Abstract

Internet has become one of the most used channels for marketing and advertising as by 2019, The estimation of people connected on internet in Africa is about 492.7 million. And particularly 6,13 million in Cameroon with 25,876,380 million of inhabitants. Based on these facts we intended to provide a web platform on which advertisers can post and monitors advertisements from used to new items or services. Customers can browse and purchase some products or engage in communication with sellers. We used a model view controller (MVC) architecture and various web technologies such as html, CSS and JavaScript for front-end, and php for back-end using Laravel framework. The implementation based on business to business and consumers to consumers approach aims to provide a free advertising tool that emphasize on time saving, transparency and consumers satisfaction. The use of this platform can make significant contribution in helping, business to engage, and convert virtual visitors to customers.

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Chapter 1 – Introduction

1.1 Overview

Digital marketing is the processes of creating, communicating, delivering offerings that have value for consumers such as products or services using digitals channels such as web-channel to spread a message about a company's brand, products, or services. The objective of marketing is to reach potential customers through the channels where they spend their time reading, searching, shopping, and socializing online. Bigdeals.com is a digital marketing tool where we can buy and sell almost everything from used items to new items or services. Users can sign up for free and post advertisement easily or browse through a large category of items and services Offred in their regions or cities. We used a Transaction based revenue/fee through our VIP advertisements.

In the following lines we tried to explain the architectures, various components, and various features of this system.

1.2 Problem Definition

While traditional marketing is still in used, it involves important drawbacks and limitations that is to be considered buy marketers.

These limitations range from Little Interaction, Poor Campaign Measurement, No Control Over Timing, and Higher Costs since the recurring costs in traditional marketing can prove to be a huge investment that may or may not give a good return. And Consumers are trapped by geographical and social boundaries, unable to search widely for the best price and quality Information about products.

The problem is to build a cost-effective and interactive platform Giving opportunity to customers to browse according to their cities, regions or through a wide range of categories from the comfort of their home. And also give opportunity to advertisers to post and monitor their advertisements.

1.3 Motivation

- provide a cost-effective tool for advertisement as users can post advertisements for free
- Develop a platform that bring buyers and sellers closer

1.4 Issues

- Finding the right advertisement or products is time consuming and a tedious task for customers
- The costs in traditional marketing can prove to be a huge investment
- The traditional advertisement requires customers to move to the shop before to buy the advertised product or service
- With traditional marketing there is no real control since it depends on methods that, once executed cannot be updated. Whether it is a static text print ad in a local newspaper or a television commercial, we will need to place a new ad to replace the old one in case of any change
- there is little or no interaction between the customers and the medium used for marketing. Buyers need to move to sellers stores before to discuss about the price or quality of products

1.5 Objectives

- Provide a user-friendly interface for customers to browse through categories and sub-categories according to their regions or cities
- Provide an interface for sellers to post and monitors their advertisements for free
- Provide purchase facilities to customers through VIP products

- Provide an interface for the administrator to monitor and manage the activities of the system
- Provide a chatting system for sellers and buyers to engage in real time communication for negotiation.

1.6 Requirements

- The system should be user friendly and intuitive such that it can be understood and used by non-technical persons
- Users should have full control on their account and advertisements
- The system should be responsive
- The system should be secured and protect against attacks such as cross site request forgery and SQL injection

Chapter 2- Diagram

2-1 Architectural Diagram

The system is based on Model view controller.

