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E-Commerce Website “Shophive”

Project Report

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1. Introduction:

In this project, we build an E-commerce website named “Shophive”. Here we sell mobile phones of different companies. We build this website after inspiring by real E-commerce website “Shophive”.

Main objective of this project to create a responsive and dynamic website using database so that we become familiar with different technologies to develop a website and go through the overall procedure of developing a website from scratch by using core technologies.

2. Functionality:

Shophive website includes following main functions:

- Login and Signup functions.
- Users validation (include email, password and also check the password strength)
- Session maintains (Maintain the session of the users)
- Store Cookies (to remember email and password)
- Add to Cart
- Dynamic Website (All data shown on website retrieved from database)
- Buying History (User can check his/her purchasing record w.r.t their accounts)
- This is Responsive (Display w.r.t to screen width)
- It also contains mobiles categories having different companies of phones.

Database is used to save and maintain record of users. Customers table save the records of login or signup users/customers. Product table contains the information about products.
Product-order table maintains the details of products which are ordered.

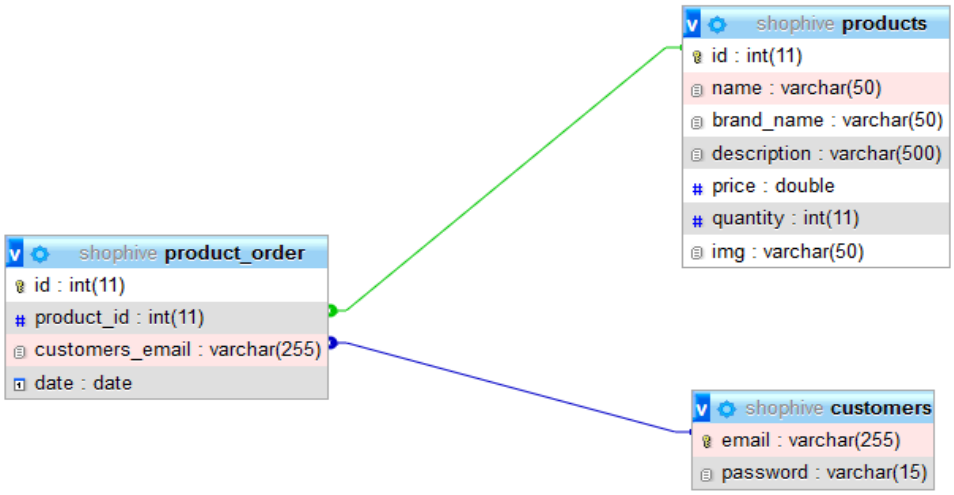
3. Technologies:

In this project we choose following technologies:

- For front-end work we used Html, CSS, Bootstrap, and JavaScript.
- For database, we used SQL database from phpMyAdmin.
- For ER diagrams we used online web app named “creately.com”
- For back-end we used Php
- We use apache sever by xampp

4. Database Schema:

A database schema is the skeleton structure that represents the logical view of the entire database. It defines how the data is organized and how the relations among them are associated. It formulates all the constraints that are to be applied on the data



Class Diagram of Database

4.1. Product Table Schema:

This schema only shows the product table of database. Each attribute has specific characteristics like length and type etc. In this schema "id" is our primary key which uniquely identify each record and we set it as auto increment so when admin add new product it we automatically insert its id.

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	name	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
3	brand_name	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More
4	description	varchar(500)	utf8mb4_general_ci		Yes	NULL			Change Drop More
5	price	double			No	None			Change Drop More
6	quantity	int(11)			No	None			Change Drop More
7	img	varchar(50)	utf8mb4_general_ci		No	None			Change Drop More

Products Table

4.2. Customer Table Schema:

This is the schema for customers table to hold their record in data base who creates account on shophive website. In this schema two attributes are used which are password and e-mail. E-mail is primary key as each e-mail is different for every user. We didn't included other attributes like name or any other detail just because of simplicity of project.

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	email	varchar(255)	utf8mb4_general_ci		No	None			Change Drop More
☐	2	password	varchar(15)	utf8mb4_general_ci		No	None			Change Drop More

Customers Table

4.3. Product_order Table Schema:

This will helpful in maintaining the record of orders w.r.t customers, product_id and date of that order. With this we can maintain our buying records. Id is primary key in this schema to uniquely identify the complete relation.

