

Software Requirements Specification

For **MERCHANDISE**

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Table of Contents

1. Preface	3
1.1. Document Purpose	3
1.2. Document Conventions	3
1.3. Intended Audience and Reading Suggestions	3
2. Introduction	4
2.1. Survey	4
2.2. Purpose	6
2.3. Scope	6
2.4. Similar systems	6
3. Glossary	7
3.1. Acronyms, definitions & abbreviations	7
4. System users	8
4.1. System stakeholders	8
4.2. Users objectives	9
5. User requirements definitions	10
5.1. System functions	10
5.2. Constraints	15
6. System architecture	16
7. Non-Functional requirements	16
7.1. Reliability Requirements	16
7.2. Portability Requirements	16
7.3. Usability Requirements	16
7.4. Security Attributes	16
7.5. Efficiency Rules	17
9. System interfaces	18
8.1. User interfaces	18
8.2. Software interfaces	20
8.3. Communication interfaces	20
10 System Modeling	21
10.1. Use cases diagram	21
10.2. Sequence diagram	23
10.3. Activity diagram	25
10.4. Class diagram	26
11. System Evolution	28
12. Work Plan	29
12. Work break down structure (WBS)	29
13. Appendices	30
14. References	30

1. Preface

1.1 Document purpose

The purpose of this document is to give a detailed description of the requirements for the “online shopping system” (OSS) software. It will explain the purpose and features of the system, the interfaces of the system, what the system will do, the constraints under which it must operate and how the system will react to external environment.

1.2 Document Conventions

- Font type: Calibri.
- Bold words with large font size more than 14 is used for the headlines of the chapters and sections or to concentrate on an important word.
- Words with all characters are Capital refers to an abbreviation.
- Website: italic underlined text with blue color refers to website address or email address.
- Sentences between to parentheses () refers to definition or give more information about the previous words.

1.3 Intended Audience and Reading Suggestions

This document is directed to the people who are interested in developing this system, to a customer for its approval and for the project manager (doctor).

This document may be help the users to give them more information about how this application works and to know what is the functions that this software does.

2. Introduction

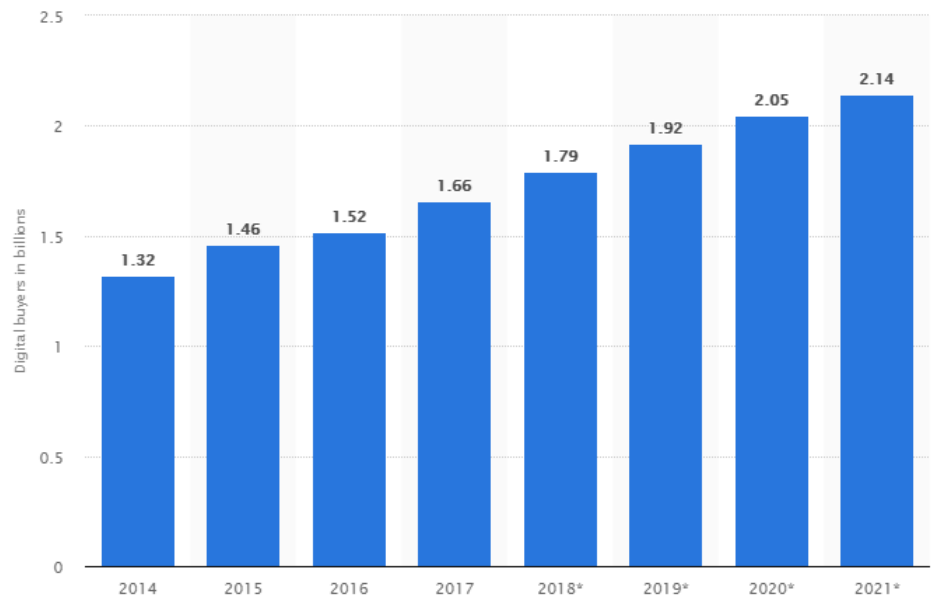
2.1 Survey:

These graphs are showing online shop from different perspectives, which will help clarifying this software.

All statistics are according to <https://www.statista.com/>

This timeline displays a forecast of the number of digital buyers worldwide from 2014 to 2021. In 2021, over 2.14 billion people worldwide are expected to buy goods and services online, up from 1.66 billion global digital buyers in 2016.

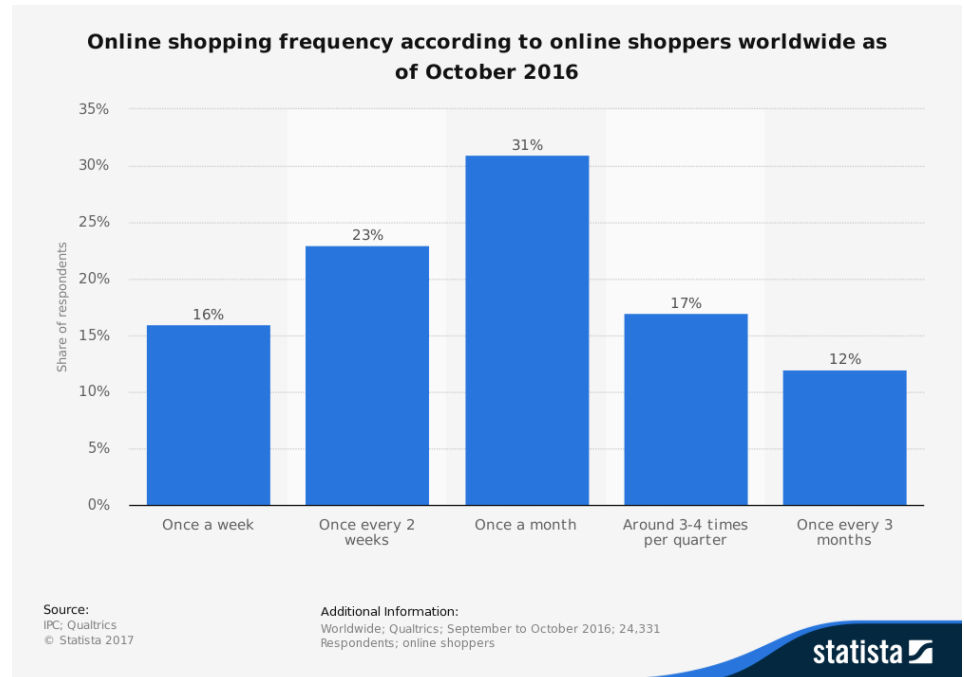
Number of digital buyers worldwide from 2014 to 2021