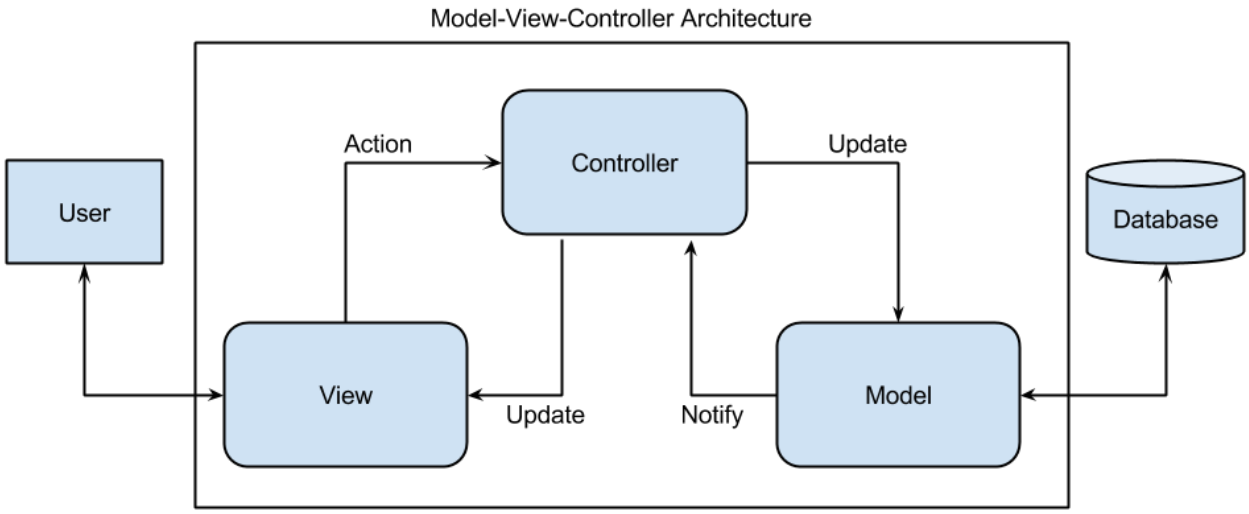


Figure 1 Architectural Diagram

2-1-1 The Model

Implemented using php, it interacts with all the system related data and entities. It connects to the database to provide data to the controller and the view.

2-1-2 The Controller

Implemented using php it represents all the business logic of the system and act as an intermediary between the model and the view.

2-1-3 The View

Implemented using HTML, CSS and JavaScript it is responsible for presentation and formatting of data sent to and from the controller or the model.

2-2 Modeling Diagram

2-2-1 Context Diagram

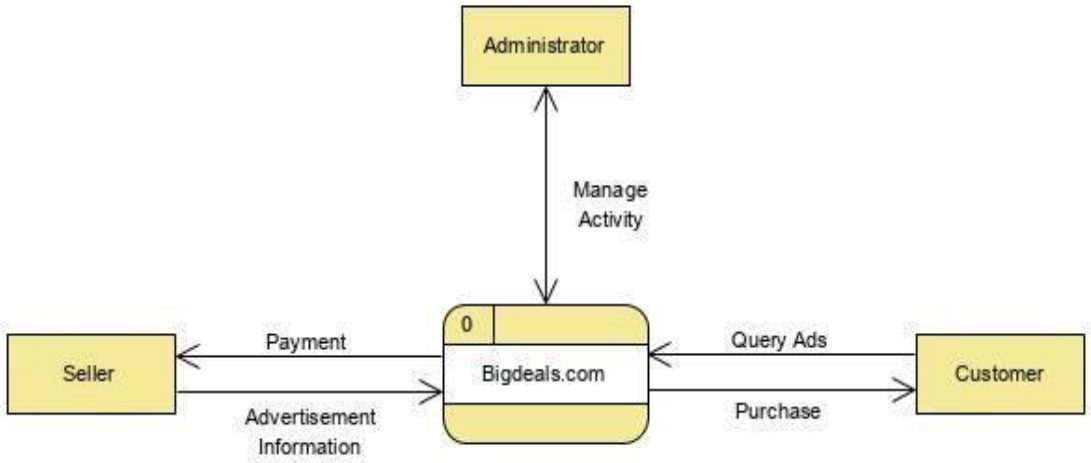


Figure 2: Context Diagram

Description:

The context diagram contains:

- The main process which is the system name (Bigdeals.com)
- And three entities:
  - Sellers who post advertisements
  - Customer who browse and purchase advertisement products
  - Administrator who monitor and manage the activity of the system

