

## 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.

## 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 web-based channels to spread a message about a company's brand, products, or services to its potential customers. 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 Offered 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 by 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.it is depending 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 use 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 -features

### 2-1 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

### 2-2 sellers' features

A person who want to sale 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

### 2-3 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

- Filter advertisement by price (min and max price)

## 2-4 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

## Chapter 3- Diagram

### 3-1 architectural diagram

The system is based on Model view controller.

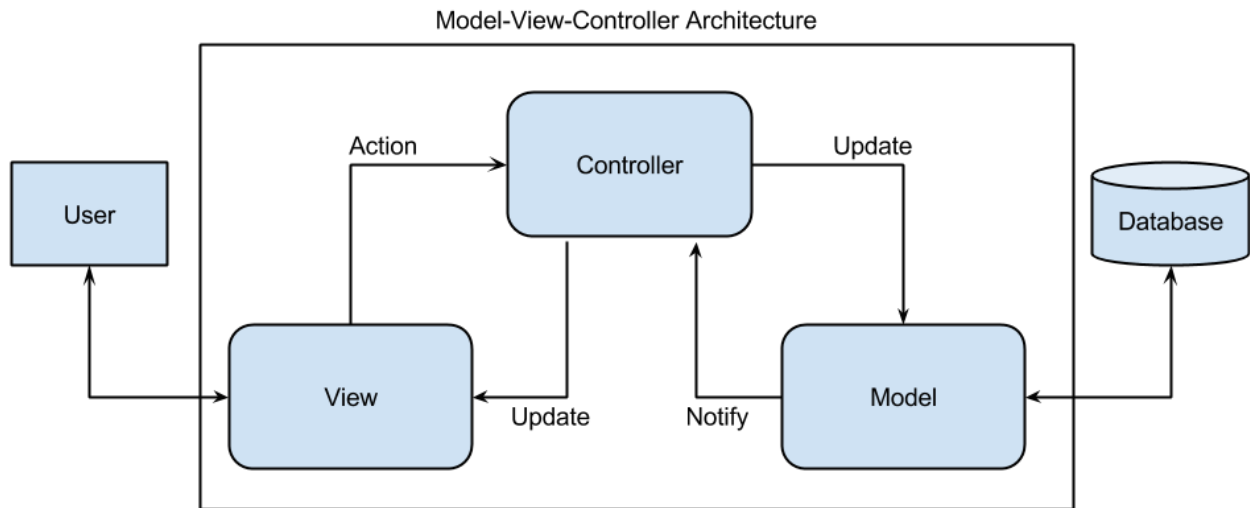


Figure 1 Architectural Diagram

#### 3-1-1 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.

#### 3-1-2 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.

#### 3-1-3 The view

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

### 3-2 modeling diagram

#### 3-2-1 context diagram

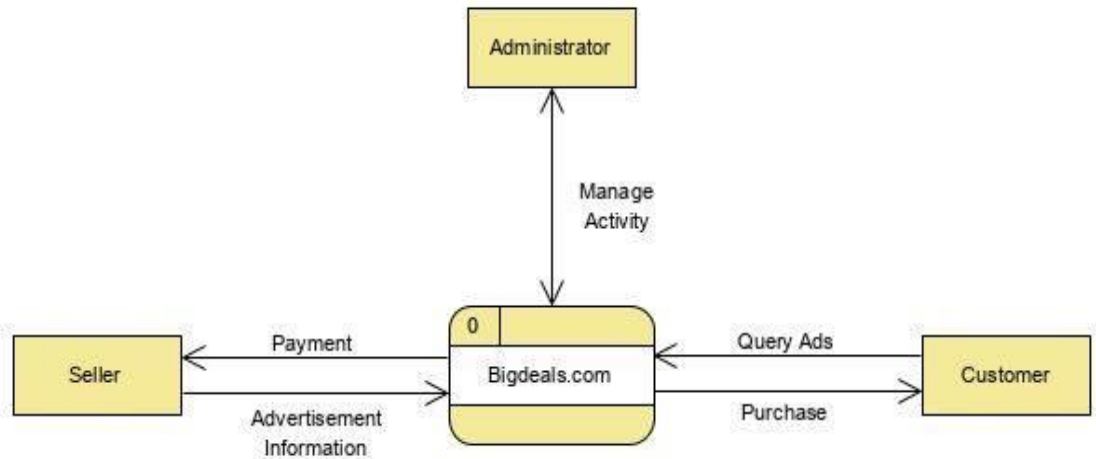


Figure 2: Context Diagram

#### 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



### 3-2-2 diagram zero

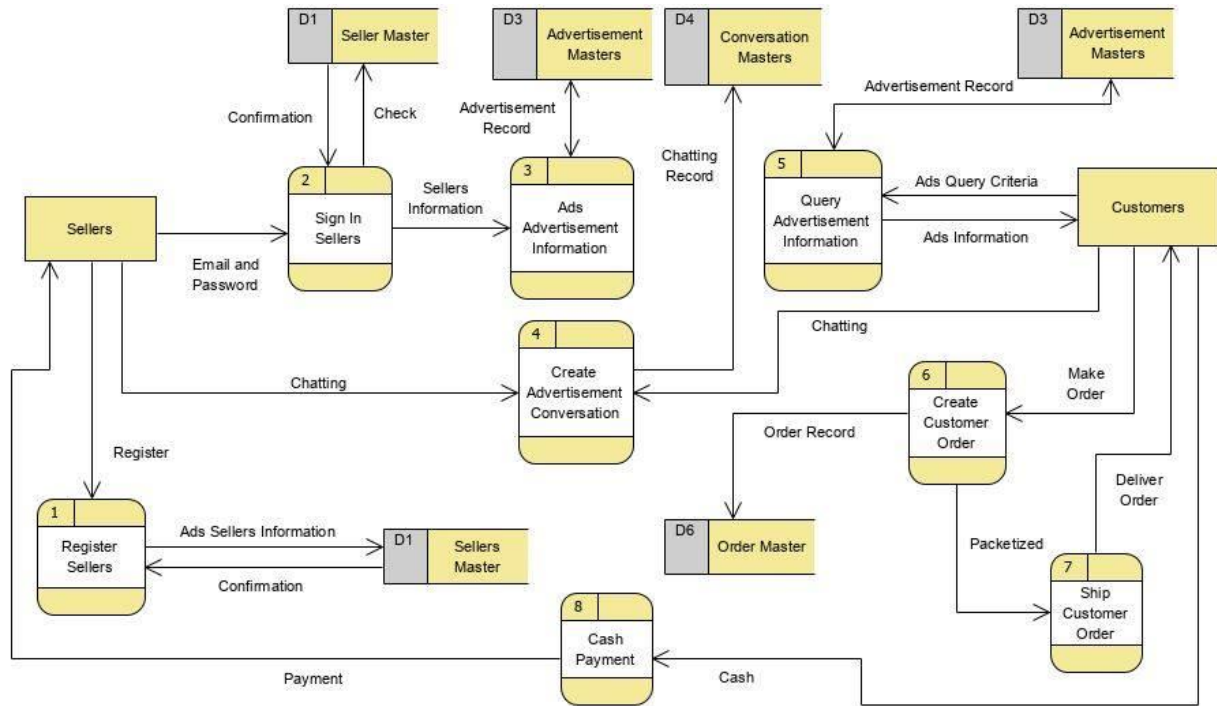


Figure 3: Diagram Zero

#### 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

### 3-2-3 diagram-1

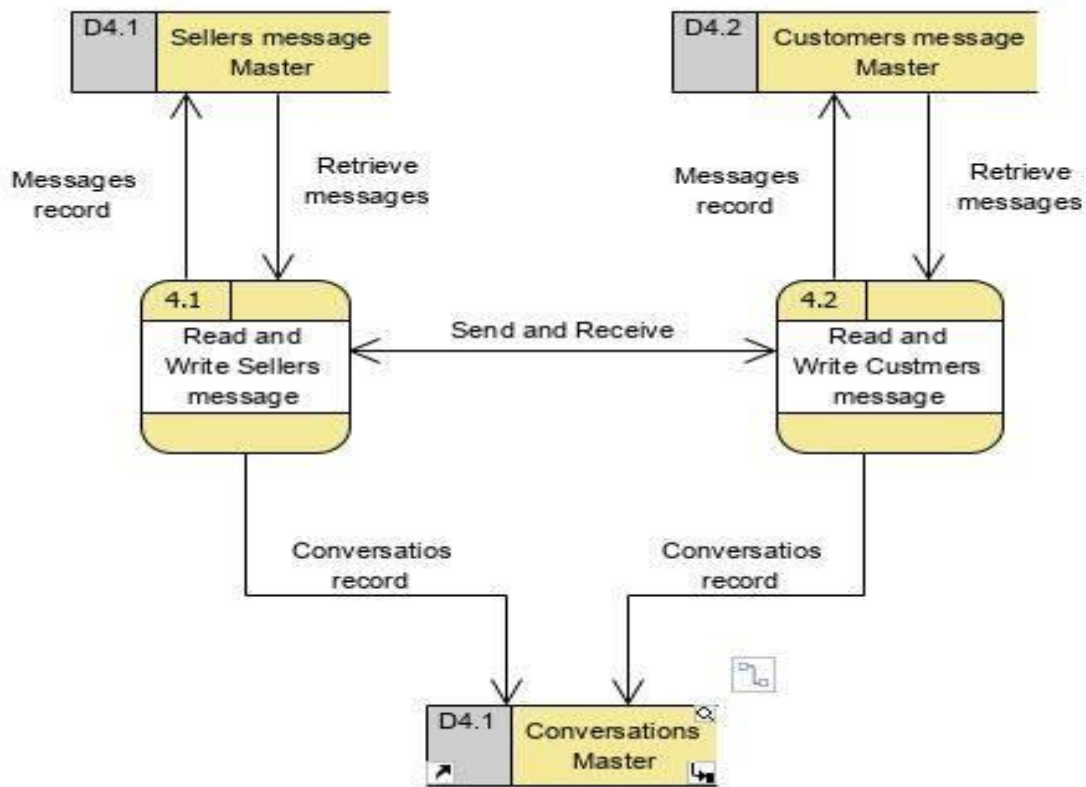


Figure 4: Diagram 1

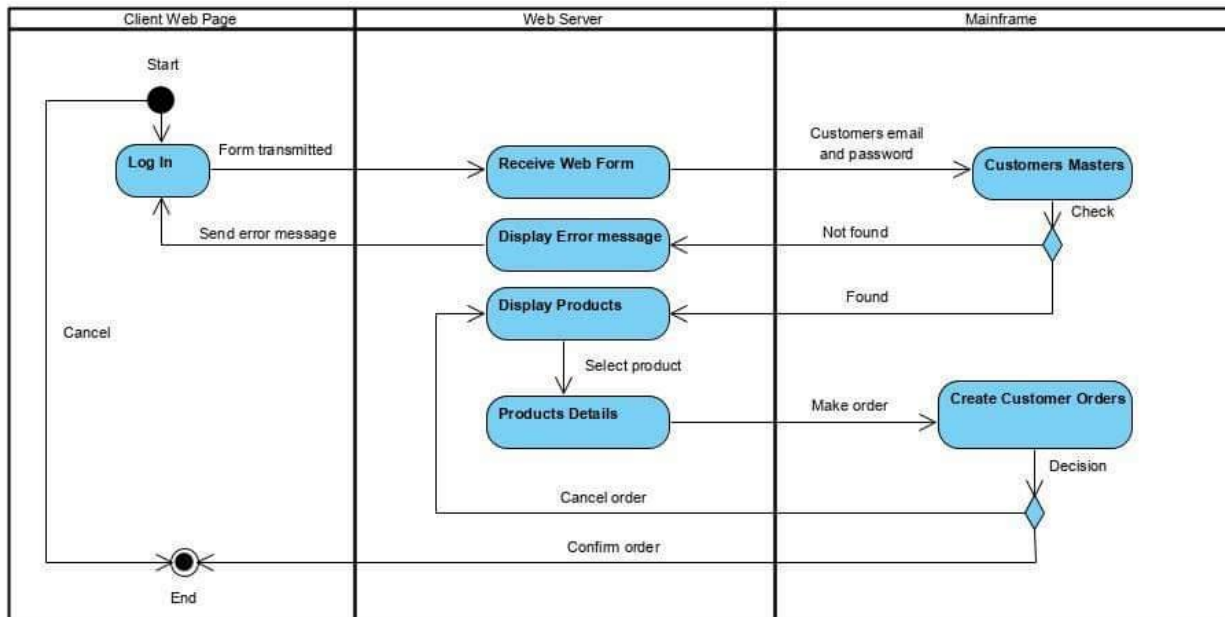
#### Description:

