TRAINING PROJECT REPORT

Submitted in partial fulfilment of the requirements for the award of the degree

of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE & ENGINEERING

by

Yash Pratap
Enrollment No. : 05196202714

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
NORTHERN INDIA ENGINEERING COLLEGE
(AFFILIATED TO GURU GOBIND SINGH INDRAPRASTHA UNIVERSITY, DELHI)
NEW DELHI – 110053

CANDIDATE'S DECLARATION

It is hereby certified that the work which is being presented in the B. Tech Training Project Report in partial fulfilment of the requirements for the award of the degree of **Bachelor of Technology** and submitted in the **Department of Computer Science & Engineering** of **Northern India Engineering College, New Delhi (Affiliated to Guru Gobind Singh Indraprastha University, Delhi)** is an authentic record of our own work carried out during a period from **June 2017 to July 2017** under the guidance of **Mr. Satyadeep Kar, Web Developer, Internshala.**

The matter presented in the B. Tech Training Project Report has not been submitted by me for the award of any other degree of this or any other Institute.

Yash Pratap
Enrollment No. : 05196202714
Date: 12 October 2017

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

ACKNOWLEDGEMENT

The training opportunity I had with **Internshala** was a great chance for learning and professional development. Therefore, I consider myself as a very lucky individual as I was provided with an opportunity to be a part of it. I am also grateful for having a chance to meet so many wonderful people and professionals who led me though this internship period.

However, it would not have been possible without the kind support and help of many individuals and organizations. I would like to extend my sincere thanks to all of them. I perceive this as an opportunity as a big milestone in my career development. I will strive to use gained skills and knowledge in the best possible way, and I will continue to work on their improvement, in order to attain desired career objectives.

This internship project report is ONLY submitted for the award of B.Tech degree in CSE from Northern India Engineering College, New Delhi (Affiliated to Guru Gobind Singh Indraprastha University, Delhi) and NOT for any other purpose. Using this document outside in any form for aforementioned scope without author's written permission is illegal and deceitful.

Sincerely,
Yash Pratap

ABSTRACT

For two months from June 2017 till July 2017, I did my web development training at Internshala, an internship provider platform. It is founded by Sarvesh Agrawal, an IIT Madras alumnus, in 2010, the website helps students find internships with organisations in India.

The Online Web Development Training by Internshala is a 6-weeks training program in the fields of HTML, CSS, Bootstrap, PHP, and MySQLi. This training program is created by Mr. Satyadeep Kar. This training program is packed with assignments, assessment tests, code challenges, quizzes, and exercises and 1 hour live chat support with the team member of mentors.

At the end of this training program, I was able to build an e-commerce website which work seamlessly across different devices.

INTERNSHALA
VIRTUAL TRAINING CENTER

CERTIFICATE OF TRAINING

Web Development

Yash Pratap from Northern India Engineering College has successfully undergone a six weeks online Summer training on Web Development. The training program consisted of HTML & CSS, Bootstrap, SQL and PHP modules and lasted for six weeks from 20th June, 2017 to 31st July, 2017.

In the final assessment at the completion of the training program, Yash scored 75% marks.

We wish Yash all the best for future endeavours.

Sarvesh Agrawal
Founder & CEO

Date of certification: 2017-07-30
Certificate Number : 1491EF60-E302-B5E7-04F0-AC5048888CAA
For certificate authentication please visit https://trainings.internshala.com/verify_certificate

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Introduction

The Full Stack Web Development Training by Internshala is a 6-weeks online training program in the fields of HTML, CSS, Bootstrap, PHP, and MySQLi.

What is Full Stack Development ?

Full Stack Development contains study of both front-end as well as back-end technologies in order to develop complete website from scratch which will be based on Transnational Management System

Front End Technologies:

Technologies which are responsible for the development of the user interface of the website. In this training program, HTML CSS and Bootstrap are used for that purpose.

Back End Technologies:

Technologies which are responsible for the implementation of relevant functionalities in order to produce desired outputs via website. In this training program, PHP and MySQLi are used for that purpose.

OBJECTIVE

The aim is to build a responsive cross platform e-commerce website which can be used as to sell products online.

Front-End Technologies

HTML

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript it forms a triad of cornerstone technologies for the World Wide Web. Web browsers receive HTML documents from a web server or from local storage and render them into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects, such as interactive forms, may be embedded into the rendered page. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. HTML elements are delineated by tags, written using angle brackets. Tags such as <img /> and <input /> introduce content into the page directly. Others such as ... surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML can embed programs written in a scripting language such as JavaScript which affect the behavior and content of web pages. Inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), maintainer of both the HTML and the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997.