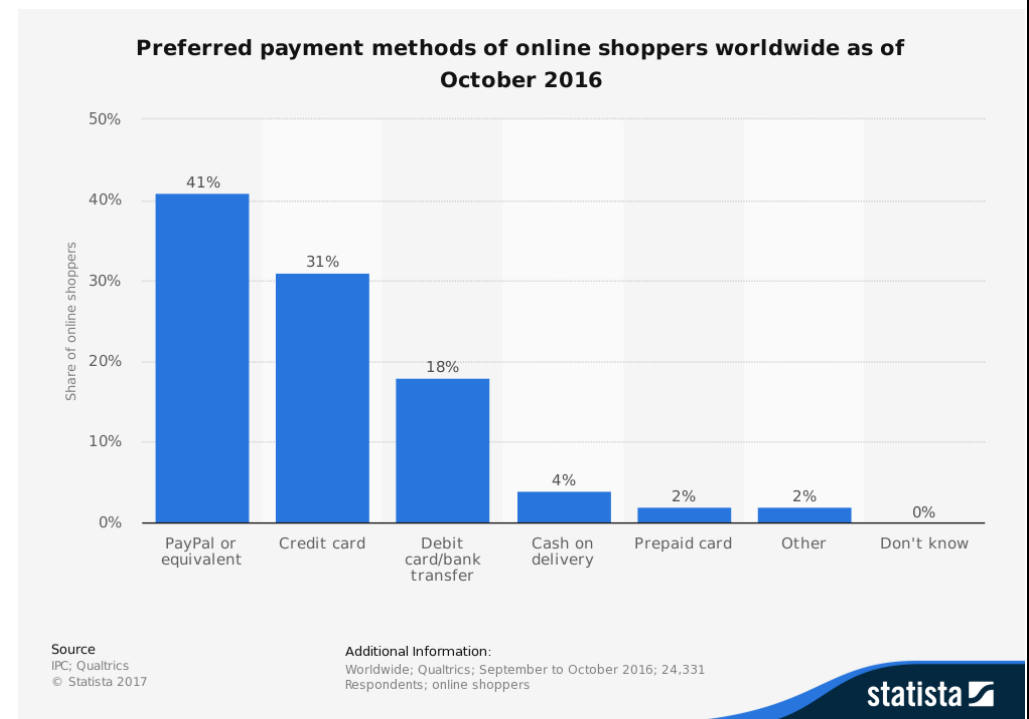
Data visualized by  tableau

© Statista 2018 

This statistic presents the online shopping frequency according to online shoppers worldwide as of October 2016. During the survey period, 16 percent of online shoppers worldwide stated that they purchased physical goods online on a weekly basis.



The statistic gives information on the preferred payment methods of global online shoppers as of March 2017. During the survey period, 42 percent of online shoppers worldwide stated that they preferred to pay via credit card.



2.2 Purpose

This software links between different types of users: Shop owners, employees, website analyst, website manager, online shoppers.

- Provide shop owners with a platform to sell their products
- Facilitate the process of online shopping starting from choosing the product till the payment.
- Facilitate the process of adding, updating, editing and deleting available products.
- Produce monthly reports regarding type and numbers of products sold.

2.3 Scope

Purchasing and selling products and services over the internet without the need of going physically to the market is what online shopping all about. Online shopping is just like a retail store shopping that we do by going to the market, but it is done through the internet. Online shopping has made shopping painless and added more fun. Online stores offer product description, pictures, comparisons, price and much more.

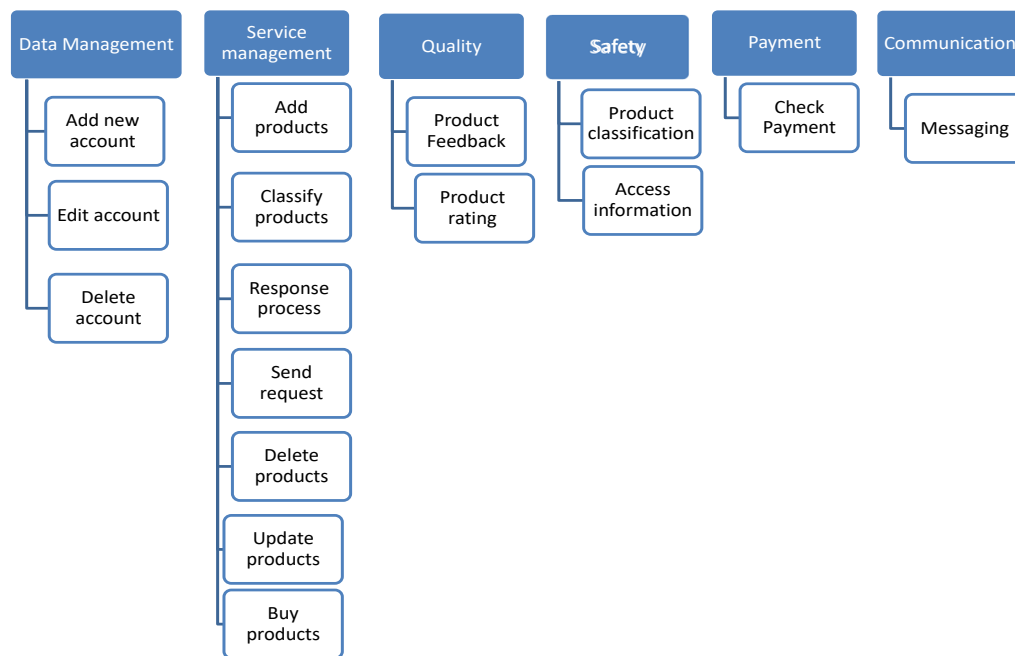


Figure 1. System functions hierarchy

2.3 Similar systems

Some websites that have the same aim of selling specific products online.

- Amazon
- Jumia
- Souq
- Shopify

3 Glossary

3.1 Acronyms, definitions and abbreviations

- Users: purchase, Authenticated purchaser, online shop employee online shop manager, online shop analyst, shop owner.
- Authenticated: signed with username and password.
- PC: Promo Code.
- SDD: Software design document.
- SRS: Software requirements specification.

4. System users

4.1 System stakeholders

· System Analyst

- Responsible for requirements gathering.
- Responsible for deployment and support.
- Create SRS.

System designer

- Receive SRS.
- Create SDD.

System testers

- Test the functionalities of the code.

System developers

- Implement and maintain Software based on SDD.

System users

Online shop employee

- Update the details of a specific product
- Add a new product.
- Send an email with a list of products to the shipping manager
- Receive a list of the commands products.
- Add the confirmed products to the website page.

Online shop manager

- View the statistics of all products monthly.