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

### 3-2-4 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.



### 3-2-5 Entity relationship diagram (ER)

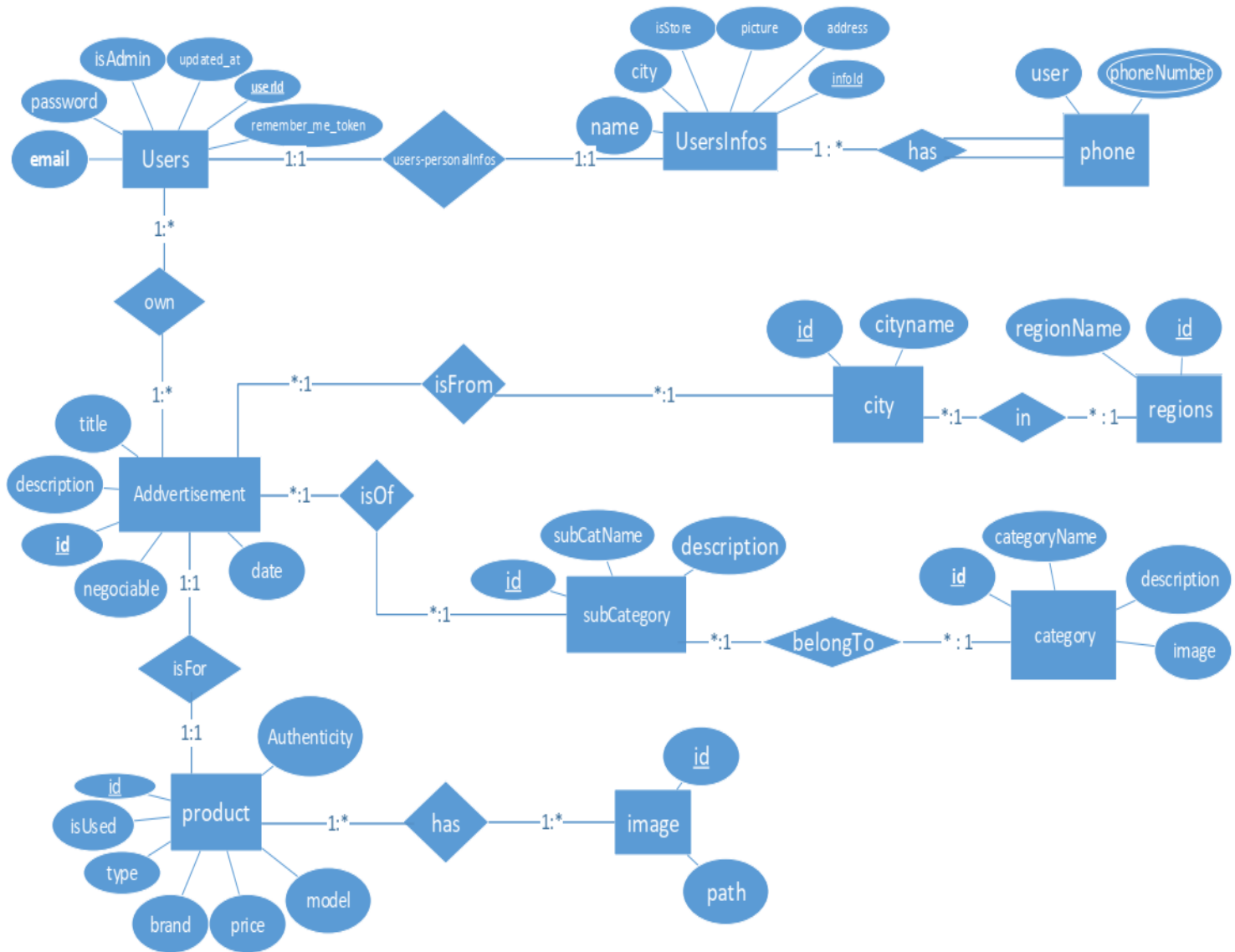


Figure 5: ER Diagram

## Chapter 4- Technologies and tools

### 4-1 Programming languages

Php 7.3.2 use to represent business logic in the controllers.

### 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
- Jsmapi: 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 Admin panel

#### 5-1-1 Admin dashboard

In the administrator dashboard we display a statistic overview about the main entities of the system starting from numbers of users to numbers of advertisements, number of VIP request, numbers of orders, cities, regions and others.

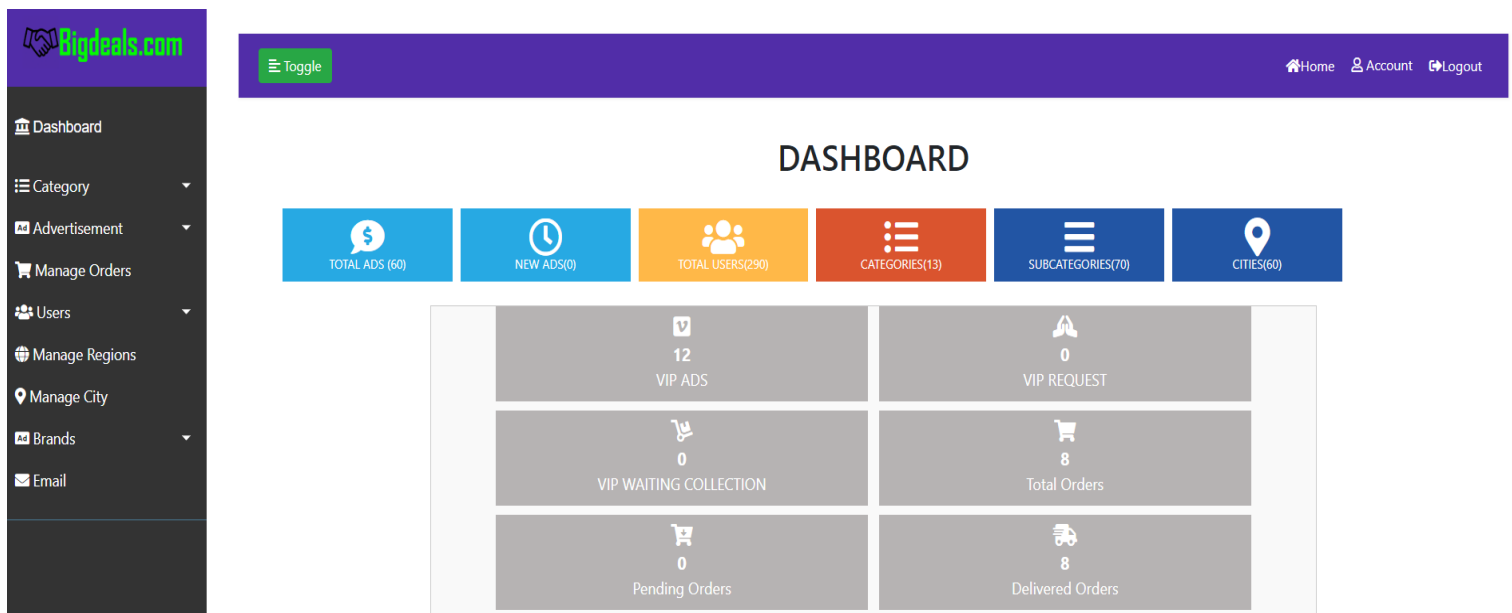


Figure 6: Admin dashboard

#### 5-1-2 Users management

Admin can manage users by viewing the list of all users or by blocking or unblocking them.

### List of Registered Users









User Id	Name	Email	Block	Delete
1	admin	gelany740@gmail.com		
2	Camille Lang	dajja67@example.org		
3	Bernie Fahey	senger.dasia@example.org		
4	Christelle Crist DDS	jordane.gusikowski@example.com		

Figure 7: User management



### 5-1-3 Catalogue management

Admin can manage categories and sub categories by editing existing one or adding new one.

List of Categories

Add new













Id	Name	Description	Date Updated	Category Icon	Edit	Delete
4	Electronics	find the best offers for electronics in cameroon: computers, laptops, tvs, cameras, etc...	2019-09-22 14:04:33			
5	Mobile Phones	buy and sell new and used telephone and accessories in cameroon. choose from the biggest brands, including apple, techno, samsung.	2019-09-22 14:06:02			
6	House And Kitchens	buy and sell new and used appliances, including furniture, kitchen items, gardening items and other items for your garden.	2019-09-22 14:06:50			
7	Automotive	purchase and sale of used cars, motorcycles and spare parts in cameroon. choose from the biggest brands like toyota, nissan, honda and suzuki.	2019-09-22 14:08:26			

Figure 8: Catalogue management

## 5-1-4 Location management

Admin can manage regions and cities by editing existing one or adding new one.

