Web based Borderless Online Shopping

A dissertation submitted to the

School of Computing,Creative Technologies and Engineering

LEEDS BECKETT UNIVERSITY

In partial fulfillment of the requirements for the award of the degree of

Master of Science

In

Software Engineering

by

Amir Ansari

Student ID: 77172892

Submitted on

September 2016

Guided by

Joshua Samual

School of Engineering and Computing Sciences

(SOCS)

FTMS GLOBAL COLLEGE

CYBERJAYA- 63000

MALAYSIA

(Certificate from the Internal Guide)

Joshua Samual

Module Leader

FTMS Global College

Kuala Lumpur,Malaysia

CERTIFICATE

This is certify that this dissertation entitled **"Web based Borderless Online Shopping"** submitted in partial fulfillment of the requirements for the award of the degree of M.Sc in Software Engineering to the **LEEDS BECKETT UNIVERSITY, UK** through FTMS Global College, Kuala Lumpur,Malaysia is a bonafide record of the work done by AMIR ANSARI(STUDENT ID:77172892) under my supervision and guidance.

Joshua Samual

Signature of   the Guide

Date: 28/08/2016

Acknowledgement

After having completed my project report, there remains only the pleasant task of acknowledging the help I received in writing my reports. I really feel an immense pleasure to acknowledge all those people who had constantly support me during the project making & helped me a lot in writing my project report. It's almost certain that without their valuable & timely suggestions, it would have taken me years to complete.

Declaration by candidates

 I hereby declare that the work entitled **"Web based Borderless Online Shopping***"*** is an authentic   work carried out by me at "FTMS Global College" under the guidance of Mr. Joshua Samual**,** for the fulfillment for the award of the "MSc in Software Engineering" and this has not been submitted anywhere else for the award of any other degree.

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Abstract

Information is one of the most valuable things of the current information society. Fast access to needed information is critical in business at the present time. Companies have to spend huge amount of money for transferring information using various ways to customers. Internet based shopping is playing a vital role in user's life so everyone wants to purchase the products through internet without spending time in the market where they go and search for a particular product and there is no guarantee that customers will get the same products or not whereas it can also take more time so overcome all the problems which happens during the finding products in the market consumers prefer internet shopping where they can browse thousands of products within a minute so this the reason markets are unable to sell their products. However, internet shopping created many problems for market and day by day markets are losing their credibility so it is necessary that markets should take some steps with the implementation of the new technique to return their popularity. Technology has opened many doors for the people' lives so they can start their business internationally and most of the companies have already started their business on international level and e-commerce is one of them which is including international products also. Street markets can also work like an internet store market after including some functionality so users can get two ways for purchasing the products. Talented people who are developing something creative can be recognized internationally and can get a chance to earn money which can help in their studies or any other work. However, people can find information about the particular place before go there because unknown place is more risky so users will not feel any problem on the ground that they have already information about a city which can save time and money.

Key Points

- Online shopping
- Market
- Talented People
- Customers
- City search

CHAPTER ONE

Background Study

1.1 Introduction

E-commerce is the coming trend on the internet trading, which is going to the future trend because nobody wants to go to shop or other daily routine works like shopping, submission of different bills, getting movies tickets etc. Users can do all the works at one place using computers or any device which can support internet. Online shopping is way where user can buy a lot of things within a minute from their office or home using any computer device and can see the future products also. Now the customers' choice has changed, now they are interested to enjoy with international products so this web portal is providing international products also. Markets are the collection of the products where customers can go and enjoy with the products but these products are not sold due to the popularity of the online shopping so this project will help to sell all the products after creating an account in this web project and it will also generate the interest among the customers to purchase the products from the market. Students always develop something innovative in class or home but few are recognize by the people so this web portal will give the chance to show their talent internationally after creating an account on this web portal where they can upload their products with the price Today's busy word this project is providing many useful information which generally used by the people. For example, city search, internet banking, email system etc. This project is the combination of the different section some are free and some are paid.

1.2 Problem Statement

The challenges encountered by the existing system serve as a major drawback to the realization of efficiency and customer satisfaction. This project is developed keeping in mind all the future facilities of E-commerce. If anybody wants to purchase any product then he would go to market and moving various shops to choose a better quality according

to his desire. So it is wastage of time and money. The existence online shopping system is only concerned about their business and how can they sell their products online and no one care about market so now a days markets are losing their credibility. Talented people are unable to get a right platform and how can they earn money because they are unable to get proper guidance or a website which can help and people always face some problems at a new place to find something in a city.

1.2 Aim

The overall aim of this project is to give two choices to the users for purchasing the products according to their desires. First one is market and second one online shopping and it will also give the chance to the customers that they can buy international products on this web portal .Talented people can achieve their goals easily and can get the chance to earn the money. People can find important information about a place before go there on this web portal like finding school, bank, institute etc.

1.3 Objective

The main objective of the project is to make an on-line web portal. Obviously, the objective was not built in a day or two but it was a thoroughly planned idea that was really the need of hour. Customers can see different types of products domestic as well international and they can purchase products easily using their currency card. The basic idea behind the project is to reduce time and money and also increase the credibility of the market where people can go and purchase the products and it is a step to provide the services to market same as online shopping. Talented people should get their actual platform after creating something innovative and the people should not get trouble at new place to finding the something so this web portal will provide all the facilities which generally needed at a new place.

1.4 Feasibility Study

Once the scope for the **Borderless Online Shopping** project was defined, the next most important question to be asked was is this project feasible. As I haven't done a project relating to

e-commerce before the answer was not easy. A good amount of investigation was needed on various points to understand the feasibility of this project. Feasibility study was done on mainly given points which are as follows:

A) Technical Feasibility: Under this feasibility we analyze about system's requirements so for this software company no more system or workstation are required and in case of speed of input, output and print will not be slow. This concerned with specifying equipment and software that will successfully satisfy the user requirement. The technical needs of the system may vary considerably, but might include:

❖ The facility to produce output in a given time.

❖ Response time under certain condition.

❖ Ability to process a certain volume of transaction at particular speed.

❖ Facility to communicate data to distant location.

B) Operational Feasibility: There are many changes in the operational feasibility. In comparison to previous system this system provides like national products, international products, shopkeepers, students creative etc. There is no need to go at the point where services and goods are available. So it will save two major things time & cost.

C) Economic Feasibility: Under this study for cost/benefit analysis there are not required more cost for developing the system but the use this web site is very beneficial for the company as well as market.

D) Social Feasibility: Under this study we can say this web site not concern with the human life. The people have accepted my proposed project. My project Borderless Online Shopping is fully user friendly.

E) Management Feasibility: Under this study we can say this project mainly for management because it is useful for storing some data very advance way. The management has satisfied my project.

F) Legal Feasibility: Under this study we can say this web site is fully legal.

G) Time Feasibility: Under this study the project not very long and not depend many other condition like acts, markets etc. so we can say project will be complete within given time.

1.5 Scope

This project is developed keeping in mind all the future facilities of E-commerce. Although in todays' busy and last world where there is always a deficiency of time, this portal saves the time and efforts to buy the latest domestic and international products and will generate such a platform where markets' products can also be sold. When any one develop something innovative they can quickly recognized by the people and can get the chance to earn the money. People will not trouble in the future if they move to the new city because this web portal will include all the services which are needed in a particular city.

1.6 Conclusion

To sum up, the background study of the "**borderless online shopping**" illustrates that what are reason to choose this project to make an advance online shopping system which can fulfill all the requirements of the users who like shopping either internet or market with including some free services.

CHAPTER TWO

Literature Review

2.1 Introduction

Literature Review is the complete study of the project briefly with comparing existing work and these works can be cited easily which help to understands the whole idea about a particular topic and it also reduces the time for development because someone has already done some work on it and it can be seen different sources like journal paper, conference paper, books etc.

2.2 Theoretical Background

Computer has changed the users' mind and we are seeing new technologies around us in different fields every day. However, there were very few options available in the past and most of the people were unaware from these existing technologies because they thought that a high level study is needed before using these technologies but now time has changed and people are very familiar using these innovative products because these are user friendly products and no need high level study. However, in the past most of the people had only one option to work which was computer but now users can work at any place where the internet is available so it made an easy life where we can responds to anyone within few seconds. For example, smart phone, tablet which also reduces the calling price on the ground that there are many free application available where users can talk with other for a long time. These technologies are the more influence factor in the in the business which have given a good step for startup also where customers can interact companies using many free services. For example, social networking site, websites, blog etc. These sites are also important where companies can advertise the products. The e-commerce is the best example of the technology which is supplying not only national as well as international products for the customers including other free services.

According to study of (Measuring Impact of Consumer and Product features on E-commerce adoption in India- an Empirical Study 2014) "Rapid growth of internet technology and online banking is playing an essential role in the e-payment area which provides an online transaction

platform to support many e-commerce applications" which clearly stated that banks are very flexible with more secure and giving the persimmon to online transaction so that customers can pay money easily after purchasing something and it will be a secure transaction. The scenario of this project is based on online shopping with some additional features. This web based system is concerned to sell domestic as well as international products and a step to provide some facilities to market where the market's people can sell their products easily. ERNESTO D'AVANZO (2013), said that "online shopping and projection of online sellers that, according to a report by Forrester research, it account for 13% of total retail sales in 2010 an obvious corollary imagined buyers could have been satisfied while making purchase decisions and, in general, shopping experiences" which explained that customers trust is more important because when customers pay money for a product they think that website is genuine and banks are also providing some security before paying money and if the transaction failed after how many days the money will be refund. According to (Shubham Goswami, 2015), the efficiency of the users increases to purchase the products through online due to exhaustive product information, intelligent comparison as well as all the e-commerce websites are too advance where the customers can search a product according to their requirements which can save time and these type of the websites are first choice of the users which provide advance search options.

In 2005, electronic gadgets (41 per cent) was the first more demanded product which is sold through internet and other services sold percentage were also good like tickets (39 per cent) and apparels (36 per cent). In the world wide scenario, online apparel was the second-most profitable after jewelry and automobile. A study which is conducted between two different organizations Google India and TNS Australia in 2013 concluded that most searchable products were electronics which percentage was almost 34 percentage as well as apparels and accessories emerged as the second (30 percent) followed by books (15 per cent), beauty and personal care (10 per cent).

In 2014, apparel was the top category all metros in India according to MasterCard analysis. The products' demands were not same in all the part of India. For example, Most of the Chennai' people spent more money on clothes and jewellery which was closely to Bengaluru and both cities belong to south India so these products were highly demanded this part of India. There are different research which is conducted to know the reason behind the growth of the apparel

segment and they found that there are some characteristics which influence it and these are discounts, search of better deals, rising fuel price and so on. Moreover, companies know the users characteristics so they updating clothes three time in comparison to other products because almost 90% people buy clothes online because of good services and new brands.

(Fu Guo, 2016) , stated that there are many factors which increase the popularity of the online shopping where users can go through and search products through a particular website but it is highly competitive to choose a website because there are many websites exist on the internet with the some good review so it was seen from different reports that recommendations more affect to the users when they get some review about a websites and users started shopping from this website because it takes less time to get feedback from others and the existing customers also enable to give answers The some scholars suggested that who have studied on recommendations from development and progress of human society said that when people get some recommendations from others it affect the choices and enables them to learn quickly ,reduce waste, and avoid mistakes as well as one individual recommendation can affect the whole society of thinking.

(YaPing Chang, 2014), stated that there are many studies exist which are mentioned that customers' experience of overall impression of external marketing incentives important for purchasing products through internet with some other additional features consumers' sensory, emotional, and cognitive experience will influence customers' intention to purchase but on the customer experience it is based on two dimensions, namely functional experience and emotional experience and both are positive influence.

(Khim-Yong Goh, 2015) , stated that how the two websites GPI (Group-purchase institutions) and non-GPI website such as amazon.com where customers can only purchase fixed offered price product. However, GPI provides flexible amount of products for the customers where the consumers can purchase products with a good amount of discounts which is also concluded that when the users purchase products through GPI it will be cheaper in comparison to others. The GPI mechanism of conditional purchase addresses and this issue by offering the opportunity for customers to get advantageous from positive constraints interactions. GPI and potential loss depends of the negative constraint interactions and the conditional purchase mechanism shares

the same underlying principle of conditional cooperation. In those cases where conditional purchase is not given so customers buy products on the basis of the final whether this price is equal to the best available price or not and it is assume that price of the particular product is high and it is advised that choose safer options and do not purchase products through GPI. This GPI mechanism reduces the impact of detrimental consequences of conditional purchase which is associated with the negative constraint interactions in GPI (i.e., an insufficient number of buyers committed to a GPI) which lead the lack of supply of the good on the basis of the desired price.

According to (Anna Potůčková, 2015) , there are many studies which are mentioned that design of a product is more influence factor to attract the customers either it is internet store or offline store so most of the internet shopping websites are following the rule of the markets and trying to put best products at the home page which are highly focusable and shopping behavior is depends on   chosen aesthetic aspect of the product where color is also part of the aesthetic aspect but it totally different for individual. For example, dark green vegetables and light red apples shows the freshness and ripe taste as well as it also divide some categories and the perception of the product´s color is dependent on the context. In the some cases, consumers are also familiar with packaging of a product and these products can also refer to particular shops.

According to (Abdul R. Ashraf, 2014), based on the recent Internet World Stats (2013) survey, there are billions of users in the world who prefer shopping through internet but Asia is the greatest where almost one billion users used internet shopping and the Europe is the half of that number as well as in North America, there were only 273 million internet users. The overall conclusion of this survey is that number of users depends upon the business. For example, number of users is proportional to business which means that more number of Internet users will generate more business. However, other benefits of the ecommerce is also considerable which attract users towards it. Technology Report which is conducted in 2013 to gain the global information about the ecommerce said that in terms of the network readiness (i.e., a country's ability to exploit the opportunities offered by information and communications technology), developing countries (Pakistan, India, Bangladesh, Indonesia rank) was low.

(Mohd Layaq Ahamad, 2014) ,stated that In 2011 James , J.H. Liou studied the relationship between perceived risk, perceived value, on the users who used online internet shopping for every small to a big products and the main objective of this study was to focus on behavioral

intentions. In this research a sample of international air travelers in Taiwan was used. The result which is got from this survey showed that the result was positive affect on attitude in both perceived value and convenience have significantly. However, users' attitude also affect for purchasing products.

(Seung-Bae Parka, 2013), said that a survey was conducted about the online shopping of a particular country Korea in comparison to other countries, why Internet shopping was not so popular in this country and how it is changing now. In a one study it was mentioned that how the number increased 19 million in 2000 to 37 million in 2010 which stated that almost 74% of the total population used the internet and the more percentage of the internet users' age 12 years old or older. In terms of the amount, consumer had spent 20 trillion and 643 million won in 2009 but in 2010 it increased (almost 21.9%), and reached 25 trillion and 155 million won. The some researcher concluded that in next few years and this number will also increase due to rapid growth of the technology as well more trustable websites.

(Mohammed Rafiq, 2012) , stated that E-S-QUAL scale is important aspect to measure the services on the basis of the four electronic quality on the internet and it mainly focus on all cues and encounters that occur before, during, and after the transaction and reassessment and revalidation of the E-S-QUAL scale focus on cross-sectional design which is developed for one country but can work in multiple countries instead of focusing a particular focal retail organization.

The UK online grocery market is one of the most competitive in the world on the other hand, US market is more in terms of the niche market with less number of regional operators providing delivery mostly in urban areas. The best way to test E-S-QUAL is online grocery shopping because it is based on a big scale replenishment, low-involvement activity which is repeated a regular time intervals. Thus, online services quality is more important because the frequency of the transactions and the amount that customers spend on groceries is relatively high. For an experiment which was happened in Wal- Mart shoppers as respondents in the development of E-S-QUAL and provides some comparison for the study and the second test was for order formulation of the E-S-QUAL construct and it provides more structure would provide a more parsimonious view of how can customers perceive eservices quality.

According to (Catherine Demangeot, 2010), the concept of exploration reflect the reality when customers do shopping online and manipulate the virtual products and try to search products which they want to buy and gather all the information about the products (visual and verbal), and all the action which will be performed by the users will show on the computer screen and when the users click on a items it shows a new page with the some hyperlinks because it is not possible that all the items in a single page so customers have to find their way, so it is necessary that whether consumers have exploratory tendencies or not, whether its characteristic is intrinsic or an extrinsic motivation so it is basic and primary requirements before searching products it should be goal oriented.

(V. Geetha, 2015) , According to Zheng all the devices which is connected to the internet they have risk especially online shopping because a good number users make transaction through internet and there are five important strategies which can reduce such risks. (1) Information about the product, (2) payment security, (3) money-back guarantee, (4) previous experience of using particular brand or product and (5) buying a well-known product and it also increases the confidence to purchase the products online. Matic and Vojvodic conducted a survey in the university to know that why the customers feel insecure to pay money online and overall result showed that website security is primary aspect as well more frequent to online purchasing. There was another survey which concluded different result and analyzed that there are also another reason which also affect trust issue financial risk and non-delivery risk negatively. In 2004, Garbarine and Strahillvitz said that, How the information about the online shopping differ from two sources online shopping (men and women) and identified five risks (fraudulent site, credit card misuse, privacy risk, shipping problem and product failure risk) which is associated online purchasing products experimentally.

(Choon Ling Sia, 2009) , said that internet security is the primary and important factor for every websites which is connected through online but if the users are going to transfer money from one account to another account so it is necessary to know that users cannot pay directly without conducting a lot of research of that particular website because a lot of users know that there are many websites available which are fake and if the users pay amount they will lose the money and these amount is non-refundable and these websites trust differ from different cultures which is recognized and influence the consumer behavior and internet shopping research conducted

according to culture. However, most of the researcher opinion is that there are two web techniques which can generate effectiveness in building and initial trust can be heavily influenced culture. According to one researcher that first study is based on laboratory study with a micro level and conclude some results which is apply in different cultures and try to understand this is similar to previous one or affecting to its and also think that what changes needed to gain new environment.

On this web portal international products are also available so when users buy any international products they can pay the money of the product in their currency and it will be automatically converted the actual price of the product. According to Kim (2014) "B2C transaction that involves the exchange of money and goods, this seems to be a simplistic picture of trust dynamics" which explains that when the customers purchase any products online ,customers get date and time delivering the product so customers have to wait and trust of the company first time.

The online shopping is also playing an important role in IT industry and everything is based on e-commerce and a report Goparaju (2015) said, "a report released by Associated Chambers of Commerce and Industry of India (Assocham) along with Pricewaterhouse Coopers (PwC), according to a joint study conducted by them in 2014, the Indian e-commerce industry is expected to grow exponentially to $100 bn by 2019 from the current $17 bn, growing at a CAGR of 34% since 2009" which explained that e-commerce is the most important impact factor in IT industry and which are attracting millions of users towards it and so most of the companies are trying develop all the web application in to the mobile application some are already exist. This web portal is very user friendly and some basic requirements are needed. Users need to create an account before purchasing any product and fill the basic details and it is permanent account which can be used at any time. Reducing the popularity of the market where customers do not want to purchase any product because they think this is the wastage of time and money because online shopping portals give more discounts which is not possible in the market. Kang (2011), stated that

According to (WEISHENG CHIU, 2014),In a survey which was conducted in Taiwan and got the result that 90% people prefer shopping though online (ACNielsen, 2005), and also study

reported that almost 78% users would prefer shopping in next six months (MasterCard Worldwide, 2010). However, according to a report which is conducted by the Technology Division of the Ministry of Economic Affairs said that all the online users who purchase products from internet mainly college students and age between 20 and 29 years and the main reason to access the internet shopping websites for some specific products like sports products instead of the other items because it was the first choice of the customers which was increasing day by day and the overall profit of the market was based on these items. According to Hawkins, Best, and Coney (2004), life style is the way which affect the way of purchasing products either online or offline. However, online customers who purchase products through internet have a unique wired lifestyle and it involves consumers' attitudes, opinions, and preferences that relate to their online purchase patterns which is different from offline.

According to (Fangyuan Chen, 2015), it was mentioned in a study that how the gender affect purchasing the products through online because both men and women does not prefer same products and they buy according to their choice and suitability which make them decision making and this study showed that men prefer shopping as purely functional activity which motivate to buy a particular product whereas women focus pleasure seeking activity and they enjoy. The men purchasing' habits are efficiently as soon as possible whereas women like to browse the products to see their features and study about these products and it is not sure that they will purchase products. In a different survey which is conducted by the Baker Retailing Initiative at Wharton (2007 concluded that women respond strongly to the hedonic aspects of a shopping experience whereas men only focus to their mission whatever products they want to purchase instead of browse all the products and react more strongly to its instrumental aspects. However, in an experiment it was also seen that when a men go to shop to demand for a particular product and they want to find the products as soon as possible and if they get the products and happy with the products they stop searching products and returned home. However, in case of women it is totally different when they go for shopping they did not have any plan about the particular products' features and demand more products and spend more time on it because they think it is enjoyable movement and the same thing happens on the internet also.

