



# **eMarketing portal**

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Software Engineering Project- II 2014

Project ID: WE-SEP-004

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## ***Declaration***

We declare that the this project report or part of it was not a copy of a document done by any organization, university any other institute or a previous student project group at SLIIT and was not copied from the Internet or other sources.

### **Project Details**

Project Title	eMarketing portal
Project ID	WE-SEP-004

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## ***Abstract***

This website is an e-marketing website which allows the people to publish advertisements of their products and services or their product and service requirements for free. The entire internet users can visit this website and can search for any product or service that a person needs or can provide. If they find an advertisement related to that they will be able to contact the owner of that advertisement through their contact details and talk about the business. If people need to publish their advertisements they must first register in the system and then login to the website. When publishing an advertisement the users must agree to all the rules and policies of the website so that the users of the website will be able to get a quality user experience. The website will provide various features to the users in order to make their work easy in registering, publishing and searching advertisements, managing advertisements and contacting the advertisement owners. Most importantly the website will provide an overall better user experience than other e-marketing websites out there in the internet.

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## **1. Introduction and Description of the Project**

### **1.1 Problem Specification**

Currently if a seller (private or business) need to sell a product the seller has to advertise through different media such as televisions, radios, newspapers and internet by paying money. The sellers always cannot find the best buyers for their products. Some sellers, especially private sellers are not able to market their product to get a good income.

When the buyers are considered they always want to buy a product easily and quickly. The buyers do not want to spend more time and money on buying. So they need to find a product which is near their location which will reduce the time taken by them to purchase.

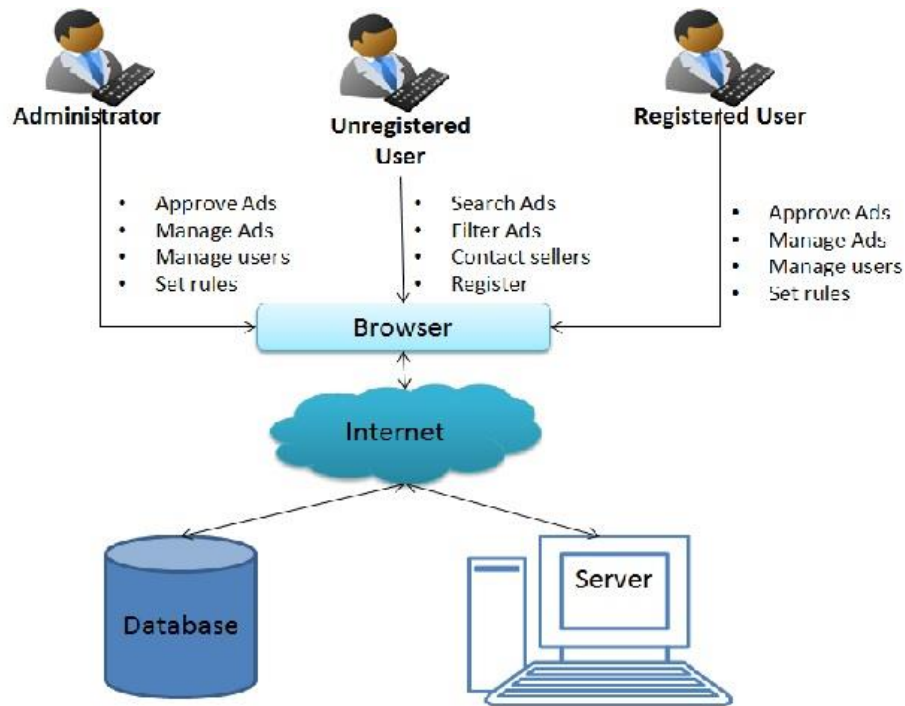
### **1.2 Solution Outline**

The proposed solution for the previously mentioned matter is a web based application. It will allow any person who wants to sell a product to a buyer quickly and easily.

The proposed website is mainly focus on the advertising about different products through the internet. This website has three main types of users

- Sellers ( Registered Users)
- Buyers(Registered/ Unregistered Users)
- Administrator

The overall structure and the functions of the system is demonstrated on the following High level architecture diagram (Figure 1.2)



1.2 High level architecture diagram

This website allows the sellers to publish the advertisements about the product they need to sell for free. They must first register in the system by providing needed information. Then the sellers must login to the system and post their advertisement.

The sellers are categorized to two different categories as Private sellers and Business sellers. When they post an advertisement they can categorize the advertisement.

They buyers can easily find the product that they want by searching the products and filtering through different categories. The buyers can find the sellers near him by filtering through the location.

The Administrator is the main responsible party to maintain the standards and the quality of the site. Administrator has the privileges to approve advertisements, manage advertisements, manage registers users, and manage the rules of the website.



### **1.3 Key Benefits**

- Solution can be easily access by all the users around the country as it is a web based application.
- Users, who registered on the site, can publish their advertisements totally free.
- All users can search for their needs easily whether they are registered or not.
- User can find exactly what they need, using the search function, which provides category wise sharp search.
- Through the user-friendly search on the site, users can find products from their region quickly.
- User can contact the seller via e-mail, which is provided on the site.
- Less time consuming as the finding a product is very convenient.
- It reduces unnecessary cost.
- Sellers will not have to use alternative methods such as television, newspaper advertising or alternative ways to do their current work.
- Increase the efficiency as work is categorized
- It is a user friendly application which will handle the requirements.
- It saves the time to fulfill the objectives of the company.