2-2-2 Diagram Zero

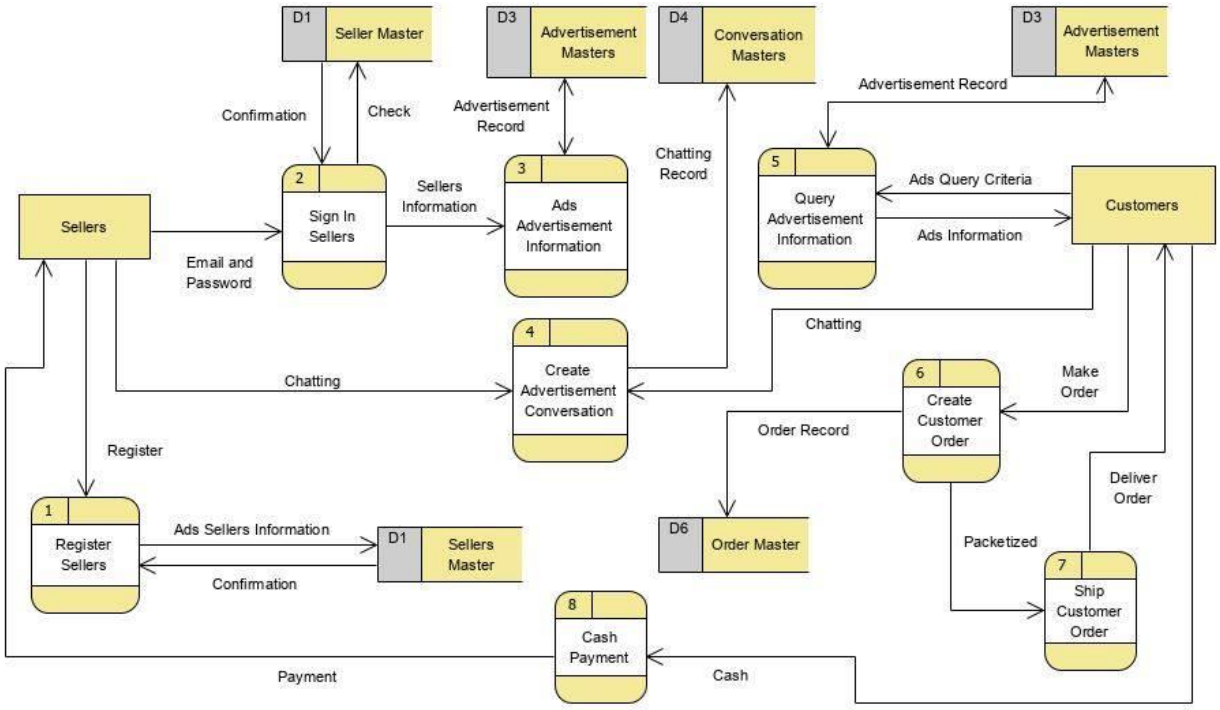


Figure 3: Diagram Zero

Description:

The diagram 0 is the expansion of the context diagram showing main process of the system:

- Eight (8) process:
  - 1-Register seller system
  - 2-sign in sellers
  - 3-ad advertisements information
  - 4-create advertisement conversation
  - 5-query advertisement information
  - 6-create customer orders
  - 7-ship customer orders
  - 8-cash payment

- Five (5) data store
  - D1-seller master
  - D3-advertisement master
  - D4-conversation master
  - D6-order master

