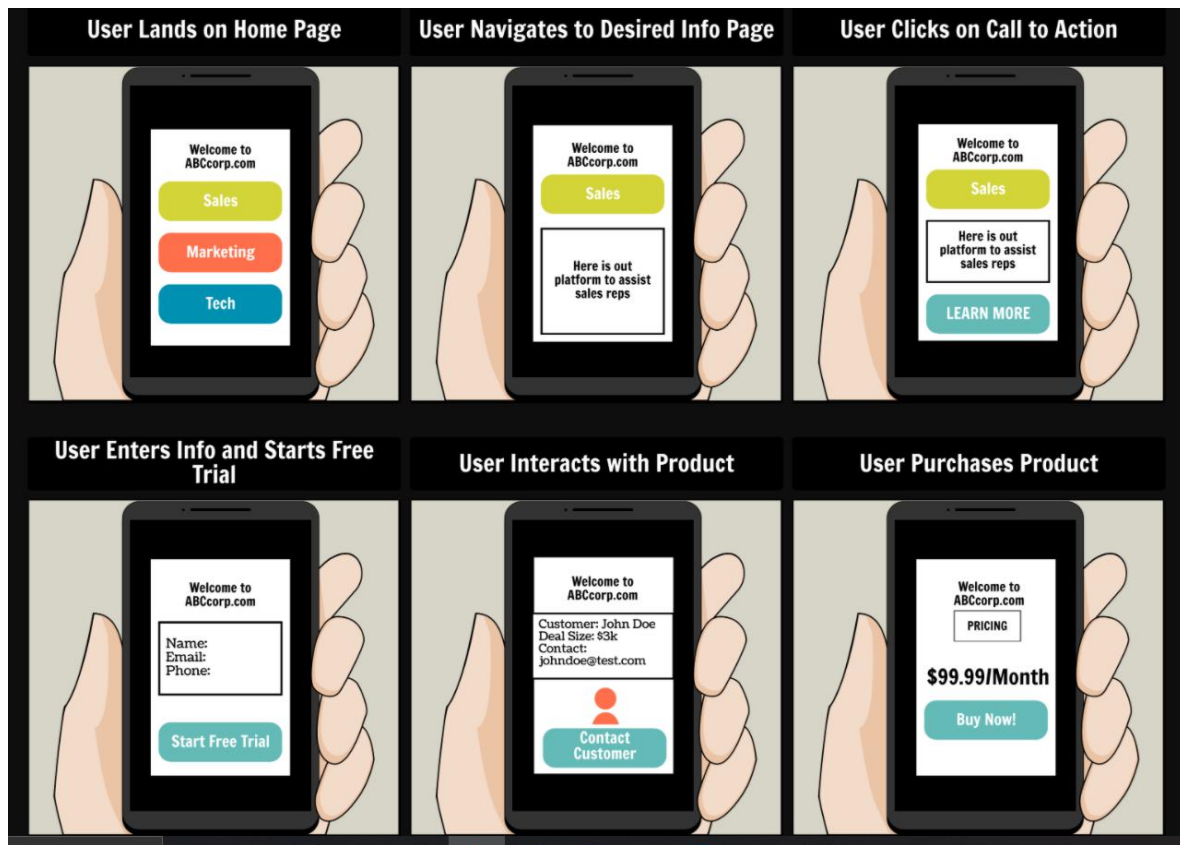
The seller's problem is getting solved as it provided a platform to sell.

BENEFICIAL OUTCOME



The seller got money for the product he've sold in our website.

Customer :