Filename extension	• `.html` • `.htm`
Internet media type	`text/html`
Type code	TEXT
Developed by	W3C & WHATWG
Initial release	1993; 24 years ago
Latest release	5.1 / 5.2 (working draft)[1] (1 November 2016; 10 months ago)
Type of format	Document file format
Extended from	SGML
Extended to	XHTML
Open format?	Yes
Website	• www.w3.org/html/ • whatwg.org

CSS

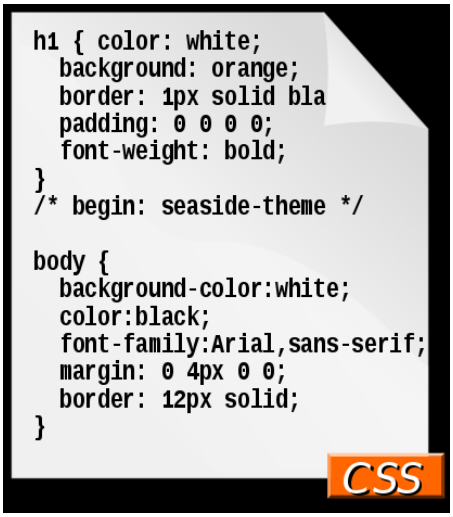
Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language. Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

CSS is designed primarily to enable the separation of presentation and content, including aspects such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

Changes to the graphic design of a document (or hundreds of documents) can be applied quickly and easily, by editing a few lines in the CSS file they use, rather than by changing markup in the documents.

The CSS specification describes a priority scheme to determine which style rules apply if more than one rule matches against a particular element. In this so-called cascade, priorities (or weights) are calculated and assigned to rules, so that the results are predictable.

The CSS specifications are maintained by the World Wide Web Consortium (W3C). Internet media type (MIME type) text/css is registered for use with CSS by RFC 2318 (March 1998). The W3C operates a free CSS validation service for CSS documents.