- Two (2) entities
  - Sellers
  - customers

2-2-3 Diagram-1

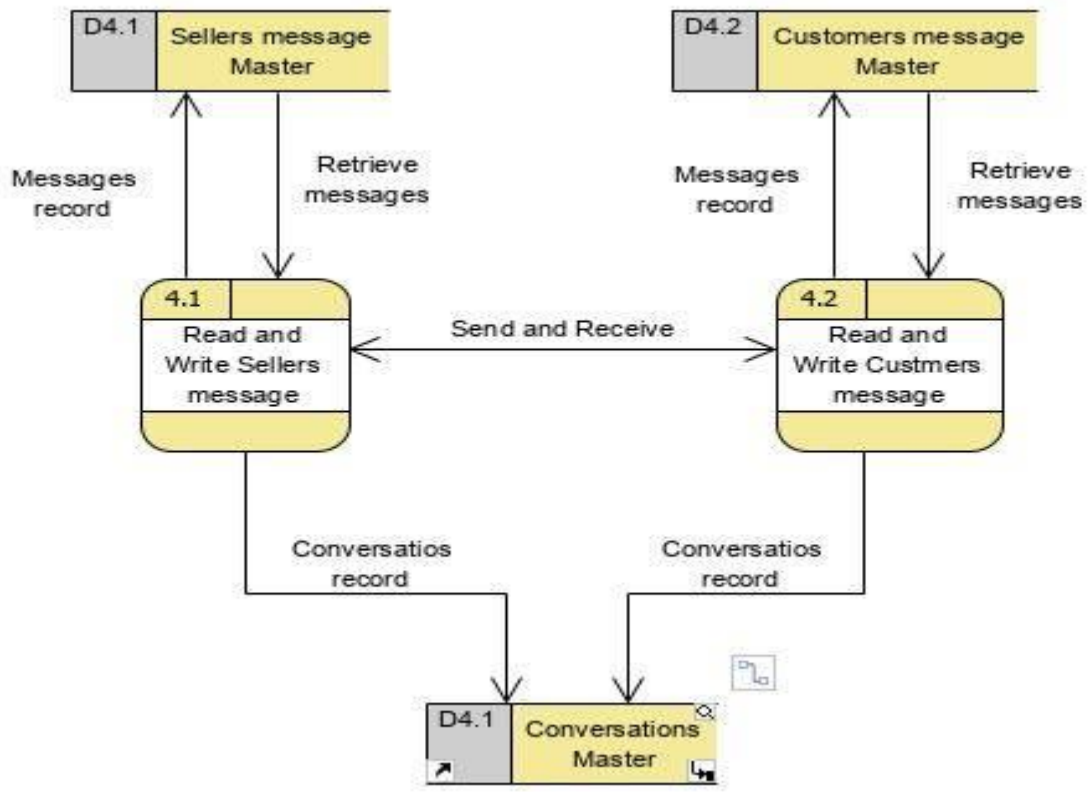


Figure 4: Diagram 1

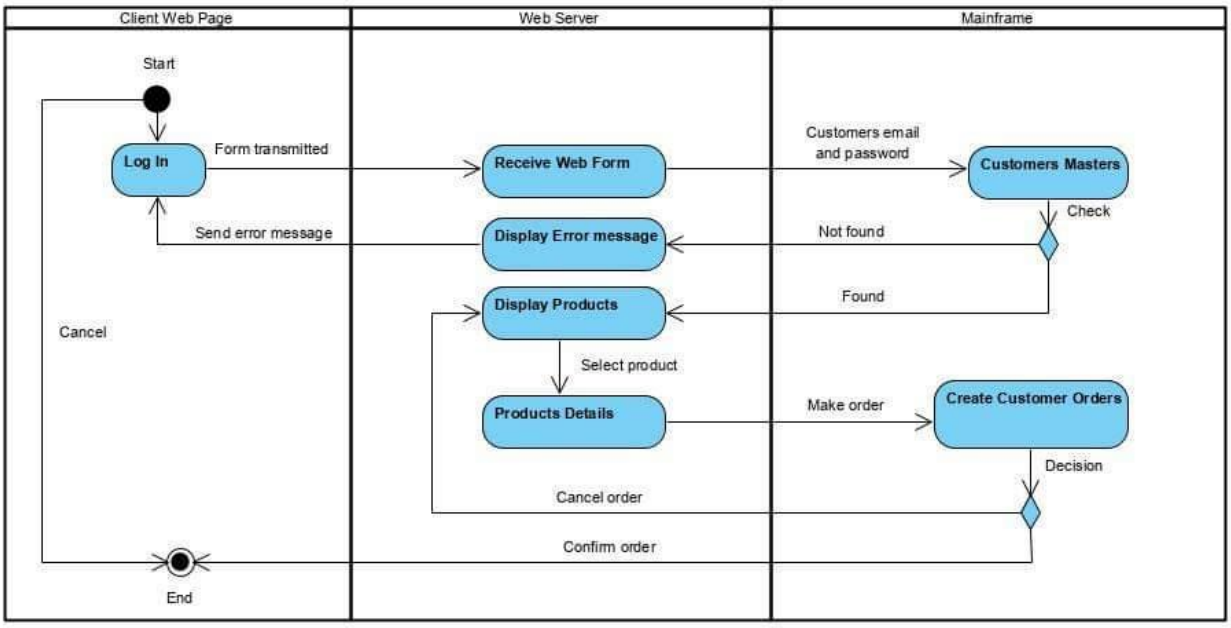
Description:

The diagram 1 is the expansion of the process 4(create advertisement conversation) from the diagram 0. it contains:

- two (2) process:
  - read and write sellers message
  - read and write customers message
- three (3) datastores
  - sellers message master
  - customers message master

2-2-4 Activity Diagram for A User Purchasing an Item

In this diagram we show the flow of data when a user login into the system and purchase an item.



2-2-5 Entity Relationship Diagram (ER)

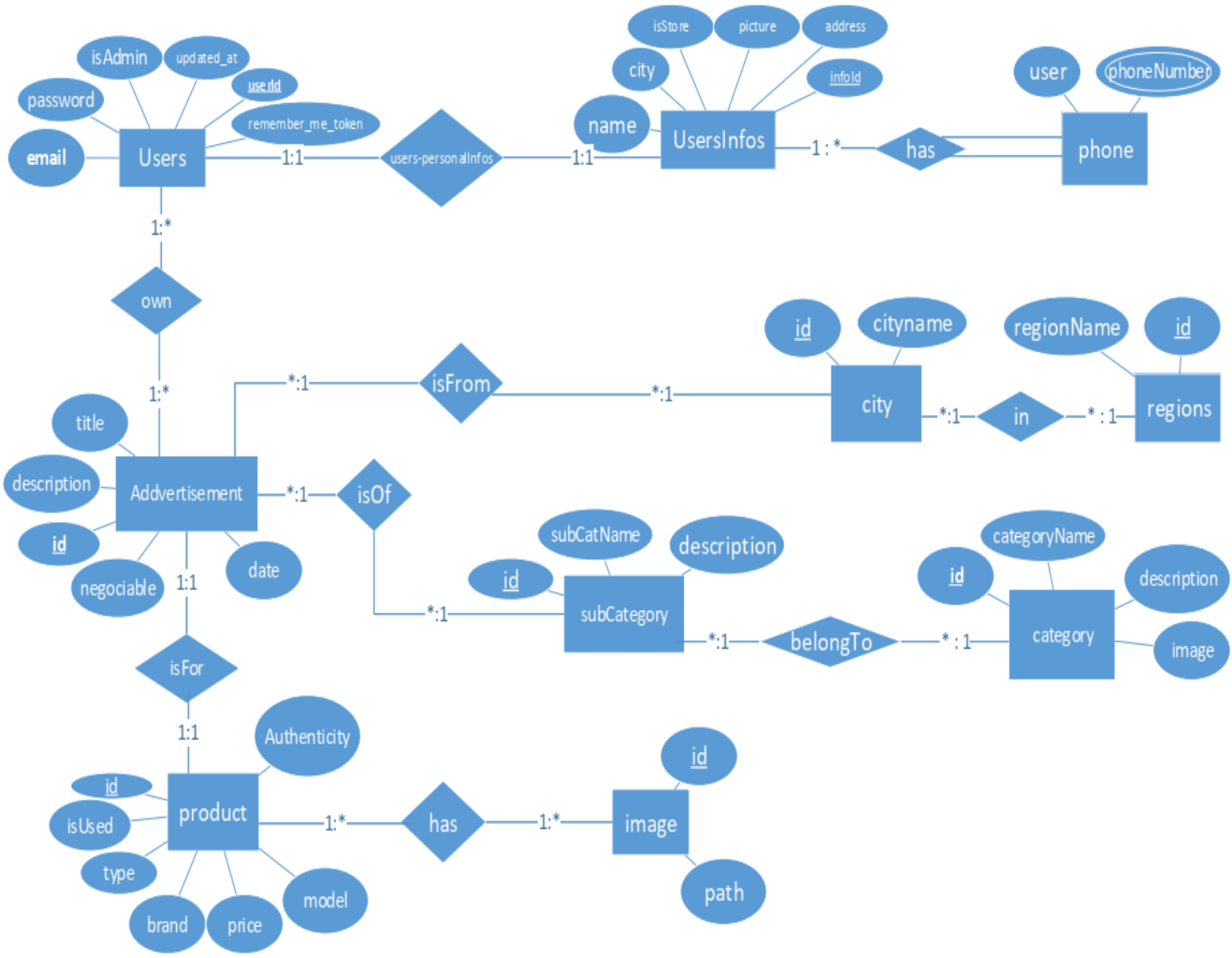


Figure 5: ER Diagram

Chapter 3 -Features

3-1 Admin Features

The administrator of the system can:

- Add and manage categories and subcategories
- Add and manage regions and cities
- Validate and block advertisements
- Block and unblock users
- Manage orders
- Respond to VIP request
- Respond to users' feedback

3-2 Sellers' Features

A person who wants to sell or advertise a product can:

- Login or register
- Post unlimited ads for free
- Edit his advertisement
- View his advertisement
- Delete his advertisement
- Request for VIP badge
- Chat with potential buyers
- Edit his personal information

3-3 Guest Features

A guest on the system can:

- Browse advertisements according to regions or cities
- Browse advertisement by categories or subcategories
- Browse advertisement by providing keywords
- Filter advertisement by price
- Filter advertisement by condition of the advertised product (used items or new)
- Filter advertisement by pricing (fixed price or negotiable price)

- Filter advertisement by VIP status of the product
- Filter advertisement by price (min and max price)

3-4 Authenticated Users 'Features

An authenticated user can do all of the above-mentioned features and also can:

- Place an order for VIP products
- Cancel his order
- Engage in real time communication with sellers