	#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
☐	1	id	int(11)			No	None		AUTO_INCREMENT	Change Drop More
☐	2	product_id	int(11)			No	None			Change Drop More
☐	3	customers_email	varchar(255)	utf8mb4_general_ci		Yes	NULL			Change Drop More
☐	4	date	date			No	None			Change Drop More

Product_Order Table

5. ER-Diagrams:

ERD stands for Entity relationship Diagram. This diagram as shows from name is used to describe relationship of entities with each other.

In other words, we can say that ER diagrams help us to explain the logical structure of databases. At first look, an ER diagram looks very similar to the flowchart. The purpose of ER Diagram is to represent the entity framework infrastructure.

5.1. Components of the ER Diagram:

This model is based on three basic concepts:

- Entities
- Attributes
- Relationship

5.1.1. Entity

Simple rectangular box represents an Entity.

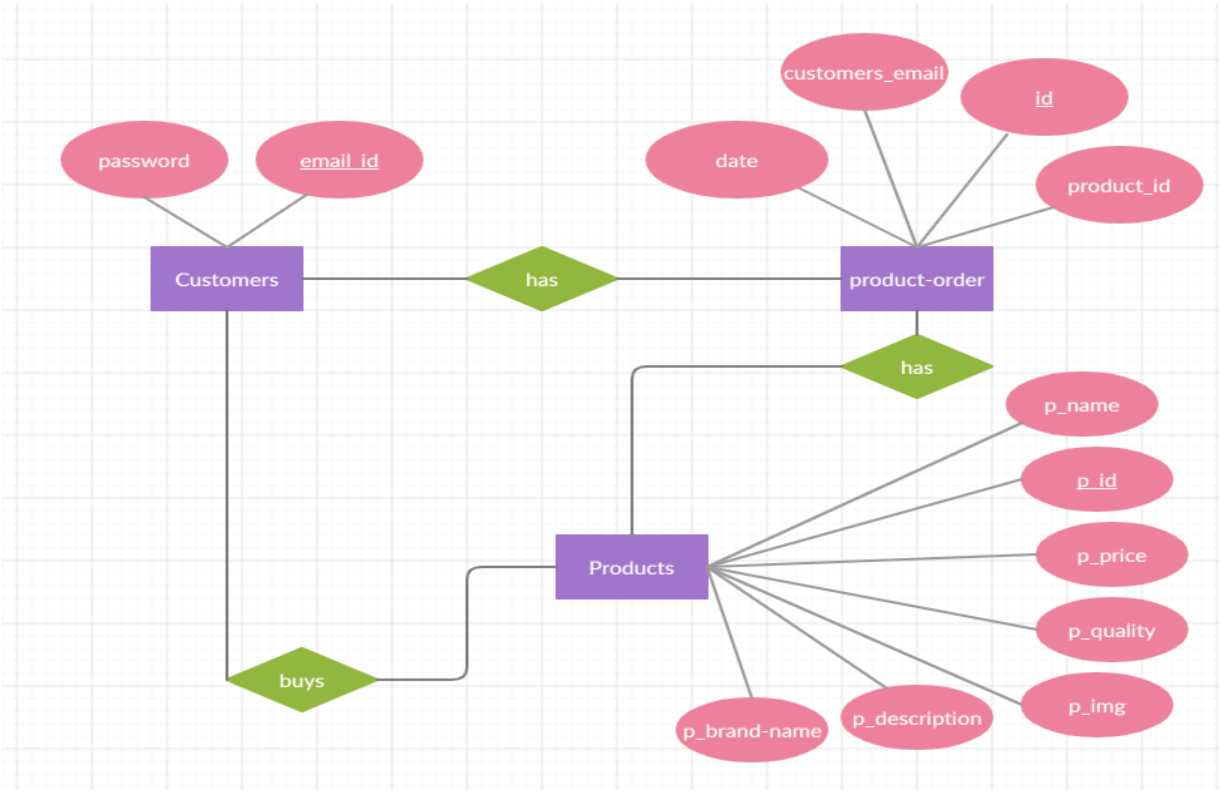
5.1.2. Attributes for any Entity

Ellipse is used to represent attributes of any entity. It is connected to the entity.

5.1.3. ER Diagram: Relationship

A Relationship describes relation between entities. Relationship is represented using diamonds or rhombus.