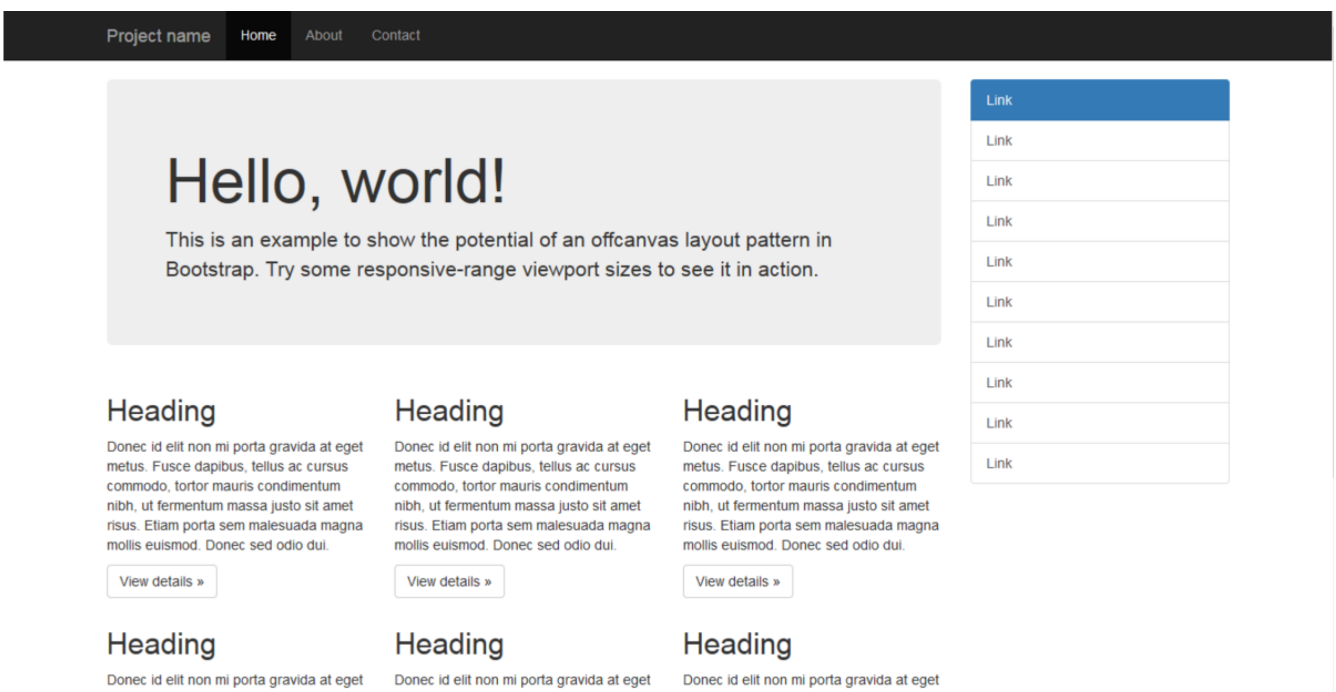


Filename extension	`.css`
Internet media type	`text/css`
Uniform Type Identifier (UTI)	public.css
Developed by	• Håkon Wium Lie • Bert Bos • World Wide Web Consortium
Initial release	December17, 1996; 20 years ago
Type of format	Style sheet language

Bootstrap

Bootstrap is a free and open-source front-end web framework for designing websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions. Unlike many web frameworks, it concerns itself with front-end development only.
Bootstrap is the second most-starred project on GitHub, with more than 111,600 stars and 51,500 forks.

Original author(s)	Mark Otto, Jacob Thornton
Developer(s)	Bootstrap Core Team
Initial release	August19, 2011; 6 years ago
Stable release	3.3.7 / July 25, 2016; 14 months ago[1]
Preview release	4.0.0-beta / August10, 2017; 58 days ago[2]
Repository	github.com/twbs/bootstrap
Development status	Active
Written in	HTML, CSS, Less (v3), Sass (v4) and JavaScript
Platform	Web engines
License	MIT License (Apache License 2.0 prior to 3.1.0)
Website	getbootstrap.com



Back-End Technologies

MySQLi Database

MySQLi is a fast, easy-to-use RDBMS being used for many small and big businesses. MySQLi Extension is developed, marketed, and supported by MySQL. MySQL is becoming so popular because of many good reasons −

- MySQLi is released under an open-source license. So you have nothing to pay to use it.
- MySQLi is a very powerful program in its own right. It handles a large subset of the functionality of the most expensive and powerful database packages.
- MySQLi uses a standard form of the well-known SQL data language.
- MySQLi works on many operating systems and with many languages including PHP, PERL, C, C++, JAVA, etc.
- MySQLi works very quickly and works well even with large data sets.
- MySQLi is very friendly to PHP, the most appreciated language for web development.
- MySQLi supports large databases, up to 50 million rows or more in a table. The default file size limit for a table is 4GB, but you can increase this (if your operating system can handle it) to a theoretical limit of 8 million terabytes (TB).

What is Database?

A database is a separate application that stores a collection of data. Each database has one or more distinct APIs for creating, accessing, managing, searching and replicating the data it holds.

Other kinds of data stores can be used, such as files on the file system or large hash tables in memory but data fetching and writing would not be so fast and easy with those types of systems.

So nowadays, we use relational database management systems (RDBMS) to store and manage huge volume of data. This is called relational database because all the data is stored into different tables and relations are established using primary keys or other keys known as foreign keys.

A **Relational Database Management System** (RDBMS) is a software that −

- Enables you to implement a database with tables, columns and indexes.

- Guarantees the Referential Integrity between rows of various tables.
- Updates the indexes automatically.
- Interprets an SQL query and combines information from various tables.

RDBMS Concepts and SQL commands

Database − A database is a collection of tables, with related data.

SQL commands:

- CREATE Database: CREATE DATABASE *databasename*;
- DELETE Database: DROP DATABASE *databasename*;

Table − A table is a matrix with data. A table in a database looks like a simple spreadsheet.

Column − One column (data element) contains data of one and the same kind, for example the column postcode.

Row − A row (= tuple, entry or record) is a group of related data, for example the data of one subscription.

SQL commands:

- CREATE Table:

```
CREATE TABLE table_name (
   column1 datatype,
   column2 datatype,
   column3 datatype,
   ....
);
```

Example:

```
CREATE TABLE Persons (
   PersonID int,
   LastName varchar(255),
   FirstName varchar(255),
   Address varchar(255),
   City varchar(255)
);
```

- DELETE Table: DROP TABLE *tablename*;

SELECT:

The SELECT statement is used to select data from a database.

SQL commands:

- SELECT Column1,Column2 FROM table_name;

  Description: used to select column1 and column2 from table

- SELECT * FROM table_name;

  Description: * is used to select all rows from the table

- SELECT DISTINCT column_name FROM tablename;

  Description: used to select all distinct column entry from the table

WHERE:

The WHERE clause is used to filter records.