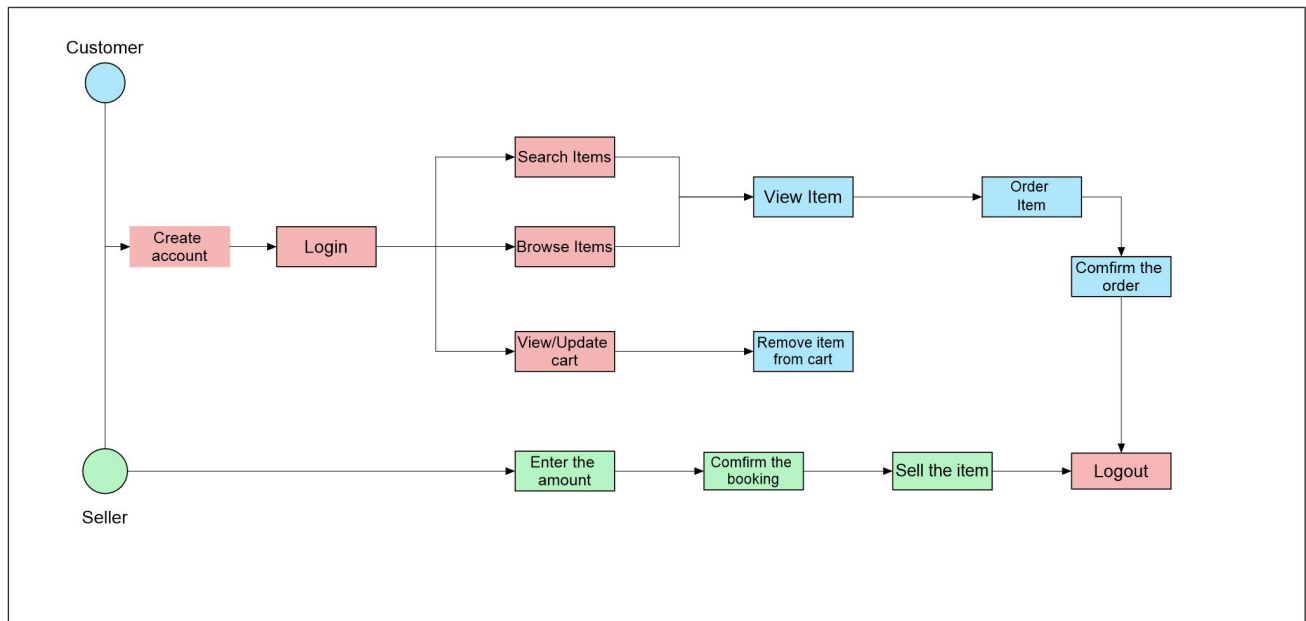


3. Brainstorming :

Seller : <https://stormboard.com/invite/1223033/square19>

Customer : <https://stormboard.com/invite/1223125/wisdom70>

4. Finite State Machines :

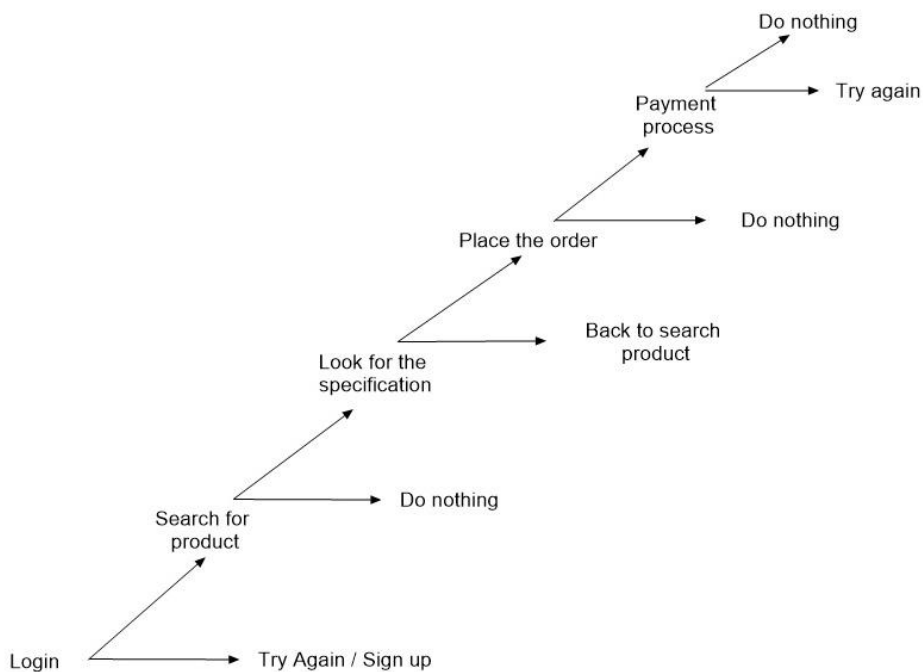


Decision Tables :

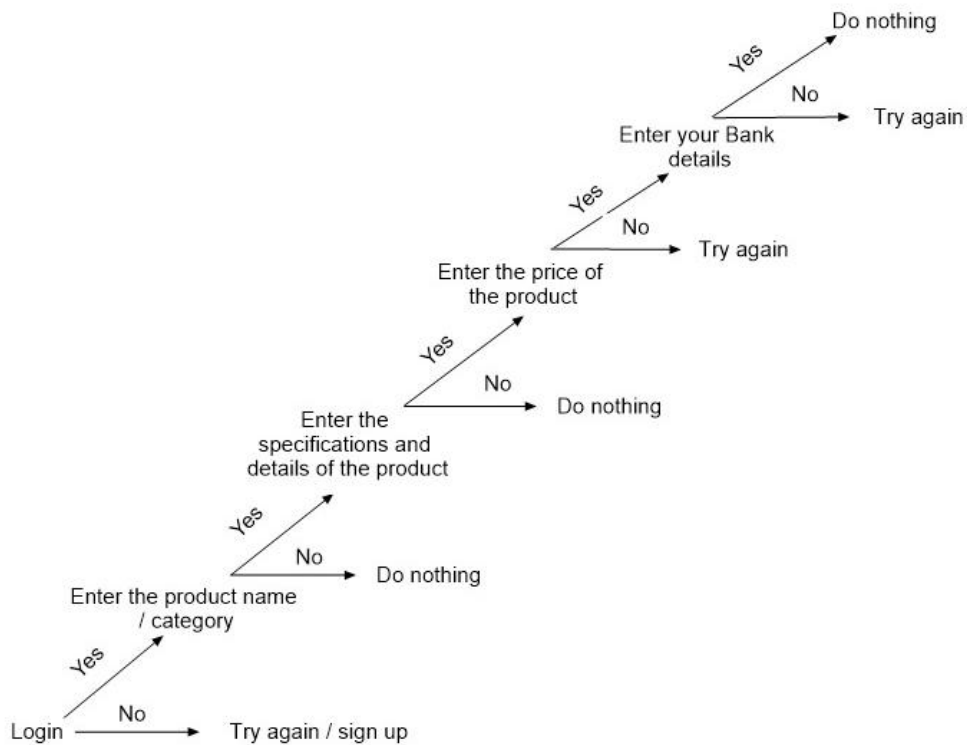
Decision table	Customer 1	Customer 2	Customer 3	Customer 4
Conditions				
Login id	Y	N	N	Y
password	Y	Y	N	Y
Product selection	Y	Y	N	N
Actions				
Correct login id	Y	N	N	Y
Correct password	Y	Y	N	N
Product availability	Y	Y	N	N

Decision Tree :

Customer:

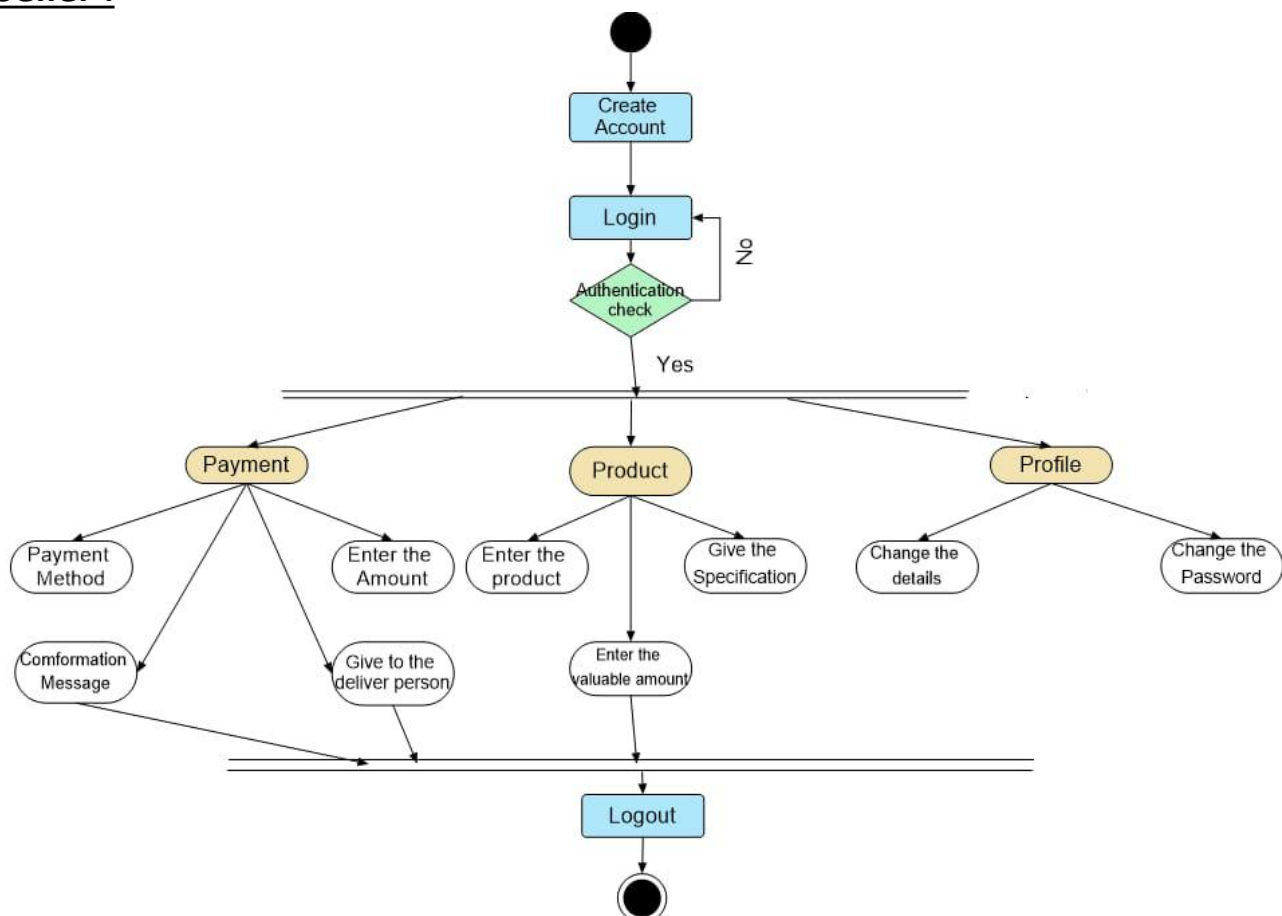


Seller:

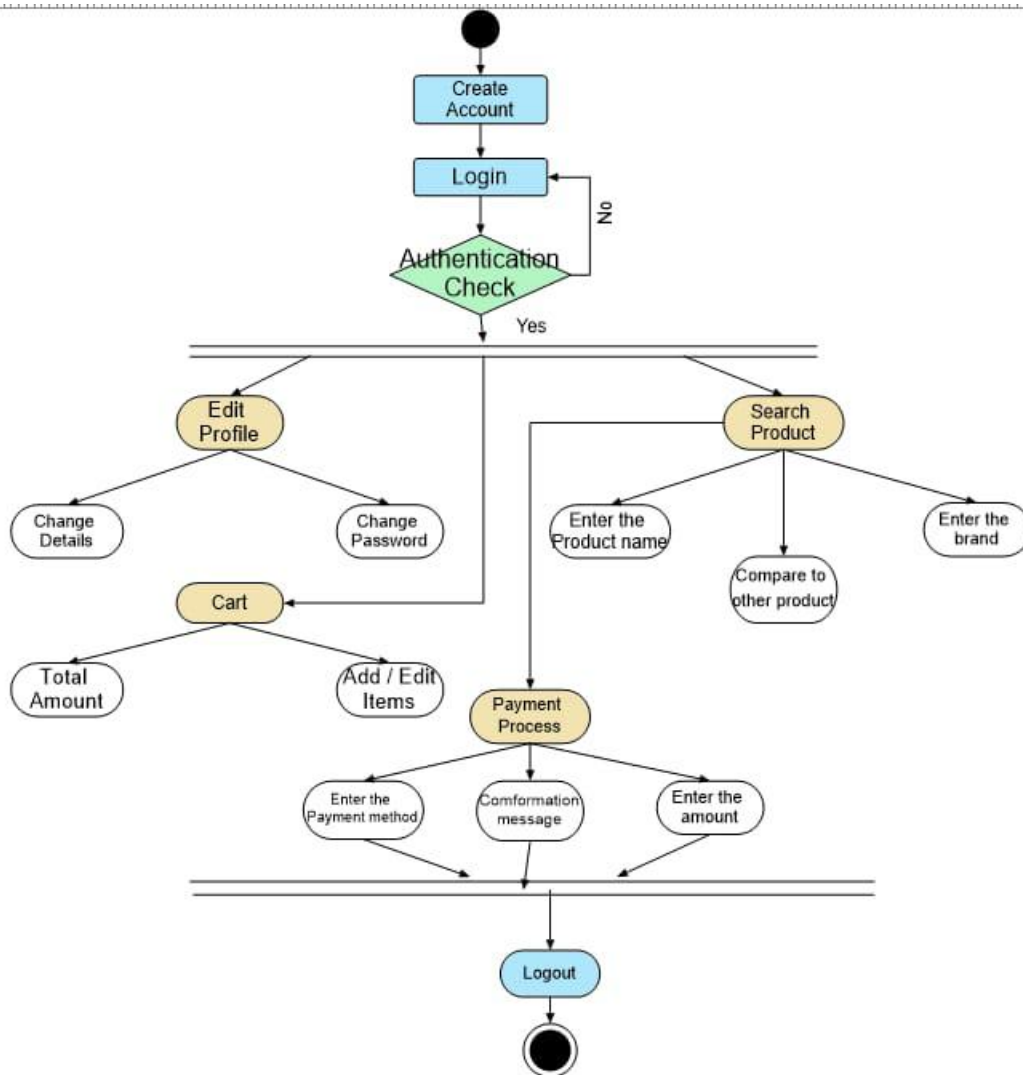


Activity diagram :

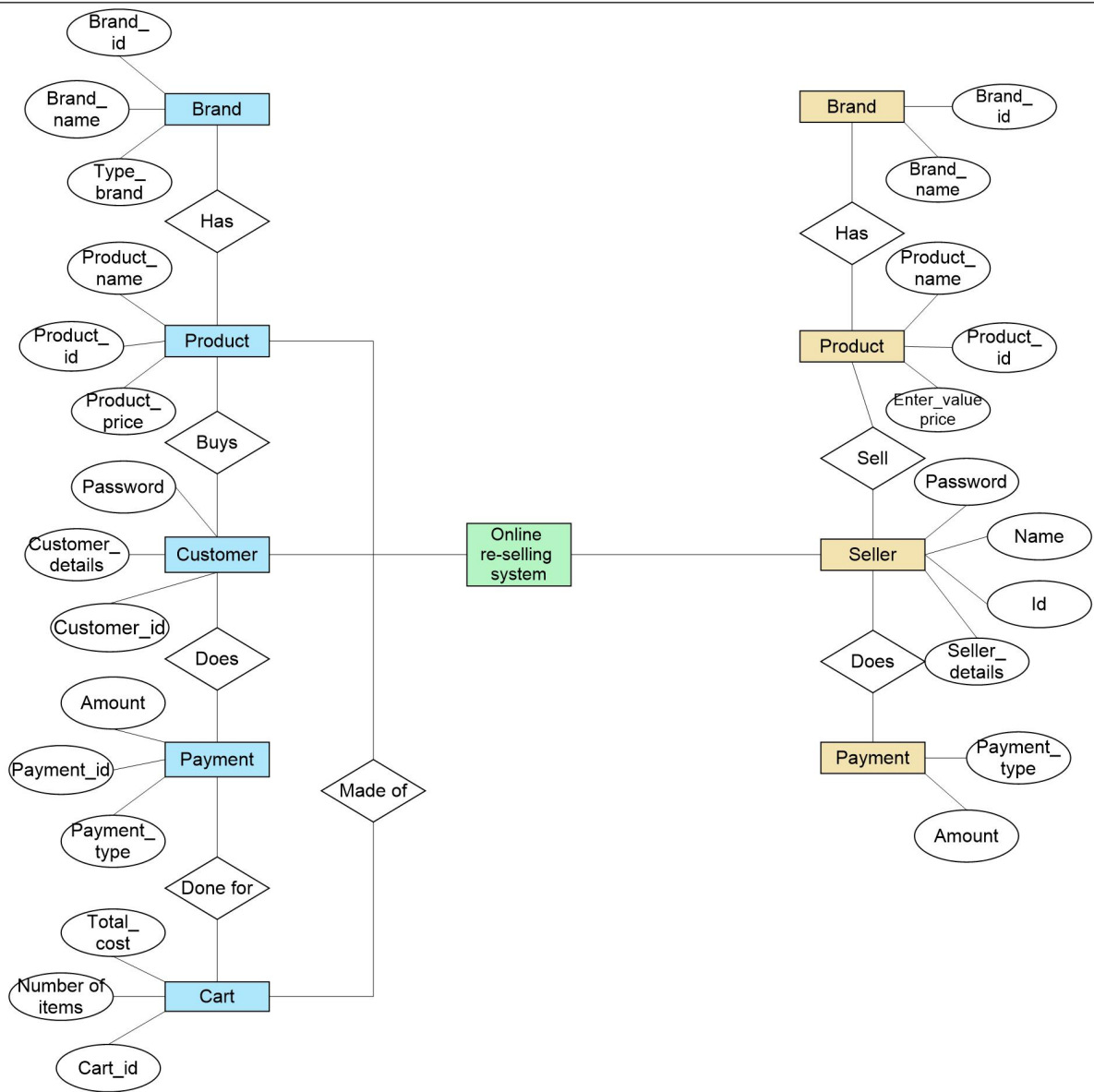
Seller :