List of Regions				<a href="#">+ Add new</a>
Region Id	Region Name	Date Created	Date Updated	Edit
11	centre	2019-09-22 17:59:20	2019-10-19 10:40:09	<a href="#">✎</a>
12	west	2019-09-22 17:59:31	2019-09-22 17:59:31	<a href="#">✎</a>
13	north west	2019-09-22 17:59:47	2019-09-22 17:59:47	<a href="#">✎</a>
14	far north	2019-09-22 18:00:00	2019-09-22 18:00:00	<a href="#">✎</a>
15	south west	2019-09-22 18:00:09	2019-09-22 18:00:09	<a href="#">✎</a>

Figure 9: Location management

## 5-1-4 Advertisement management

Admin can manage advertisements by verifying, validating, blocking or responds to VIP request badge.

List of Ads

Post new Ads (60) inactivated Ads (0) Activated Ads (60) Blocked Ads (0) VIP Ads (12) VIP Request (0) Waiting for Collection (0)







Id	by	date	City	Address	Phone	Subcategory	Title	ads images	View	Edit
12	Camille Lang	2019-10-01 16:17:04	yaounde	mokolo	678681549	sport and fitness	Motorized Treadmill DC 3.0HP Peak/2.0CHP			
13	Camille Lang	2019-10-01 16:18:32	yaounde	Mvogada	678687549	sport and fitness	Free Weights 17.5 KG			

Figure 10: List of advertisements

ADS STATE:

☐ Desactivated

☒ Activated

BLOCK STATE:

☐ Blocked

☒ Unblocked

VIP STATUS:

☒ Cancel

☐ Requested

☐ WaitingForCollection

☐ Confirmed

Category:

leisure, sports and children

Sub-category:

sport and fitness

Update

Figure 11: admin updating ads info

## 5-1-4 Orders management

Admin can manage orders by viewing orders details, or changing the order status to delivered, pending or cancel.

### List of Orders

All orders (8)Pending Orders (0)Canceled orders(0)Delivered orders (8)




Order Code	Designation	NAME	Phone	Address	Price	State	Edit
5d987c42472d1	asos 4505 icon run vest	ALY	678681547	IUT	7500.00	Delivered	
5d991dbc126ce	asos 4505 icon run vest	ALY ABDELKADER GELANY	678681547	BOARD BAZAR	7500.00	Delivered	
5da983cdd5cf2	apple iphone 5s 64gb full box	ALY	678787643	IUT	12500.00	Delivered	

Figure 12: Orders management

## 5-1-4 Feedback management

Admin can respond to feedback by directly replying to users' messages.




Name	email	message	Date	Reply
afedf	SDFDE@FG.COM	fgfgf	2019-10-19 11:33:27	
afedf	SDFDE@FG.COM	fgfgf	2019-10-19 11:32:25	
sdsddf	SDFSDF@GMAIL.COM	asds	2019-10-19 11:27:03	

Figure 13: Feedback management

## 5-2 users' interface

### 5-2-1 Login interface

The screenshot shows the Bigdeals.com website with a purple header. The header contains a 'Post your ads' button, the Bigdeals.com logo, and navigation links for 'ALL ADS', 'CATEGORIES', and 'CITY'. A 'Post ad' button is also in the header. The main content area is titled 'Sign Up on Bigdeals' and is enclosed in a green border. It features a section titled 'Advantages to Sign Up' with three bullet points: 'Start posting your own ads.', 'Mark ads as favorite and view them later.', and 'View and manage your ads at your convenience.' To the right of this section is a 'Log in' form with fields for 'Email' (containing 'gelany740@gmail.com') and 'Password' (masked with dots). Below the password field is a 'Log in' button. There are also links for 'Remember me' and 'Forgot Password?'. At the bottom of the login form is a 'Create an Account' link.