"A website shopper with a specific gift purchase in mind was attracted by an on-site shopping recommendation to buy a fun gift for himself on impulse" which gives an idea about the selling the products online with comparing the price of the products and also other benefits which online web portal are more suitable for the users. E-commerce Company always pay more money on their employee and also invest money in different fields like, advertising, arrange the workshop, give free gifts to the users etc. XU (2014), said that "price discounts and bonus packs are the most widely employed sales promotion strategies, both online and offline". Shopkeepers can show their products online and also can mention details about their market where the customers can purchase the products after creating an account on this portal and talent people who are creating something innovative, they can also open an account on this web portal and can show their talent internationally and can earn money to sell their products. People can get the details about the city and what are the facilities available in a particular place because in this web portal is offering many free services which can be accessed by the people without creating any account.

(FLORIAN ZETTELMEYER, 2006) , stated that it is necessary for every customer who purchase product through internet so it is important an interaction between customer characteristics (e.g., the disutility of bargaining) and the payoffs from using the Internet. It was an essential survey and the report said that consumers who are disadvantaged in the bargaining process are more likely to use the Internet. According to standard economic, it is essential that when consumer purchase any products through internet their behavior should be positive and also related to their benefits and the only disadvantageous is the price negotiations different internet websites but those customers who dislike to conversation face to face to know about the products so they can get the more information about a particular product.

Security is the most important issue for all the web application which are running on the internet because sometimes company lost their data due to less security this is also a web application so security is the first priority so, B-Y Chang, (2015) said that "Security concerns had a significant negative effect on the intensity of e-commerce use. He suggested that a lack of data security and privacy makes it difficult for individuals and firms to engage extensively in online transactions" which explain that in the past, web system was not more secure so most of the people avoid to pay money online but this web portal is more secure no one can get banks details except customers.

(Dongmin Kim, 2010) , said that It is essential goal for every ecommerce companies which is B2C because every success of an internet store depends on it and reduce the risk during the transaction of the money for products and increased the chances to buy the products through internet. Therefore it is an important for every success of online store is that how to convince to customers and how can they trust to buy the products through this store and which also includes some other features like customers' belief regarding the ability, integrity, and benevolence of online retailers. There is only one mechanism on which users can trust is store's website. The assurance refers to all the problem which are related to safety and always try to include some good algorithm which is fast and best for purchasing products and this can be provided by the an Internet store itself, by customers, or by a third party organization. In this report, it is noted that how this characteristics is different from others and also suggest to business managers to compare with others who are using this features because this survey included almost 85 Internet stores and clouded the data and there two important aspect first one is safe shopping our security guarantee" and another one which is also important and consumer always from which Hacker Safe.

(Kim J. , 2012) , stated that there are many factors which are affecting the internet shopping and these are essentials

❖ **Consumer Factor:** It is the first factor which is consumer side and included some features like privacy, security, time saving, ease of use, convenience, enjoyment, previous experience, brand reputation, and tactility and these items are related to customers' attitude, feeling, or decision.

❖ **Marketing Factor:** The marketing technique is important for every business but in internet shopping is different because it operated through internet so advertisements are important through different websites and social networking sites**.** The marketing' items are based on the 4P's which are product, promotion, place, and price. The marketing factor is more practical attribute, such as delivery methods where as consumer factor is more emotional attribute

❖ **Technology Factor:** The ecommerce total depends on the technology so it is necessary to know about the technology availability and efficiency which is important for purchasing products. There are three main technological factors were suggested as important to online shopping: the availability of personal computers and Internet access, download time, and representativeness of pictures and colors

2.3 Existing System

The existing online shopping systems are only concerned about the selling domestic and few international products with including some free services available. According to (Exploring the Effects of "What"(Product) and "Where" (Website)Characteristics on Online Shopping Behavior, 2016) "research on online shopping behavior offers various measures of consumer engagement" which explain that there can be many ways for the customers to choose a particular websites and purchase from here.

2.4 Comparison between Existing System proposed System

The comparison of the systems can be based on different functionalities which are below:

S.No	Features	Flipkart	Amazon	**Ebay**	**Borderless Online Shopping**
1	GUI	Flipkart shows more items at the home page and customers can purchase products from here because all new items will be here without moving another page.	Amazon has a clean interface with graphic icons for the product	Ebay is different and its interface is combination of the azmazon.com and askmebazar.	It will show the mixed items on the home page of different categories national as well international products with including some other services link.
2	Product Price	Product price is high in comparison to Amazon and Ebay because it is domestic company and only fulfill Indians' customers' requirements and it is popular in this country.	The products which are available in amazon store are lower price because	Product price lie between Flipkart and Amazon and it has also may branches in different countries.	Products' prices will be low because it is also following some guidelines of amazon online store but with some additional

			this company has many branches in different countries with different number of products.		features. People can compare the prices online store and markets' products before purchasing
3	Popularity	Flipkart online store is only popular in India and it is first choice among the users with limited number of products available which are demanded among the customers.	It is an international store and its popularity is different in individual country but in India it is the 2nd most popular website after amazon.	The same popularity as like amazon online store because it is also an international online store.	The objective of this website also open in multiple countries with including many markets which are also selling good number products so it will be a popular store.
4	Market Product	There are no special section for markets where markets' people can advertise about their products and users can see products before purchasing.	This store is not focusing about markets and they are only concerned to sell their products online.	Markets information is not available.	In this portal there is a special section for markets' products where the people can create an account and put the information about their markets.
5	Free Service	Limited free services available like users can post information about a product in advertisement page.	No Free services available	No Free services available	There are many free services available which are beneficial for the users. For example, city search, online banking, quizzes etc.

2.5 Software Development Life Cycle

The software development life cycle (SDLC) is the process which includes planning of a project and it is first step to choose SDLC before the development start. However, overall design

and work functionality will depends on the first stage so it is essential before developing any software spend more time on this stage and make a good plan with collecting all the requirements of the customers. There are different ways available to develop a project with different life cycle which depends on the project requirements and each methodology depends on a particular software (tutorialspoint, 2016).
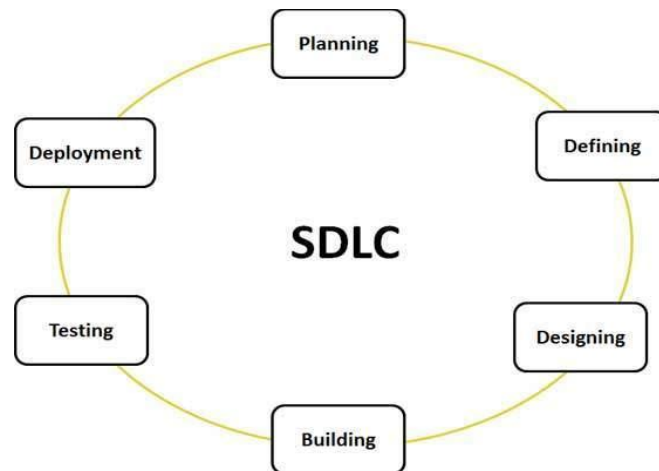

Fig 2.5.1 Software Development life cycle process (tutorialspoint, 2016)

➢There are different software development life cycle models available which are frequently used among the developers for a project development but few are more popular as well as important among all the cycle models which are:

1. Waterfall Model
2. Iterative Model
3. Spiral Model
4. Prototype Model
5. Agile Model

1. Waterfall Model: The Waterfall Model was the first life cycle model which introduced in the software development and it solved many big problems which was occurring during the software development with giving a new direction and it is also called linear-sequential life cycle model. The most key point of this life cycle is that every phase is dependent on each other and first phase is important to complete before moving second phase (tutorialspoin, 2016). The life cycle of the water fall model which will complete whole process in different phases.
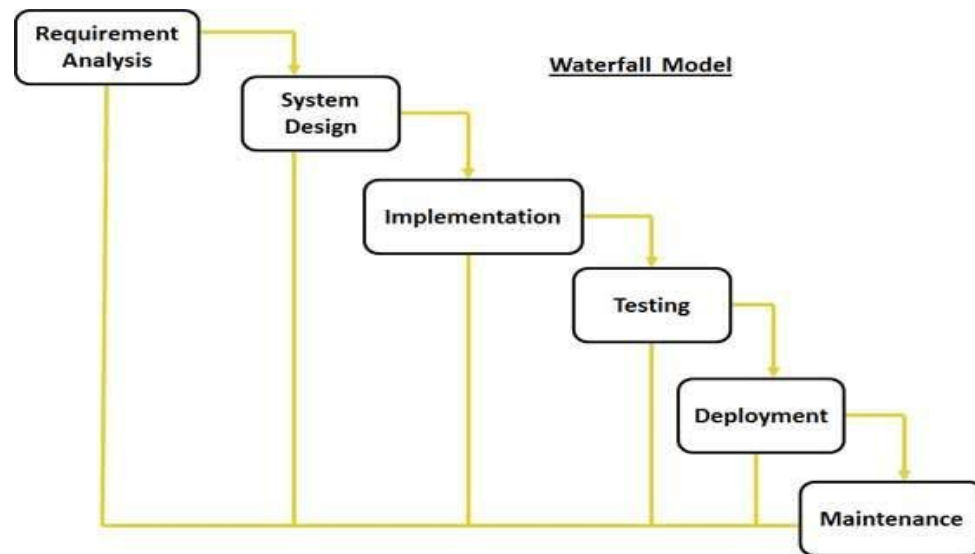
Fig 2.5.2 Water fall Model (.tutorialspoint, 2016)

Phase1) Requirement Gathering and analysis: The first step of the software development using waterfall model is the requirements gathering from basic to advance features of the project' demands and analyze it and prepare documents.

Phase2) System Design: The completion of the first phase now the time is to move second   phase which is design the system whatever the requirements gather from the first phase to use these information and prepare good structure which fulfill all the requirements and showed to customers about the functionality of this project.

Phase3) Implementation: Whatever input comes from above two stage on the basis of that developers start the process of the development and first, a small portion of the project develop which is called units and it and the integration of the all the units in the next phase because many software engineers work in a project with the different section of a software and each unit will also be tested using unit testing.

Phase4) Integration and Testing: The completion of the phase3 which was the unit development and now all the units or small programs will be integrated into a system and whole system will be tested for any failure.

Phase5) Deployment of system: The successfully completion of the above four phases now the system is ready for the deployment after successfully testing of the functional and nonfunctional and this system can be deployment any environment real or virtual.

Phase6) Maintenance: This phase can be occurred any time when the system will not work properly and this problem can be solved by any software developers who have proper knowledge about this technology because everything is documented.

2. Iterative Model: It is a simple and fast development of a software development process in comparison to Waterfall Model because there is no need to collect complete requirements at one time in this model some portion of the requirements will be needed and start the implementation using these information which will be reviewed and it will be continue the process until the process complete (tutorialspoint, 2016).
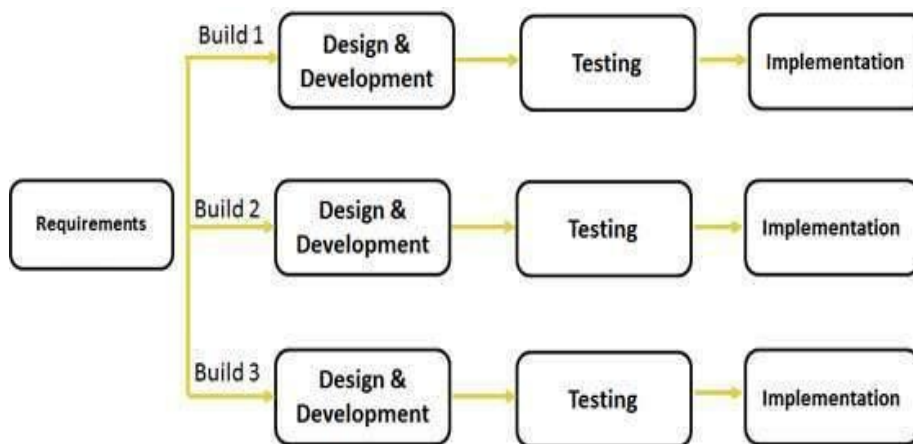
Fig 2.5.3 Iterative Model (tutorialspoint, 2016)

3. Spiral Model: This model' characteristics is the combination of the iterative development with the systematic, controlled aspects of the waterfall model or any sequential linear development model. There are four different phases of this spiral model to develop a software and a software project will repeat its cycles many times through these phases which is called spiral (tutorialspoint, 2016).
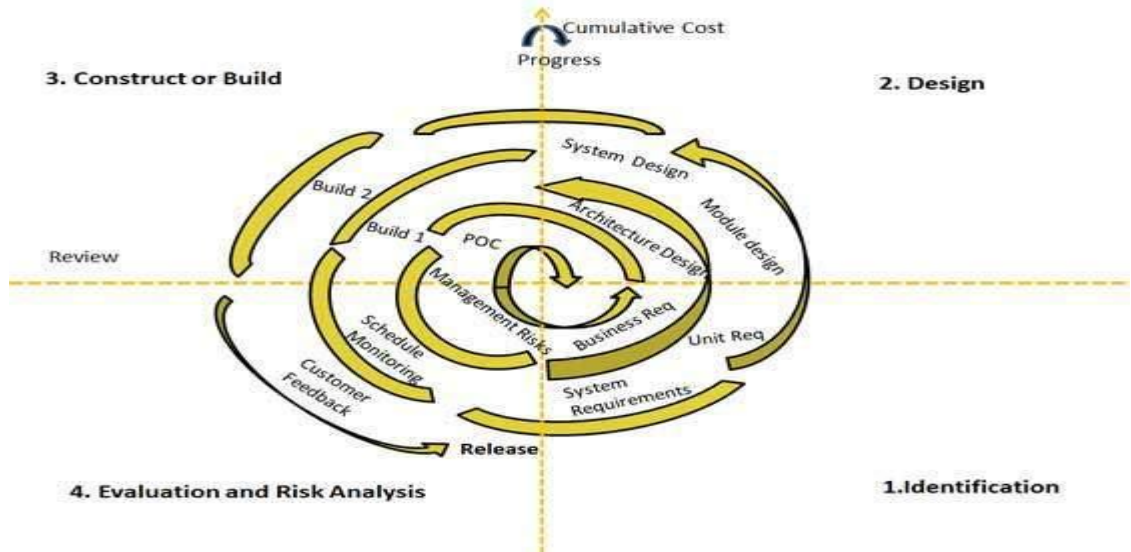
Fig2.5.4 Spiral Model (tutorialspoint, 2016)

Phase1) Identification: It is same process as requirements gathering in waterfall model but only slightly different which is, instead of gathering requirements at one time in this process system analyst communicate with the customer in continuous manner and this process start from baseline spiral.

Phase2) Design: The system structure is associated with different types of the design and it starts from conceptual design in the baseline spiral and contains architectural design, logical design of modules, physical product design and final design in the subsequent spirals.

Phase3) Construct or Build: This phase is completely based on the development process of the product at every spiral and when the design is completed to get the customer feedback.

Phase4) Evaluation and Risk Analysis: This is the final step of the software development which includes identifying, estimating, and monitoring technical feasibility and management risks, after the testing of the software customer evaluates the software and provides feedback.

4. Prototype Model: This model is very popular during the system development and most of the project development process is based on this methodology which is a successful model. In the beginning, it shows the functionality of the product under development but may not hold actual logic. The one of the good reason behind this popularity is to get valuable feedback from the customers and try to understand what the customer expected from this product (utorialspoint, 2016) and the phases are:
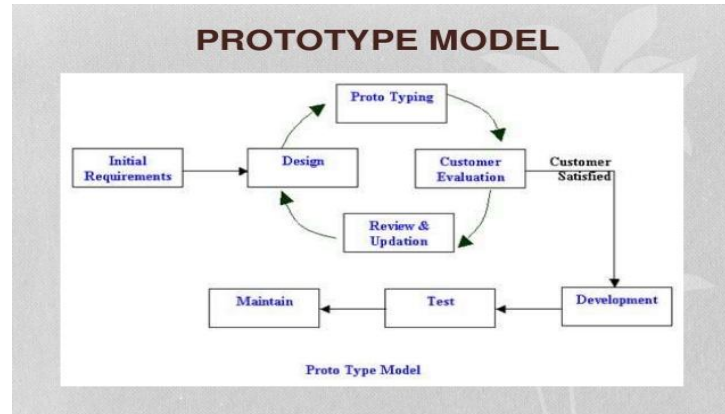
Fig 2.5.5 Prototype Model (tutorialspoint., 2016)

❖ **Basic Requirement Identification**: It is a first step of the prototype model which includes the basic product requirements especially user interface and in this phase complicated details like performance and security can be ignored which are internal and external design.

❖ **Developing the initial Prototype:** In this phase, the initial prototype is developed where the developers can show the requirements and user interface and this is not sure that these features will exactly work as actual software developed.

❖ **Review of the Prototype:** The developers will show the demo of the prototype to the customers or other important stakeholders and this step is essential because customers' feedback will help to remaining part of the project development.

❖ **Revise and enhance the Prototype:** This phase is the discussion between company and the customers based factor like time, budget and technical feasibility of the actual implementation and whatever changes customers want it will be incorporated in the new prototype model and this cycle repeats until the customers' expectation are fulfill.

5.   Agile Model: This model is associated with two different software process model iterative and incremental. The main objective of this model is to deliver the product to the customer quickly and break the product into small segments and specify the time of the completion of each segment of the project. Every iteration involves cross functional teams working simultaneously on various areas like planning, requirements analysis, design, coding, unit testing, and acceptance testing. The disadvantageous of this model is the there is no documentation needed which can create problem during the maintenance. There are different Agile Manifesto principles:
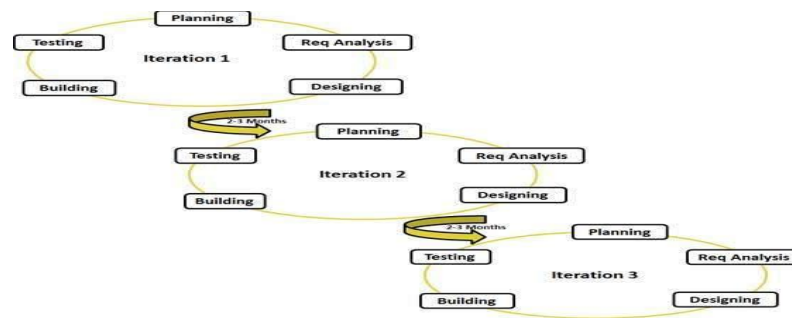
Fig 2.5.6 Agile Model (tutorialspoint, 2016)

❖ **Individuals and interactions** - Motivation is the important factor during the software development which increases some confidence and same as self-organization as well as interactions like co-location and pair programming.

❖ **Working software** – There is no documentation in the agile approach so demo of the software is considered a best way to communicate with the customer.

❖ **Customer collaboration** – In this model, system analyst does not gather all the requirements in the beginning of the project so continuous customer interaction is very important to get the proper requirements.

❖   **Responding to change** – This is the final step which occurs when the changes needed on quick responses.

2.6 Overview of Resources Available

This project has to be quite flexible in terms of requirements needed. It should use the existing machines and must not have any special requirement to be able to use the E-commerce System without any (or with very less) changes. The project must use the existing software, or free software that does not have any licensing issue to keep the cost less. The requirements are as follows:

A) SERVER-SIDE REQUIREMENTS:

i)   Hardware Requirements:

❖ Processor   :   Core i3 or above

❖ RAM   :   1 GB or above

❖ Hard Disc   :   20 GB or above

B) CLIENT-SIDE REQUIREMENTS

ii) Hardware Requirements:

❖ Processor   :   Core i3 or above.

❖   RAM   :   1 GB or above

❖   Hard Disc   :   2 GB or above.

C) TOOLS AND LANGUAGES USED WITH THEIR FEATURES

Every project needs some tools and programming language that has to be decided in advance during the analysis. This project also uses quite a number of tools as well as languages which are explained below in detail. This project can work on both Windows and Linux platforms but this project is tested only windows side:

C.1) TOOLS USED

❖ **J2SE Development Kit –** Java 2 Platform standard edition includes tools useful for developing and testing programs written in the Java programming language and running on the Java platform.

❖ **MySQL –** MySQL has become the most popular open source database and the fastest growing database in the industry. MySQL offers several key advantages:

- Reliability and Performance
- Ease of Use and Deployment
- Cross-Platform Support

❖ **Apache Tomcat –** Tomcat is the servlet container that is used in the official reference implementation for the Java Servlet and Java Server Pages technologies. Tomcat is developed in an open and participatory environment. It is free open source and works on both Windows and Linux.

❖ **Eclipse:** This is a technology which is used to implement many computer languages (Java, JSP, HTML etc.).There are different version of eclipse available but for web application eclipse IDE for Java EE Developers will be required.

C.2) LANGUAGES USED

The project uses the **J2EE platform** and its technologies. Some technologies will be used for a little work and some will be used throughout. The following is a complete list of all technologies and their use in the project in detail:

❖ **JAVA –** It is one of the most powerful Object Oriented Platform Independent Language. Java is used in most of the project in one form or another

❖ **JSP –** Java Server Pages or JSP for short is a server-side technology that takes Java language with its inherent simplicity, and uses it to create highly interactive and flexible web applications.

❖ **JavaScript –** JavaScript is used for client- side scripting. It enables the web pages to have some programmatic functionality in the browser. JavaScript works with and can manipulate the HTML page in which it is embedded.