SQL commands:

- SELECT * FROM table_name where column1 = “QueryValue1”
- SELECT * FROM table_name where column1 = “QueryValue1” and column2 = “QueryValue2”
- SELECT * FROM table_name where column1 = “QueryValue1” or column2 = “QueryValue2”

INSERT:

The INSERT INTO statement is used to insert new records in a table.

SQL commands:

INSERT INTO table_name (column1, column2, column3, ...)VALUES (value1, value2, value3, ...);

UPDATE:

The UPDATE statement is used to modify the existing records in a table.

SQL commands:

UPDATE Customers SET ContactName='Juan' WHERE Country='Mexico';

ALTER TABLE:

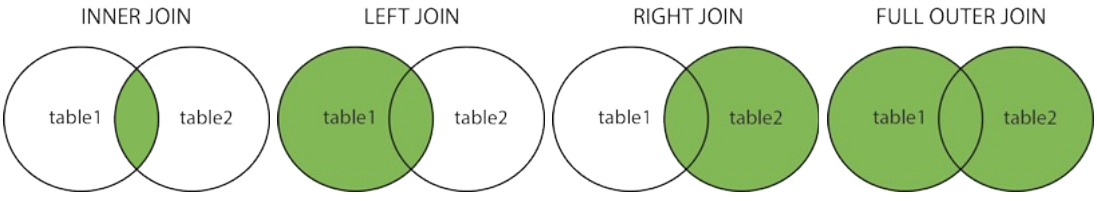
It is a command used to add, modify, or drop columns in a table.

- ALTER TABLE table_name ADD column_name column-definition; // used
- ALTER TABLE table_name CHANGE column_name column_name_updated column-definition-updated;
- ALTER TABLE table_name DROP column_name;

JOIN:

A JOIN clause is used to combine rows from two or more tables, based on a related column between them.

NATURAL (INNER) JOIN:
Returns records that have matching values in both tables
LEFT (OUTER) JOIN:
Return all records from the left table, and the matched records from the right table
RIGHT (OUTER) JOIN:
Return all records from the right table, and the matched records from the left table
FULL (OUTER) JOIN:
Return all records when there is a match in either left or right table



SQL commands:

SELECT Orders.OrderID, Customers.CustomerName, Orders.OrderDate
FROM Orders INNER JOIN Customers ON Orders.CustomerID=Customers.CustomerID;

PHP

PHP is a server-side scripting language designed primarily for web development but also used as a general-purpose programming language. Originally created by Rasmus Lerdorf in 1994, the PHP reference implementation is now produced by The PHP Development Team. PHP originally stood for Personal Home Page, but it now stands for the recursive acronym PHP: Hypertext Preprocessor.
PHP code may be embedded into HTML or HTML5 markup, or it can be used in combination with various web template systems, web content management systems and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server software combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications.The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP License. PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge.
The PHP language evolved without a written formal specification or standard until 2014, leaving the canonical PHP interpreter as a de facto standard. Since 2014 work has gone on to create a formal PHP specification.

Example (PHP Script):

```
<html>
   <head>
      <title>PHP Test</title>
   </head>
   <body>
      <?php echo '<p>Hello World</p>'; ?>
   </body>
</html>
```

Paradigm	Imperative, object-oriented, procedural, reflective
Designed by	Rasmus Lerdorf
Developer	The PHP Development Team, Zend Technologies
First appeared	June 8, 1995; 22 years ago[1]
Stable release	7.1.10[2] / September 29, 2017; 11 days ago
Implementation language	C (primarily; some components C++)
OS	Unix-like, Windows
License	PHP License (most of Zend Engine under Zend Engine License & The TSRM License)
Filename extensions	.php, .phtml, .php3, .php4, .php5, .php7, .phps
Website	php.net