Online Shop analyst

- View requests from shop owners.
- Accept or reject requests.

Shop Owner

- send a request.

- sell the products on the website.
- view the respond of the request.
- view the statistics of his products monthly.

Purchaser

- View all products.
- See the details for a specific product.
- Filter products based on category.
- View system in multiple languages.
- View products in different currency.

Authenticated purchaser

- Add a review about a specific product.
- See reviews in the details page of that product
- Rate a product (scale from 1 to 5).
- Buy a product from the existing products.
- Use promo codes so he get discounts.
- Receive an email includes shipping details.

4.2 Users objectives

- **Shop owner**
 - Decrease set up and running costs.
 - Decrease marketing costs.
 - Reaching to the largest number of customer
 - Ensure that his products are selling successfully.
 - Decrease time and effort to follow selling and buying operation.
- **Purchaser**
 - Convenience in buying.
 - Get better prices.
 - Get several brands and products from different sellers with different prices all in one place.
 - Few expenses.
 - Get rid of compulsive shopping.

- **Administrator/ Employees**
 - Improve customer relationships
 - Expand products and services.
 - Profitability in every Merchandise business.

5. User requirements definitions

5.1 System functions

Create account

In order to be an authenticated user:

The user can add a new account by adding the following information:

- First name and last name.
- Phone number.
- Mail.
- Date of birth.
- Gender.
- Mail
- Address information. (Country "default Egypt", City, Region, Address)
- Upload profile picture. // data-type unknown.
- Agree terms and conditions.
- Press submit.

In case he is a shop owner he must add also the following:

- Shop name
- Category of his products
- Credit card information

Edit account

Authenticated users can edit following information in their accounts:

- First name and last name.
- Phone number.
- Mail.
- Date of birth.
- Gender.
- Mail
- Address information. (Country "default Egypt", City, Region, Address)
- Upload profile picture. // data-type unknown.

Version 0.9

- Agree terms and conditions.
- Press submit.

In case he is a shop owner he must add also the following:

- Shop name
- Category of his products
- Credit card information

Login

User needs to enter following information to login to his/her account:

- Email.
- Password.
- System verifies Email and password.

Logout

Users can leave their account by logging out, and so they will be back to the state of not being authenticated to this website.

Search for an item

Any user can search for a product by entering the following information:

- Choose type of the product or write his name manually in the search bar.
- Press search.

View product details.

Any purchaser can view product's details including product's name, description, price, reviews but can't edit it - for security concerns- by selecting the desired product.

Filter

User can filter desired products depending on the type of the product according to the following criteria:

- Brand filter
- price filter.
- Size filter.
- Gender filter.

Cart

After authentication his/her identity

Add item to cart

- Add the items he/she needs
- Open cart
- Verify personal information.
- Verify payment information
- Confirms

Remove item from cart

Version 0.9

- Select desired item to be removed
- Click remove
- Confirm

Messaging:

Receive an email

After the authenticated purchaser make an order with his/her information.

the system will send automatically a confirmation mail to his/her email address with all the products information that he ordered and the time of delivery.

View statistics

- Shop owner and administrator have to log in to the system.
- Shop owner receive statistics about the percentage of sales of his products every month.
- Administrator receive statistics about the percentage of sales of all products every month.

Products feedback

- Selects the item he/she wants to view its details.

Add review or rate:

After authentication his/her identity

Reviewing:

- Add a review (paragraph) in a text box including these point:
 - What is good about this product.
 - What is bad about this product.
 - Any suggestions (optional).
- Confirm
- Review will be added in the item`s page

Rating:

- User can rate the product depending on these points:
 - His/her satisfaction for product.
 - How much the product he/she received matched website`s details about this product.
- Select rate scale from (1 to 5).

See review or rate:

he/she can check the reviews about the desired product by:

- select an item
- go to the item`s page
- See all reviews

Payment

there are many methods the purchaser can choose to complete his ordering process with like (credit card, cash on delivery, PayPal, Debit card, Fawry)

- After verification personal information
- Selects desired type of payment.
- Assuming he chose Credit card, debit card or PayPal system will check first whether enough money is available or not, if system found available money confirmation message is sent on the user`s mail, else he will pop out an error message to the user to choose another payment method.
- Assuming he chose cash on delivery, confirmation message is sent on his email immediately and delivery man receives the payment on delivering the product.
- Assuming he chose Fawry service, a code will be sent on his email, this code will be used by the user to proceed through the payment through any Fawry store within a specific time a confirmation message is sent on his email, if he did not his order is cancelled.

Request

Send request

- After the shop owner authenticates himself.
- Shop owner sends a request to website analyst includes all information about all products he wants to sell.

Respond to request

- After the website analyst authenticates himself.
- Website analyst makes analysis on the products and decides to accept or reject these products.
- Website analyst sends his response to the shop owner.

View request response

- After the shop owner authenticates himself.
- Shop owner can view this response on his request from website analyst.

Receive list of confirmed products.

- After the employee authenticates himself.
- Shop owner receives confirmation on his request from website analyst.

- After confirmation of shop owner on this deal, products list will be sent automatically to the website employee

Add item

- Shop owner receives confirmation on his request from website analyst
- After confirmation of shop owner on this deal, products list will be sent automatically to the website employee
- Website employee add items from list to website depending on the type of the products.

Remove item

- After the employee authenticates himself.
- Employee can remove any added item if the shop owner decided that or if all items given by shop owner sold out.
- This item will not be available anymore to users of website.

Edit item details

- After the employee authenticates himself.
- If there are new updates in the information of any item added on the website, employee can edit details of this item based on these new updates.

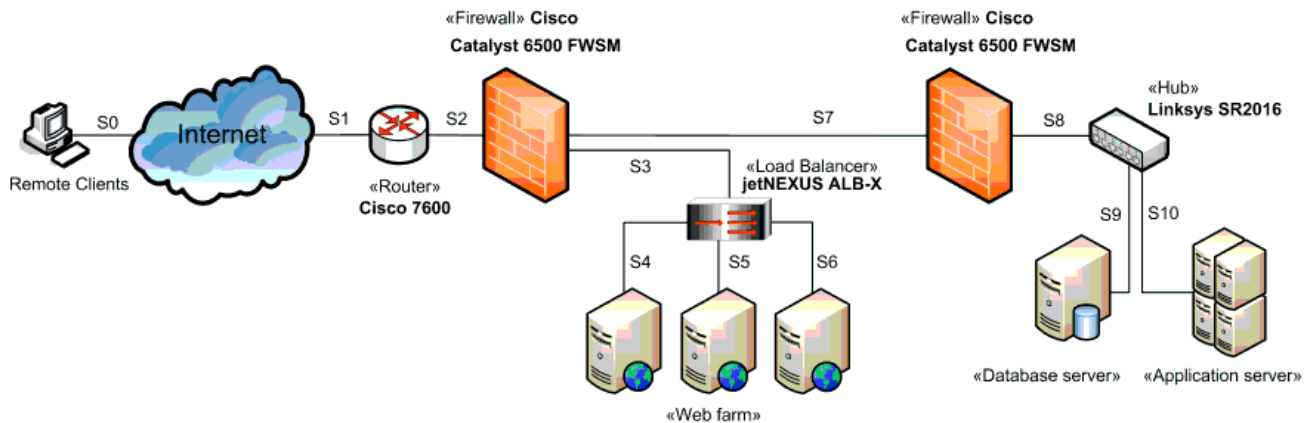
Send shipping products

- After the employee authenticates himself.
- All shipping products are collected automatically and added to a specific table then sent automatically to shipping manager to make shipping process.