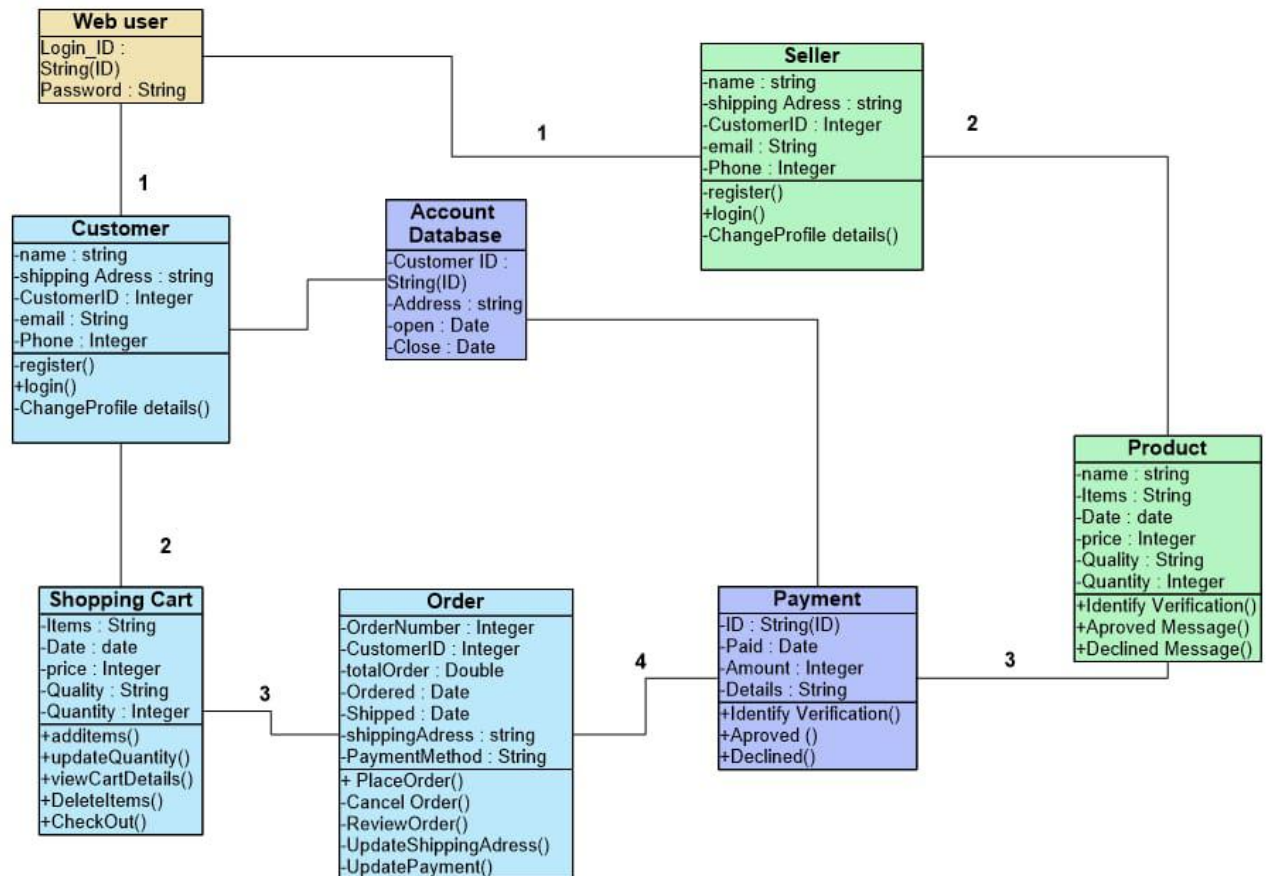
Customer :



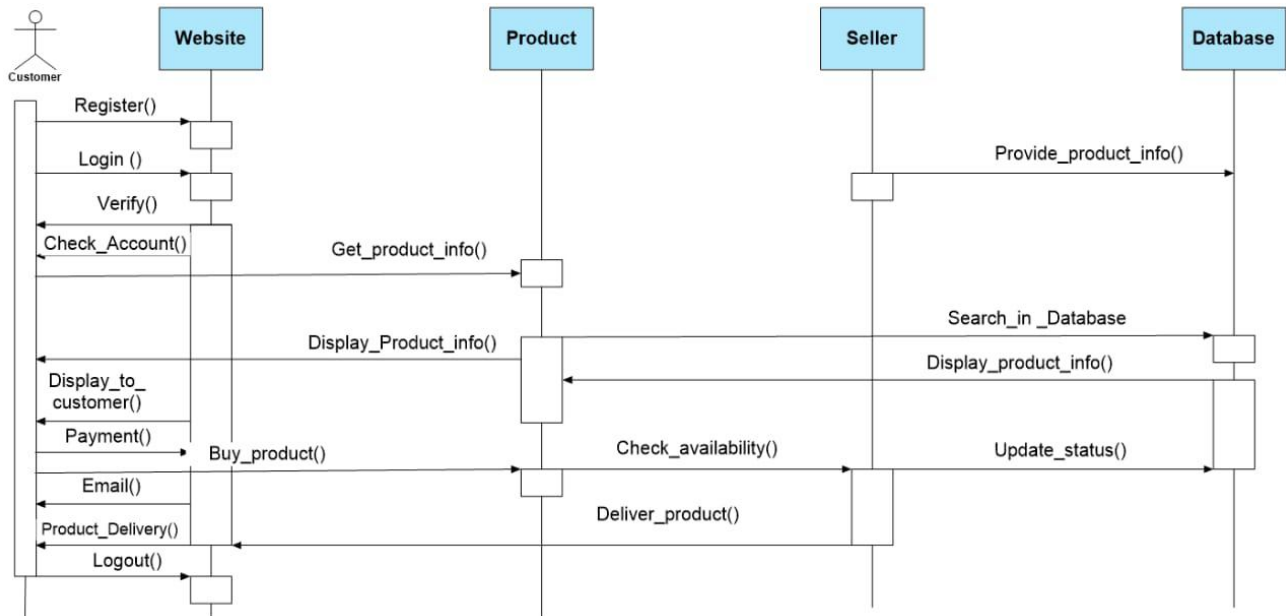
ER DIAGRAM :