## **2. Solution Outline**

The proposed system has a main focus on the posting advertisement for free. The website allows the registered users who are sellers to post the advertisement by categorizing the well. It will allow the buyers to find a product easily and quickly without any delay.

### **Main functions of the system**

- User Registration
- Search
- Contact the seller
- Report/ Complain about advertisements
- Filter advertisements by category
- Share the details of an advertisement
- Login
- Publish advertisements
- Enable/ disable comments
- Edit advertisements
- Delete advertisements
- Post comments on a specific advertisement
- Rank the business seller
- Provide feedbacks on sellers
- Add advertisements to my favorites
- Change/update account details
- Reset password
- Get notifications
- Approve advertisements
- Manage advertisements
- Manage sellers (registered users)
- Set rules
- Modify/remove rules

## 2.1 System Requirements

### 2.2.1 Functional Requirements

#### User Registration

Number	1	Size	3
User story	As an unregistered user I can register in the website So that I can use the services of the website		
Acceptance Criteria	Success: A new user is added to the system.  Error: Display error message and allow user to re-enter the details.		
Priority	High		

#### 2.1.1.1 User Registration

#### Search

Number	2	Size	3
User story	As an user I can search for advertisements So that I can find details about a product that I need to buy		
Acceptance Criteria	Success: Display the details about the products, which are searched.  Error: Indicate the user that there are no match results to the search		
Priority	High		

#### 2.1.1.2 Search

**Contact the seller**

Number	3	Size	2
User story	As an user I can contact the seller (via email/ phone) So that I can get more details about the product that I need to buy and to complete my purchase		
Acceptance Criteria	Success: E-mail is sent to the seller.  Error: Display error message and allow user to re-try.		
Priority	High		

**2.1.1.3 Contact the seller****Report/ Complain about advertisements**

Number	4	Size	2
User story	As an user I can report / complain about advertisements So that I can ensure whether the advertisement is not harming or discriminating any party and trust the details of the advertisement		
Acceptance Criteria	Success: A complain about an advertisement is sent to administrator.  Error: Display error message and allow user to re-try.		
Priority	Medium		

**2.1.1.4 Report/ Complain about advertisements**

**Filter advertisements by category**

Number	5	Size	5
User story	As an user I can filter advertisements by category So that I can easily/ quickly find the products according to my need		
Acceptance Criteria	Success: Display filtered result.  Error: Display error message and allow user to re-try.		
Priority	High		

## 2.1.1.5 Filter advertisements by category

**Share the details of an advertisement**

Number	6	Size	3
User story	As an user I can share the details of an advertisement So that I can I can notify other people about the advertisement quickly and efficiently		
Acceptance Criteria	Success: The details of the advertisement are shared on social networks.  Error: Display error message and allow user to re-try.		
Priority	Low		

## 2.1.1.6 Share the details of an advertisement

**Login**

Number	7	Size	2
User story	As a Seller (registered user) I can login So that I can use services of the web site		
Acceptance Criteria	Success: The user directed to user's account page.  Error: Display error message and allow user to re-try.		
Priority	High		

**2.1.1.7 Login****Publish advertisements**

Number	8	Size	5
User story	As a Seller (registered user) I can publish advertisements So that I can get a publicity for my product and earn money by selling the product		
Acceptance Criteria	Success: Advertisement details are sent to approval.  Error: Display error message and allow user to re-try.		
Priority	High		

**2.1.1.8 Publish advertisements**

**Enable/ disable comments**

Number	9	Size	2
User story	As a Seller (registered user) I can enable/ disable comments So that I can notify whether the users that I can get their opinion or not		
Acceptance Criteria	Success: Allow or does not allow the buyer to post comments on the advertisement.		
Priority	Medium		

## 2.1.1.9 Enable/ disable comments

**Edit my advertisements**

Number	10	Size	3
User story	As a Seller (registered user) I can edit my advertisements So that I can notify the updated advertisements details to the buyers		
Acceptance Criteria	Success: Advertisement details are edited.  Error: Display error message and allow user to re-try.		
Priority	High		

## 2.1.1.10 Edit my advertisements

### Delete my advertisements

Number	11	Size	2
User story	As a Seller (registered user) I can delete my advertisements So that I can remove any information regarding a finished business		
Acceptance Criteria	Success: Advertisement is deleted.  Error: Display error message and allow user to re-try.		
Priority	High		

#### 2.1.1.11 Delete my advertisements

### Post comments on a specific advertisement

Number	12	Size	3
User story	As a logged user I can post comments on a specific advertisement So that I can give my opinion regarding the advertisement		
Acceptance Criteria	Success: A comment is posted on the relevant advertisement.  Error: Display error message and allow user to re-try.		
Priority	Medium		