5.2 Constraints

- There are few constraints that the system should follow. They are:
- All the inputs should be checked for validation and messages should be given for the improper data. The invalid data are to be ignored and error messages should be given.
- Details provided by the vendor during his sign up should be stored in database.
- While adding the products to the system, mandatory fields must be checked for validation whether the vendor has filled appropriate data in these mandatory fields. If not, proper error message should be displayed or else the data is to be stored in database for later retrieval.
- All mandatory fields should be filled by customer, while buying the items from the cart.

6. System architecture



7. Non-Functional requirements

7.1 Reliability:

- The system should meet an SLA of 99.5 percent

7.2 Portability

An end-user is use this system on any OS; either it is Windows or Linux.

7.3 Usability: .

- The end user shall be able to place an order within 30 seconds.
- The end user shall be able to access any page within four clicks.

7.4 Security:

- Each page in the system shall authenticate the user.
- User's that are not allowed to view specific areas of the systems.

Key security requirements:

- **Login** / Access levels

- Create, Read, Update, and Delete (CRUD) levels.
- Access permissions for application data may only be changed by the system's data administrator
- **Password** requirements – length, special characters, expiry, recycling policies, 2FA
- **Encryption** (data in flight and at rest) – All external communications between the system's data server and clients must be **encrypted**
 - Data **Classification** / System Accreditation: All Data must be protectively marked and stored / protected.

7.5Efficiency

Performance:

- The All Web pages download within three seconds during an average load, and five seconds during a peak load.
- While executing a search, the system must be able to display 500 search results per page.
- Response times: application loading =3 sec , browser refresh times = 5 sec , emailing time = 10 sec.
- Processing times: functions=5sec, calculations= 5 sec, imports =3sec
- Query and Reporting times: initial loads =5sec

8. System Interfaces

8.1 User interfaces:

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.

MERCHANDISE

login sign up

Welcome on board!

This is a template for a simple marketing or informational website. It includes a large callout called a jumbotron and three supporting pieces of content. Use it as a starting point to create something more unique.

Skip to website »

Purshaser

Donec id elit non mi porta gravida at eget metus. Fusce dapibus, tellus ac cursus commodo, tortor mauris condimentum nibh, ut fermentum massa justo sit amet risus. Etiam porta sem malesuada magna mollis euismod. Donec sed odio dui.

Sign up »

Shop owner

Donec id elit non mi porta gravida at eget metus. Fusce dapibus, tellus ac cursus commodo, tortor mauris condimentum nibh, ut fermentum massa justo sit amet risus. Etiam porta sem malesuada magna mollis euismod. Donec sed odio dui.

Sign up »

© 2016 Company, Inc.

Welcome page

MERCHANDISE

login sign up

Sign Up

Email address:

E-mail

User name

user name

ID Number

phone number

Address

phone number

Password1:

phone number

Password2:

phone number

Create an account

signup page

18 | Page

Please sign in

☐ Remember me

Login

Login page

MERCHANDISE About Contact Category admin Log out



Checkout form

Below is an example form built entirely with Bootstrap's form controls. Each required form group has a validation state that can be triggered by attempting to submit the form without completing it.