❖ **Servlet –** A Servlet is a Java program that generates dynamic web content. They are written using the Java Servlet API and are managed by a Servlet container such as Tomcat. The Servlet processes the user request, builds a response, and passes it to the container which it back to the user.

❖ **HTML –** HTML or Hyper Text Markup Language is used creating web pages. HTML pages are static and do not interact with the user but can be made interactive by adding JSP elements them.

❖ **XML –** Extensible Markup Language or XML for short has become the de facto standard for data interchange on the Internet.

2.7 Conclusion

To sum up, all the paragraph of literature review illustrates that online shopping is all depends on the customers' choice and how they choose a particular website for the shopping because trust is the more important in internet shopping and most of the researcher believe that before developing any online shopping system it is necessary to compare how the proposed system can differ from others existing system.

CHAPTER THREE

Methodology

3.1 Research Methodology

It is a technique to find the facts and opinions of the given research which tells that how this research is conducted. There are many information available of the existing system and it may be success or failure of online shopping system. There are many sources available which helped to conducting the research about ecommerce and gave some good points and bad points about it. For example, Internet, meetings, interviews, questionnaires, sampling and other techniques are used to collect the information about this system.

3.2 Research Method

There are various ways for conducting a research but two techniques are essential to collecting data from users which are Qualitative and Quantitative but in this project Qualitative technique is used which collected the individual response from users.

3.2.1 Qualitative Technique

It is mainly an examining study which gives an idea about the underlying reasons, opinions, and motivations. It also includes vision of the problem statement and try to develop a strategy for conducting research as well as finding the thoughts and opinions. Qualitative Research methods is not uniformly because it is based on unstructured or semi-structured techniques. For example, some methods conducting qualitative research are individual interviews, and participation/observations etc. According to (Factors influencing electronic commerce adoption in developing countries:The case of Tanzania, 2014) said that it is necessary that before conducting any online shopping survey

it should keep in the mind that participant should be familiar with internet shopping so the actual results can be obtained.

3.3 Software Development Methodology

The software methodology is chosen for this proposed system is Prototype Model on the basis of the functionality because it is a complex project which includes different areas so it is very difficult to collect all the requirements at one time. However, a small portion of the project which is developed can be seen by the customers and if they want any changes it can be done and the same process will repeat.

3.4   Research Question and Survey

This survey is conducted on the basis of the Qualitative Technique and it is conducted from different categories' people because this system is associated in different areas and it is collected response from individual responder and on the basis of the following questions:

1. How often do you buy products online?
○ Extremely often
○ Very often
○ Moderately often
○ Slightly often
○ Not at all often

2. On which website are you least comfortable buying from an individual you don't know?
○ eBay
○ craigslist
○ uBid
○ eBid
○ Amazon Marketplace

○ Google Product Search

○ Other (please specify)

[   ]

3. In the past 6 months, which of the following superstores have you shopped at? Please include online shopping as well as in store shopping. (Please select all that apply.)

☐ Big Lots

☐ BJs Wholesale Club

☐ Costco

☐ Home Depot

☐ K Mart

☐ Lowe's

☐ Menards

☐ Sears

☐ Sams Club

☐ Target

☐ Walmart

☐ I have not shopped at any of these stores

4. How important is price to you when choosing this type of product?

○ Extremely important

○ Very important

○ Moderately important

○ Slightly important

○ Not at all important

5. Is the shipping time of our product reasonable?

◉ Extremely reasonable

○ Very reasonable

○ Somewhat reasonable

○ Not so reasonable

○ Not at all reasonable

6. Compare to our competitors, how this project will be effective?

- ○ Much more effective
- ○ Somewhat more effective
- ○ Slightly more effective
- ○ About as effective
- ○ Slightly less effective
- ○ Somewhat less effective
- ○ Much less effective

7. How innovative is the project?

- ○ Extremely innovative
- ○ Very innovative
- ○ Somewhat innovative
- ○ Not so innovative
- ○ Not at all innovative

8. If you are not likely to use our new project, why not?

- ○ Do not need a product like this
- ○ Do not want a product like this
- ○ Satisfied with competing products currently available
- ○ Cannot pay for a product like this
- ○ Not willing to pay for a product like this
- ○ Other (please specify)

9. Do you like our project, neither like nor dislike it, or dislike it?

- ○ Like a great deal
- ○ Like a moderate amount
- ○ Like a little
- ○ Neither like nor dislike
- ○ Dislike a little

○ Dislike a moderate amount

○ Dislike a great deal

10. What changes would this service have to make for you to give it a higher rating?

```
┌─────────────────────────────────────┐ ▲
│                                     │
│                                     │
│                                     │ ▼
│ ◄ ▌                              ► │
└─────────────────────────────────────┘
```

3.5 Conclusion

To sum up, technology has given a new world where everything is easy and does not matter where you are because you can do any work from that place. However, there are many data available on the internet which shows that how the internet shopping is popular among the users and in this survey most of the users were familiar with these questions.

CHAPTER FOUR

Data Analysis

4.1 Introduction

The survey is conducted around the thousands number of users in different areas to know their opinions about this project and almost every user gave the proper response of the each question with some logic.

4.2 Statistics of Respondent

The response collected through many sources like social networks, workshop, colleges etc. However, mostly respondent age was between 20-35 years and all had familiar with the internet shopping and they access shopping website 2-3 times in a day to know the future products. The respondent responses are:

1)

How often do you buy products online?
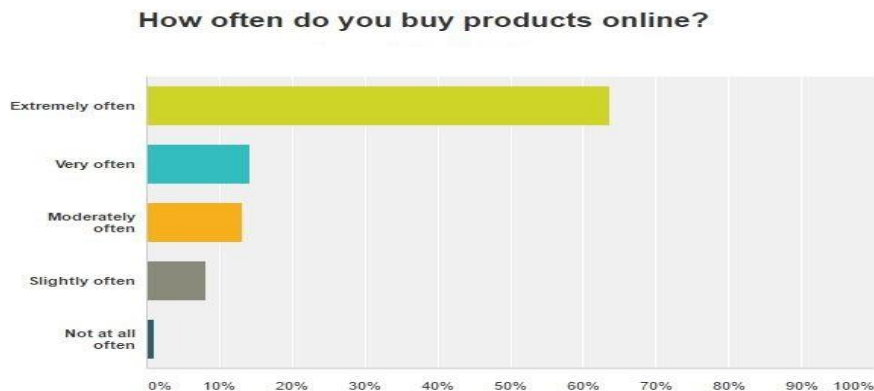
Fig 4.1 answer 1

➢ **Description:** It can be seen from the above result that almost 65% people purchase products through internet and the overall percentage of the users who like or dislike was also good and few of them dislike internet shopping and the reason behind is that lack of information.

ii)

On which website are you least comfortable buying from an individual you don't know?
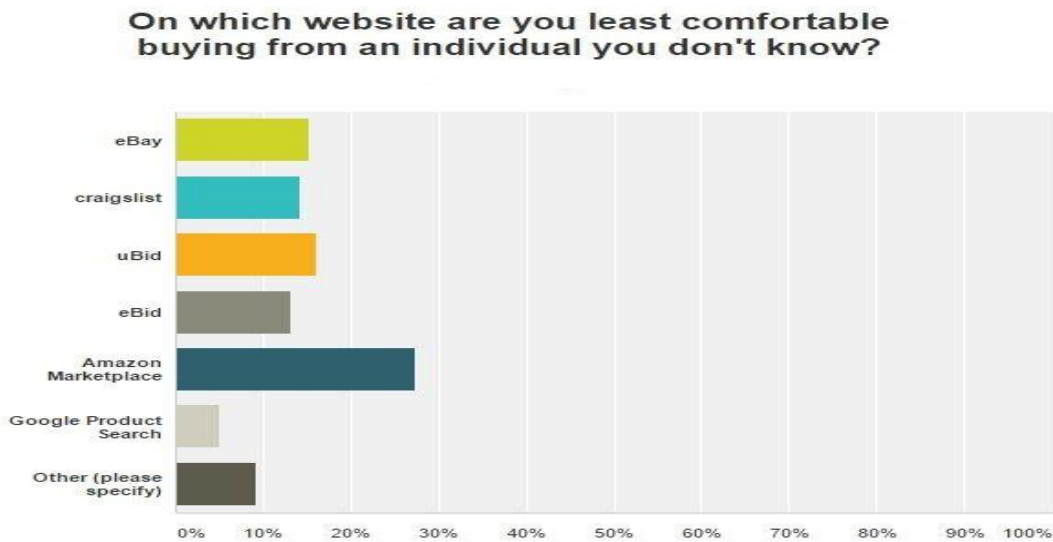
Fig 4.2 answer 2

➢ **Description:** The above question was important to know that how the users are comfortable to purchase products through online from which particular website they used. The respondent also gave the reason behind the disliking a specific website.

iii)
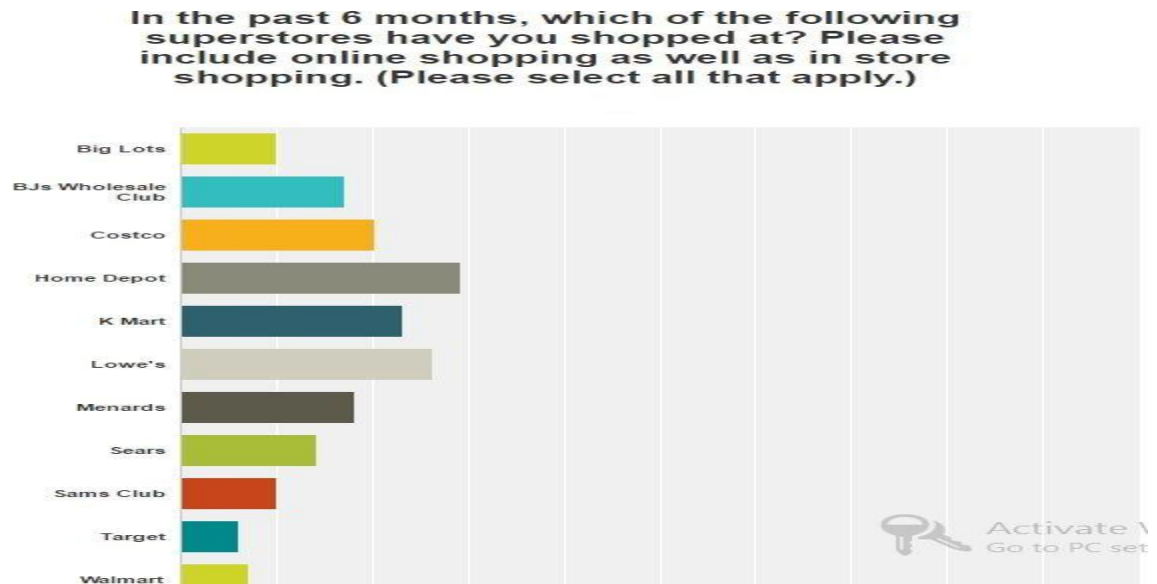
Fig 4.3   answer3

➢ **Description:** The above question was based on the markets popularity because in this project there is a section which included market descriptions and the respondent gave the current data about the popular market.

iv)
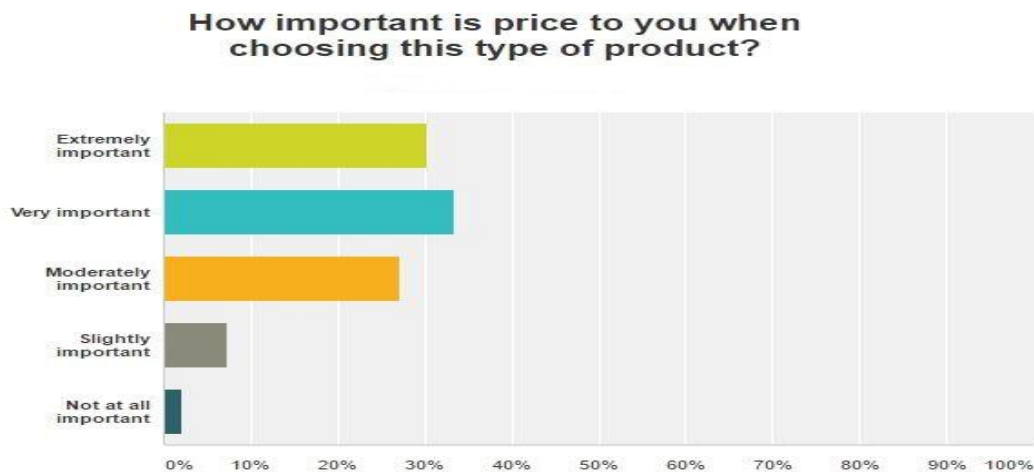
Fig 4.4 answer4

➢ **Description:** The price which is an important for every project because it depends on the customers' budget and always most of the users try to find out the products according to their requirements.

v)

Fig 4.5   answer5

➢ **Description:** The author asked about his companies' products delivering time and got the good responses because he mentioned appropriate time of the national as well as international product.

vi)
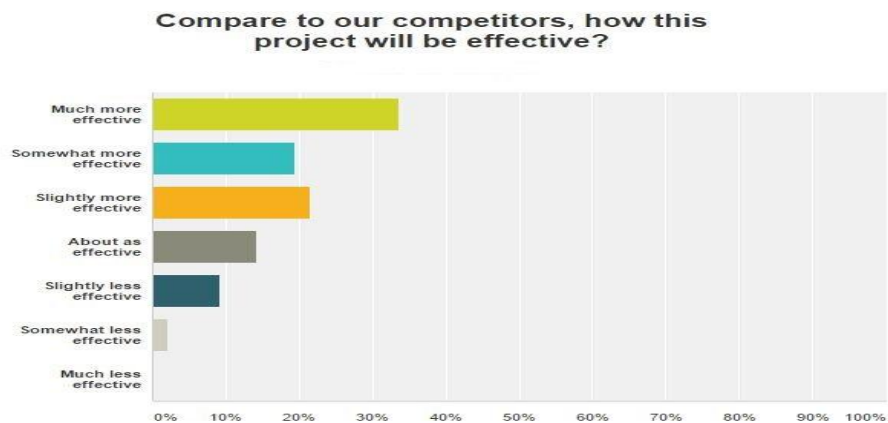
Fig 4.6   answer 6

➢ **Description:** The above question asked to the users comparing existing system to the proposed system on the basis of the every individual feature and how this project can help to their lives and how much it will attract to the customers.

vii)

How innovative is the project?
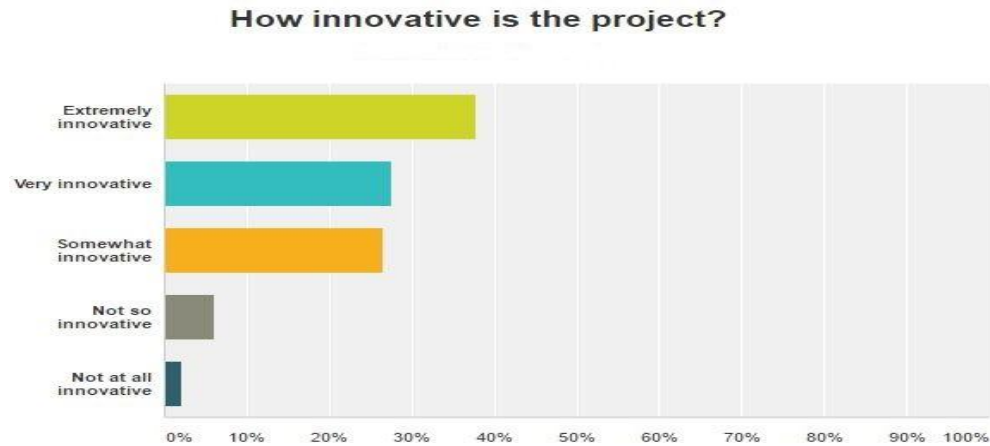
Fig 4.7 answer 7

➢ **Description:**   This above question is based on the compete research with including all the services which are available in this proposed system and how this innovative with others existing system and respondent gave many answers of the project innovation.

viii)

If you are not likely to use our new project, why not?
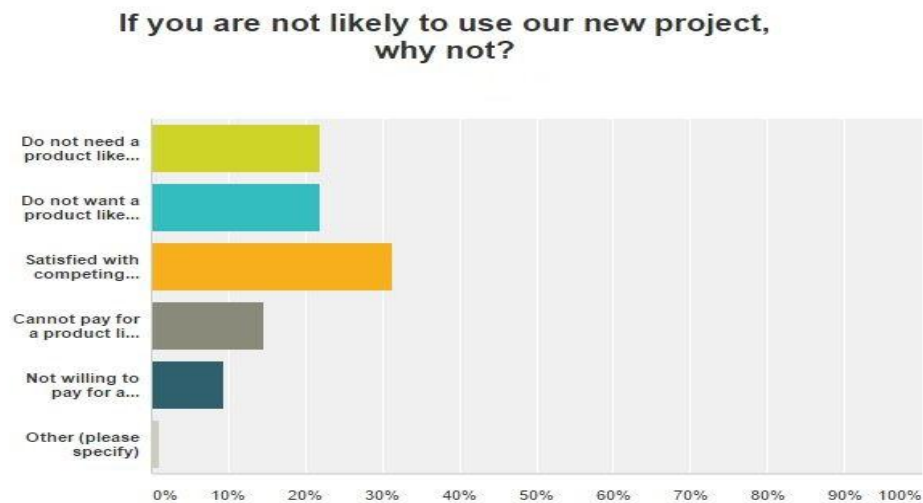
Fig 4.8 answer 8

➢ **Description:** The author asked above question from those people who do not like this project to know the reason behind this disliking and try to modify or include some contents on the basis of their opinions

ix)
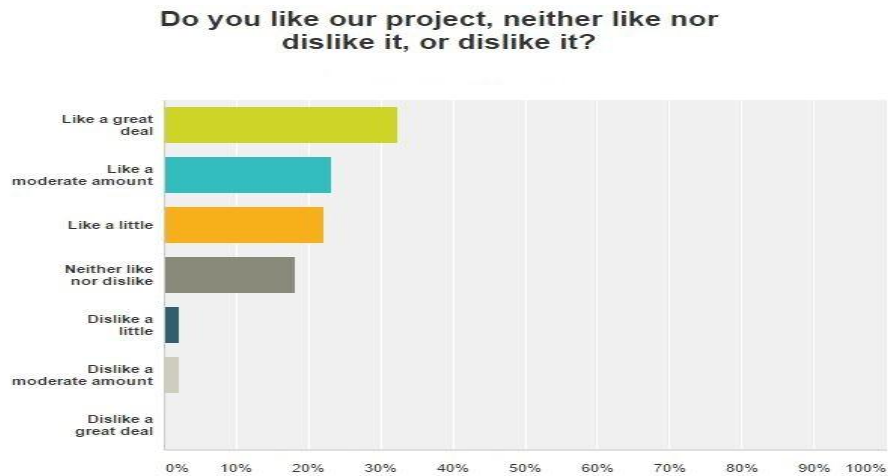
Fig 4.9 answer 9

➢ **Description:** The author asked overall opinions about the proposed system including liking, disliking etc. However, it was a mixed voices of the respondent and they also gave good suggestions to improve the services

4.3 Conclusion

The overall survey gave the positive feedback of this system and also mentioned some important points which can be included based on the users' opinion and try to deliver a good system and it will be user friendly and help to the people.

CHAPTER FIVE

System Analysis and Design

5.1 Introduction

❖ This system is more feasible in many ways which can be seen in different aspects.

❖ **Output**: The project is created for report and printouts as output of the portal's all static or dynamic web pages.

❖ **Inputs**: Input of the project through form of Java Servlets under the following points.

➢ **Accuracy**: Data will be always accurate because data enter through textbox and combo box with fixed length and data type also. Wrong data not accepted by the project because each field uses data validation.

➢ **Timeliness**: Data is access very fast because the database is MYSQL and not complex calculation present in the project.