5.2. ER Diagram of E-commerce website Shophive:



ER Diagram

5.3. ER-diagram explanation:

We have three tables:-

- Product-order
- Customers
- Product

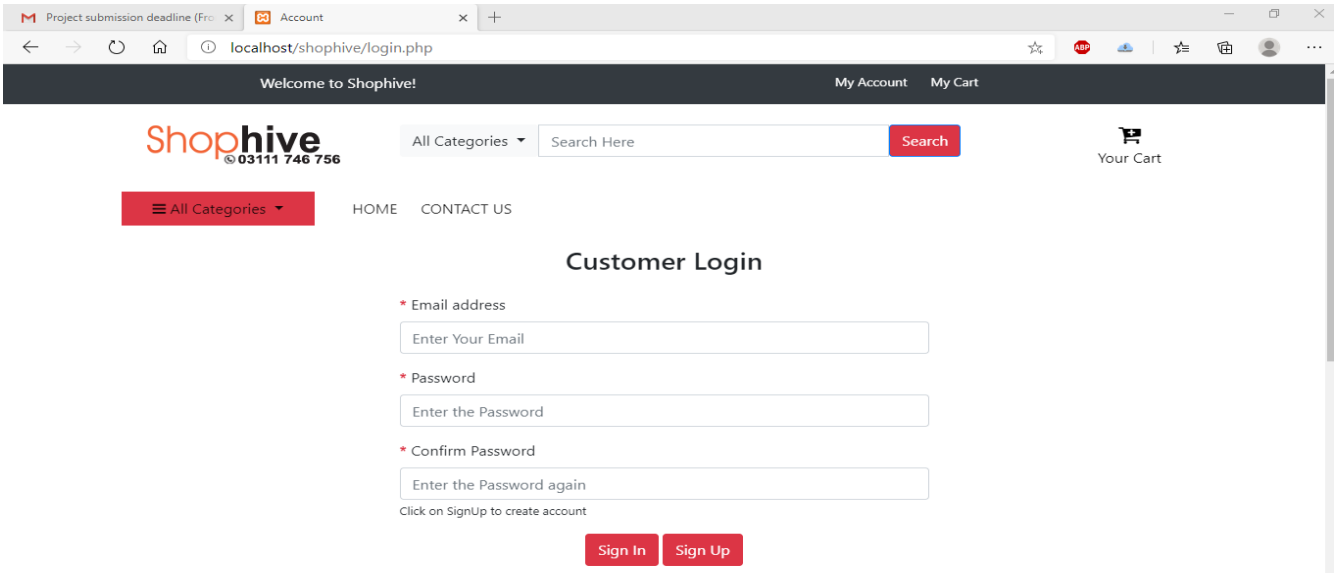
5.3.1. Relationship of these tables:

Customer can buy many products and a product can be ordered more than one time. It means the relation between customer and product table is many-to-many. A customer can have only one order at a time, so it will be one-to-one relation between customers and product-order.