PROJECT

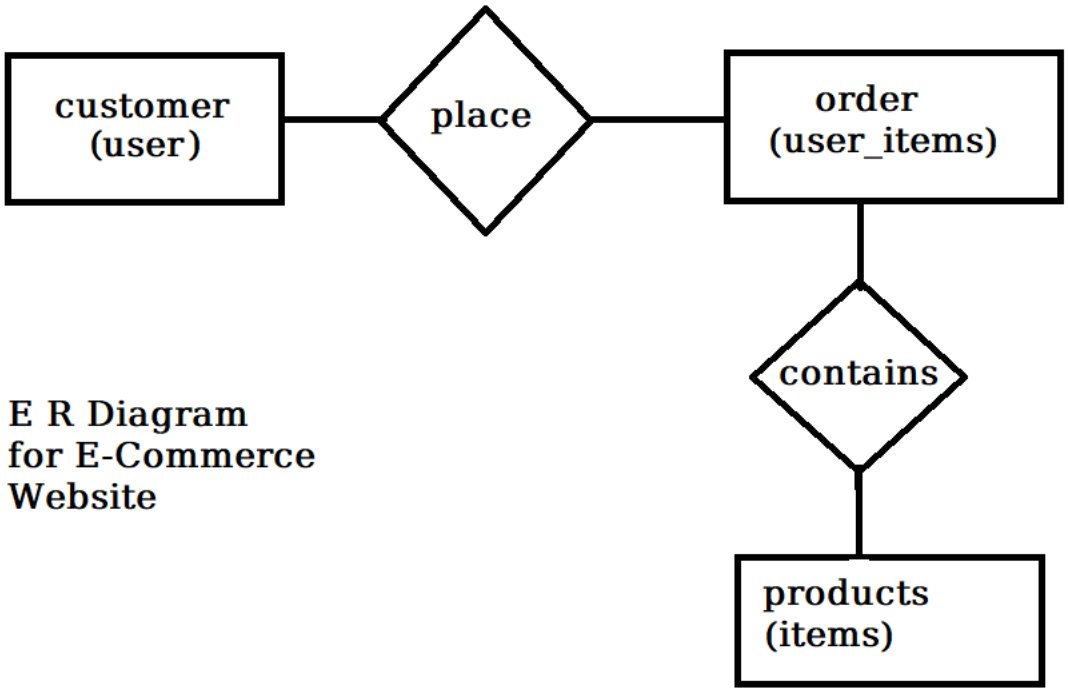
E-Commerce Website

E-commerce is a transaction of buying or selling online. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web for at least one part of the transaction's life cycle although it may also use other technologies such as e-mail. Typical e-commerce transactions are in the online books (such as Amazon) and music purchase (music download in the form of digital distribution such as iTunes Store), and to a less extent customized/personalized online liquor store inventory services.

E-commerce businesses may employ some or all of the followings:

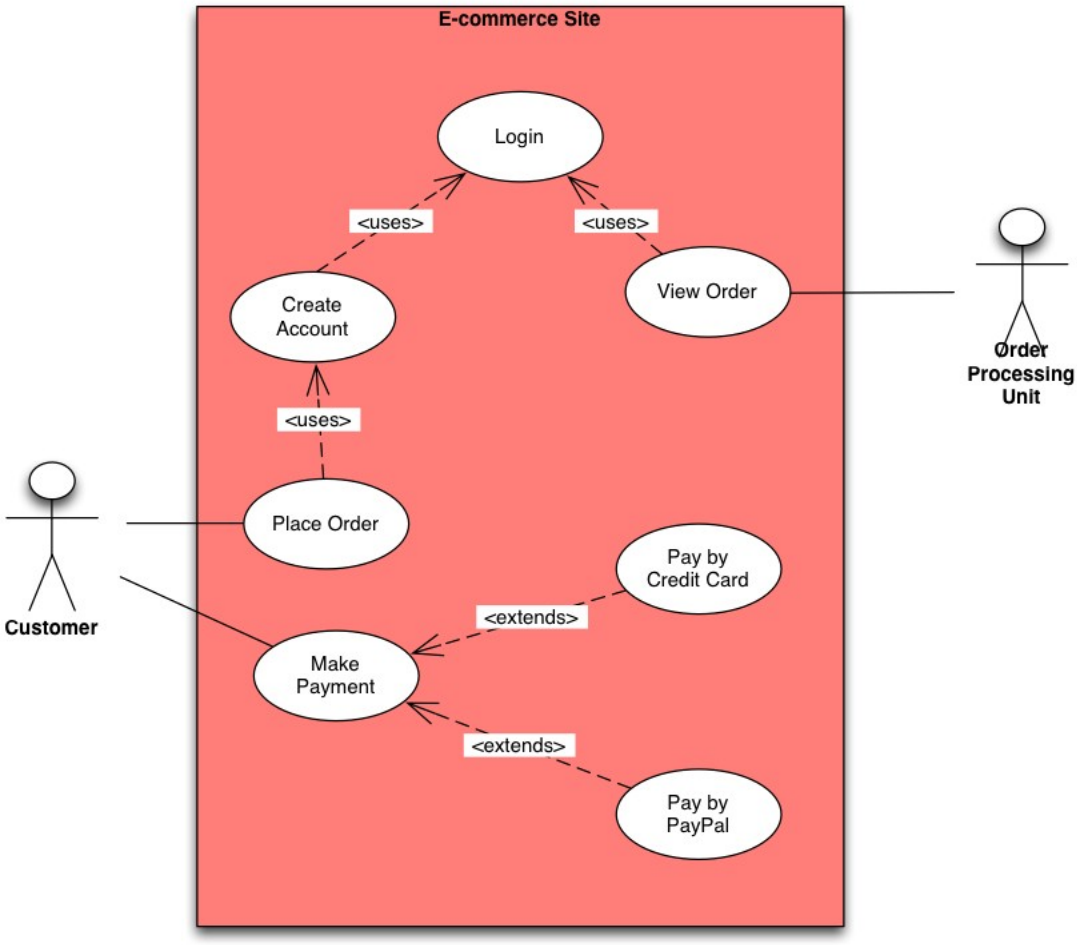
- Online shopping web sites for retail sales direct to consumers
- Providing or participating in online marketplaces, which process third-party business-to-consumer or consumer-to-consumer sales
- Business-to-business buying and selling;
- Gathering and using demographic data through web contacts and social media
- Business-to-business (B2B) electronic data interchange
- Marketing to prospective and established customers by e-mail or fax (for example, with newsletters)
- Engaging in pretail for launching new products and services
- Online financial exchanges for currency exchanges or trading purposes.