- ➢ **Proper format**: For proper format input and output DHTML, FrontPage and Java Servlet are used.
- ➢ **Economy**   : The data will be produced at the least cost.
- ➢ **Files:** For storing the data MYSQL tables are used through Java Database Connectivity (JDBC). This is implementation on relational database management
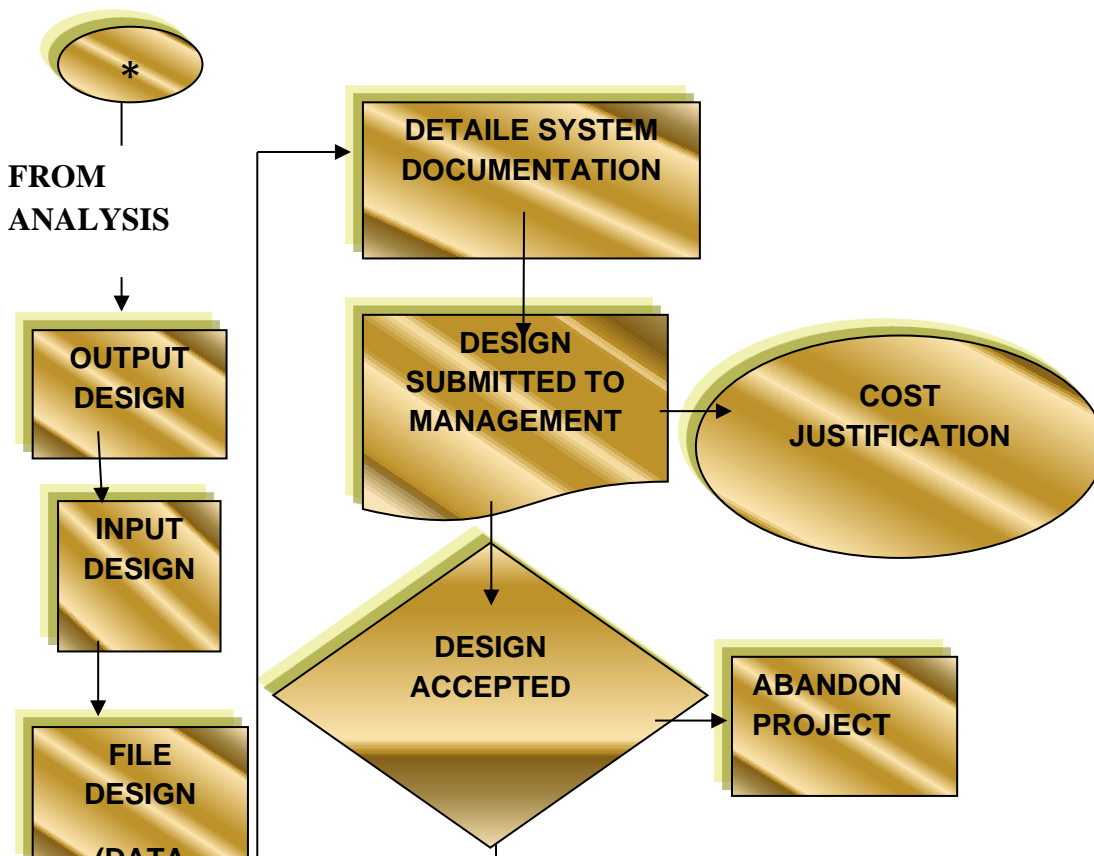
A) System Design

➤ **Description:** The above structure is a system design which is describing important phases for a software development and it starting from analysis and end with implementation and in between includes many other phases. For example, input design, design accepted, cost justification etc.

B) The Structure of the System

```
                    Borderless Online Shopping
                                 |
        +----------------+-------+--------+-----------------+
        |                |                |                 |
   Shopping         Shopkeepers      Free              Students
   Types                |            Services          Section
        |          +----+----+          |
        |          |         |     +----+----+
        |        Shop      Market   |    |    |
        |                                 
   +----+----+                     City Search  Internet  Others
   |         |
 Domestic  International
```
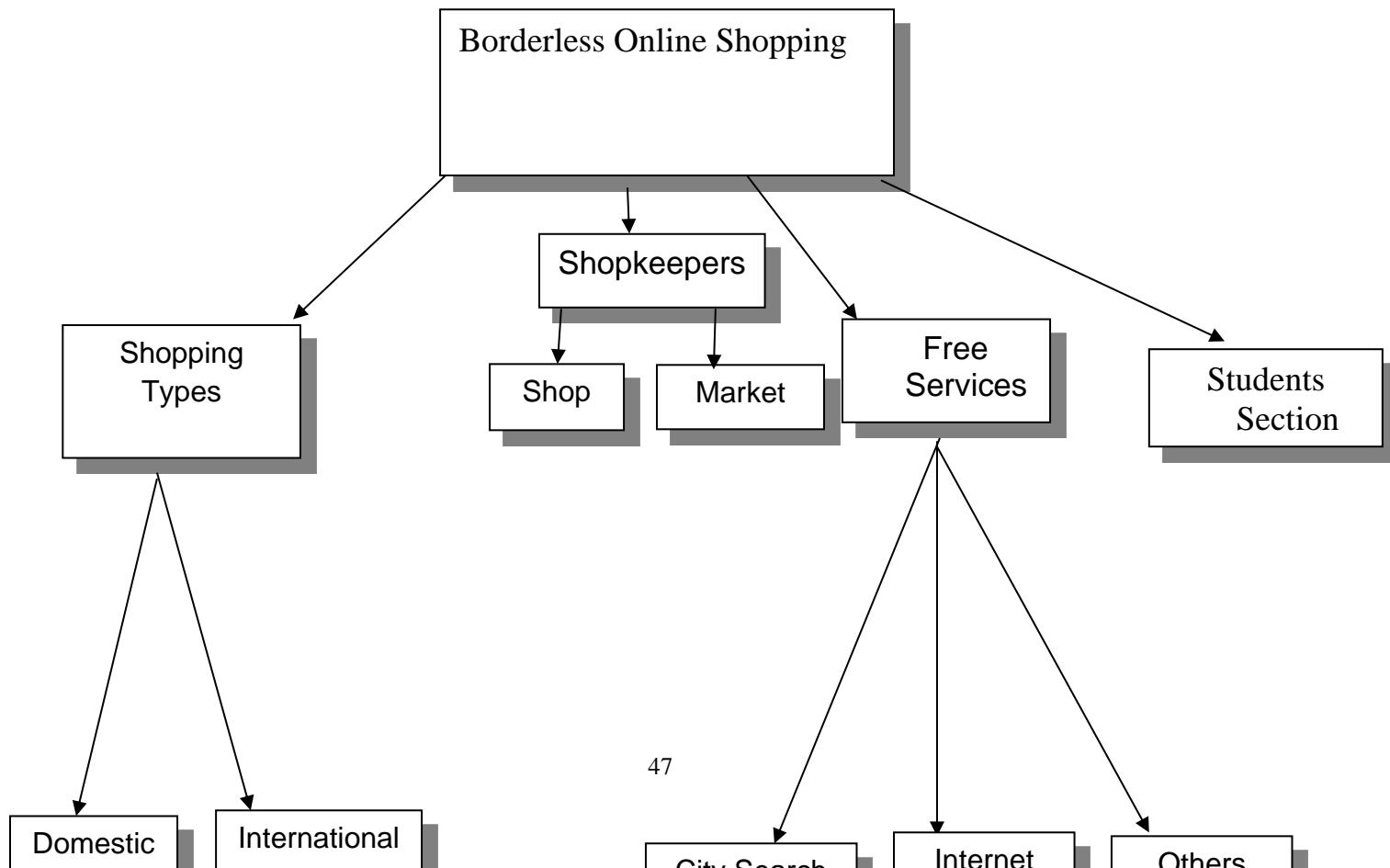
Fig 5.2 Structure of the System

➢ **Description:** The above structure is showing the overall interface of the Web based Borderless online Shopping that how the users can interact with this system depends on the choice using free services as well as paid services.

C) Hyperlink Diagram

```
                            ┌─────────────────────┐
                            │      Home Page      │
                            └─────────────────────┘
                                       │
     ┌──────────┬──────────────┬───────┴────────┬──────────────┐
     ▼          ▼              ▼                ▼              ▼
 ┌────────┐ ┌──────────┐ ┌──────────┐ ┌──────────────┐ ┌──────────────┐
 │  Home  │ │ About Us │ │  Online  │ │  Shopkeeper  │ │ Free Services│
 │        │ │          │ │ Shopping │ │              │ │              │
 └────────┘ └──────────┘ └──────────┘ └──────────────┘ └──────────────┘
```

| Domestic |

| Internationa |

| Market | | Shops |

| Registration |

| New Products | | Old Products |

| Login |
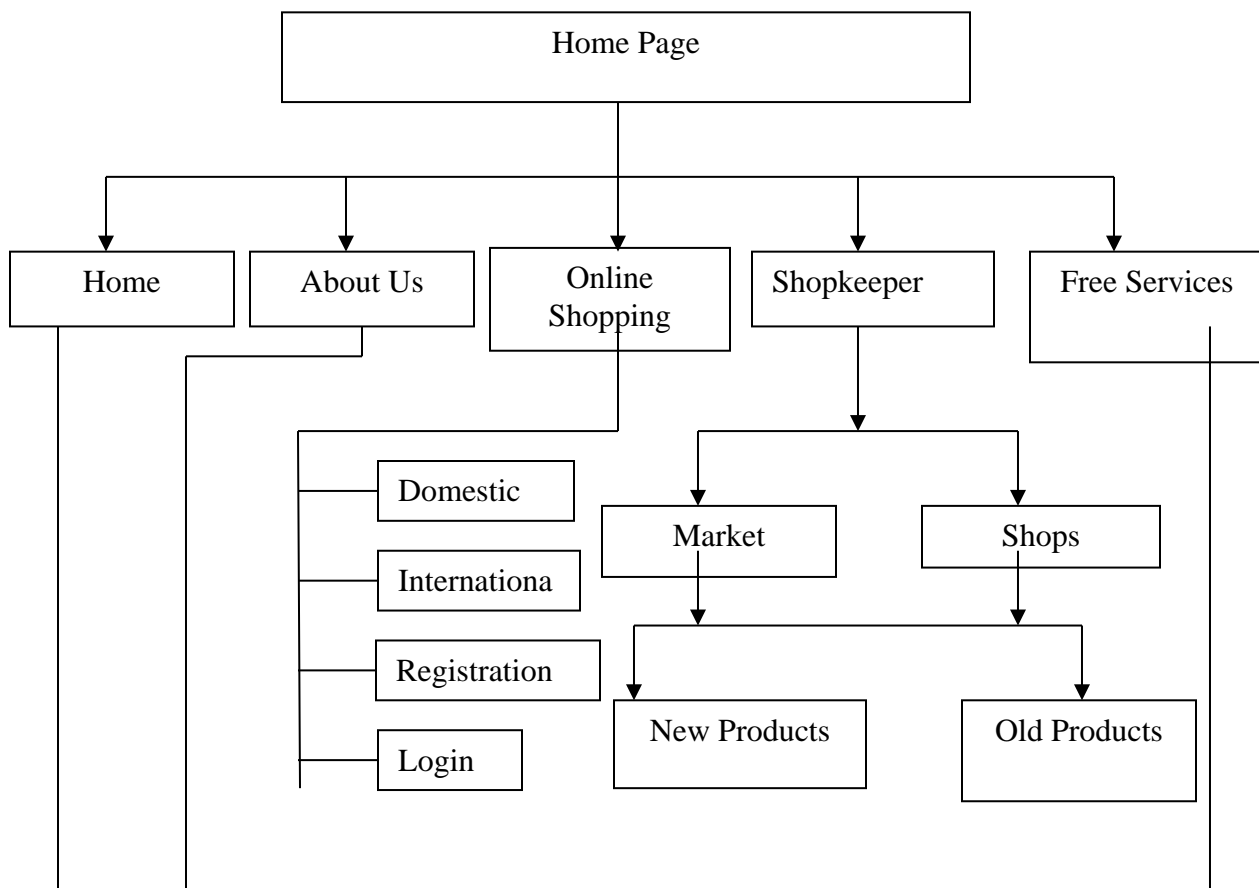
Fig 5.3 Hyperlink diagram

➢ **Description:** The above structure is showing that what are the contents available for a particular service who can used different services.

5.2 Entity Relationship Diagram

Entity/Relationship diagram or ER diagram in short are used to graphically represent entities (data objects), their attributes and relationships between objects. To make an ER diagram primary components are identified: data objects, attributes, relationships, and various type indicators. Entities are represented by labelled rectangle. Relationships are indicated with lines that contain a diamond labelled with the relationship connecting objects. The ER Diagram of " **Borderless Online Shopping"** is given on next page.

lname   sex   country   city

street

49
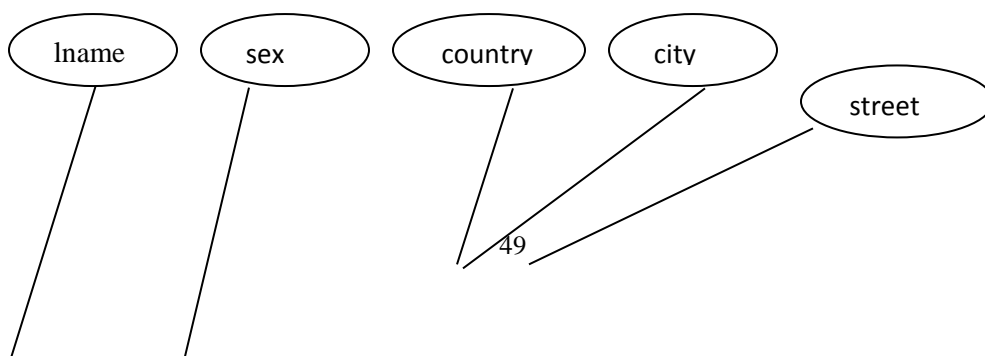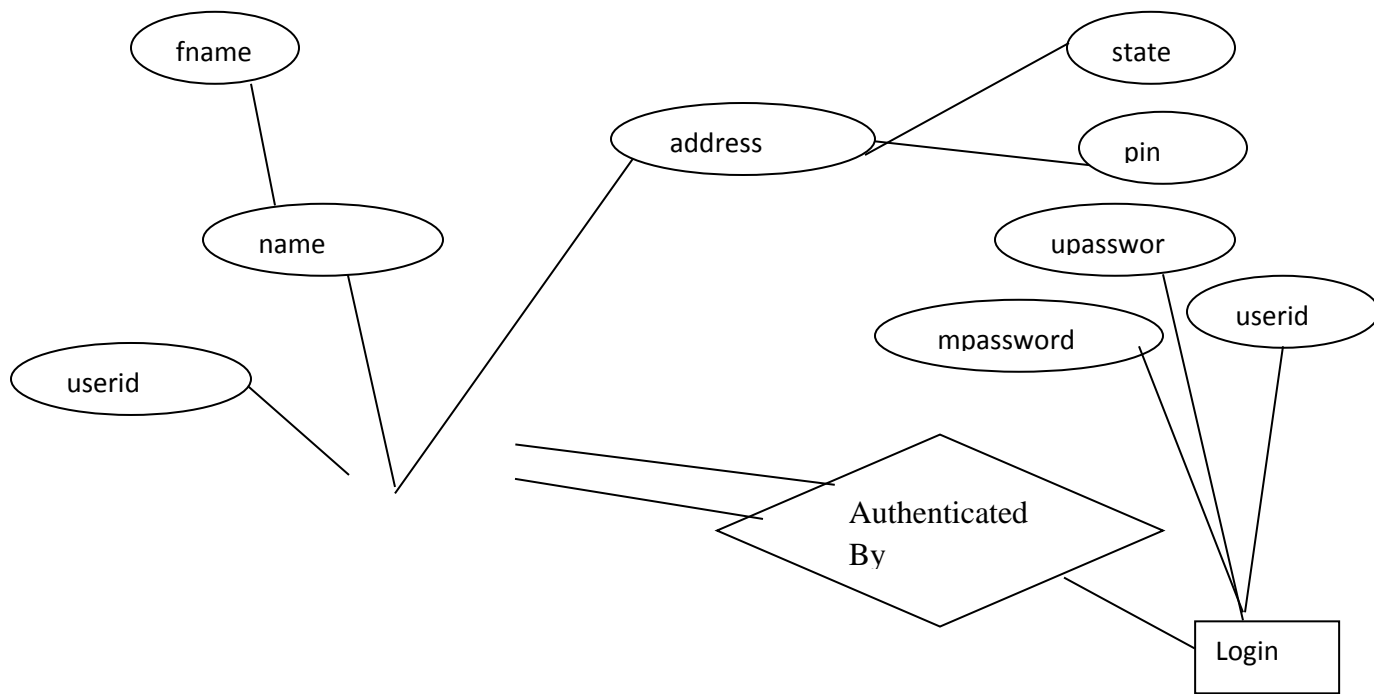
Fig   5. 2.1 ER DIAGRAM

5.3 Use Case Diagram

The use case diagram is a very simple and important diagram which describes whole story that how the users can interact with the particular service of this system without wasting time. However, this project is combination of different categories of services so every users have different use case diagram for that specific service. The developers always focus on this diagram because they try to put all the ways where one use case can interact with another use case.

5.3.1 Online Shopping Use Case Diagram

This is the use case diagram of the online shopping that how the users can purchase products from this portal so before buying any product it is necessary that users have to do registration or existing users can login. There are some other services also available which can be seen without login. For example, check availability, search products etc.
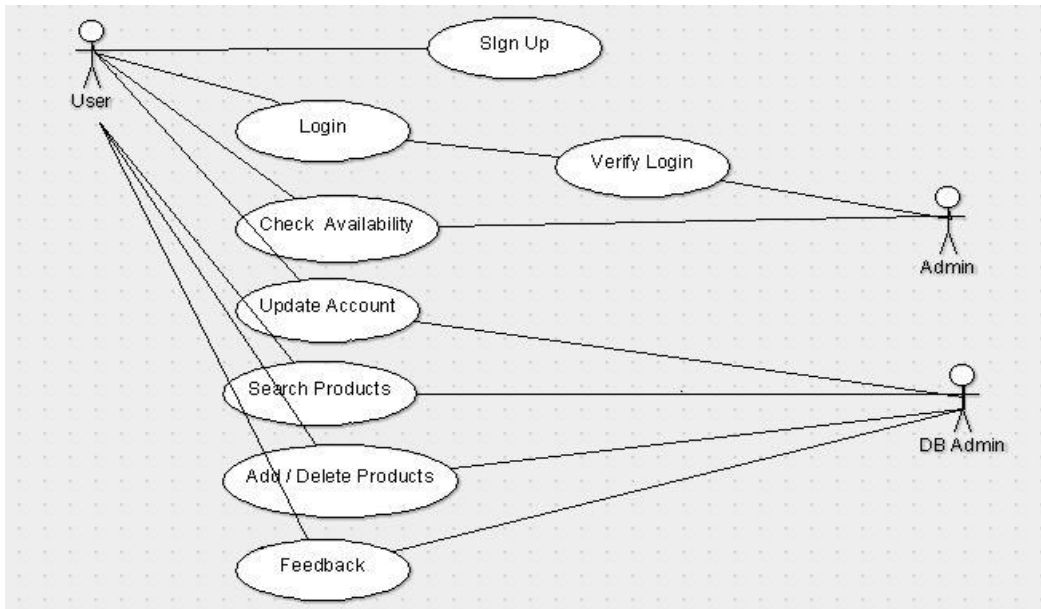
Fig 5.3.1 online shopping use case diagram

➢ **Description:** Below is the description of the above use case diagram.

i)

Term	Synonym	Description
Administrator	Admin	An individual who maintains and monitors the database of the system and upload the information about a particular product.
DB Admin	Product Database	It is database where all the information about the products and users will be stored which is uploaded by the admin.
User	Actor	A user who is only interested in viewing and purchasing some products.

ii)

Use case name	Use case Description	Actor

Use case name	Use case Description	Actor
Registration	The System will first ask to the user to do registration and create an account before purchasing any kind of the products.	Users, customers etc.
Login	The system will ask login for both users and admin to perform any operation.	Admin Login User Login

5.3.2 City Search Use Case Diagram

The city search use case diagram is especially for searching and updating some information. As in the below diagram mentioned that users can search a place without login but if they want to put some information users have to register or valid users can login but admin post useful data about a particular city.
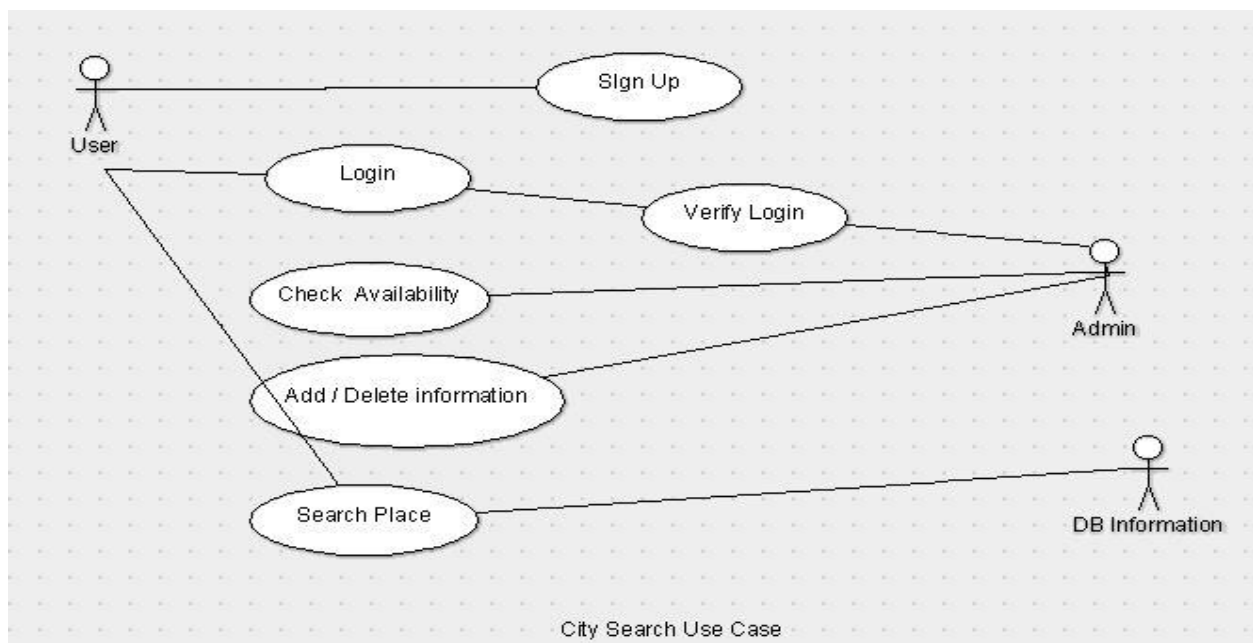
Fig 5.3.2 City Search Use Case Diagram

i) **Description:** Below is the description of the above use case diagram

Term	Synonym	Description
Administrator	Admin	An individual who maintains and monitors the database of the system and upload the information about a particular

		city.
DB information	Information Database	It is database where all the information will be stored which is posted by the users and admin based on different categories.
User	Actor	A user who is only interested in viewing and posting some little information.