6. Front-end work details:

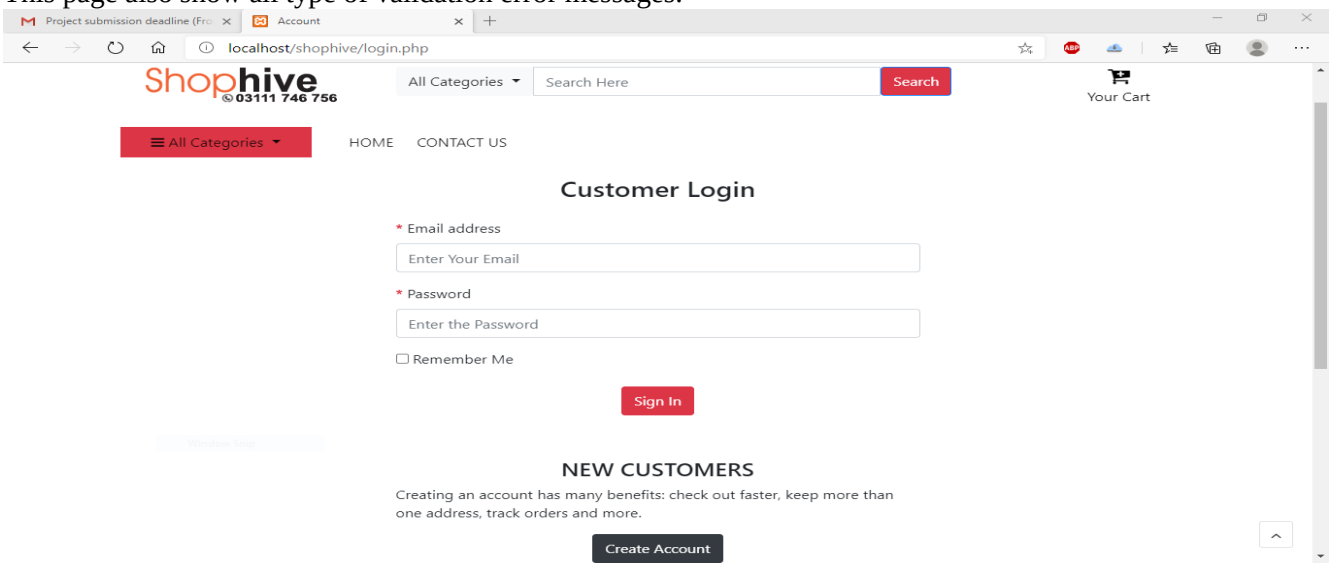
Database system is used in login and signup form. When a new customer wants to buy something, he click on "signup/create account button. This button connects the new comer to customer table, where his/her record is saved.

In following page, customers table used to store the data of new account and to retrieve data for login option. Validation includes the checking of password strength and also checks whether the password of user is correct or not who is logging in. For this type of validation like patron matching JavaScript is used. Similarly, to check that the new email entering by customers is already exists in our database or not. For this validation we used Php.



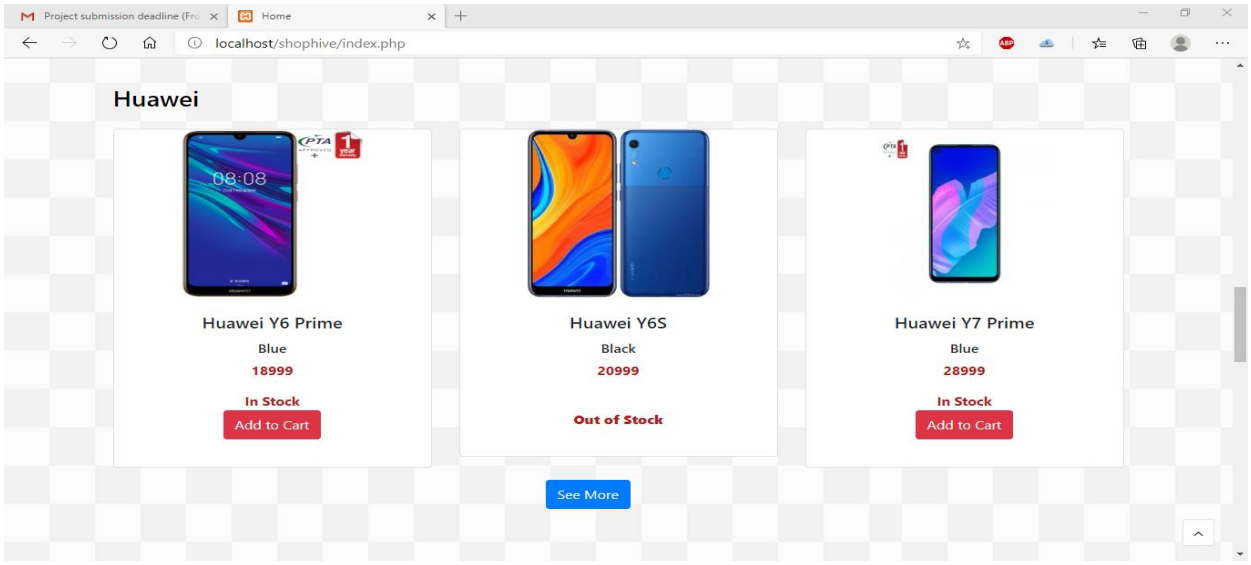
Sign up page

We can come from every page to this page because navigation to this page is available in header top bar. This page also show all type of validation error messages.