CLASS DIAGRAM :



SEQUENCE DIAGRAM :



Vision Document

1. Introduction

The purpose of this document is to collect, define and analyze high level features and needs of online reselling system. It focuses on the capabilities required by stakeholders and target users. And why these needs exist. The details of how the online reselling system fulfills the requirements of stakeholders with detailed view of use case and supplementary specifications.

1.1 Purpose

The major purpose of the vision document is to know all the needs of the sellers and buyers. This document also be a guideline for the developers to understand and meet all the stake holder needs. This document mainly focuses on knowing the problems that were faced by the user. This also help in developing valid and reasonable solutions to solve that difficulty or problem and fixes the problem. The main purpose for preparing this document is to give a general insight into the analysis and requirements of the existing system or situation and for determining the operating characteristics of the system.

1.2 Scope

There is a lot of scope for the document. We can further investigate the all the required question to the user/ stakeholder to develop a product that meets all the stake holder needs and satisfy the users and customers. All the major problems being faced by the users / stakeholders can be solved so that it can lead to be a quality product. Using this application, the sellers might simply inform the buyers and conjointly admin will communicate with the sellers.

1.3 Definitions, Acronyms, and Abbreviations

- **OTP:** one time password
- **PORTAL:** the website that encompasses access to the document in a limited basis
- **RELIABILITY:** the amount of relevancy
- **PERFORMANCE:** how effective is the portal working/ useful

1.4 References

- Meesho online reselling system
- Information Security Requirements: To provide security to the system based on the current security system currently.
- The Billing System: To provide the interface between the system being developed and the billing system currently in use to update the database of the user record.

1.5 Overview

Online reselling system deals with the service of providing a platform for online reselling. The project deals with retrieval of information through a world wide portal. It collects related information from all the sellers and maintains database, which are used to generate reports in various forms to measure individual and overall statistics of the sellers. The project is specifically designed for the use of re-sellers and buyers.

2. Positioning

2.1 Business Opportunity

This project will be more profitable than offline system as it has more features and easier to buyers as system allows sellers and buyers access through PC or mobile. Offline reselling system is the basic form of university system which has some of the faults, these faults can be overcome by online system.

2.2 Problem Statement

The problem of	Inaccuracies in authentication
Affects	sellers, buyers, administrator
the impact of which is	1.Decrease in number of users 2.Data scrap increases 3.Leads to many confusions
a successful solution would be	1.Higher profitability 2.Efficiency 3.Increase in number of users

The problem of	Inaccuracies in data
Affects	Buyers, sellers
the impact of which is	1.Decrease in relevance 2.Leads to many confusions.

a successful solution would be	1.Increased accuracy in data 2.Better understanding between the sellers and buyers. 3.Higher efficiency
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The problem of	Inaccuracies in payments
affects	Buyers, sellers, administration
the impact of which is	1.Confusions for the user 2.Wrong display of status can lead to disturbance 3.User dissatisfaction
a successful solution would be	1. Increased accuracy of payment information 2. Highly effective 3.Decreased disturbances

2.3 Product Position Statement

For	Customers and stakeholders.
Who	Enters the system for different products
The online reselling system	Is an e-commerce software that gives information about the products.
That	Helps the users to access the product details
Unlike	offline reselling system
Our product	Is better with more features than offline system

3. Stakeholder and User Descriptions

3.1 Market Demographics

Online reselling system helps to access more easier even to person who have less computer knowledge, it is available in and any type of operating system or android, IOS. It can be accessible at any time and any place with good internet facility.

3.2 Stakeholder Summary

Name	Description	Responsibilities
System operator	The stakeholder is not directly related to the system. They are related as admins of the system. They do not directly use the portal that will be created they manages the activities that were done in the system	The main responsibility of the system operator is to update the relevant data into the database from time to time and manage the activity of the system. The system operator also checks the activity of the system, it's performance and maintain the system correctly

Name	Description	Responsibilities
Financial manager	The stakeholder is neither directly related to the system nor uses the system. The financial manager is an employee in	They check the amount paid by the buyers, amount that is to be paid to the sellers and all the financial related transactions occurring in the system. He

	the system who manages and gives reports of all the financial transactions related to the System.	also updates the status of the transactions for the users.
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Name	Description	Responsibilities
Development team	The stakeholder is neither directly related to the system nor relate with the users of the system. They only deal with development and maintenance of the portal	They involve in the development of the portal/website based on all the stakeholder needs. After the successful development on a version they work on the next version to improve the performance and features.