ii)

Use case name	Use case Description	Actor
Registration	The System will first ask to the user to do registration before posting any information.	Only users need registration for posting something which is only related to selling and buying
Login	The system will ask login for both user and admin to perform any operation.	Admin Login User Login

5.3.3 Internet Banking use Case Diagram

This use case diagram is based on the internet banking system where users can create an account and deposit some money which can be used during purchasing products. First of all customers have to open an account and they will get users name and password which is more important to access this system.
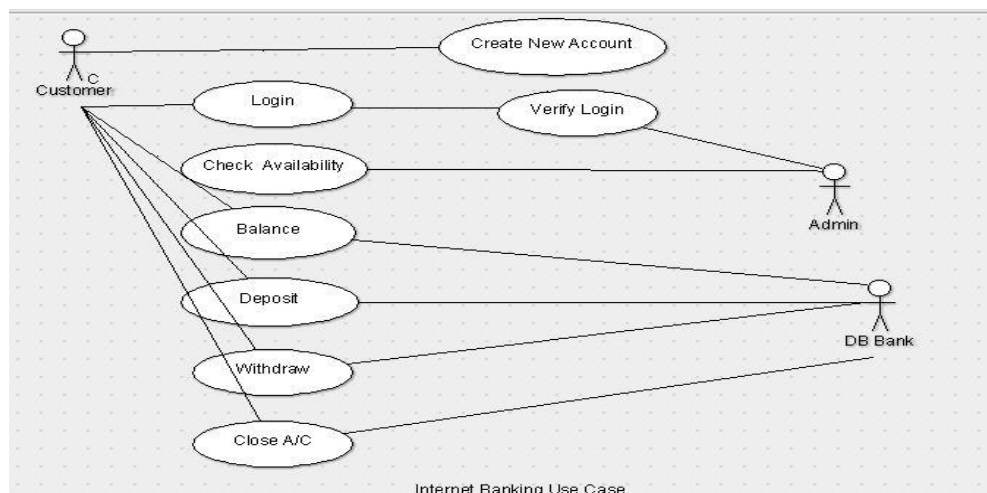
Fig 5.3.3 Internet Banking use case diagram

> **Description:** Below is the description of the above use case diagram

Term	Synonym	Description
Administrator	Admin	An individual who maintains and monitors the database of the system and upload some instructions or useful information about the bank.
Bank Database	DB Bank	It is database of the bank where all the users' information and amount will be stored.
customer	Actor	A user who is only interested to his account.

ii)

Use case name	Use case Description	Actor
Create New Account	First and important step to create an account.	Customer is the only one who need to create an account.
Login	Those who are registered users they can perform some operation after successfully login.	Customer, Manager etc.

5.3.4 Email System Use Case Diagram

In this diagram users have to interact with all the services but only condition is that users need to create an account or exiting users can login.
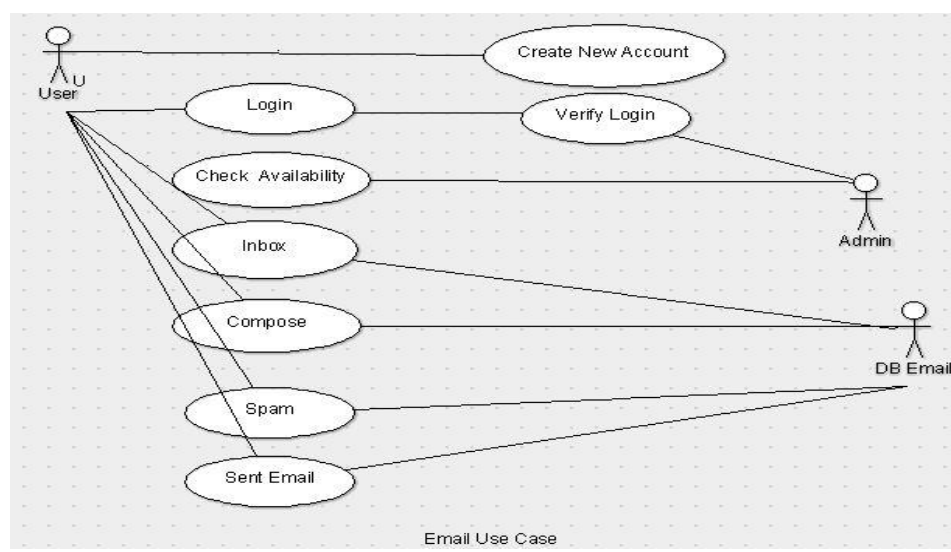
Fig 5.3.4 Email System use case diagram

> ➤ **Description:** Below is the description of the above use case diagram

i)

Term	Synonym	Description
Administrator	Admin	An individual who maintains and monitors the database of the system will send some useful information about the system.
Email Database	DB Email	It is the database where all the email related information will be stored.
User	Actor	A user who is only interested to his account.

ii)

Use case name	Use case Description	Actor
Create New Account	The system will ask for the registration.	User is the only one who need to create an account.
Login	Existing users can perform some tasks like sending email, inbox, compose email etc.	User, Admin

5.4 Class Diagram

The class diagram is the Unified Modeling Language (UML) which describes the system of the structure using different classes and it is a static diagram which is showing system's classes, their attributes, operations (or methods), as well as the relationships among objects.

5.4.1 Online Shopping Class Diagram

The class diagram of the online shopping system is showing that how the classes and its attributes are interacting with different classes or specific method. Here user class is interacting with three different interface and its attributes.
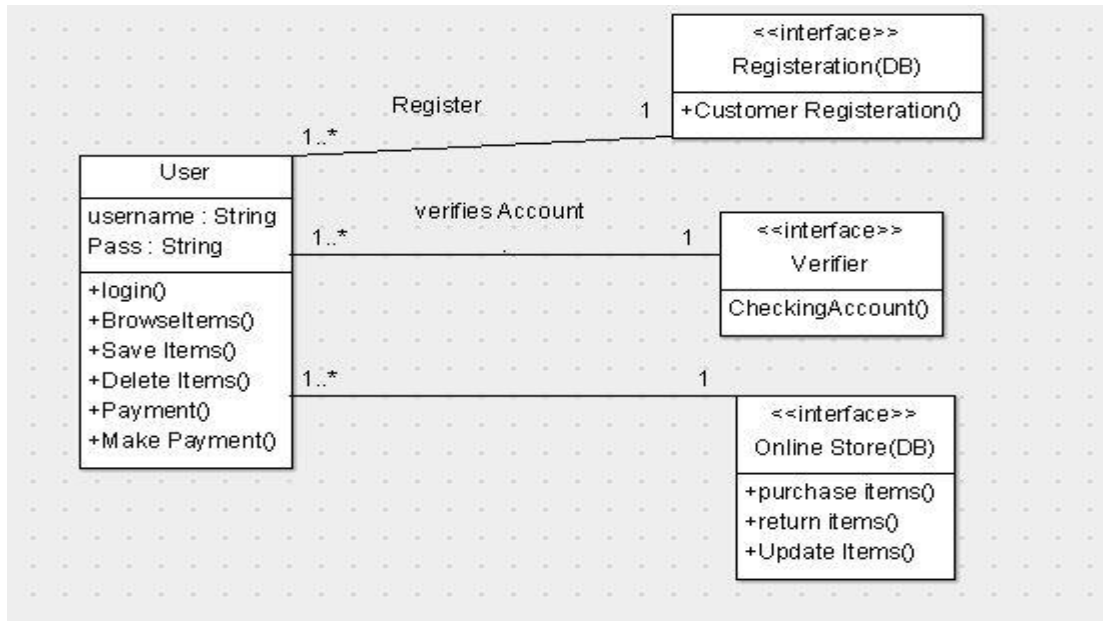
Fig 5.4.1 Online Shopping Class Diagram

5.4.2 City Search class diagram

The process is repeating same as online shopping where user class attributes (Email, pass) and methods (post classified, view classified) are applying in three different interfaces to make successful operation which are Registration, Verifier and Information (DB) etc.
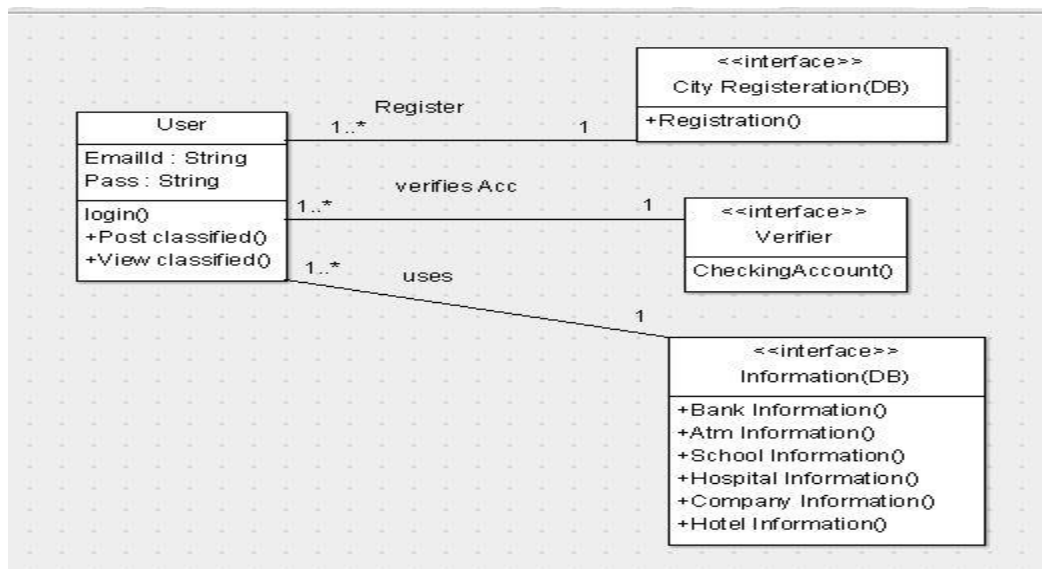
Fig 4.5.2 City Search Class Diagram

5.4.3 Internet Banking Class Diagram

The customer attributes (Account Number, pass) with some methods are interacting with three different process to perform some operations of the online banking which can be used different process of online shopping.
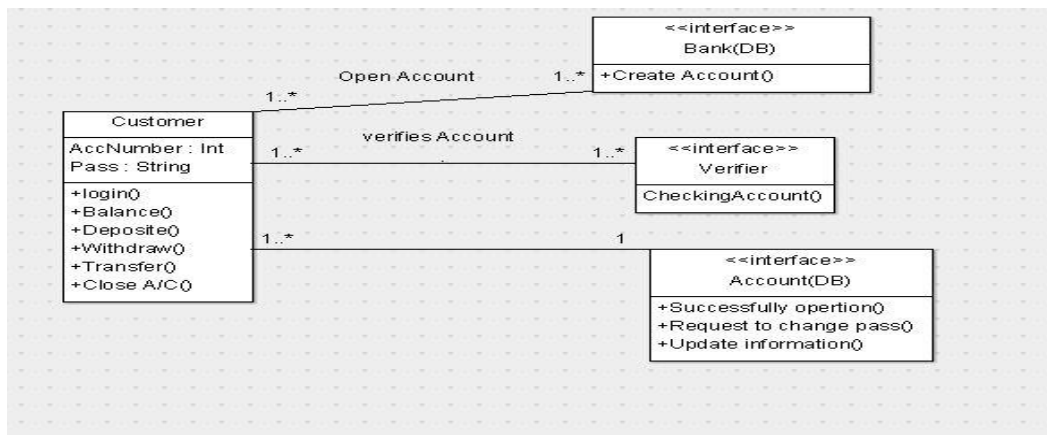
Fig 5.4.3 Internet Banking Class Diagram

5.4.4 Email System Class Diagram

The class diagram of this system includes different attributes, methods and user who is main actor can interact with interfaces and after login or registration they can perform actions in this system.
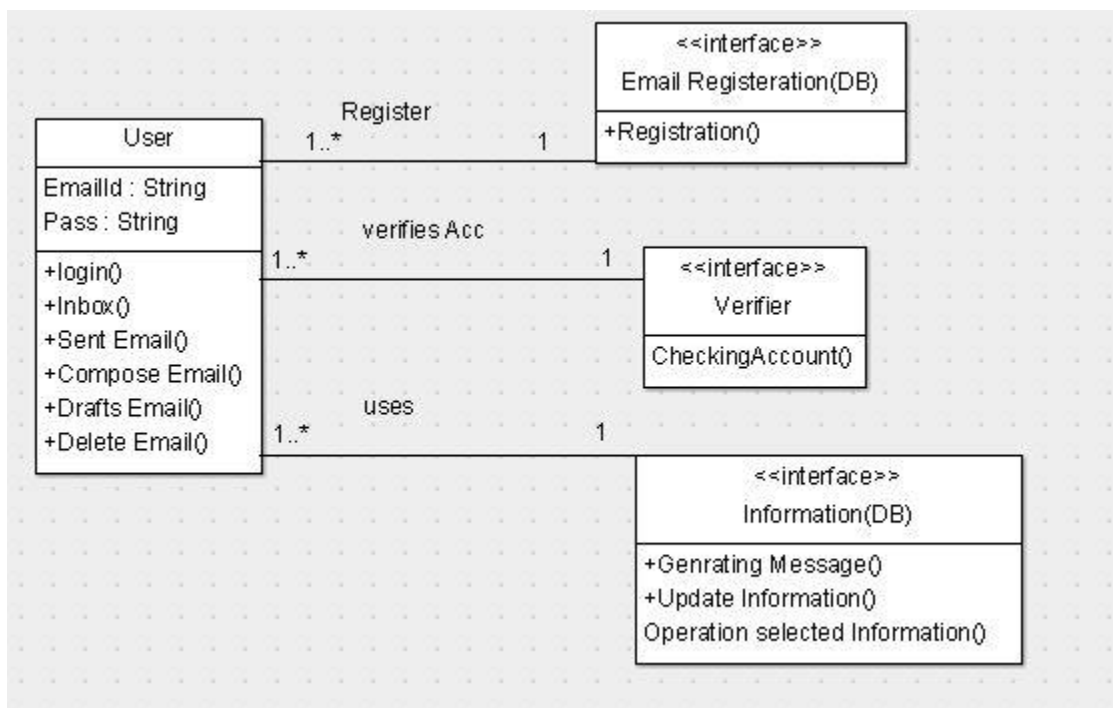
Fig 5.4.4 Email System Class Diagram

5.5 Activity Diagram

It is a graphical representation of the project which includes stepwise activities and actions with support for choice, iteration and concurrency and this model is the association of both conceptual and organizational processes and it shows overall flow of control.

5.5.1 Online Shopping Activity Diagram

The below activity diagram is showing that the process begin with login who are registered users and if they are not, they have to create an account and end with users' choice because there are many options available after login.
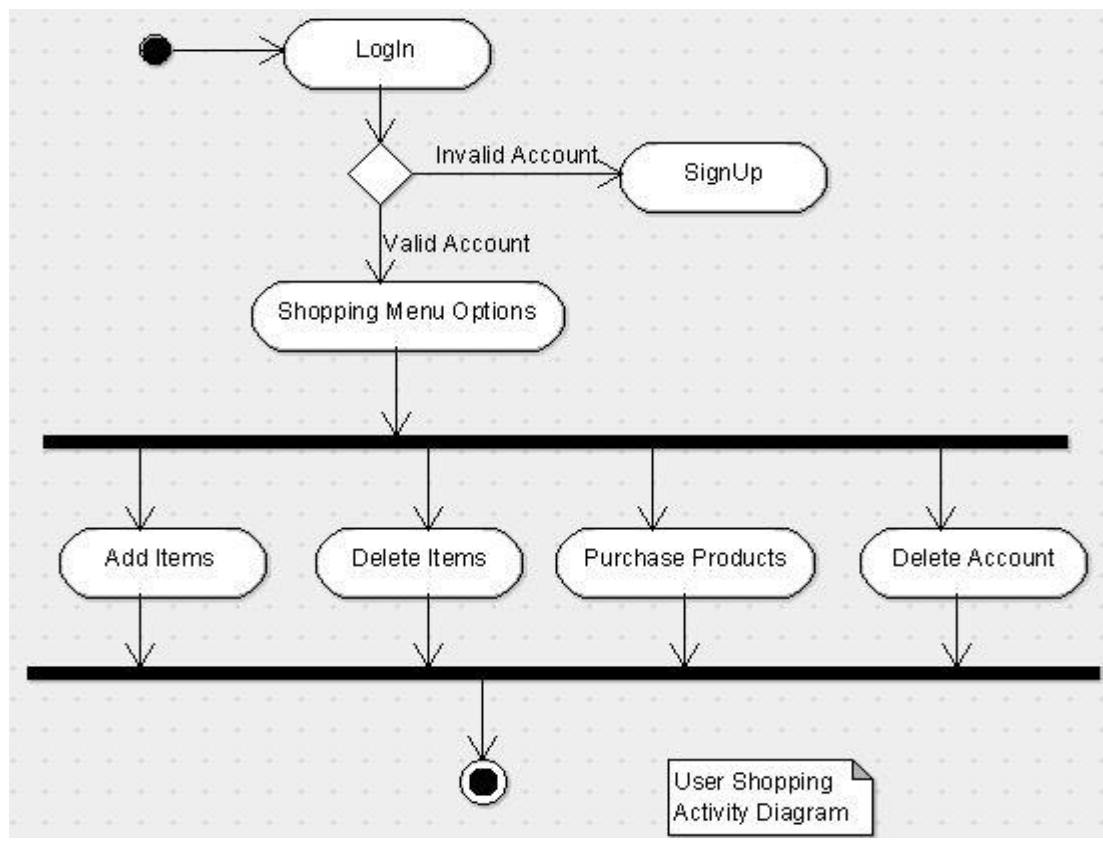
5.5.1   Online Shopping Activity Diagram

5.5.2 City search Activity diagram

Every process begins with login to perform some actions on this portal to find the information and this process will be continue until the user close the activity.
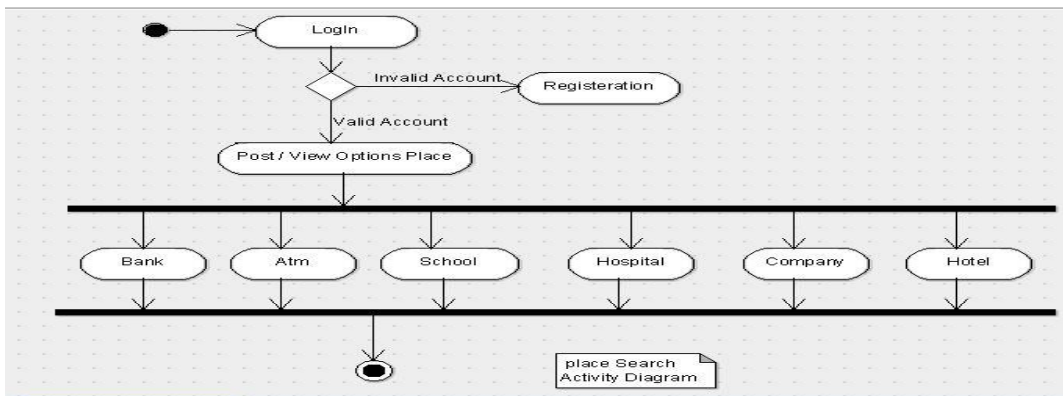
5.5.2 City Search Activity Diagram