- Save advertisement as favorite
- Rate sellers

3-5 VIP Badge

VIP badge is a feature implemented in order to monetize our system by facilitating transaction between buyers and sellers. A seller after posting his product advertisement can request for VIP badge. Once the administrator verifies the conformity of his advertisement, he can approve his request and notify the sellers that his request was accepted. After the request is accepted our logistic service will collect the seller's product. once the Sellers's product Is collected his advertisement will now be display as a VIP advertisement, and customer will be able to purchase it online. once a VIP product is ordered by a customer, the delivery is made by our service and we take 5% of the selling price and return 95% to the sellers.

3-6 Payment Method

For VIP product we perform cash on delivery meaning a customer pays when he receives the product.

Chapter 4- Technologies and Tools

4-1 Programming Languages

Php 7.3.2 use to represent business logic.

4-2 Scripting Languages

Html 5, CSS3 and JavaScript used in front-end development to represent views.

4-3 Libraries

- Bootstrap 4.3.1 as CSS library
- jQuery 3.3.1 as JavaScript library
- Jsmap: a JavaScript library used to draw Cameroon map

4-4 Framework

- Laravel 5.8:

Laravel is a server-side PHP framework using the model view controller (MVC) architecture.

4-5 API (application program interface)

- Pusher: used to broadcast message event in case of our real time chatting feature.
- Addthis.com: use for social sharing

4-6 Web Server

- Xampp 7.3.2

4-7 Database Server

- MySQL (10.1.38-MariaDB)

Chapter 5- User Interface Design

5-1 Users' Interface

5-1-1 Home Page

From home page a user can browse directly by region by selecting a desired region from the map or browse by categories by selecting our main categories.