Your cart ⁰

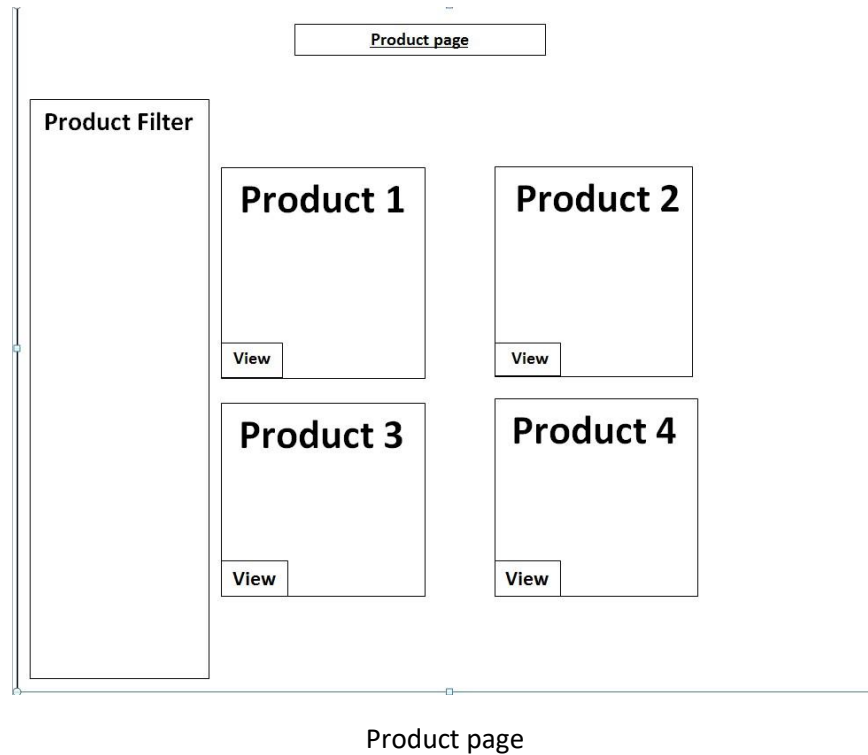
Total (USD) 0

Promo code

Redeem

Employee Analyst Dropdown admin Fixed top

Cart page



8.2 Software interfaces

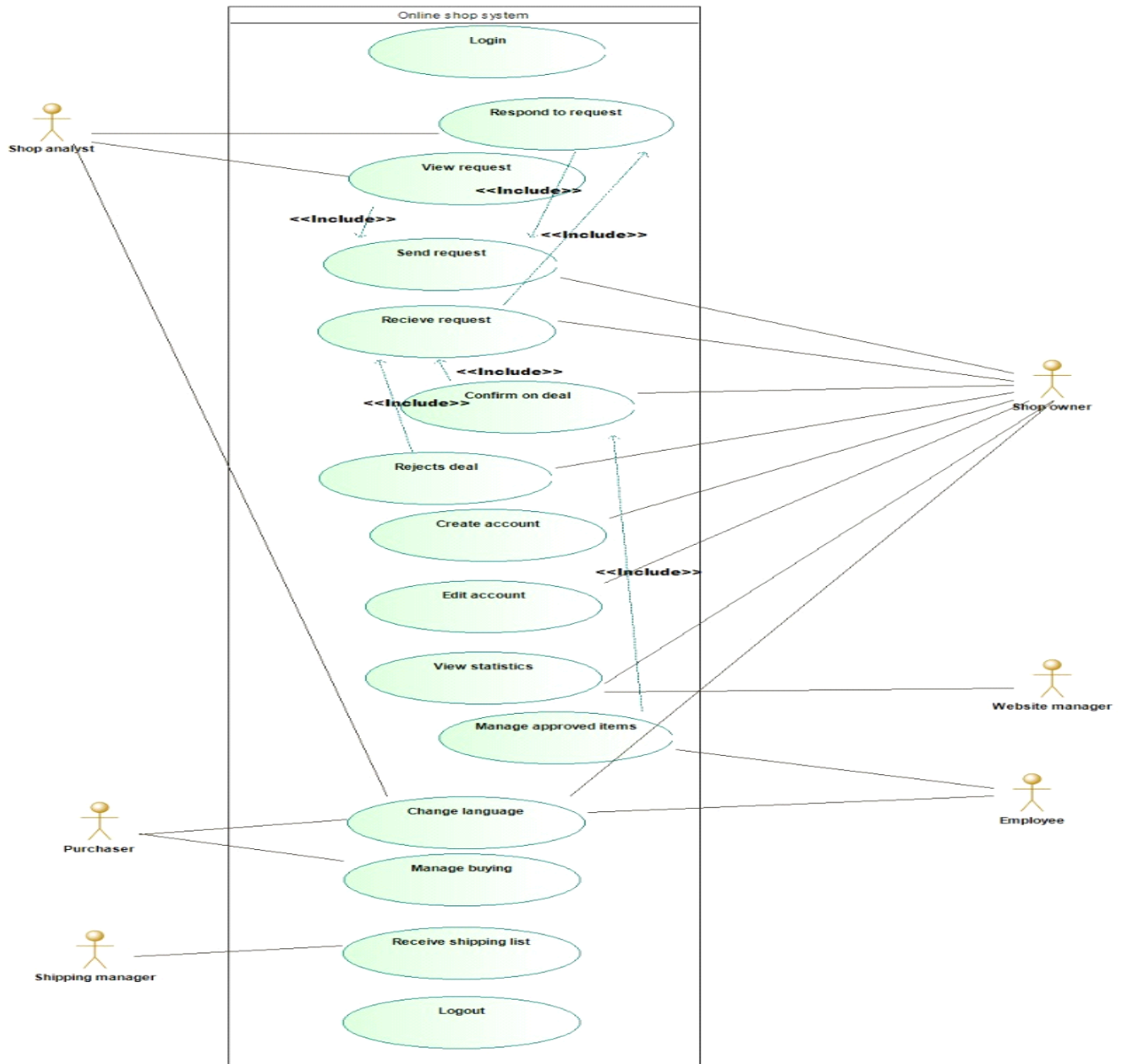
- Operating System : Unix, Linux, Mac, Windows etc..
- Development tool :Hypertext Preprocessor, JavaScript, Ajax
- Data Base : MySQL

8.2 Communication interfaces

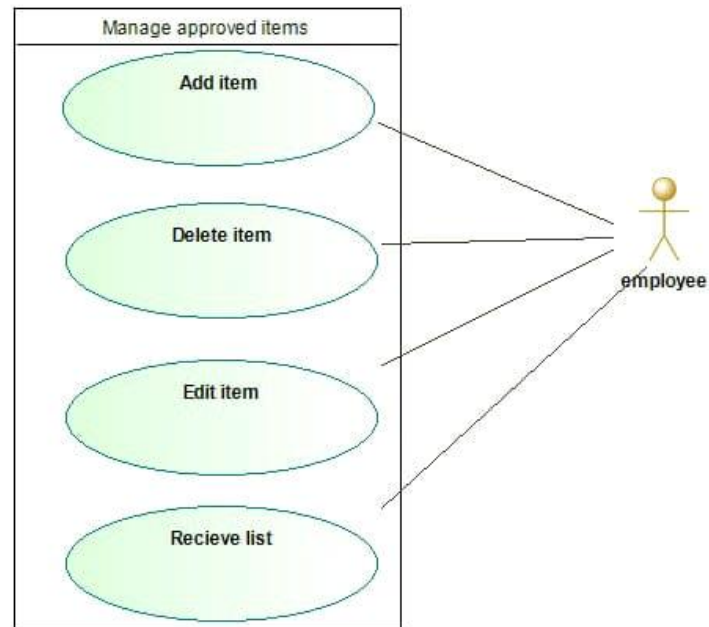
- Merchandise shall use HTP protocol for communication over the Internet and for the intranet communication will be through TCP/IP protocol.
- Information transmission should be securely transmitted to server without any changes in information through Web site encryption by using SSL.