5.5.3 Internet Banking Activity Diagram

The activity of this system starts from the account creation and when an account successfully created now customers can choose any action which they want to perform and end with closed.
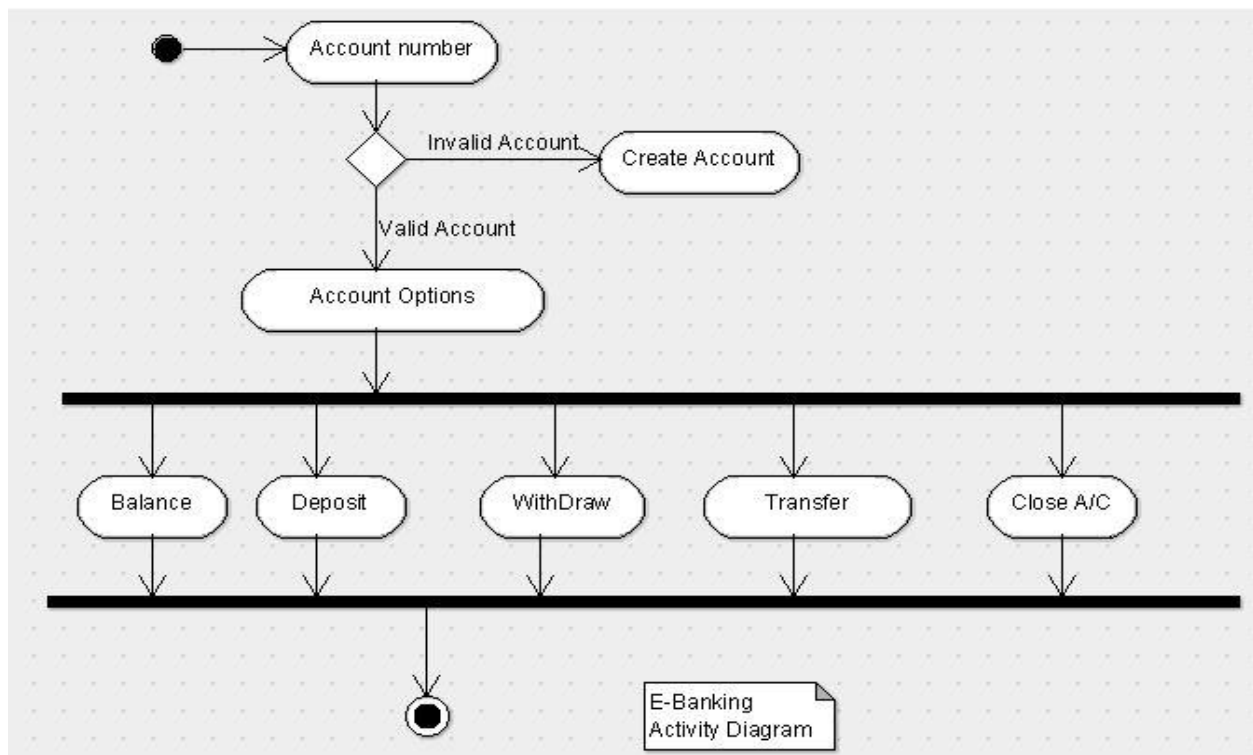
5.5.3) Internet Banking Activity Diagram

5.5.4 Email System Activity Diagram

There are two stages to start an activity which are login and registration but login is the first because who have already registered, they can login and choose any option which are given below to perform some tasks and finally they can close activity after the completion of the process.
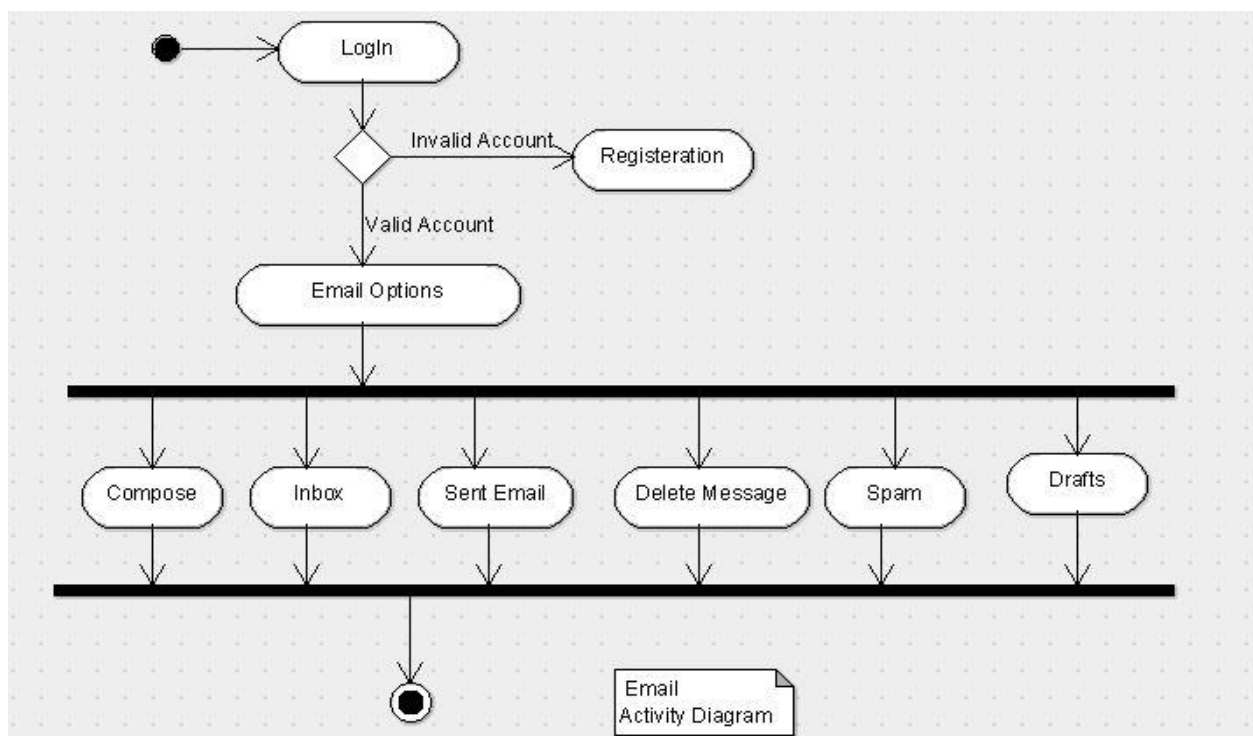
5.5.4) Email System Activity Diagram

5.6 Sequence Diagram

The sequence diagram is a type of interaction diagram which describes that how the object operate with some directions what order and it is like message sequence chart with arranging time sequence. The sequence diagram is especially used in use case diagram to determine the logical view of the system development.

5.6.1 Online Shopping System Sequence Diagram

   The below diagram is the sequence diagram of the online shopping system showing that how the message is occurring from different phases and which will complete first and goes to second and it will repeat until the process complete.
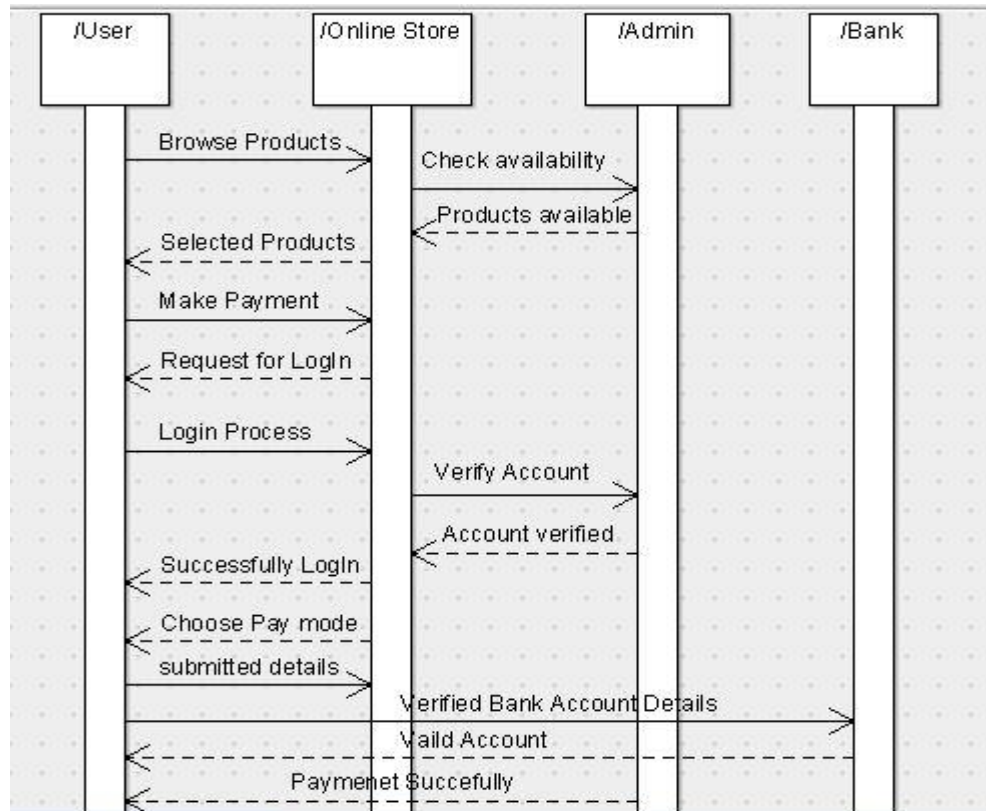
5.6.1 Online Shopping System Sequence Diagram

5.6.2 City Search Sequence Diagram

The below diagram starts from the searching place and goes to view classifies and ask for a particular place in the city and it can be retrieved from the database.
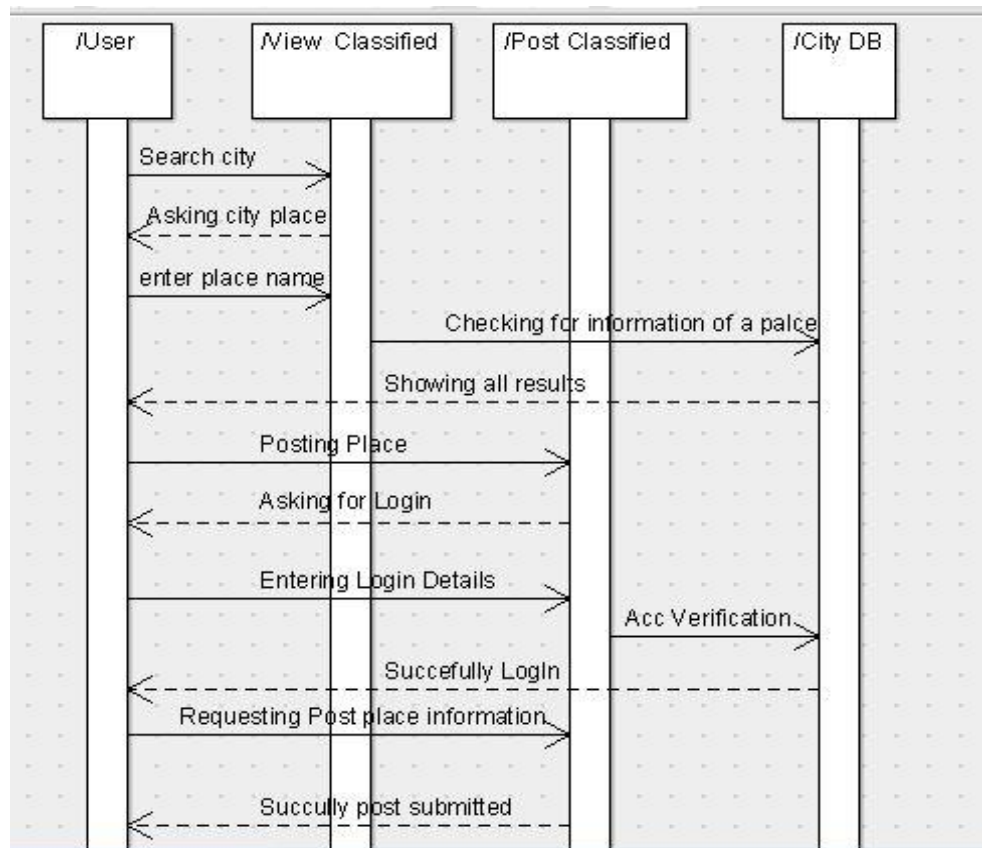
5.6.2) City Search Sequence Diagram:

5.6.3 Internet Banking Sequence Diagram

The below diagram is showing that first login is important and E-banking will ask username and password of the existing user and the process will continue of different stages.
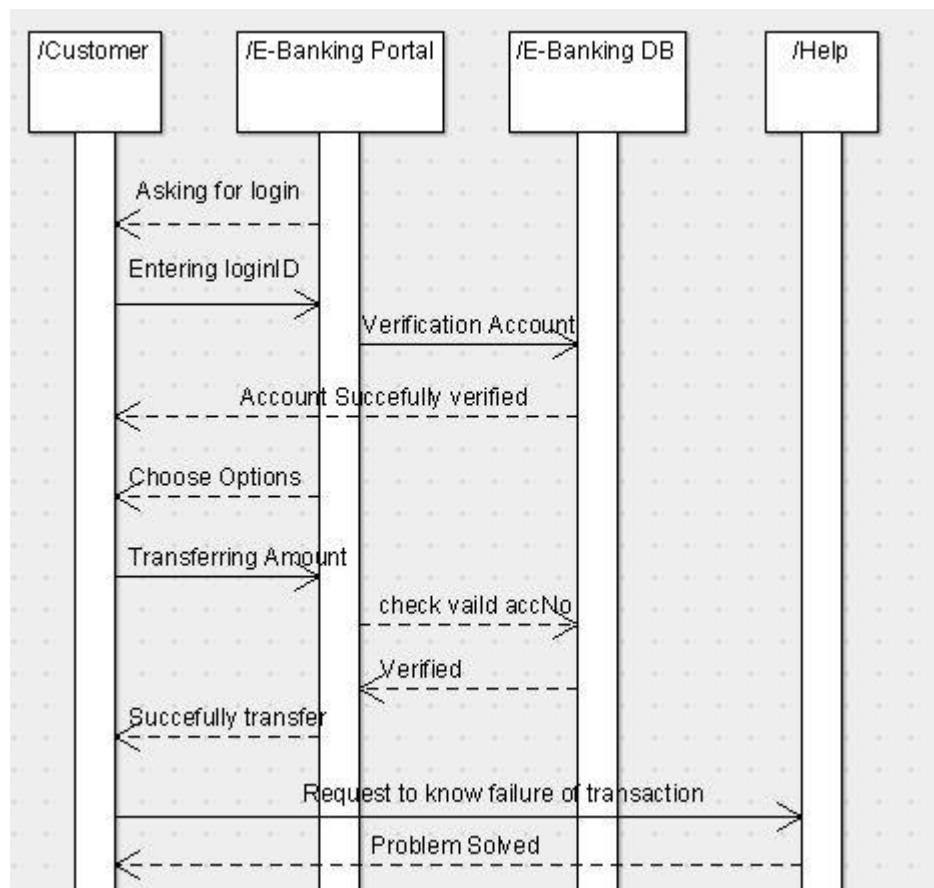
5.7.3) Internet Banking Sequence Diagram:

5.6.4 Email System Sequence Diagram

The sequence diagram of this system passes through three different phases and start from the users who want to perform some action with their accounts until close the operation.
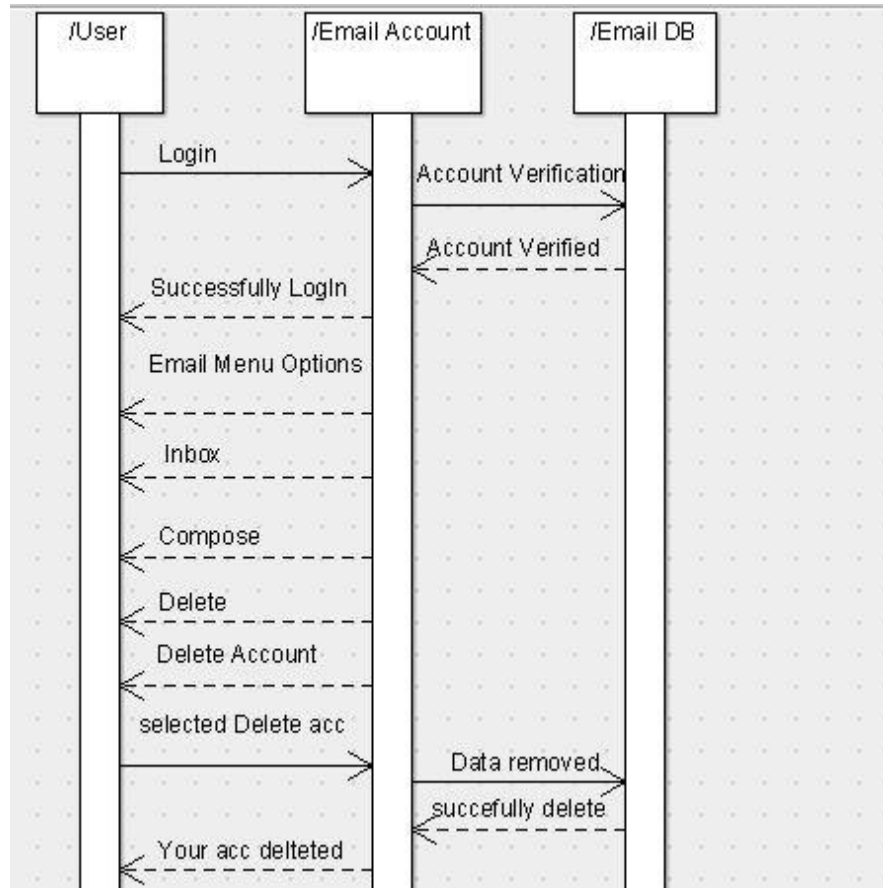
5.7.4 Email System Sequence Diagram

5.7 Data structures used

The below tables are the format of the data where user will give some input.

A) User Shopping Table

FIELD NAME	DATA TYPE	DESCRIPTION
NAME	TEXT	User Name
ADDRESS	TEXT	User Address
Pin Code	TEXT	Users Pin code
PHONE	NUMBER	Phone Number
EMAIL	TEXT	E-mail

B) City Search Table

FIELDNAME	DATA TYPE	DESCRIPTION
NAME	TEXT	User Name
ADDRESS	TEXT	User Address
PHONE	NUMBER	User Phone No
EMAIL	TEXT	User E-mail
COUNTRY	TEXT	User Country

C) Online Banking System Table

FIELD NAME	DATA TYPE	DESCRIPTION
NAME	TEXT	Customer Name.
AMOUNT	TEXT	Opening Amount
ADDRESS	TEXT	Customer Address
PHONE	NUMBER	Customer Phone No
EMAIL	TEXT	Customer E-mail

D) Library Management System Table

FIELDNAME	DATA TYPE	DESCRIPTION
USER NAME	TEXT	User Name
PASSWORD	TEXT	User Password
PHONE	NUMBER	User Number
ADDRESS	DATE	User Address
DESIGNATION	TEXT	User Designation

E) Online Quizzes System

FIELDNAME	DATA TYPE	DESCRIPTION
USER NAME	TEXT	User Name
PASSWORD	TEXT	User Password
CATEGORY	TEXT	User Category
EMAIL	TEXT	User Email Address

F) Pharmacy System

FIELDNAME	DATA TYPE	DESCRIPTION
USER NAME	TEXT	User Name
PASSWORD	TEXT	User Password
ADDRESS	TEXT	User Address
CITY NAME	TEXT	User City Name
DISTRIBUTER NAME	TEXT	Distributor Name
STATE NAME	TEXT	User State Name
Country Name	TEXT	User Country Name

Region	TEXT	User Region
PHONE	NUMBER	User Phone Number
EMAIL	TEXT	User Email Address

G) Social Management System

FIELDNAME	DATA TYPE	DESCRIPTION
USER NAME	TEXT	User Name
PASSWORD	TEXT	User Password
EMAIL	TEXT	User Email Address
MOBILE	NUMBER	User Mobile Number

H) Transport Management System

FIELDNAME	DATA TYPE	DESCRIPTION
Branch	TEXT	User Branch
Username	TEXT	User Name
Password	TEXT	User Password
Date of Joining	DATE	User date of joining
Date Of Birth	TEXT	User Date of Birth
Salary	DATE	User Salary

I) Email System Table:

FIELDNAME	DATA TYPE	DESCRIPTION
NAME	TEXT	User Name
EMAIL	TEXT	User Email
GENDER	TEXT	User Gender
DATE OF BIRTH	DATE	User dob
ADDRESS	TEXT	User Address
CITY	TEXT	User City
STATE	TEXT	User State

COUNTRY	TEXT	User Country
CONTACT	NUMBER	User contact Number

5.8 Input and output Design

It's said that 'One who is infallible is God and to err is human'. People do commit mistakes either out of inefficiency do a particular thing or out of negligence. Now, during the system life cycle when a system analysts advances from the logical view of the system to the physical design of the system, designing input specification for the system is a crucial issue. This id the phase when man-machine interaction and intervention is the most and hence, the most error prone phase. For the input design many HTML form are used but at the time of data transfer to the server I use Java Servlets. For user friendly use message box is display at the time to get focus of any particular field and lost focus for invalid data and the length of the text box is defined according to the field length and in the some cases if only numeric value is required for a particular field then that box accept only numeric value. If other box and control used in the project then handle in the same way. For more user friendly many message are display at the time of wrong entry.

❖ First Java Web Server is on otherwise can run servlet runner at dos prompt

❖ For displaying the Java Servlet pages, Java Development Kit or Java Servlet Development Kit is not required.

❖ For database MySQL is necessary in computer.

❖ For running the web site there are all database tables will be present in the MySQL on the server.

❖ For running web site any internet browser is required.

5.9 Conclusion

To sum up, the based on the information and design which is mentioned above is describing the overall structure of the system and how the users can interact with it and perform some actions especially for those who want to use free services etc.