3.3 User Summary

Name	Description	Responsibilities	Stakeholder
Buyer	They are one of the end users of the portal. They only include sellers and buyers.. They were allowed to use the portal only if allowed by the administrator	They view product offerings,condition, specifications, view product details, pay the amount.	Self-represented

Name	Description	Responsibilities	Stakeholder
Seller	They are one of the end users of the portal. They only include sellers that were authorized by the administration. They were allowed to use the portal only if allowed by the administrator	They sell products, check product details, fix prices.	Self-represented

Name	Description	Responsibilities	Stakeholder
Administrator	They are one of the users of the system that can manage the users and activity of the system	They manage customers, sellers that were using the portal. They generate system reports such as statistics reports. They check the activity of the users	Self-represented

3.4 User Environment

The users of the system are sellers, customers and the administrators who maintain the system. The members and the users are assumed to have basic knowledge of the computers and Internet browsing. The administrators of the system to have more knowledge of the internals of the system and is able to rectify the small problems that may arise due to disk crashes, power failures and other catastrophes to maintain the system. The proper user interface,

users-manual, online help and the guide to install and maintain the system must be sufficient to educate the users on how to use the system without any problems. The system needs to be supported on mobile devices and computers, etc. It requires Internet Explorer or Netscape. It should be able to work on both PC and MAC.

3.5 Stakeholder Profiles

3.5.1. System operator

Representative	ABC
Description	The stakeholder is not directly related to the system. They are related as employees of the system. They do not directly use the portal that will be created they manages the activities that were done in the system
Type	System analyst
Responsibilities	To update the relevant data into the database from time to time To manage the activity of the system. To check the performance To check the accuracy of the data To generate system reports
Success Criteria	By proper functioning of the system
Involvement	They involve in system maintenance of data
Deliverables	None
Comments / Issues	None

3.5.2 Financial Manager

Representative	DEF
Description	The stakeholder is neither directly related to the system nor uses the system. The financial manager is an employee in the system who manages and gives reports of all the financial transactions related to the reselling system
Type	Financial expert
Responsibilities	To check the fees paid by the customers To update salary that is to be paid to the sellers To manage all the financial related transactions occurring in the system. To update the status of the transactions for the users. To generate financial reports
Success Criteria	By proper tallying of the amounts
Involvement	They involve in financial transactions
Deliverables	None
Comments / Issues	None

3.5.3. Course organizer

Representative	GHI
Description	The stakeholder is directly related to the system. The course organizer deals with all the activities related to the products and sellers
Type	Product administrator

Responsibilities	<p>To give the buyers,sellers about the information about the courses for each semester.</p> <p>To manage the details about number of products available.</p> <p>To manage the sold product reports and manage the transaction details.</p>
Success Criteria	By proper maintenance of products and their availability
Involvement	They involve in assigning courses to different people and managing them
Deliverables	None
Comments / Issues	None

3.5.4. Development team

Representative	JKL
Description	The stakeholder is neither directly related to the system nor relate with the users of the system. They only deal with development and maintenance of the portal
Type	Website developer
Responsibilities	<p>To develop of the portal/ website based on all the stakeholder needs.</p> <p>To maintain the website</p> <p>To work on different features to be added in the next</p>
Success Criteria	By proper functioning of the website created
Involvement	They involve in the development of the portal/ website based on all the stakeholder needs. After the successful development on a version they work on the next version to improve the performance and features.
Deliverables	Website that meet all the stakeholder needs

Comments / Issues	None
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3.6 User profiles

3.6.1 Customer

Representative	XXX
Description	They are one of the end users of the portal. They only include customers that were having an account in the system. They were allowed to use the portal only if allowed by the administrator.
Type	Buyer
Responsibilities	View product details view images Seller information Check availability details pay the amount
Success Criteria	By getting good products
Involvement	They are end users of the portal
Deliverables	None
Comments / Issues	None

3.6.1. Seller

Representative	XXX
Description	They are one of the end users of the portal. They only include Sellers that were authorized by the admin. They were allowed to use the portal only if allowed by the administrator
Type	Seller
Responsibilities	upload product details assign amount Sell products
Success Criteria	By producing appropriate Genuine products
Involvement	They are end users of the portal
Deliverables	Products
Comments / Issues	None

3.6.2. Administrator

Representative	XXX
Description	They are one of the users of the system that can manage the users and activity of the system
Type	Admin
Responsibilities	manage Buyers, sellers that were using the portal. generate system reports such as product review reports. check the activity of the users
Success Criteria	By proper managing of the system and users

Involvement	They are end users of the portal
Deliverables	None
Comments / Issues	none

3.7 Key Stakeholder or User Needs

Need	Priority	Current Solution	Proposed Solutions
Availability for 24*7	High	Server issues	It can be used as link in mobile or any type of operating system with established server
Easy to use for any category of customer	High	Single language based learning	Multi language-based software
Automated messages for payments	Medium	It is offline system	The user will be automatically notified through registered phone number about the payment transactions and their status
Complaint or Customer support	Low	It is online system	A space will be created all the feedbacks that were given will be sent to the system operator
Paying the amount	High	It is offline/online system	The amount will be shown in the payments section. It can be linked up with online payment portals

3.8 Alternatives and Competition

3.8.1 If customer is not satisfied with present client they can alternative solution like to change a second option.

4. Product Overview

4.1 Product Perspective

The Online reselling System to be developed benefits greatly to the stakeholders and users of the system. This system can be used to save user records, provide product details. Administrator will provide stock availability and seller details.

4.2 Summary of Capabilities

Customer benefit	Supporting features
Access from anywhere	Users can access the software from anywhere. Easy to access from any type of operating system and mobile phone
Assurance for server	There will not be any server problem even though many users use at a time
No problem in files	Software can accept any type of format and can open any format at any pc or mobile
Customer satisfaction is improved because nothing falls through the cracks.	Problems are uniquely itemized, classified and tracked throughout the resolution process. Automatic notification occurs for any aging issues.