Login page

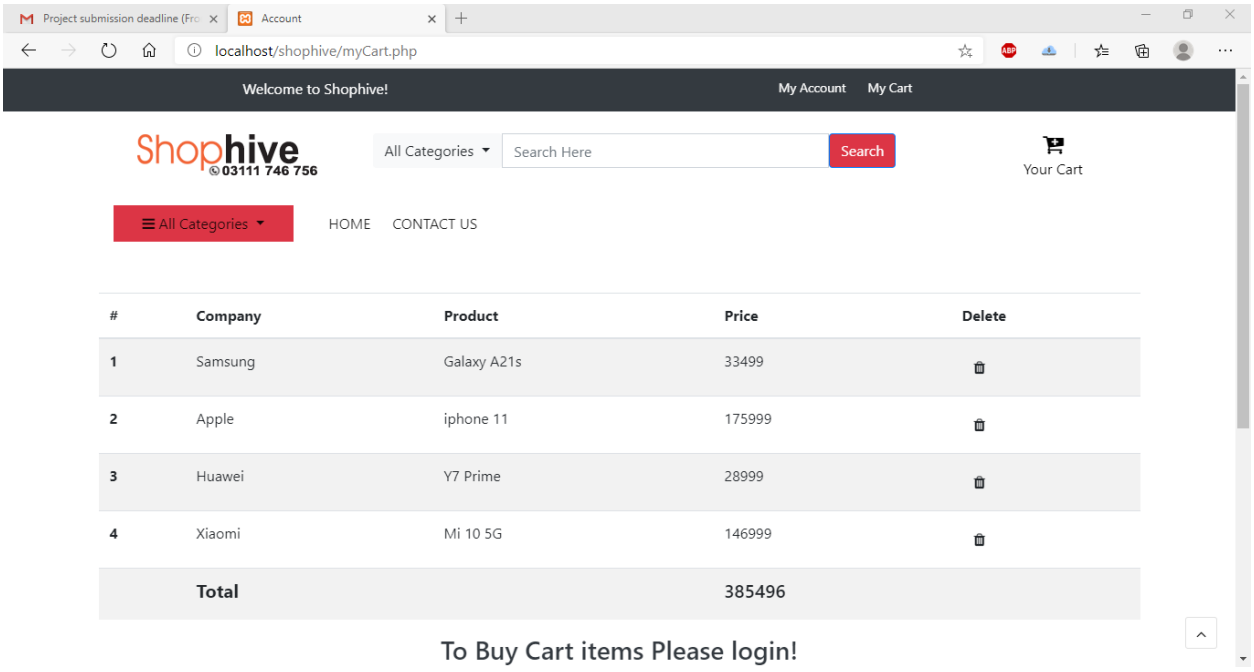
Similarly, to keep record of products, our database system maintains all the data of products in “product” table. It also keep the record of its quantity so that it can show either this product it is in stock or out of stock.



Home page (Body part)

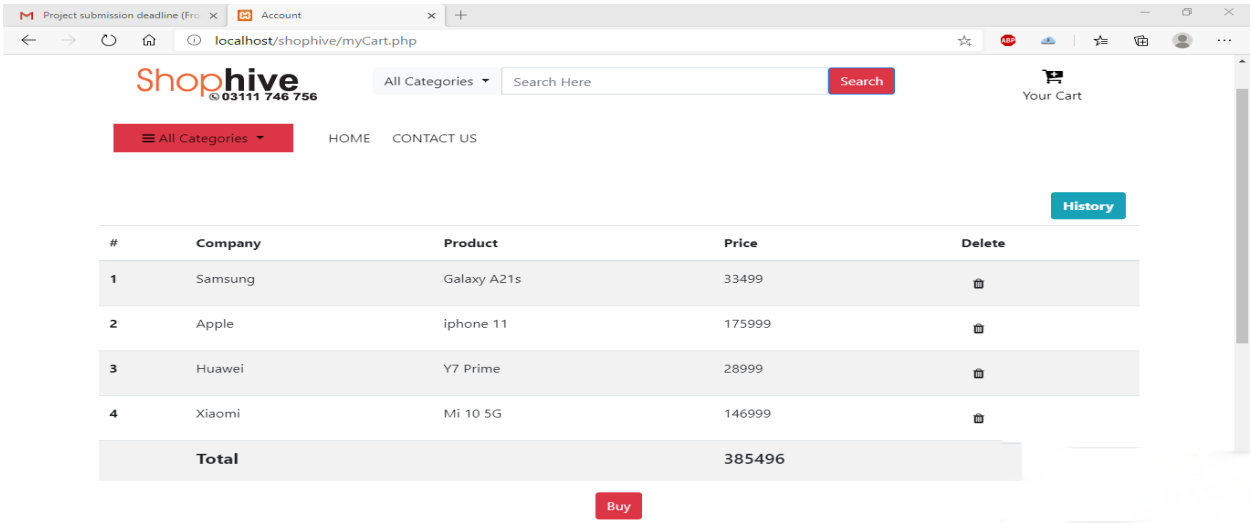
In home page, you can see products, these products details and images coming from database. You can also see in middle card that product is out-of-stock this is because quantity of this product become 0 therefore user can’t add it to cart and can’t buy this. We can navigate to this page from every page.