Figure 14: Login interface

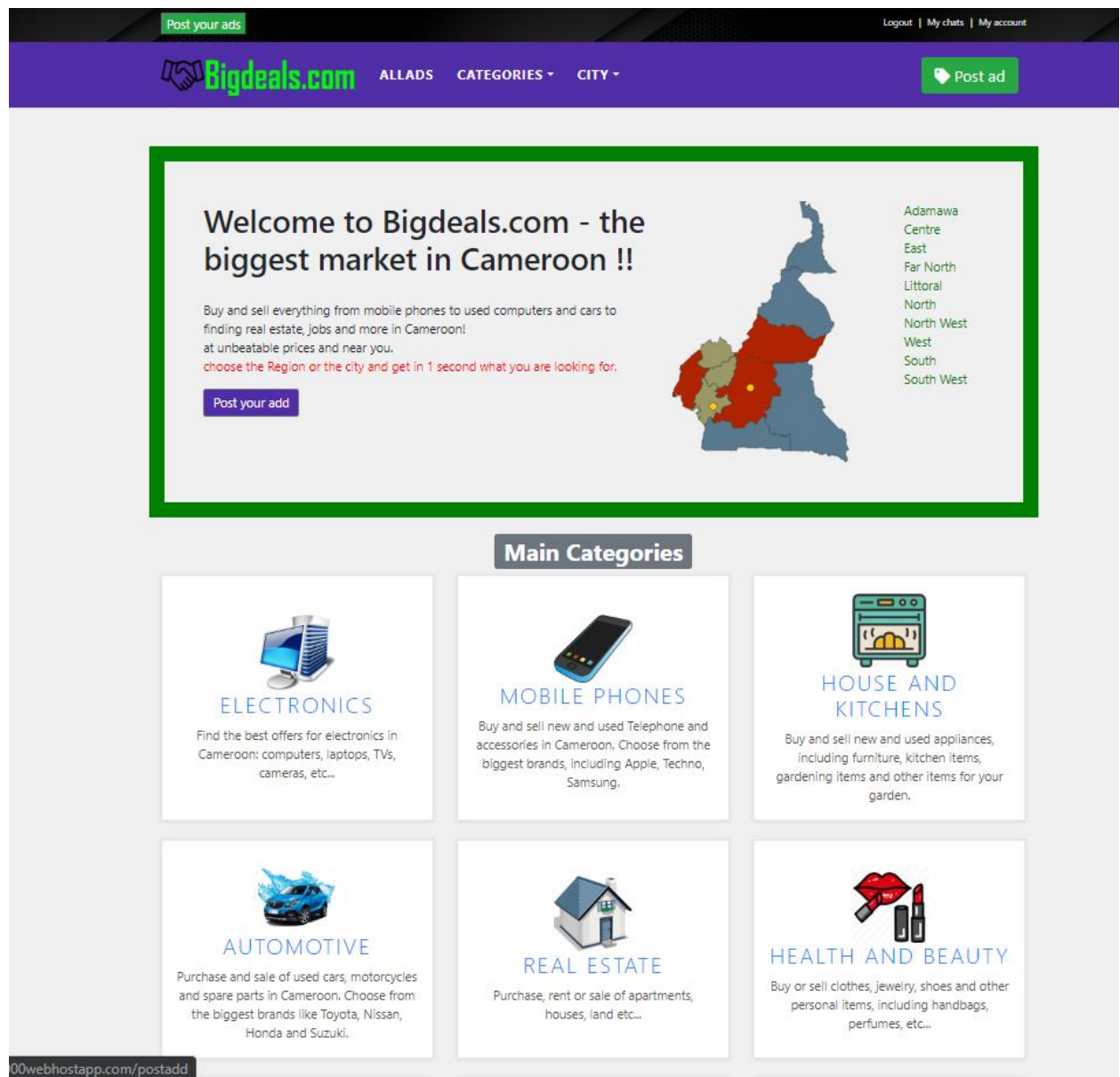
### 5-2-2 Register interface

The screenshot shows the Bigdeals.com website with a purple header. The header contains a 'Post your ads' button, the Bigdeals.com logo, and navigation links for 'ALL ADS', 'CATEGORIES', and 'CITY'. A 'Post ad' button is also in the header. The main content area is titled 'Sign Up on Bigdeals' and is enclosed in a green border. It features a section titled 'Advantages to Sign Up' with three bullet points: 'Start posting your own ads.', 'Mark ads as favorite and view them later.', and 'View and manage your ads at your convenience.' To the right of this section is a 'Register' form with fields for 'Name', 'E-Mail Address', 'Password', and 'Confirm Password'. Below the 'Confirm Password' field is a 'Register' button.

Figure 15: Register interface

### 5-2-3 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.



## 5-2-4 Products list page

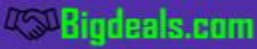
Here we display a list of advertisements products with short details giving the possibility to the user to filter the list according to price, condition or VIP status of advertisements.

The screenshot displays the Bigdeals.com website interface. The top navigation bar is purple with the logo and links for ALLADS, CATEGORIES, and CITY. A 'Post ad' button is on the right. Below the navigation bar is a search section with a city dropdown, a category dropdown set to 'smartphones', and a search input field with a 'Search' button. The main content area features a left sidebar with filters: 'Sort By Price' with min/max input fields and an 'Apply filter' button; 'VIP' status filter; 'Condition' filter; 'Pricing' filter; and 'All Categories' with options for Mobile Phones, Electronic, and House and kitchens. The right side shows a list of product advertisements. Each listing includes a product image, title, category, location, price, and time posted.

Product Image	Product Title	Category	Location	Price	Time Posted
	apple iphone 5s 64gb full box...(New)	smartphones	Yaounde Mokolo	Fcfa 12500	1 month ago
	Oppo F1s...(Used)	smartphones	Bamenda Sabga	Fcfa 30000	1 week ago
	Promotion Iphone 11 Pro À 55000 Fcfa Stock Très Limité...(Used)	smartphones	Yaounde Avenue-Kennedy	Fcfa 55000	2 weeks ago
	Samsung S8 Plus Black... (Used)				


## 5-2-5 Products details page

On this page we display various information's concerning the product advertisement, giving possibility to users to purchase the product, to save the advertisement as favorite, to chat with the seller or to rate the seller based on purchased experience.