#### 2.1.1.12 Post comments on a specific advertisement



**Rank the business seller**

Number	13	Size	5
User story	As a logged user I can Rank the business seller So that I can provide feedback on the reliability of the seller to the other buyers		
Acceptance Criteria	Success: The seller's rating is increased.  Error: Display error message and allow user to re-try.		
Priority	Medium		

## 2.1.1.13 Rank the business seller

**Add advertisements to my favorites**

Number	14	Size	5
User story	As a logged user I can add advertisements to my favorites So that I can select the best product that I want after looking at similar kinds of products and refer details later		
Acceptance Criteria	Success: The advertisement is added to user's favorites list.  Error: Display error message and allow user to re-try.		
Priority	Low		

## 2.1.1.14 Add advertisements to my favorites

**Change/update account details**

Number	15	Size	3
User story	As a logged user I can change/update my account details So that I can update my details according to the real changes		
Acceptance Criteria	Success: The user's account details are updated.  Error: Display error message and allow user to re-enter the details.		
Priority	High		

## 2.1.1.15 Change/update account details

**Reset password**

Number	16	Size	5
User story	As a registered user I can reset my password So that for the convenience of mine if I forget the password		
Acceptance Criteria	Success: The user's password is reset.  Error: Display error message and allow user to re-enter the details.		
Priority	High		

## 2.1.1.16 Reset password

**Log out from the account**

Number	17	Size	2
User story	As a logged user I can log out from the account So that I can finish using the services		
Acceptance Criteria	Success: The user re-directed to the home page.		
Priority	High		

**2.1.1.17 Log out from the account****Get notifications**

Number	18	Size	3
User story	As a registered user I can get notifications So I can make sure my add has been posted if not I can correct the mistakes and repost it		
Acceptance Criteria	Success: The user receives a notification on a specific advertisement.		
Priority	Medium		

**2.1.1.18 Get notifications**

### **Approve advertisements**

Number	19	Size	5
User story	As an Administrator I can approve advertisements So that all advertisements are according to the standard and advertisements can be displayed in the website		
Acceptance Criteria	Success: The advertisement is approved and displayed.  Error: The advertisement is not approved and displayed.		
Priority	High		

#### 2.1.1.19 Approve advertisements

### **Manage advertisements**

Number	20	Size	5
User story	As an Administrator I can manage advertisements So that the posted advertisements can be checked for errors and necessary changes can be made		
Acceptance Criteria	Success: Advertisement details are edited / deleted and managed according to the policy.  Error :		
Priority	High		

#### 2.1.1.20 Manage advertisements

**Manage sellers (registered users)**

Number	21	Size	3
User story	As an Administrator I can manage sellers (registered users) So that all users can be maintained if there's an issue and they are according to the rules of the site		
Acceptance Criteria	Success: Details of sellers can be edited or removed successfully.  Error: An error message is displayed and asked to redo		
Priority	High		

**2.1.1.21 Manage sellers (registered users)****Set rules**

Number	22	Size	2
User story	As an Administrator I can set rules So that the web site has a general set of accepted policies to all users		
Acceptance Criteria	Success: The rules are added and a success message is displayed  Error: An error message is displayed and asked to reenter details		
Priority	High		