As our website has functionality of “Add-cart”, so there is also need to keep record and to save data of these carts.

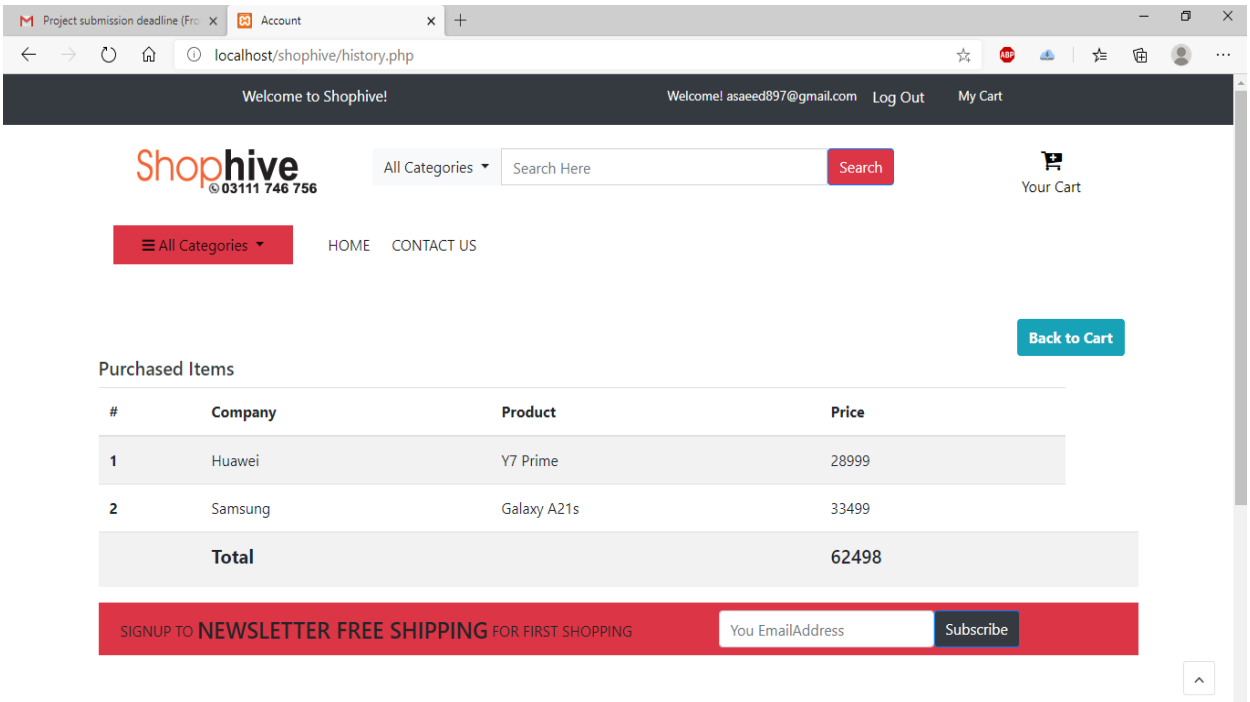


My Cart without login

This above images of mycart page shows products which user added to cart but user is not loged-in therefore buying option is not showing. These records came from session variable. When user login to his/her account he/she can buy these items. When user buy these item then that data recorded into the product_order table.