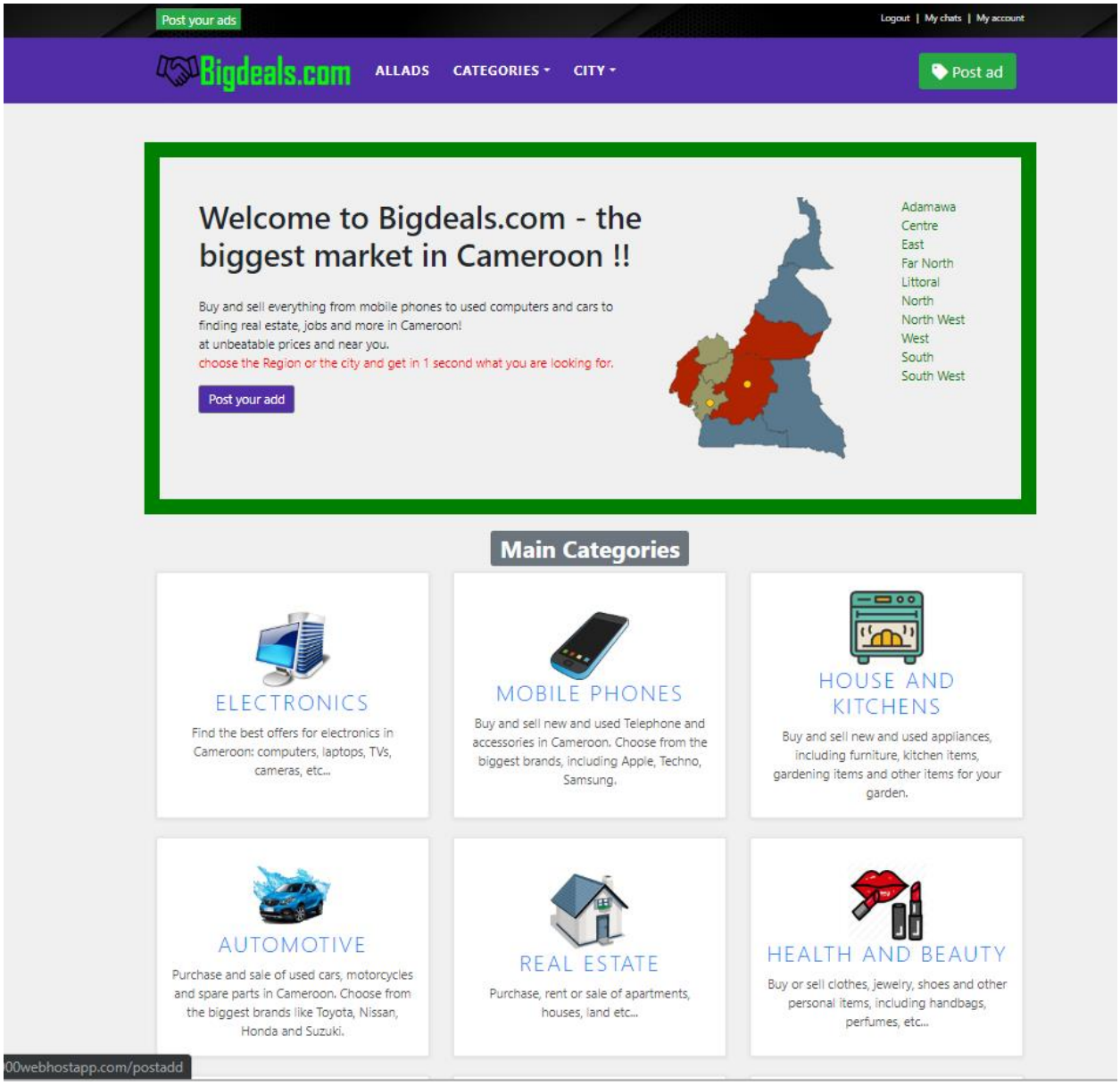


Figure 6 :Home page

5-1-2 Products List Page

Here we display a list of advertisements products with short details giving the possibility to the user to filter the list according to price, condition or VIP status of advertisements.