CHAPTER SIXTH

System Implementation

6.1 Introduction

The overall system is based is on different technologies which are secure and fast. The most common computer language which is used in the development of this project is java based on its features like Platform independent, Secured, Multithreaded and Dynamic etc. The other technologies also used to design the .good page at client side.

6.2 The screen shot of the Web Based Borderless Shopping

This project is too big so it is impossible to put all the screen shot of the system but trying to include some important screen shots of the project which can give some idea for understanding the whole project.

6.3 Users Section

In the users section those contents are available where users can interact with the system and perform some actions.

6.3.1 Home Screen: This is the first page of system which included all the contents of the different types of the services and from here users can move at any services according to their choices.
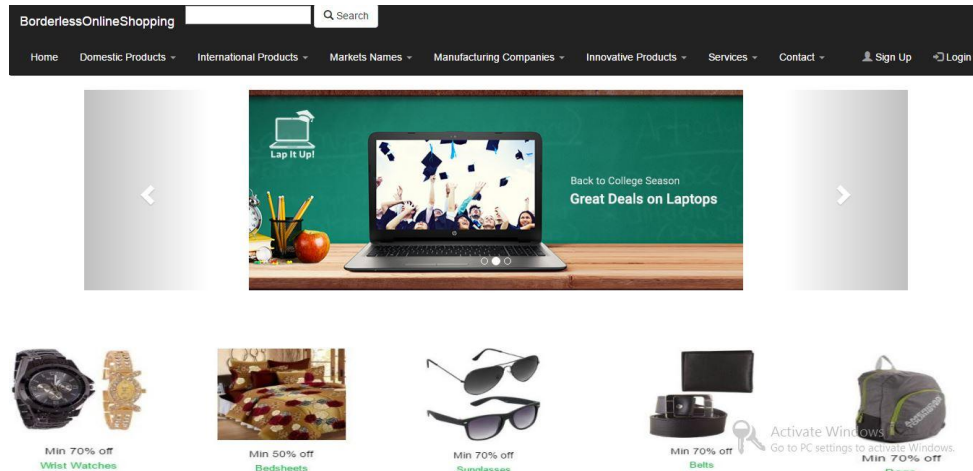
Fig 6.3.1 Home Screen of the System

6.3.2 Domestic Products: This content only included all the domestic products which are popular according to the countries people' choices and it is most usable content for local people.
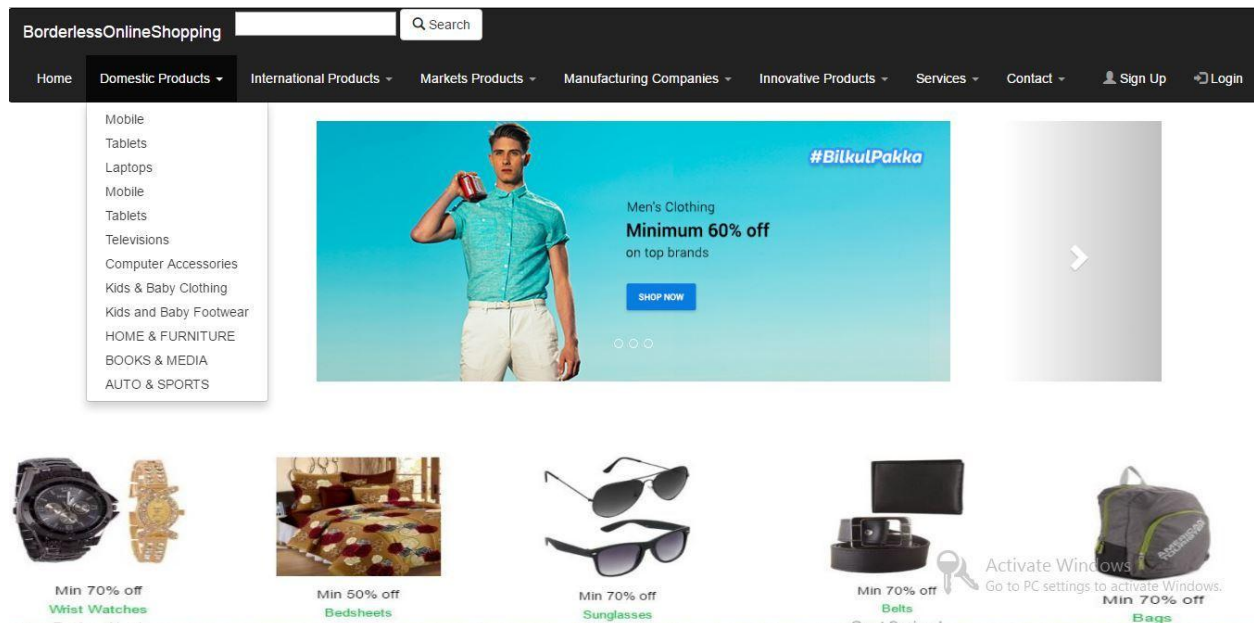
Fig 6.2.2 Domestic Product

6.3.3 International Products: This content included some advanced items of the different countries' products and users can purchase these products easily whatever they like.
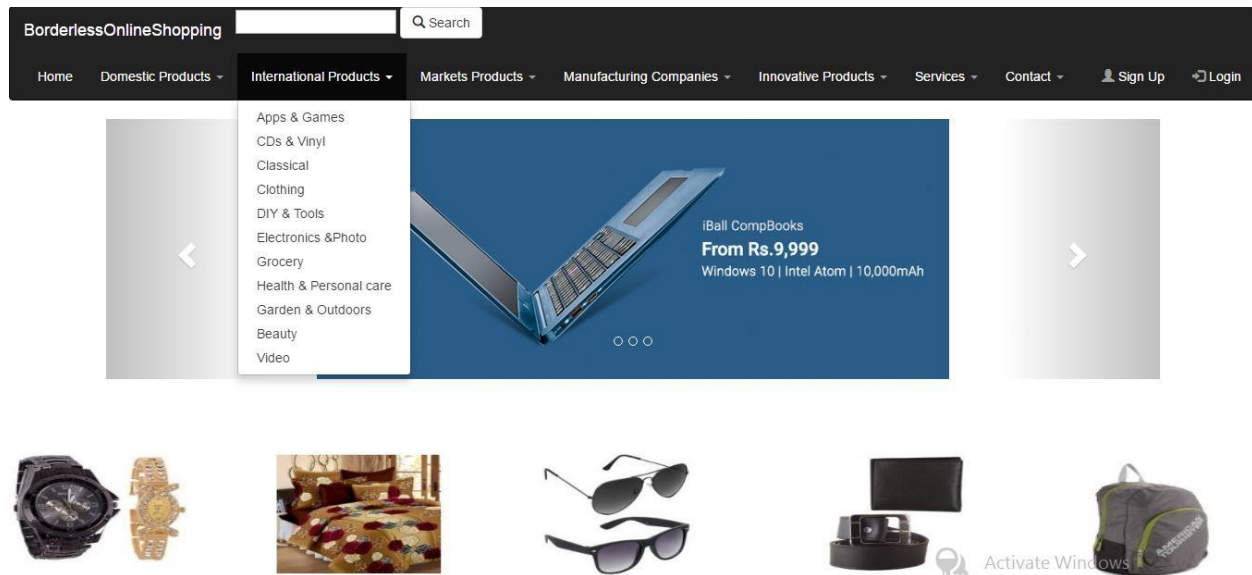
Fig 6.3.3 International Products

6.3.4 Market Names: It is totally different from internet shopping and users can purchase any items from the super market. However, it is good for both national and international customers who like street shopping.
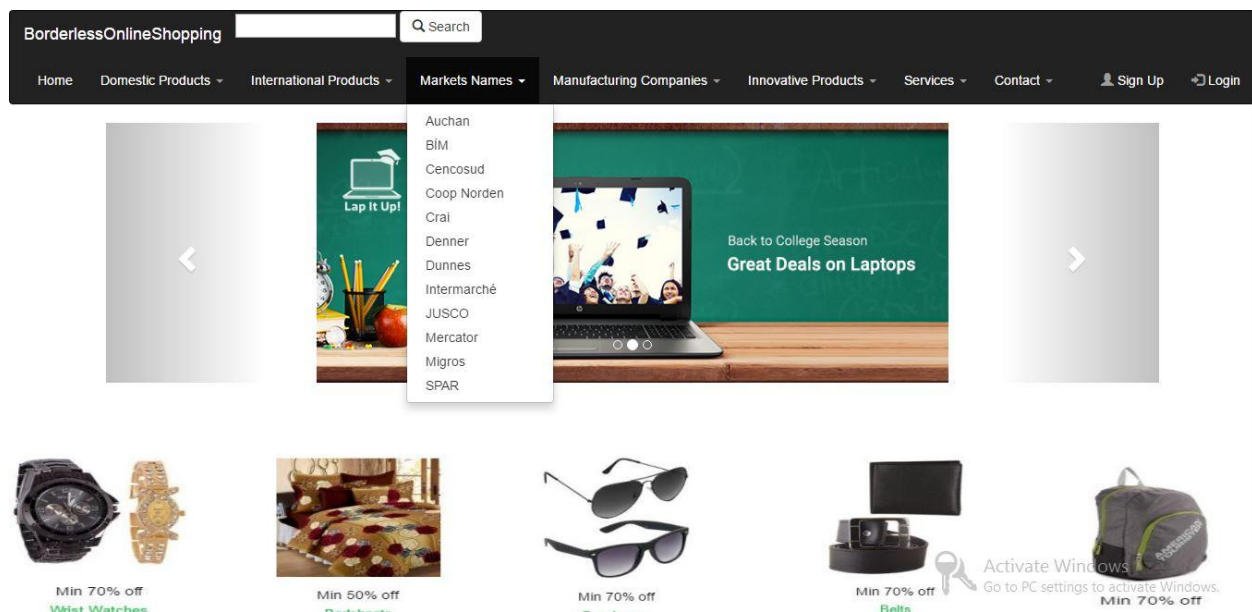
Fig 6.3.4   Market Names

6.3.5 Manufacturing Companies: This content of the system included list of companies which are manufacturing products with their details and the people can contact with them to know the prices and discuss something what they want or start the business.
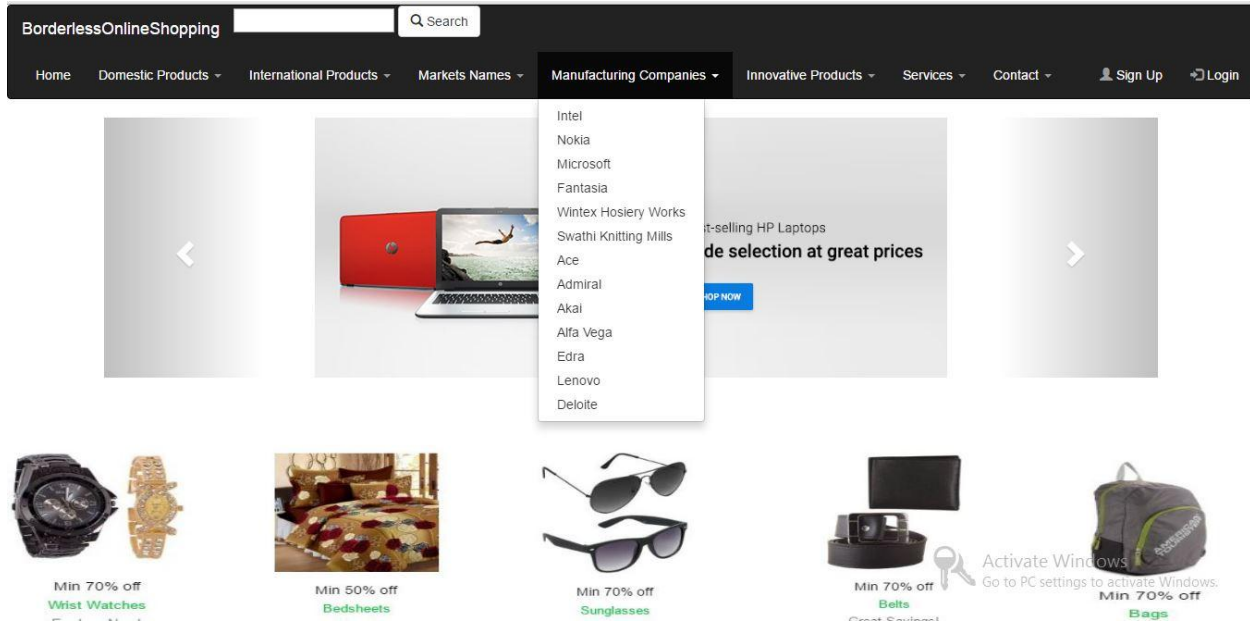
Fig 6.3.5 Manufacturing Companies

6.3.6 Innovative Products: The users who develop something or have with creative mind can post their products with their details on this content and it will be recognized internationally.
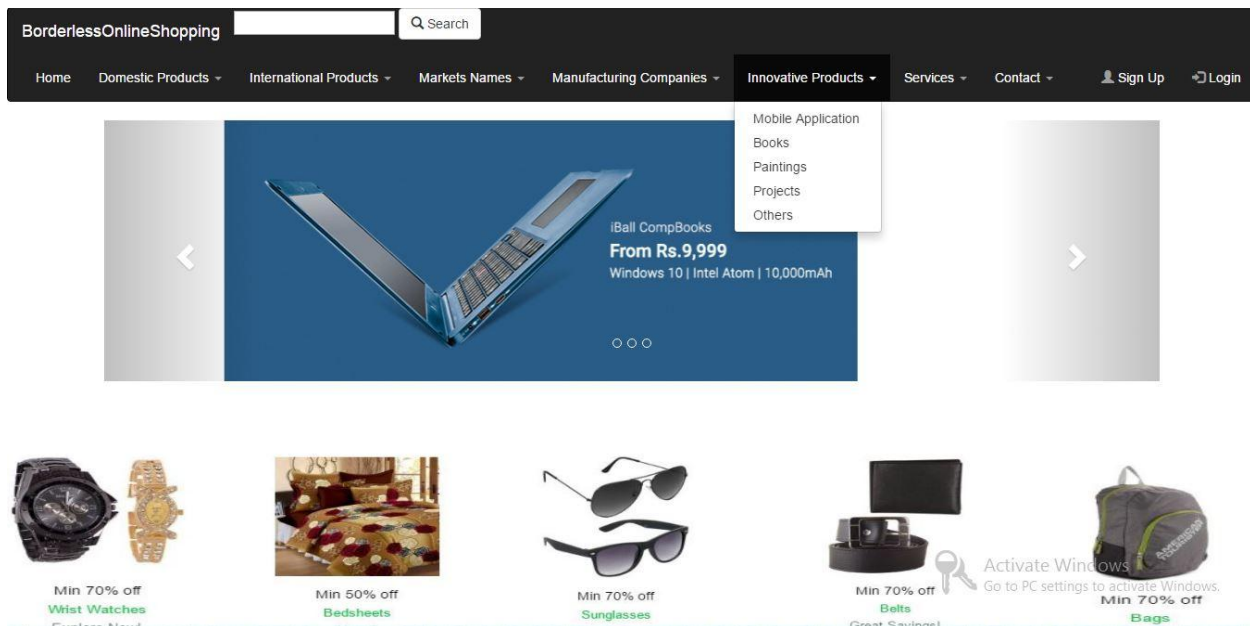
Fig 6.3.6 Innovative Products

6.3.7 Services: This content included different types of free services which can be used by the users and it will helpful what they are searching.
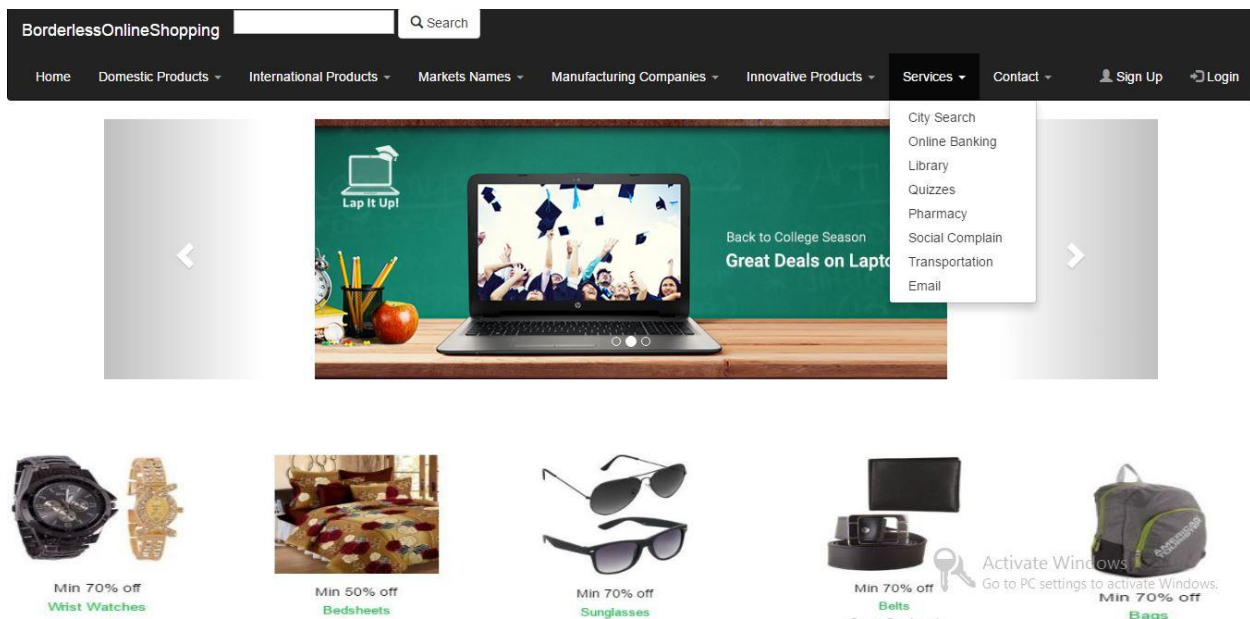
Fig 6.3.7 Free Services

6.4 Admin and Employee Section

Here all the actions included which will be performed by the administration.

6.4.1 Contact: It will show the list of different employees with details and every link has its own page for interaction and admin or employee accounts are also available in this section.
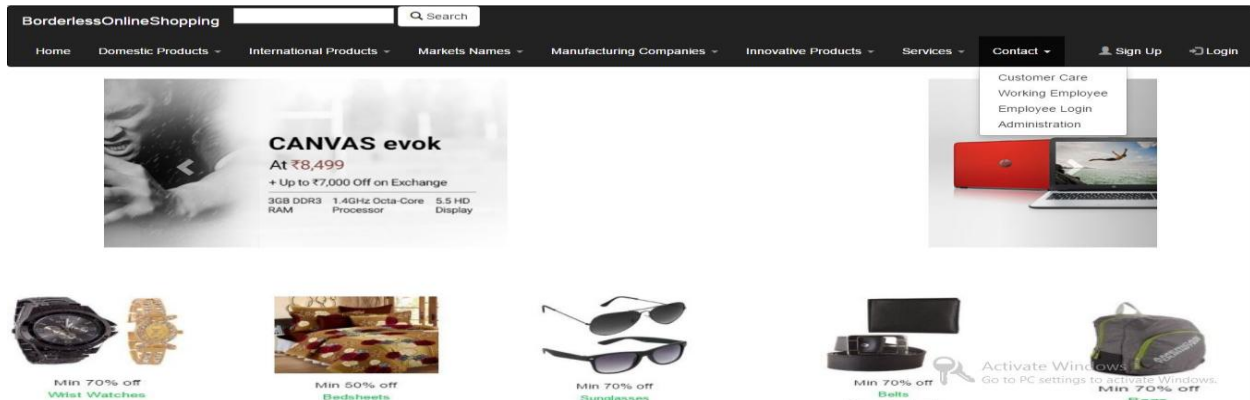
Fig 6.4.1 Employee Contact

6.4.2. Admin Login: The below screen shot of the admin account after login admin can perform some operations.

Fig 6.4.2. Admin Login

Fig 6.4.2.1 after Login

6.4.3 Employee Login: The employee can login is same as admin login but they can perform different actions which they have permission in employee section.

Fig 6.4.3.1 Employee Login

Fig   6.4.3 .2 after Employee Login

6.5 Conclusion

There are few screen shots which are showing that what are permission have given users, admin and employees to access this system.

CHAPTER SEVEN

Software Testing

7.1 Introduction

The testing is an important phase for the software to find the bug which can be happened during the software development. Thousands of software available which failed to perform well because these are not tested properly. The web based borderless project tested properly using manual and automated.

7.2 Unit Testing

Unit testing is good for this project based on the system design. However, it tests individual module because every services are independent with each other and this helps to detecting the logical errors in the modules. The testing is based on the users' input and will show errors if the users enter wrong value after this it can be said that software is perfect.

7.3 Manual Testing

The first testing is manually which are efficient but takes much time and be done without using any software. This testing will be done on the every value of the textbox to check that valid or invalid input data before submitting on the server.

LEGEND

A lot of symbols are used in the testing data and reports which are given as follows:

1. N/A : Not Applied.
2. A : Apply
3. S : Select this field.
4. BFP : Blank Field Prohibited.

5. **BFA** **:** Blank Field can be applied.

6. **MBE** **:** Must Be Existing.

7. **EMA** **:** Error Message Appeared.