Mycart with login

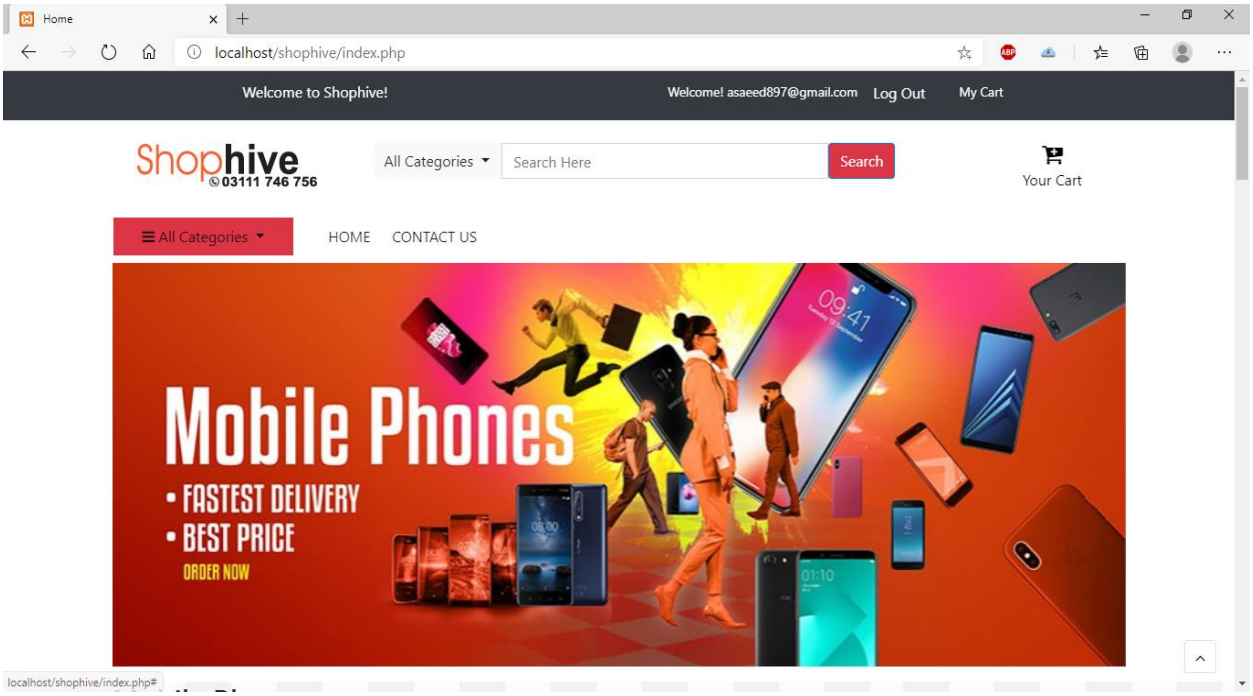


Purchasing History

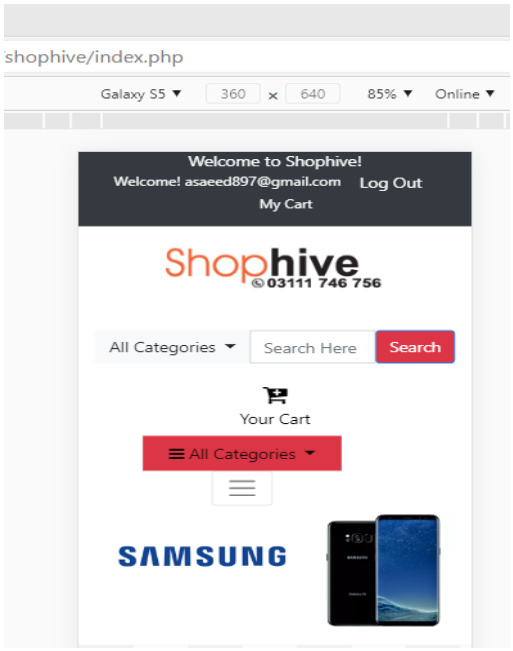
Here you can also see the history button, which helps user to see his/her purchasing history. On upper right corner you can see the buyer of these items who is currently login. We can navigate to this page only from cart page when we are loged-in.

7. Conclusion:

In a net shell, we successfully build up a responsive and dynamic e-commerce website with database connectivity. The responsiveness of our website shows that working on that is much better. We learn in this project that how data can be maintained of a website in databases and also learn how to work in a team and time management also. At the end, the view of front page of our website is as follows:



Home page (Header and Slider)



Mobile View of Home Page