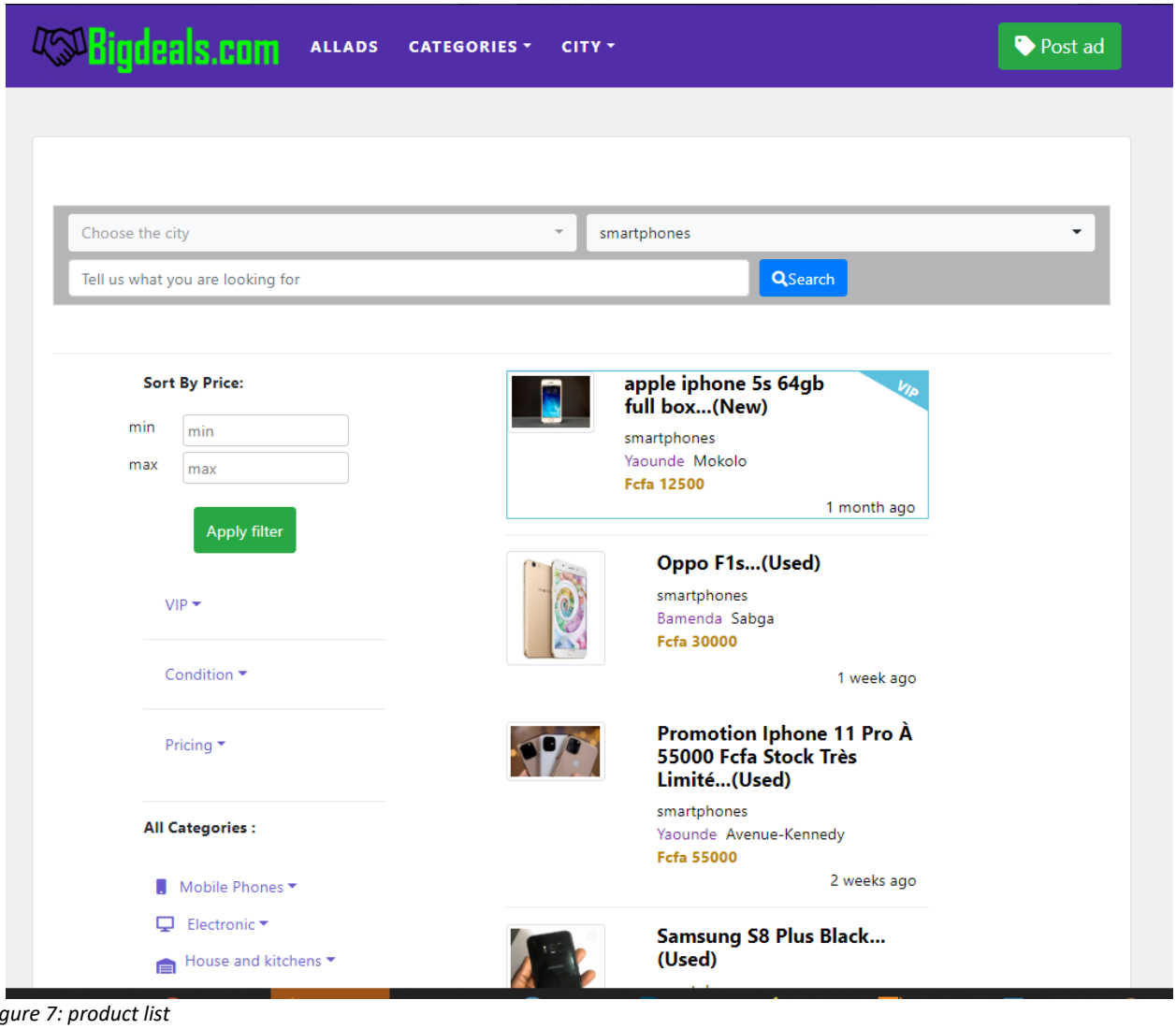


Figure 7: product list

Chapter 6- Conclusion and features work

6-1 Future Work

In the future we will like to include an online payment system and more features for monetizing our system.

6-2 Conclusion

The Internet has become a major resource in modern business, marketing and communication. Using this system can increase business gain, attract more customers and improve the visibility of a business.