**2.1.1.22 Set rules**

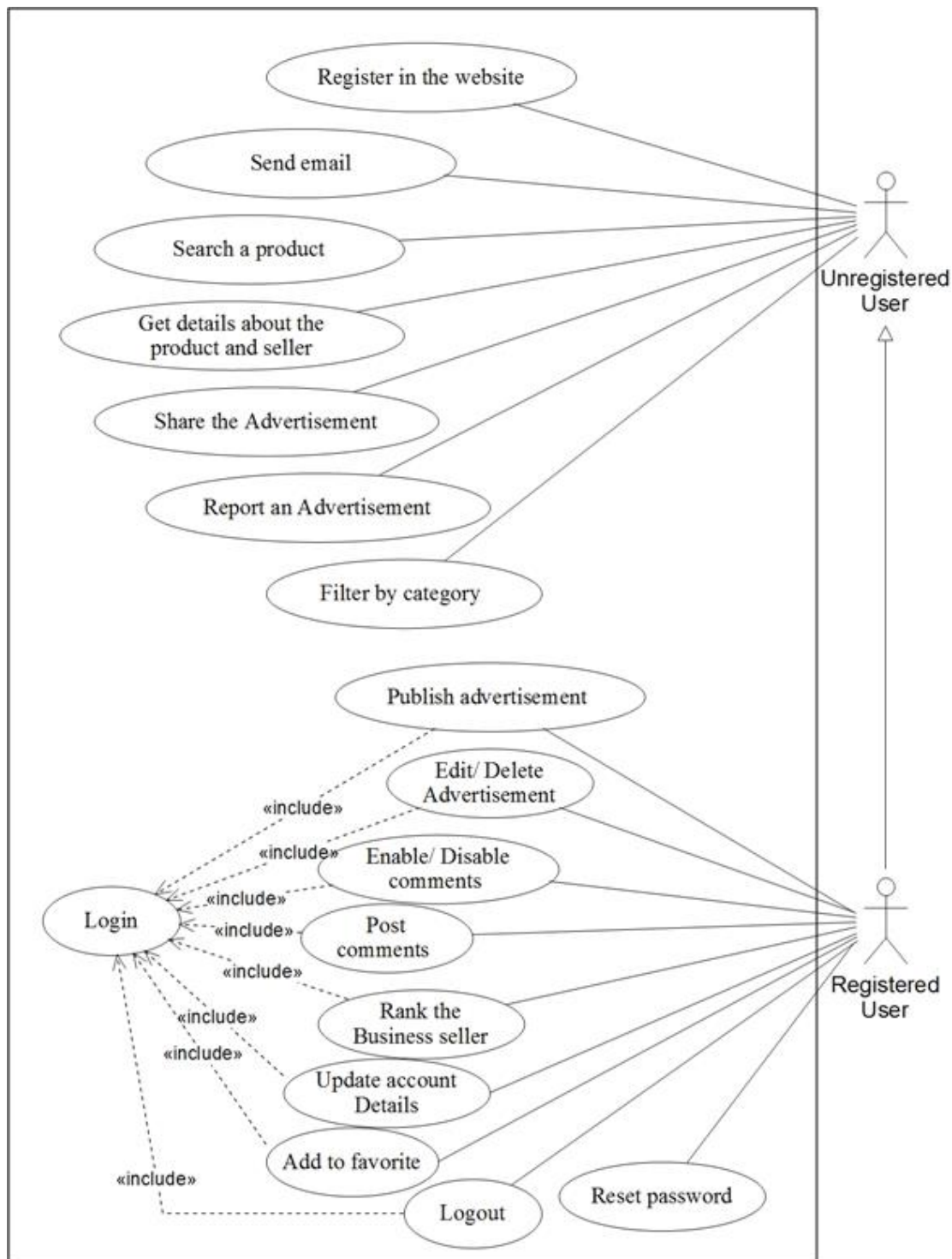
**Modify/remove rules**

Number	23	Size	2
User story	As an Administrator I can modify/remove rules So that the rules must be updated according to the time		
Acceptance Criteria	Success: Rules are modified/deleted and success is notified  Error: An error message is displayed and asked to redo		
Priority	High		