 [ALLADS](#) [CATEGORIES -](#) [CITY -](#) [Post ad](#)

### 2 BEDSHEETS 2-PLACES

For sale by **MOUNKAMBOU** 02-Nov-2019 00:51:56



< >



**Description :**  
2 Bedsheets 2-Places + 1 Pair Of Pillowcases - Multicolor

[Place Your Order](#)

The product will be delivered by Bigdeals

Pay at delivery

**6000 Fcfa** Fixed Price

condition: New And Original

City: Yaounde

Address: Madagascar

[Save ad as Favorite](#)


★ ★ ★ ★ ★ [Rate](#)

[696364897](#)


[Chat](#)

Saler Rating: ★ ★ ★ ★ ☆ 4.33/5

#### Similar Product



bed room 2 place liquidation  
Fcfa 15000

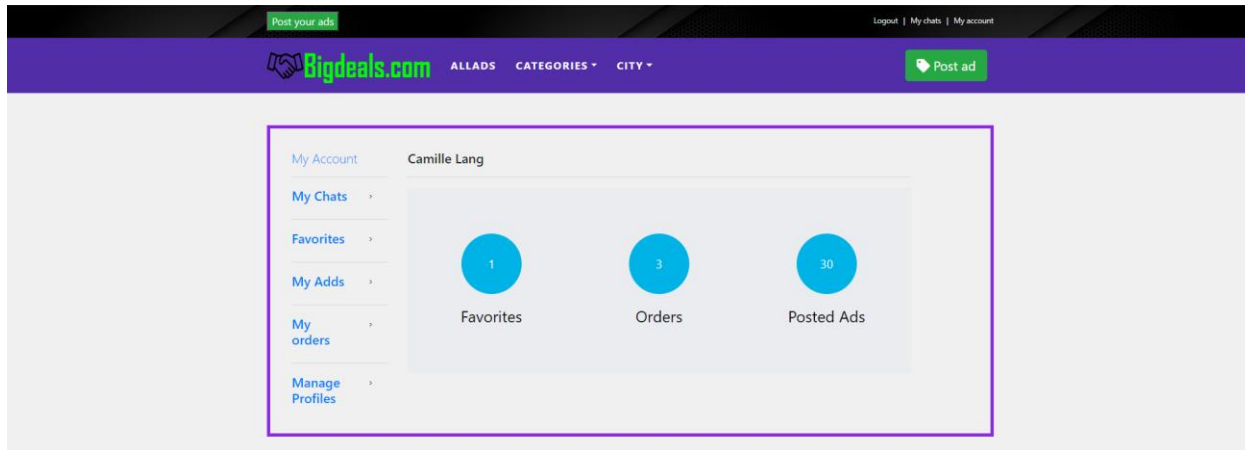


2 bedsheets 2-places  
Fcfa 6000

Figure 16 :product details page



## 5-2-6 Users dashboard



## 5-2-7 user posted ads management

Here we give possibility to users to view the list of their ads , edit, delete or request for VIP badge.

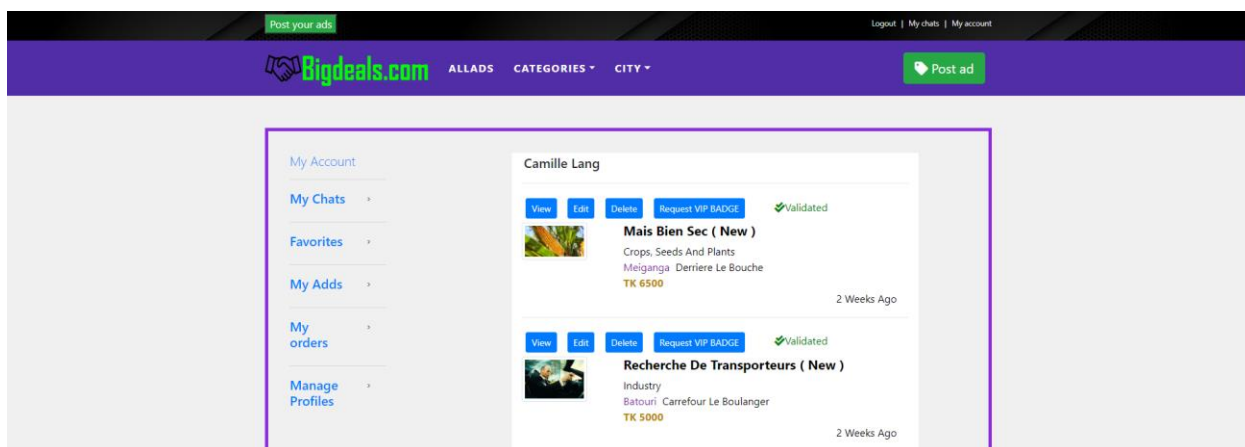


Figure 17: manage ads for users

## 5-2-8 user list of favorite ads

A user can display the list of his favorite ads or delete them.