10. System modeling

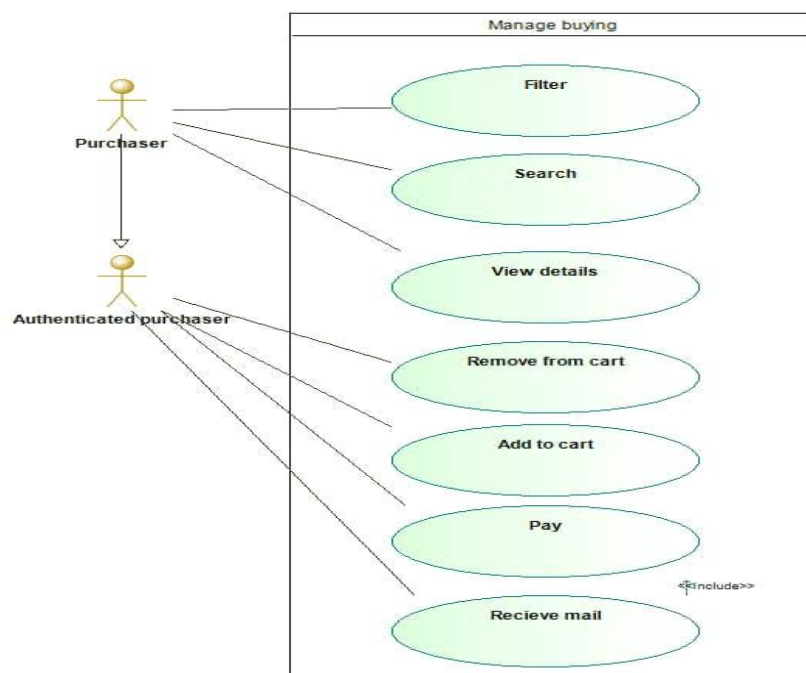
10.1 Use cases



System use case diagram

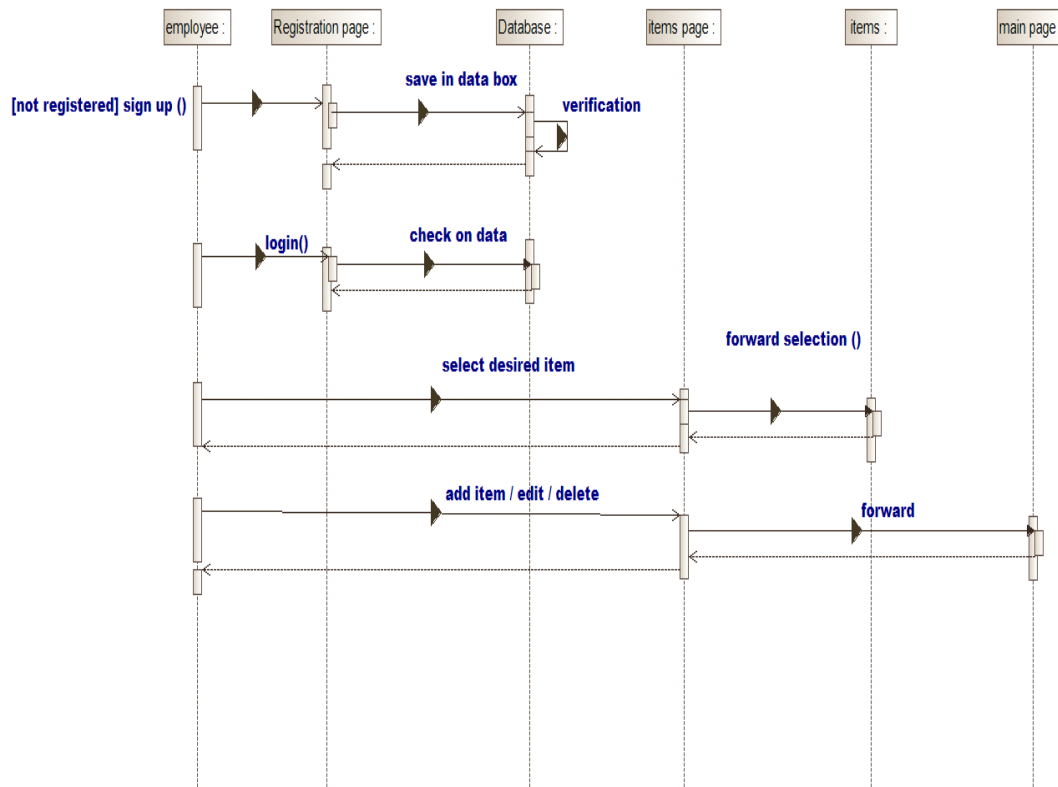


employee use case diagram

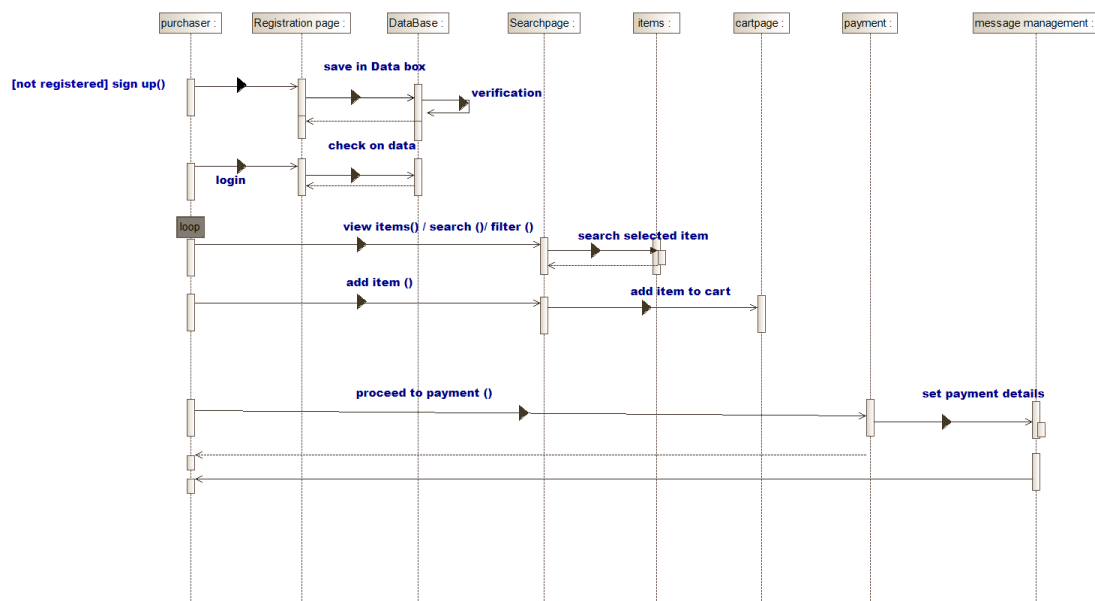


Manage buying use case

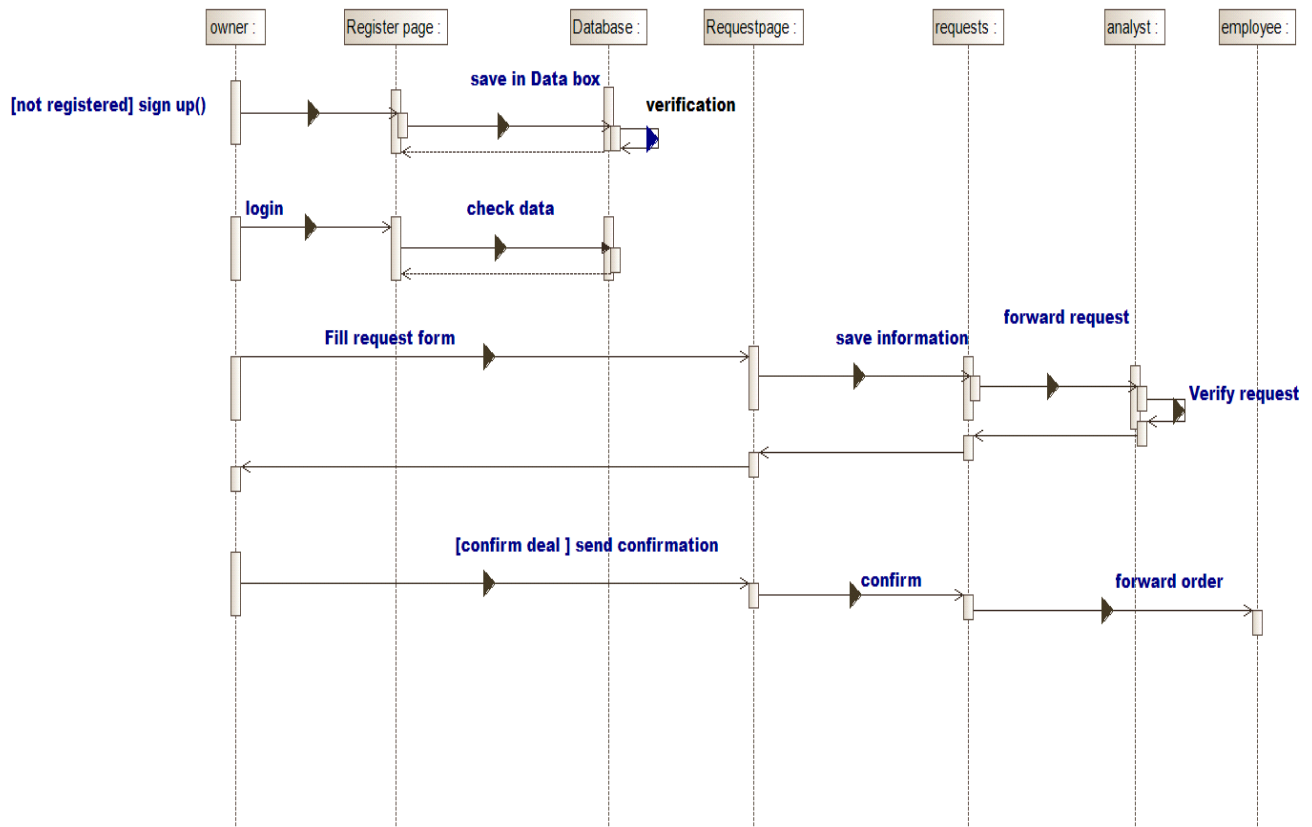
10.2 Sequence diagrams



employee sequence diagram

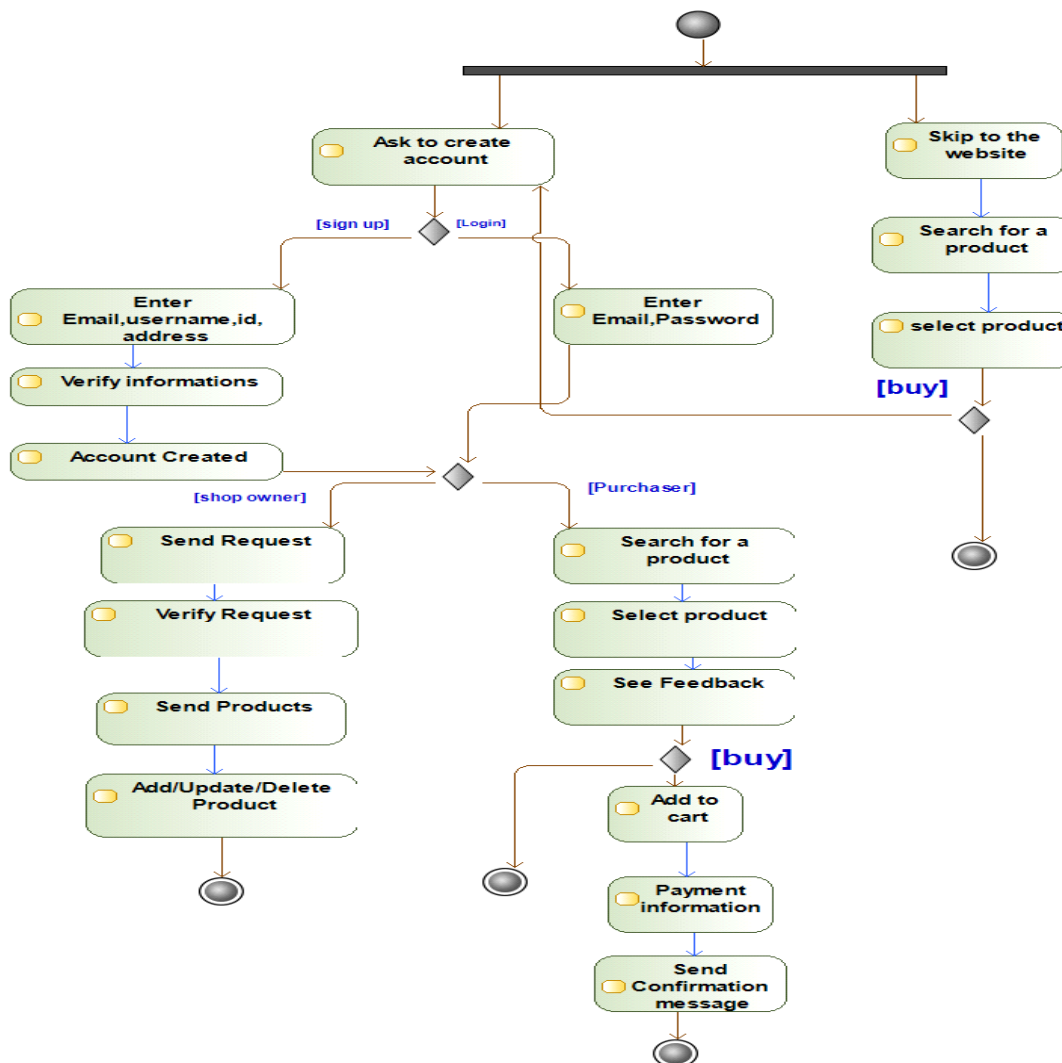


Manage buying sequence diagram



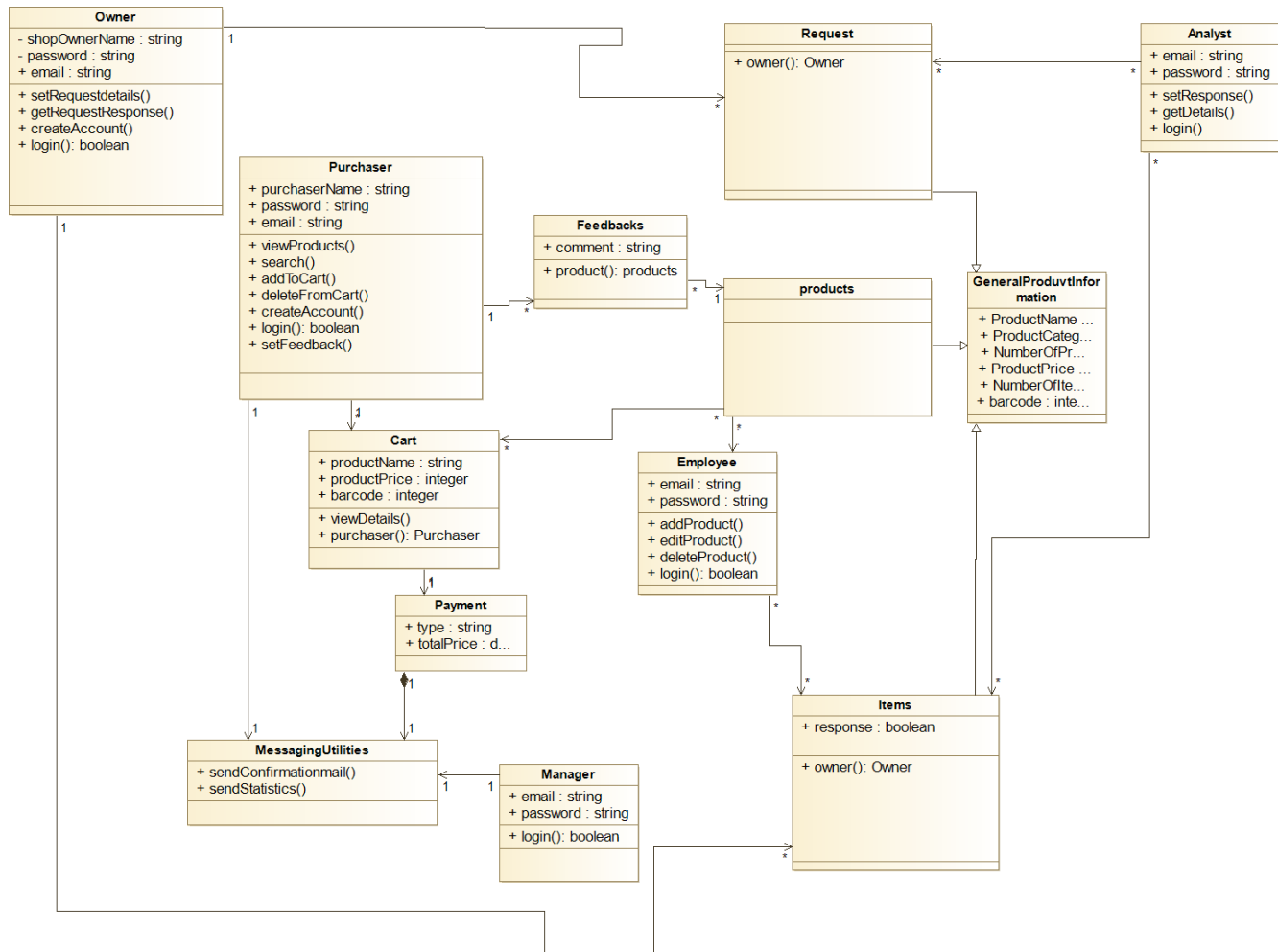
Selling products sequence diagram

10.3 Activity diagram



System activity diagram