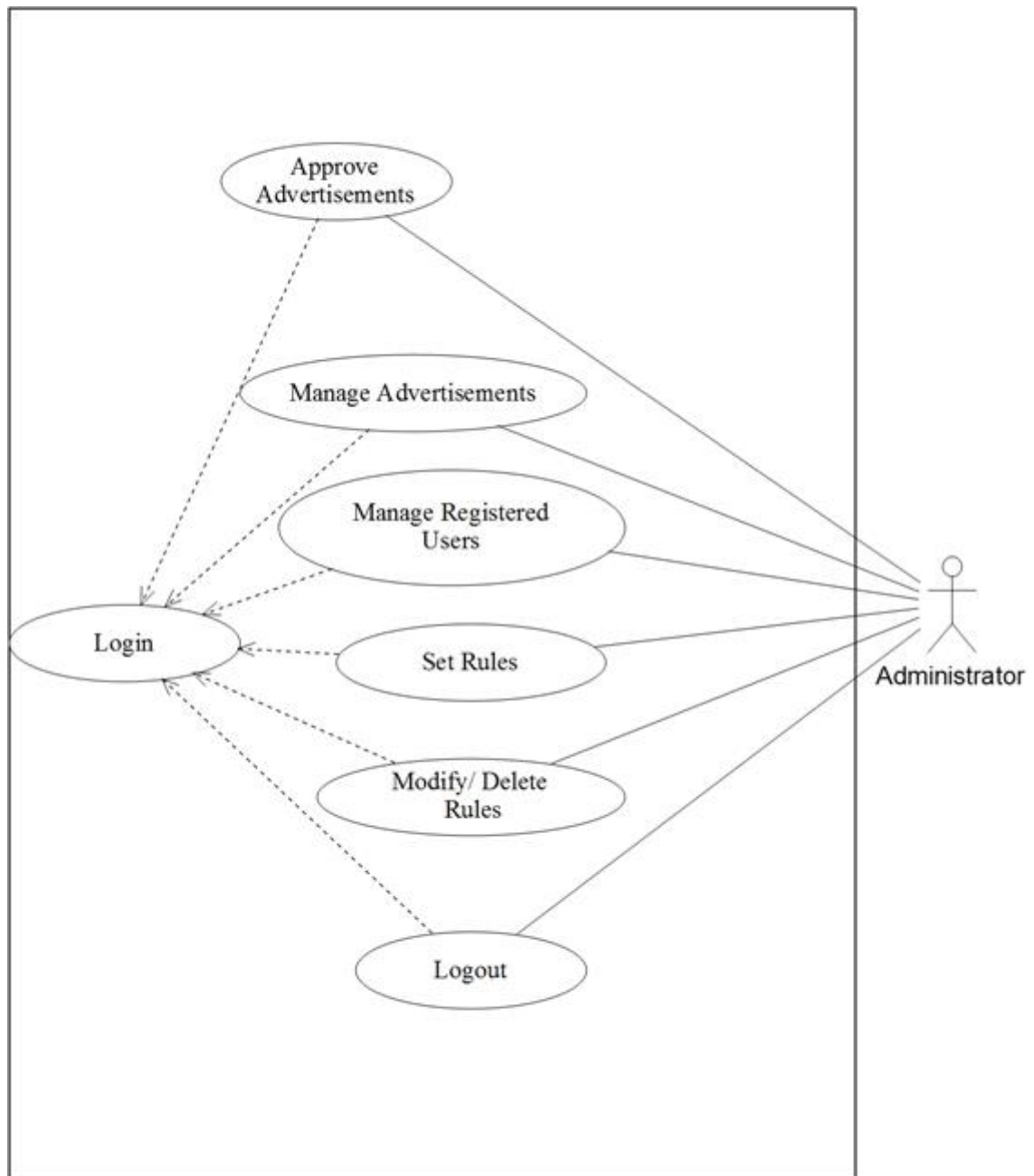
## 2.1.1.23 Modify/remove rules

## Use Case diagrams

Overall functions which were previously described are demonstrated using use case diagrams (Figure 2.1.1.1, Figure 2.1.1.2)