Management can identify problem areas and gauge staff workload.	Trend and distribution reports allow high level review of problem status.
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4.3 Assumptions and Dependencies

Online reselling system software must support the following:

- Access through web
- Access through MAC/Windows and Android/IOS phones
- Stores customers and seller information accurately
- Multiple user collaboration
- Using this website, you can quote and invoice in second not hours

4.4 Cost and Pricing

The cost for online reselling system is sufficient for the customer and effective in any Internet connection environment.

4.5 Licensing and Installation

Our software professionals will do the installation of system, The system is licensed only to the users who has created an account.

5. Product Features

5.1. Availability for 24*7 at the registration period

5.2. Easy to use for any category of seller/buyer.

5.3. Automated messages for payments

5.4. Complaint or feedback

5.5Paying the amount

6. Constraints

- Each user must keep their password as confidential.
- More over the user must have individual ID for creating a login into registration portal.
- Only administrator can control user addition and deletion in the system.
- Also, these group has the all the official activities.
- The next obstacle was the availability of fast and reliable internet connection.

7. Quality Ranges

7.1 Security

Controlling the access to the database provides security to the system. More over the user must have individual ID for creating a login into registration portal. Only administrator can control user addition and deletion in the system. Also, these group has the all the official activities. The next obstacle was the availability of fast and reliable internet connection.

7.2 Availability

The system is online 24 hours a day .

7.3 Usability

The system is easy to use for all the users.

7.4 Maintainability

The system shall be easy to maintain.

7.5 Flexibility

The system should allow the access of all the students at a time.

8. Precedence and Priority

The features defined in the vision document will be provided in two releases. The first release will support all the web-based features. The second release will support all the Mobile device features.

9. Other Product Requirements

9.1. Applicable Standards

- The user should have either Internet or wireless facilities.
- The user must be using a platform such as windows, iOS, android, mac

9.2. System Requirements

- The system needs to have either Internet explorer or Netscape, i.e. any kind of Web Browsers.
- The mobile device should be able to connect to the Internet.

9.3. Performance Requirements

- The Splash Page or Information page should be able to be downloaded within a minute using a 56K modem.
- The access time for a mobile device should be less than a minute.
The information is refreshed every two minutes

9.4. Environmental Requirements

None

10. Documentation Requirements

10.1. User Manual

The user manual describes the use of the system to the users. It describes the use of the system on mobile system, pc, and tablets. The user manual should be as a hard copy and also as online help.

10.2. Online Help

Many applications provide an online help system to assist the user. The nature of this system is unique to application development as they combine aspects of programming (hyperlink, etc.) online help is provided for each and every feature provided by the system.

10.3. Installation Guides, Configuration, and Read Me File

This document includes the installation and configuration guidelines, which is important to a full solution offering. Read me file include just standard compliment.

10.4. Labeling and Packaging

Our representation will do most of the sales. Packaging and promotional material will be developed.

A Feature Attributes

Attribute	Online Payment System
Status	Approved
Priority/Benefit	Important
Effort	High level effort
Risk	High level risk
Target release	Version 1.0(Linux 2.0)
Assigned to	Technical department
Reason	To provide an easy and an comfortable way to customers.

Attribute	Send The OTP Password
Status	Proposed system

Priority/Benefit	Critical
Effort	Medium level effort
Risk	Low level risk
Target release	Version 1.0(Linux 2.0)
Assigned to	Management department
Reason	Extended security

Attribute	Show the fast selling products
Status	Proposed system
Priority/Benefit	Important
Effort	Low level effort
Risk	Medium level risk
Target release	Version 1.0(Linux 2.0)
Assigned to	Server maintainer
Reason	Provide easy way to buy the worthy products.

Attribute	e-payment and link e-wallet
Status	Proposed system
Priority/Benefit	Critical
Effort	Medium level effort
Risk	Low level risk
Target release	Version 1.0(Linux 2.0)
Assigned to	Passengers
Reason	Provide a better confirmation report to the Customers.

Attribute	Modifying ordered product details
Status	Approved
Priority/Benefit	Important
Effort	Low level effort
Risk	Medium level risk
Target release	Version 1.0(Linux 2.0)
Assigned to	Server department
Reason	Provide an alert message for administrator.

A.1 Status

Proposed	It is very easy to delete or edit the user details when it found unnecessary.
Approved	Allow the user to buy the products.
Incorporated	All system software corporate with the customer system

A.2 Benefit

Critical	System must be secure. Information should be provided where buyers wants to see.
Important	Database should have a backup
Useful	Alert the customers by sending the notification.

A.3 Effort

If the customer enter the wrong password or the user name one or two times wrong there account get locked. On that mean time they lose their required products. The software developers should spend some time to retrieve the problem.

A.4 Risk

Cost of developing system application cannot be estimated accurately.
So this feature may need some extra resources.

A.5 Stability

The system is stable and well protected. There is no changes to this format area unit predicted. The review are going to be taken once the second version released.

A.6 Target Release

Planning to implement a beta version which will be tested within the real time atmosphere. If tests covers a full version, then the ultimate version are free supported the enhancements of the defects of the beta version.

A.7 Assigned To

Architect, style and implement the software package that may be accomplished by a team of software package engineers. Support and maintenance of the hardware could be a responsibility of the hardware cluster. Project manager can manage the total project and make sure that the project goes within the right direction.

A.8 Reason

All the requirements that have been set for this system will provide stability, reliability, portability, high performance, security and easiness.