8. **D** **:** Default Value

1. Internet Banking Service

i) New Account Registration

ARRAY OF VALUES								
Field Name	Blank Entry	Numeric Entry	Alphabet Entry	@ Entry	Special Symbol	Expected Result	Observed Result	Test Result
USER NAME	BFP	A	A	A	A	EMA	EMA	**Pass**
PASSWORD	BFP	A	A	A	A	EMA	EMA	**Pass**
REPASSWORD	BFP	A	A	A	A	EMA	EMA	**Pass**
AMOUNT	BFP	A	N/A	N/A	N/A	EMA	EMA	**Pass**
ADDRESS	BFP	A	A	A	A	EMA	EMA	**Pass**
PHONE	BFP	A	N/A	N/A	N/A	EMA	EMA	**Pass**
ACCOUNT NO	BFP	Autogenrated	N/A	N/A	N/A	EMA	EMA	**Pass**

Module Test Status:	*Successful*

2) Library Management System

i) **Module Name: Staff Registration**

ARRAY OF VALUES								
Field Name	Blank Entry	Numeric Entry	Alphabet Entry	@ Entry	Special Symbol	Expected Result	Observed Result	Test Result
USER NAME	BFP	A	A	A	A	EMA	EMA	**Pass**
PASSWORD	BFP	A	A	A	A	EMA	EMA	**Pass**
RE-PASSWORD	BFP	A	A	A	A	EMA	EMA	**Pass**
PHONE	BFP	A	N/A	N/A	N/A	EMA	EMA	**Pass**
ADDRESS	BFP	A	A	A	A	EMA	EMA	**Pass**
designation	BFP	N/A	A	N/A	N/A	EMA	EMA	**Pass**

Module Test Status:	*Successful*

3) Online Quiz System

i) Module Name: Quiz Registration

ARRAY OF VALUES								
Field Name	Blank Entry	Numeric Entry	Alphabet Entry	@ Entry	Special Symbol	Expected Result	Observed Result	Test Result
User Name	BFP	A	A	A	A	EMA	EMA	**Pass**
Password	BFP	A	A	A	A	EMA	EMA	**Pass**
Category	BFP	N/A	S	N/A	N/A	EMA	EMA	**Pass**
Email	BFP	A	N/A	N/A	N/A	EMA	EMA	**Pass**

Module Test Status:	*Successful*

4) Pharmacy System

i) **Module Name:** New Registration

<table>
<tr><th colspan="9">ARRAY OF VALUES</th></tr>
<tr><th>Field
Name</th><th>Blank
Entry</th><th>Numeric
Entry</th><th>Alphabet
Entry</th><th>@
Entry</th><th>Special
Symbol</th><th>Expected
Result</th><th>Observed
Result</th><th>Test
Result</th></tr>
<tr><td>USER NAME</td><td>BFP</td><td>A</td><td>A</td><td>A</td><td>A</td><td>EMA</td><td>EMA</td><td>Pass</td></tr>
<tr><td>PASSWORD</td><td>BFP</td><td>A</td><td>A</td><td>A</td><td>A</td><td>EMA</td><td>EMA</td><td>Pass</td></tr>
<tr><td>REPASSWORD</td><td>BFP</td><td>A</td><td>A</td><td>A</td><td>A</td><td>EMA</td><td>EMA</td><td>Pass</td></tr>
<tr><td>DISTRIBUTER NAME</td><td>BFP</td><td>A</td><td>N/A</td><td>N/A</td><td>N/A</td><td>EMA</td><td>EMA</td><td>Pass</td></tr>
<tr><td>ADDRESS</td><td>BFP</td><td>A</td><td>A</td><td>A</td><td>A</td><td>EMA</td><td>EMA</td><td>Pass</td></tr>
<tr><td>CITY NAME</td><td>BFP</td><td>N/A</td><td>A</td><td>N/A</td><td>N/A</td><td>EMA</td><td>EMA</td><td>Pass</td></tr>
<tr><td>STATE NAME</td><td>BFP</td><td>N/A</td><td>A</td><td>N/A</td><td>N/A</td><td>EMA</td><td>EMA</td><td>Pass</td></tr>
<tr><td>Country Name</td><td>BFP</td><td>N/A</td><td>S</td><td>N/A</td><td>N/A</td><td>EMA</td><td>EMA</td><td>Pass</td></tr>
<tr><td>Region</td><td>BFP</td><td>N/A</td><td>S</td><td>N/A</td><td>N/A</td><td>EMA</td><td>EMA</td><td>Pass</td></tr>
<tr><td>PHONE</td><td>BFP</td><td>A</td><td>N/A</td><td>N/A</td><td>N/A</td><td>EMA</td><td>EMA</td><td>Pass</td></tr>
<tr><td>EMAIL</td><td>BFP</td><td>A</td><td>A</td><td>A</td><td>A</td><td>EMA</td><td>EMA</td><td>Pass</td></tr>
</table>

Module Test Status:	*Successful*

7.4 Junit Testing

It is an automated testing which is fast and accurate in comparison to manual testing but for this project software will be needed so cost can be increasing of the project. There are some contents of the Web based Borderless Online shopping which is tested automatically using

1) **City Search Content Testing:** This testing of the city content module which is free service in this project.

i) **Users' Registration:** This is the testing on the textboxes where users will enter some values and it will check that entering data is valid or invalid.
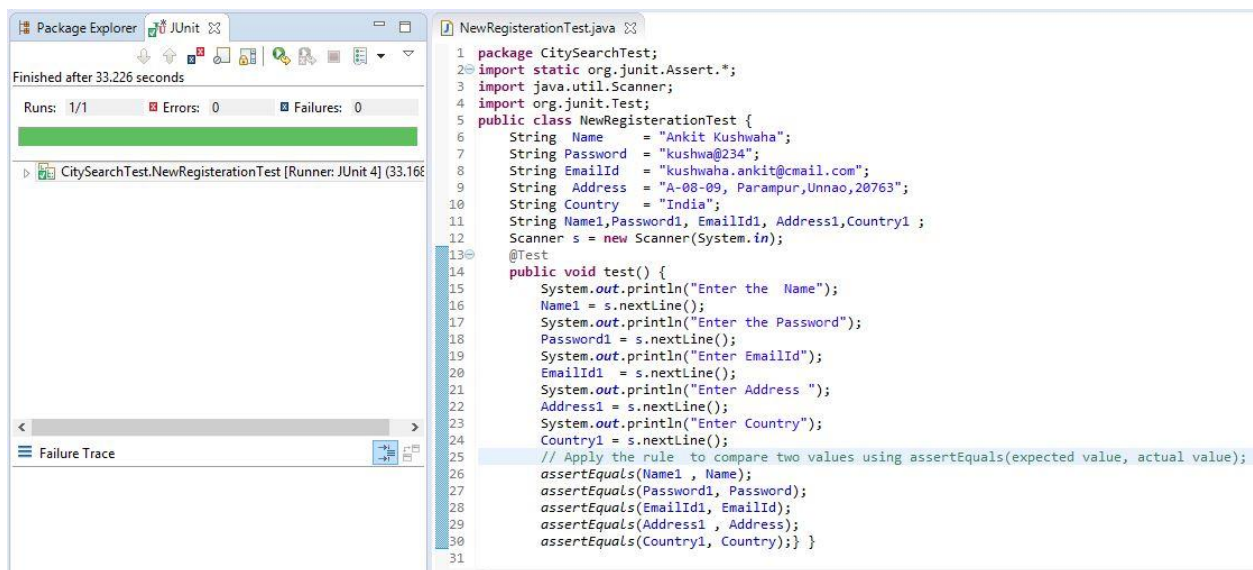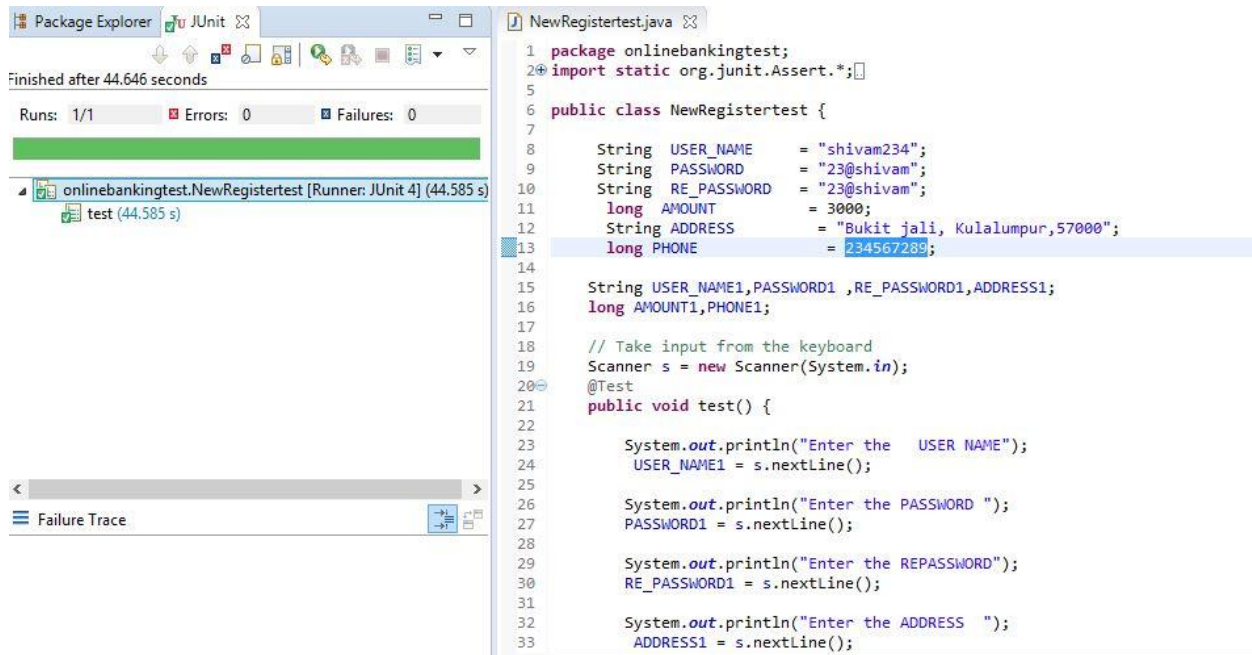
a) Users' Registration Testing
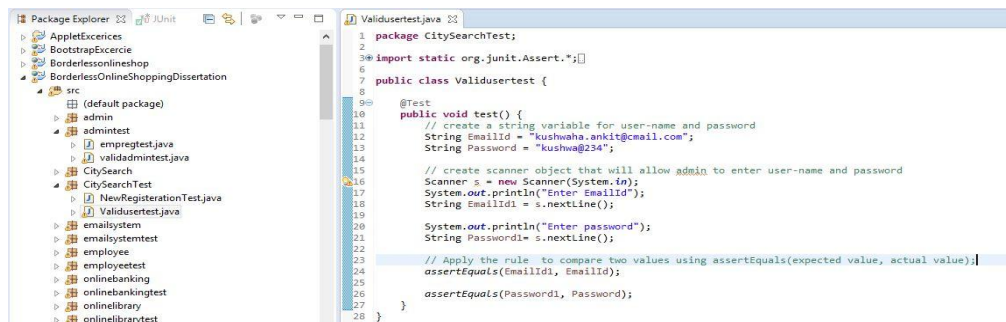
b) Users' Login

2) **Online Banking System**: The same operation will be done in the online banking system to verify the data which is entered by the users.

i) **Customers' Registration**: The first one is the customers' registration in the bank and data will be check by automated.

a) User' Registration

ii) **Customer' Login:** After registration which data is stored in database and now it will be verify that user entered same information which is stored in database.

b) Customer's Login

3) Email System: The first one user needs to register to store the data in the existing database with accurate data type.

i) **Users' Registration:** This is the part of the registration where the users will do registration with some input.

a) User's registration

ii) **User' Login:** Now the user will login with specific data and it will be verified with the database.

b) User' Login

7.5 Security Mechanism

This project as it deals with users personal data needs good security mechanism which is taken care of various measures have to be taken to take care of security in the whole project. Care of security is taken for individual servers as well as the whole system. Steps are taken to counter two types of security issues which are as follows:

- **Unauthorized access to database server.**
- **Steps taken against hacking of system.**

Some of the steps taken to counter the above problems are described below:

- ❖ The database can be configured to only allow queries generated by the programs of the local machine to run so remote user is unable to run a query.
- ❖ First of all at the time of registration the user is required to set a password which should be greater than six characters for better security.
- ❖ Passwords wherever entered are not shown instead asterisk (*) character is shown.
- ❖ When a user logins in the Borderless system his login details are not saved in a cookie on the local system for increased security as some other person can read the cookie details. The system maintains login **session details** on the server which it manages in **a hash table** till the user is logged in. As the user does logoff his details are erased from the server hash table.

7.6 Conclusion

The overall System is tested carefully by using two methodology manual and Junit. However, one is fully depends on human and another one is based on machine and trying to find out the system bugs because without testing software is incomplete and error can be occurred at any time.

CHAPTER EIGHT

Conclusion

8.1 Further Enhancements

Although the present system is satisfying, many of the requirements of a Web based Borderless Online shopping system and there are few limitations of this system which can be easily deal with. The existing system only focus on internet shopping with little free services but with a little effort it has many free services which can help to the users many ways including market products also available.

8.2 Future Scope

This site is developed keeping all this in mind including some free services which are generally used by the users and trying to help many ways and in the future it can be extended, to any limit and customer can select his favourite products of different companies by comparing these prices and facilities and finally he can place his order from his computer or any smart phones and if they like to go to shopping in market then can search a specific product which is near to user' place and enjoy the shopping. Also a lot of components developed for this project can be reused for future projects with a little change. Few components that can be reused are password checking bean, password reminder etc. So we can say this project as a whole as well its components have a good future**.**

8.3 Strength of Web based Borderless Online

The overall system is based on java which is more secure language and the best of part of this system is that every free service has a different account so users can not easily use a free services until they do not have any account.

8.4 Lesson Learnt

This whole project is the combination of the different technologies and every stage was a learning stage and only used best existing technologies which fulfil all the requirements the project and deliver a good software.

8.5 Conclusion

The overall system is tested carefully and fulfilling all the requirements which were analysed at the first stage of software development. The whole project belongs to different areas and users can go choose services according to their requirements because at the home page all the hyperlinks are available which can redirect to different page.

8.6 List of Appendix

There are two different types of the list of appendix mentioned below:

Appendix A Gantt Chart

The Gantt chart is illustrating the whole period of the "web based Borderless Online Shopping" from beginning to deliver a good software. It is also describing that how many days took to complete each section and most of the work did parallel.
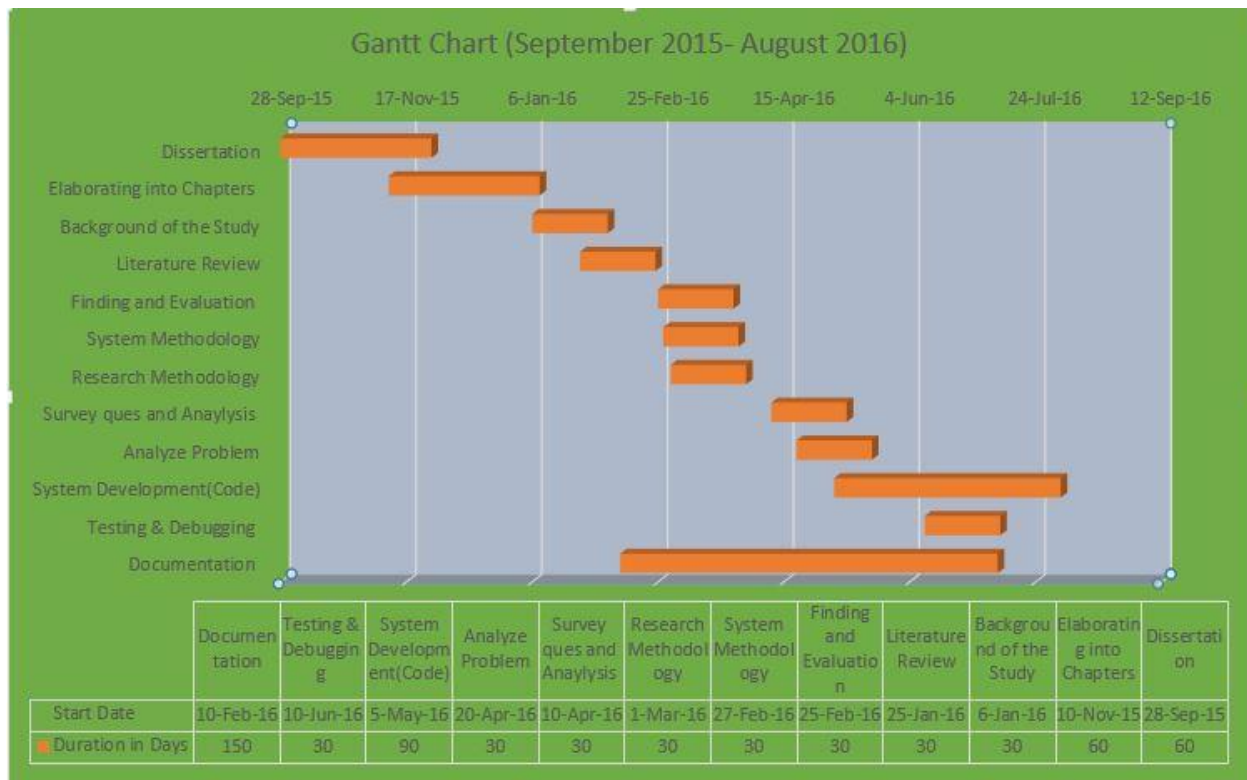

Fig 8.6   Gantt chart (September 15- August 2016)

Appendix B Screen Shot: There are few more screen shots of the web based borderless online shopping.

1)

DETAILS OF THE EMPLOYEE

ID	Name	Department	Salary	Delete	Update
231	javed ansari	cps	35000	Delete Record	Update Record
901	Sadma Ansari	HomeScience	900	Delete Record	Update Record
123	Samson	Engineering	5000	Delete Record	Update Record
12	Amir Khan	IT	3000	Delete Record	Update Record
34	Asjad	IT	3500	Delete Record	Update Record
45	Akil	Advertis	799	Delete Record	Update Record
11	Amir	cse	455	Delete Record	Update Record
21	Amir Khan	IT	3500	Delete Record	Update Record

2)

EMPLOYEE DETAILS ARE

WebSoft Arena Green Apartment 1990-02-05 male play sing MALAYSIA 192.168.56.1 File

Screen Shot kANPUR 2006-01-05 female play sing INDIA 192.168.56.1 File

Platform Delhi 1990-05-09 male play sing movie 192.168.56.1 File

Sadma BeniGanj 1992-02-03 female movie read INDIA 192.168.239.2 File

Amir Arena Grren Apartment 1992-12-31 male play INDIA amiransari.my@gmail.com 192.168.239.2 File

AMIR ANSARI hagdfeya 1992-12-31 male play INDIA amiransari.my@gmail.com 169.254.211.220 File

AMIR ANSARI GANJMURADABAD 1992-12-31 male play INDIA amiransari.my@gmail.com 169.254.211.220 File

Akil hhhshshs 1992-12-31 male play INDIA amiransari.my@gmail.com 169.254.211.220 File

AMIR ANSARI GANJMURADABAD 1992-12-31 male play INDIA amiransari.my@gmail.com 169.254.211.220 File

Symonds 11 street 1999-12-12 male play INDIA symonds@yahoo.com 169.254.211.220 File

Symonds 11 street 1999-12-12 male play INDIA symonds@yahoo.com 169.254.211.220 File

3)

Expenditure Report

Display All: ☐   Expenditure By Month: --------- ----

Payment ID	Pay Slip ID	Employee ID	Payment For	Gross Salary	Allowances	Deductions	Net Salary
3	1	Emp001	2016-04	RM 15000	RM 220.0	RM 6280.22	RM 5890.18
4	1	Emp001	2016-03	RM 15000	RM 220.0	RM 6280.22	RM 5890.18
5	1	Emp001	2016-03	RM 15000	RM 220.0	RM 6280.22	RM 5890.18
6	4	Emp001	2015-01	RM 15000	RM 2800.0	RM null	RM 17800.0
7	5	Emp001	2016-01	RM 15000	RM 10000.0	RM null	RM 25000.0
8	5	Emp001	2016-01	RM 15000	RM 10000.0	RM null	RM 25000.0
Total Expenditure							**RM 85470**

4)

Search Products

m

Name	Address	DOB	Gender	Hobby	Country	Emailid	File	IP
My Documents	GANJMURADABAD	1992-12-31	male	play	INDIA	amiransari.my@gmail.com		
File								
169.254.211.220								
Maaz Ansari	Bangermau	1999-12-31	male	play	INDIA	maaz@yahoo.com		
File								
169.254.211.220								
Maaz Khan	Shiusbg	1999-12-12	male	play	INDIA	mazz@yahoo.com		
File								
169.254.211.220								
Maaz Khan	Shiusbg	1999-12-12	male	play	INDIA	mazz@yahoo.com		
File								
169.254.211.220								

5)

6)

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