2.1.1.1 Use case diagram 1(Overall functions)



2.1.1.2 Use case diagram 2(Overall functions)

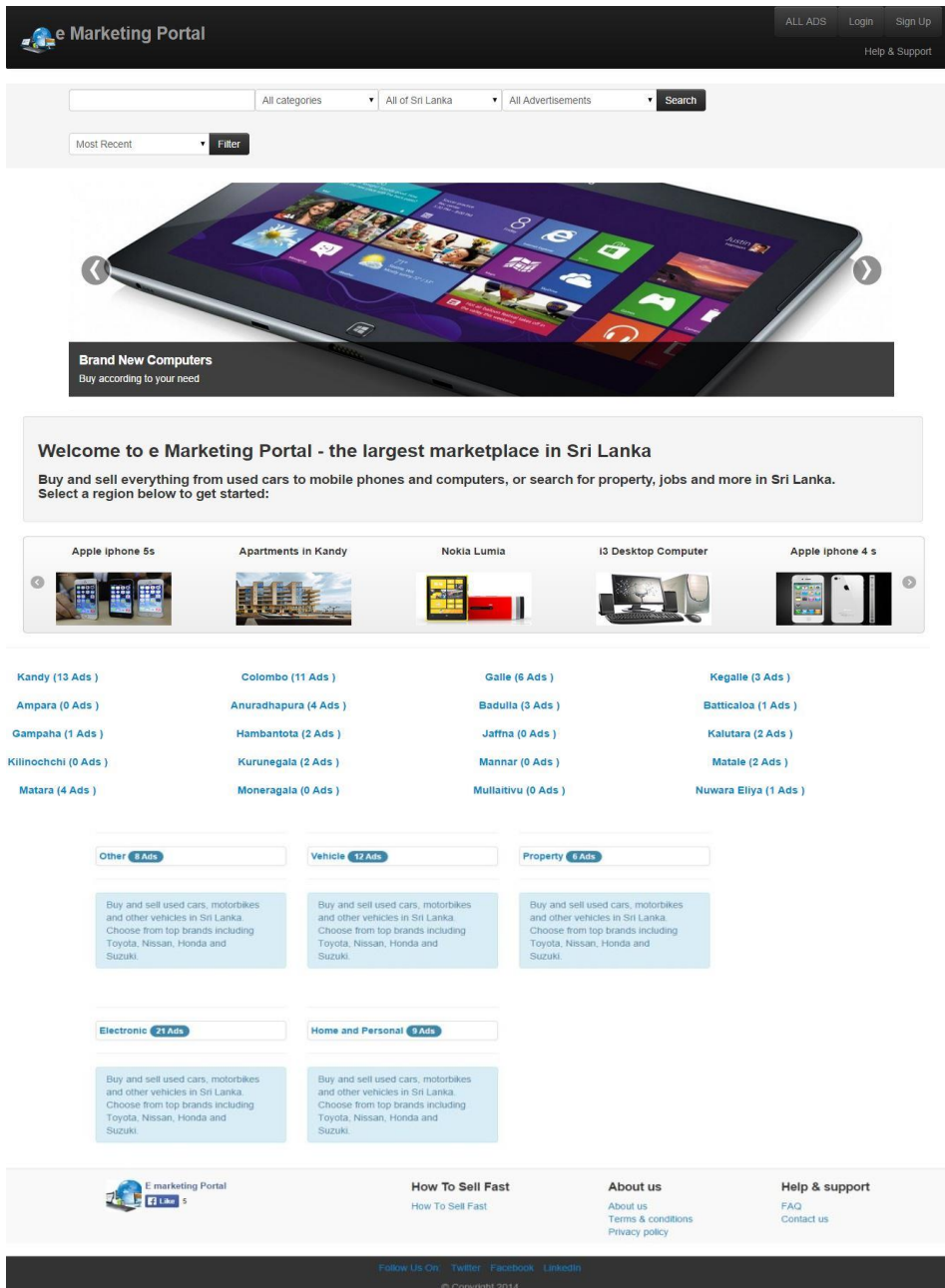


### **2.2.2 Non Functional Requirements**

- Availability – System availability to the end user at any given time. When the sellers or Buyers are trying to visit the web site they must be able to access the web site without any problem using a normal internet connection.
- Reliability/Fault Tolerance – The website must be reliable and it must be able to tolerate any fault and continue its operation until maintenance is done.
- Usability - System ease of use and navigability to a layman user. Example: Should not take more than 3 mouse clicks to reach any feature/screen in the system.
- Performance – The tasks in the web site must be completed in a less time period to achieve the required functionality. Response time requirements.
- Security – The system must be secure to store personal information and the contact information. Secure the system is from hackers and unauthorized users
- Portability - System's ability to adapt to different environments. A computer user and a mobile device user should be able to use the web site without any problem.
- Scalability - The system's ability to scale and support number of active users at a given point of time.

## 2.4 System Interfaces

### Home Page



The screenshot displays the home page of the 'e Marketing Portal'. At the top, a dark header bar contains the portal's logo, navigation links for 'ALL ADS', 'Login', and 'Sign Up', and a 'Help & Support' link. Below the header is a search bar with dropdown menus for 'All categories', 'All of Sri Lanka', and 'All Advertisements', followed by a 'Search' button. A 'Most Recent' filter is also present. The main content area features a large banner for 'Brand New Computers' with a tablet displaying various app icons. Below the banner, a welcome message states: 'Welcome to e Marketing Portal - the largest marketplace in Sri Lanka. Buy and sell everything from used cars to mobile phones and computers, or search for property, jobs and more in Sri Lanka. Select a region below to get started:'. This is followed by a row of featured ads: 'Apple Iphone 5s', 'Apartments in Kandy', 'Nokia Lumia', 'i3 Desktop Computer', and 'Apple Iphone 4 s'. A grid of regional links follows, listing locations like Kandy, Ampara, Gampaha, Killinochchi, Matara, Colombo, Anuradhapura, Hambantota, Kurunegala, Moneragala, Galle, Badulla, Jaffna, Mannar, Mullaitivu, Kegalle, Batticaloa, Kalutara, Matale, and Nuwara Eliya with their respective ad counts. Below this is a categorized section for 'Other', 'Vehicle', 'Property', 'Electronic', and 'Home and Personal' ads, each with a brief description. The footer contains social media links, a 'How To Sell Fast' guide, 'About us' information, and 'Help & support' links. The copyright notice '© Copyright 2014' is at the bottom.

#### 2.4.1 Home Page

Home page consists of very attractive user interfaces and clear navigation links to login, register, search for an advertisement, view all advertisement, and browse by different categories, locations, view popular ads and links to support pages

## Sign up and Login

e Marketing Portal

[View Ads](#) [Login](#) [Register](#)

Sign Up Now It's all for free!

Create an Account to Post an Advertisement free

View, edit and delete your Advertisements

Save your contact details to save time

Keep in touch with your favorite Advertisements

Sign Up

Go to Login

Follow Us On: [Twitter](#) [Facebook](#) [LinkedIn](#)

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### 2.4.2 Signup Page

Login Now

you have successfully registered to our system

Password

Login

[I forgot my password](#)  
[Sign Up](#)

### 2.4.3 Login Page

## Account Settings

[My Ads](#) [Favorites](#) [Account Settings](#)

Account Settings

Change Details

User type

☒ Business User

☐ Private User

Name

Kanchana

Phone Number

0776449789

District

Kandy

City

Gampola

Change Details

Change Password

Current Password

New Password

Confirm Password

Change Password

### 2.4.4 Account Settings

27

## Post an advertisement

1

Enter details

2

Check Again

3

Success

Quick rules

- Do not post unallowed text in the title and description.
- Do not include your Email, Contact numbers and URLs in the title or description.
- Do not upload unsuitable pictures. Invalid picture ads will be removed after manual checking.

More rules

Fill in Details

Title

Category

Other

Description

Price

Rs:

☐Negotiable

Location

Kandy

City

Gampola

Phone Number

0776449789

Image

No file chosen

### 2.4.5 Post an Advertisement

#### Search Page

Filter


Category: All

Location: All

Sort: Newest

Price Rs:

To




Apple iphone 4 s

Posted on 2014-09-12 11:37:40

Phone : 0112128888

Rs.60000




Apple iphone 4

Posted on 2014-09-12 11:27:09

Phone : 0112456321

Rs.65000



Apple MacBook Pro

Posted on 2014-09-12 11:27:09

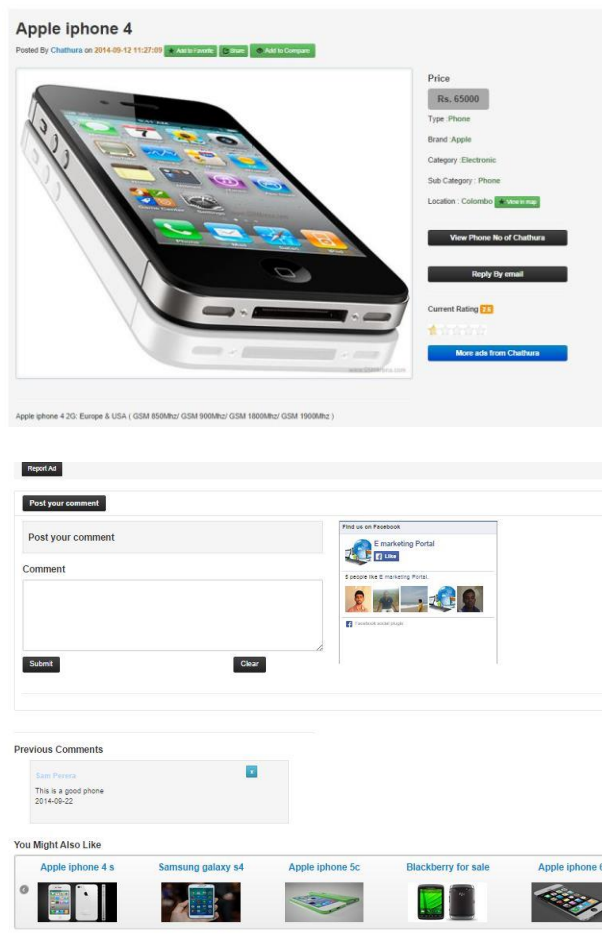
Phone : 0112456321

Rs.100000

### 2.4.6 Search Page

Search page with an advanced search to filter by different parameters such as keyword, categories, locations, price and different criteria. Display the search results showing major details such as ad title, image price, phone and posted date instantly.

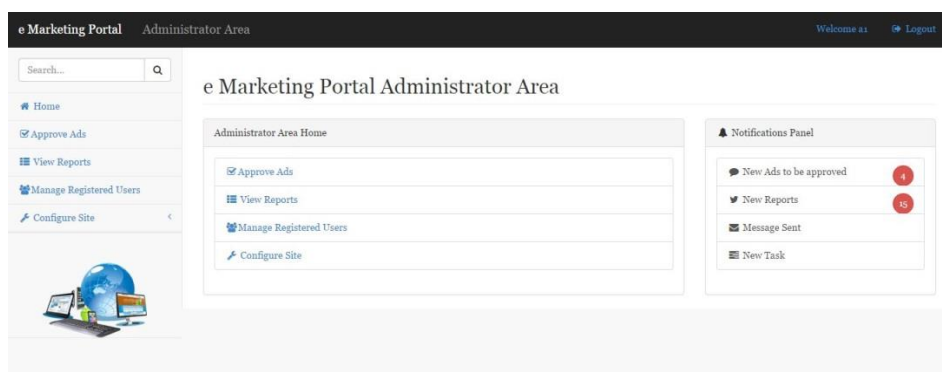
## One Advertisement Page



### 2.4.7 One Advertisement Page

Displays detailed information about one advertisement and allow user to interact through adding to favorite, rating seller, sharing ad details, comparing the ad, contacting seller, posting comments, view related advertisements, get more seller details and reporting the advertisement

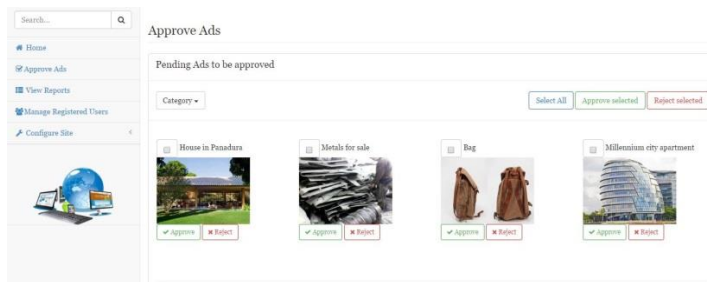
## Administrator Home Page



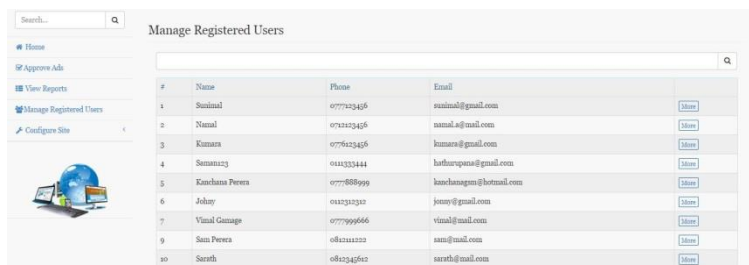
### 2.4.8 Administrator Home Page

When the administrator is logged in to the website admin will be directed to this page. This page contains major details for the administrator to do specific tasks such as approve and manage ads, manage reported ads and reports, manage registered users and configure website details.