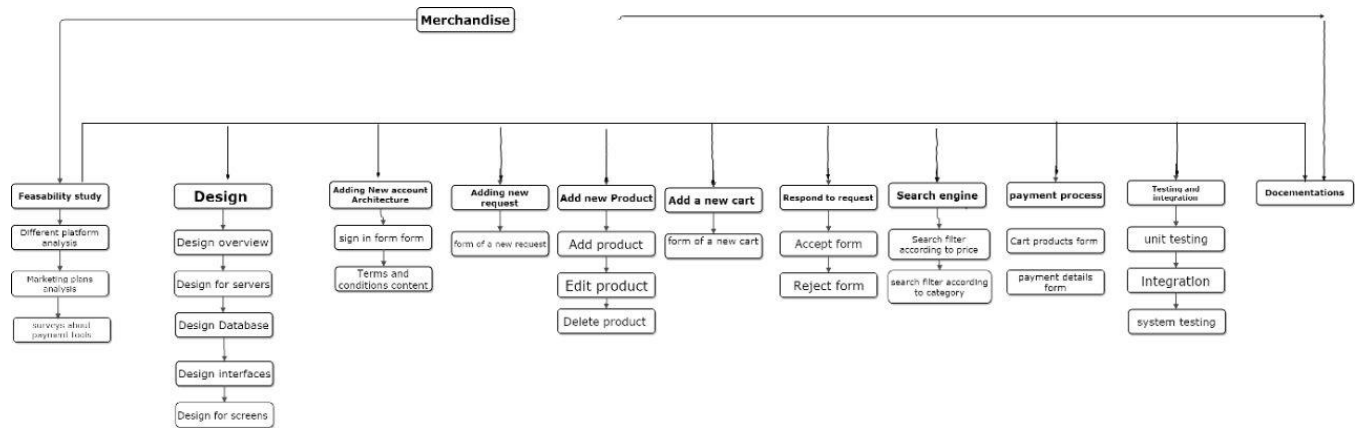
10.4 Class diagram



11. System Evolution

Version Number	Features added to the system
0.9.1	Maintain the faults of the previous version of system according to the rating forms of users and administrator reviews.
0.9.2	Add list of banned users to the database to prevent them from creating an account again
0.9.3	Maintain the faults of the previous version of system according to the rating forms of users and administrator reviews.
0.9.4	Send statistics to manager with sold products

12. Work Plan 13.1 Work break down structure (WBS)



14. Appendices

- 1- High quality images for diagrams & charts. Folder Name: "Diagrams".
- 2- Statistics images is found in Folder Name: "Statistics".

15. References

Survey:

<https://www.statista.com/>

Similar Systems:

<https://www.amazon.com/>

<https://www.jumia.com.eg>

<https://www.shopify.com>

<https://egypt.souq.com/>

Constraints and interfaces:

<http://www.freestudentprojects.com/studentprojectreport/project-srs/online-shopping-system-software-requirements/>