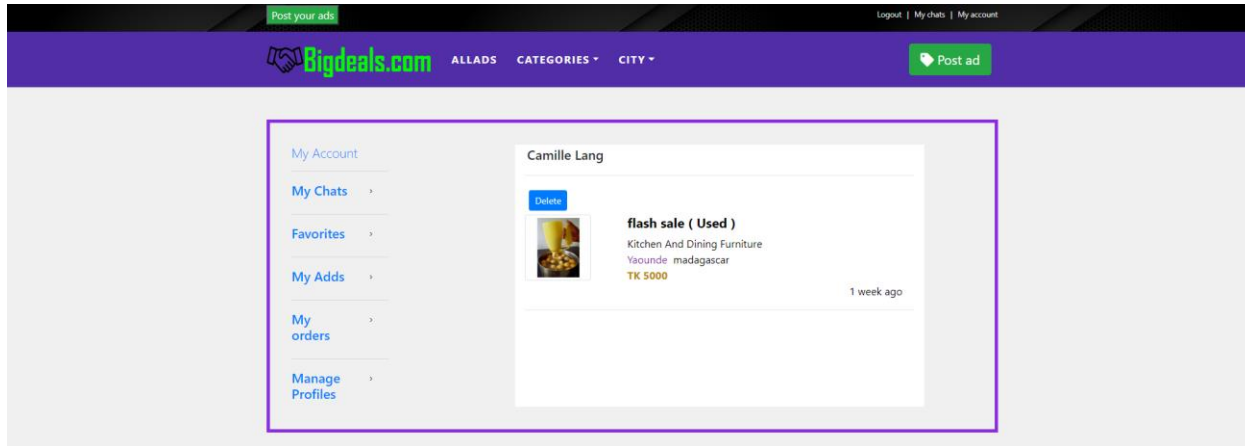


Figure 18: User list of favorite ads

## 5-2-9 user edit profile

A user can optionally update hi personal information or change his password

My Account

My Chats >

Favorites >

My Adds >

My orders >

Manage Profiles >

Camille Lang

YOUR LOCATION

Region:

Choose a Region ▾

Your City:

Choose a City ▾

Your Address:

enter your address

Full Name:

enter your full name

Phone

9 digits

update informations

Change Your Password

Current Password:

New Password:

at least 8 characters

Confirm New Password:

update password

## 5-2-10 user Order

Display the list of users purchased items and give him possibility to cancel pending orders

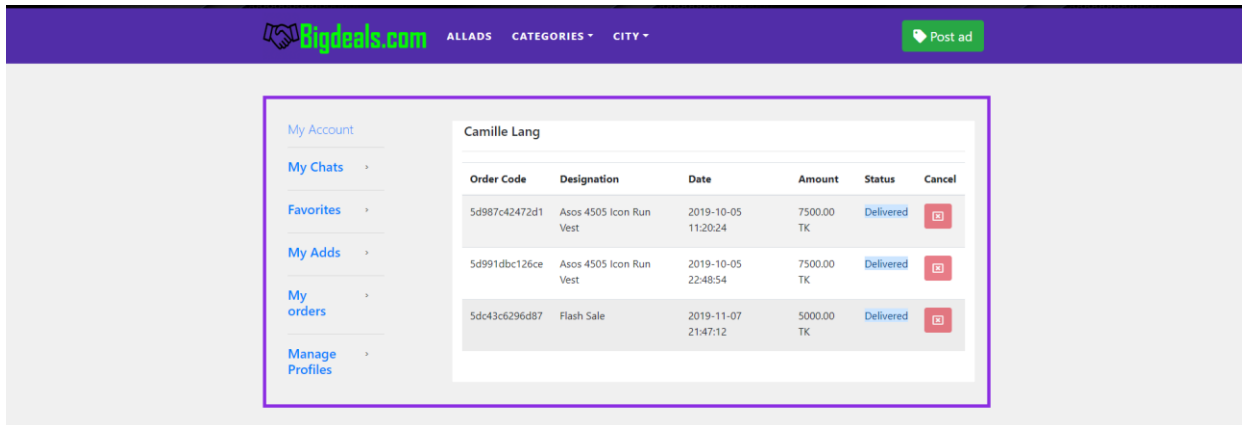


Figure 19 : users orders list

## 5-2-11 My chat

In this interface a user can read and manage his messages.

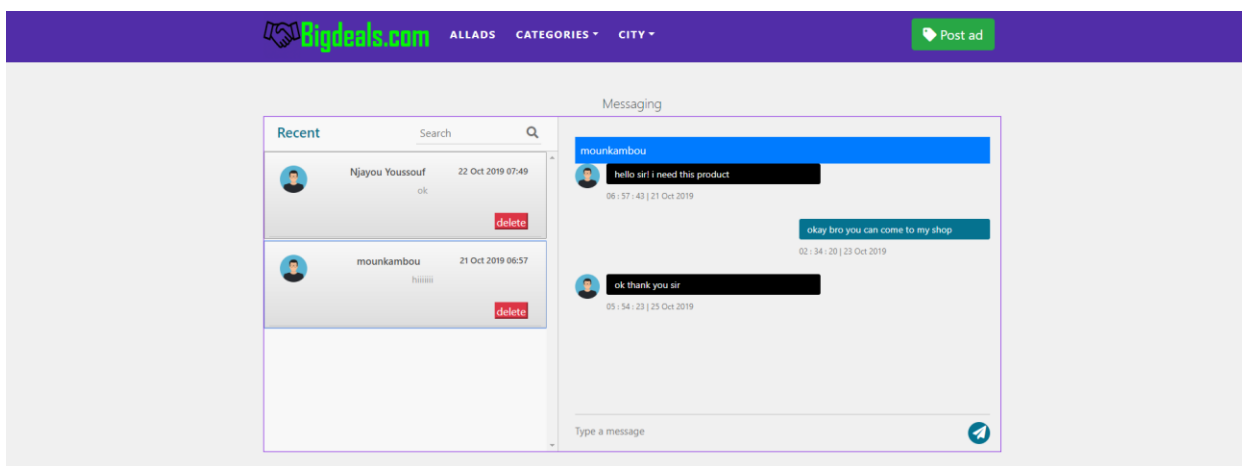


Figure 20: My chat