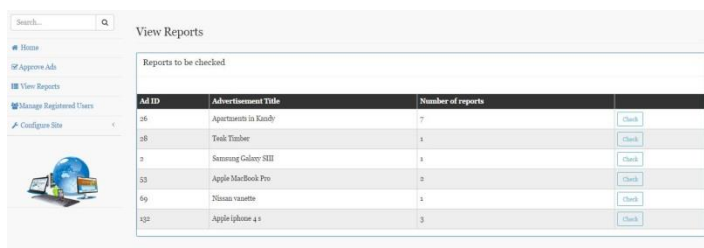
Following shows interfaces major admin functions



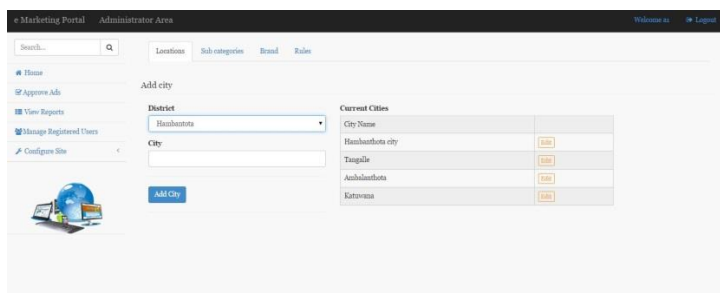
## 2.4.9 Approve ads



## 2.4.10 Manage users



## 2.4.11 Report handling



## 2.4.12 Configure site

## **2.5 Assumptions/Constrains**

- Using the scrum software development methodology to complete the system in short iterations
- Develop the website and host it in the local Apache server for testing
- Using software such as XXAMP or WAMP server which has integrated web server, database to develop and test the product locally.
- Develop the website using the MVC (Model View Controller) design pattern, for the separation of the code logic from the views.
- Use a centralized MySQL database.
- Responsive User Interface to support multiple screens.

### **3 Final Deliverable**

This section describes about the deliverable that were resulted at the end of each iteration throughout the project. This project consisted of five iterations and two releases. There were two iterations prior to the release one. There were three iterations prior to the release two.

#### **Release 1**

##### **Iteration 1**

- Learning and exploring PHP CodeIgniter framework, Bootstrap CSS framework
- User registration and creating user accounts.
- Authenticating users when they login
- Post an advertisement
- Contacting a seller through email.
- Commenting on a specific advertisement
- 

##### **Iteration 2**

- Learning jQuery and ajax
- Managing the user account and managing the advertisements posted by a logged user.
- Activating a user account through email verification.
- Resetting password through email.
- View all advertisement details
- View the one specific advertisement details
- Rating a business seller
- Add an advertisement to favorite list

##### **Iteration 3**

- Posting advertisement according to different category
- Basic search at home page.
- Filter advertisements by category and Location.
- View related advertisements.
- Report an advertisement
- Share an advertisement in social networks



## **Release 2**

### **Iteration 4**

- Advisement approval function. Checking text and pictures.
- Report handling function for the administrator
- An advance search form to filter advertisements by different parameters.
- Display seller profile and advertisements posted.
- Compare two advertisements
- Help and support page
- Integrating and testing the web site

### **Iteration 5**

- Manage registered users by administrator.
- Giving feedbacks on seller and display them.
- Configuration of master data of web site by the administrator.
- Sort advertisements by popularity, date and price.
- Display most popular advertisements
- Uploading multiple images on an advertisement
- An auto complete feature in search text field which suggests word.
- Finalizing the project by integrating and hosting

## **3.1 Future Work**

The website created can be improved as a ecommerce website which allow the users to search and also buy products online by doing payments via the internet. And also many features can be added according to the needs of people such as easy configuration of the website. A mobile application of the website can also built to allow the users to get a good service from the web site.

## 4 Conclusion

The website allows users to publish advertisements of their products for free. Any internet user can visit this website and can search for any products that a person needs. It provides and enhances the e-marketing facility to the people of the Island. By completion of this solution selling a product to a best buyer, who is the ideal person to buy a product is an easy task. Any person who wants to find and buy a product can purchase the best product which is closest to him.

As the final outcomes of this project are concerned we have achieved most of the clients' requirements. But there are some limitations and weaknesses also. One is less visits to client which is a drawback in concerning the agile methodology. For this the website could be hosted from the initial state and ask the client to give feedback on it regularly. This will save considerable amount of time than visiting the client and getting feedback.

By doing this emarketting portal website project we learnt many conceptual things such as agile development methodology, project management, working as a group to achieve a target. And also we got a good knowledge about web technologies such as PHP, CodeIgniter, HTML, JavaScript, JQuery, CSS and MySQL database management. Furthermore we experience working with a real client and producing a product considering their expectations. One of the most important achievements of this project is finalizing the website and deploying it by hosting it in a server, which we have never done before.

## 5. References

- [1] Ramez Elmasri, Shamkant B. Navathe, Fundamentals of Database System Page-Jones, M (2000).
- [2] Grady Booch, Fundamentals of Object- Oriented Design in UML. Chapters 1 & 2. eta (2007)
- [3] Grady Booch, Robert A. Maksimchuk, Michael W. Engle, Bobbi J. Young, Jim Conallen, Object Oriented Analysis and Design with Applications 3rd Edition, Chapter 1
- [4] L. Bass, P. Clements, and R. Kazman, Software Architecture in Practice, 2nd ed. Reading, MA: Addison Wesley, 2003. [E-book]

**Appendices (if any):**

*Appendices may be used to provide data of peripheral benefit to the project.*

- *Include your ER diagram(If your system has a database)*
- *Selected Code Listing <Code of special algorithms implemented can be include here>*