Entity Relationship Diagram



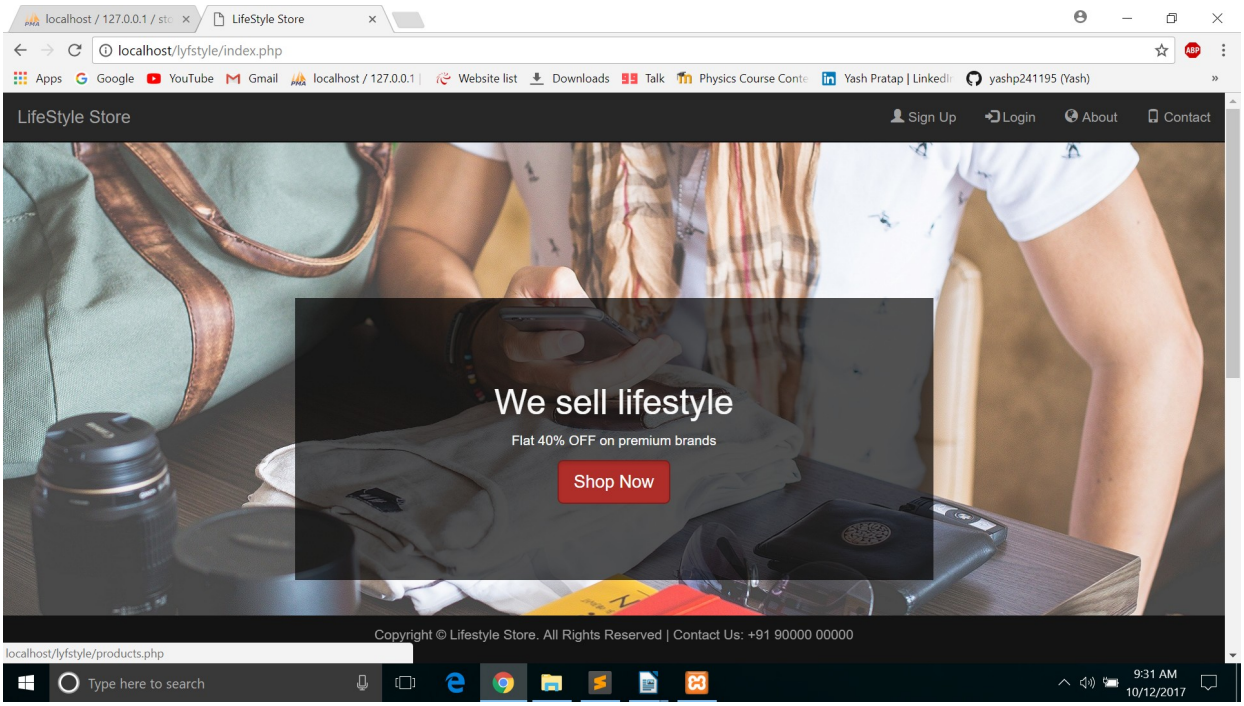
E R Diagram
for E-Commerce
Website

Use Case Diagram

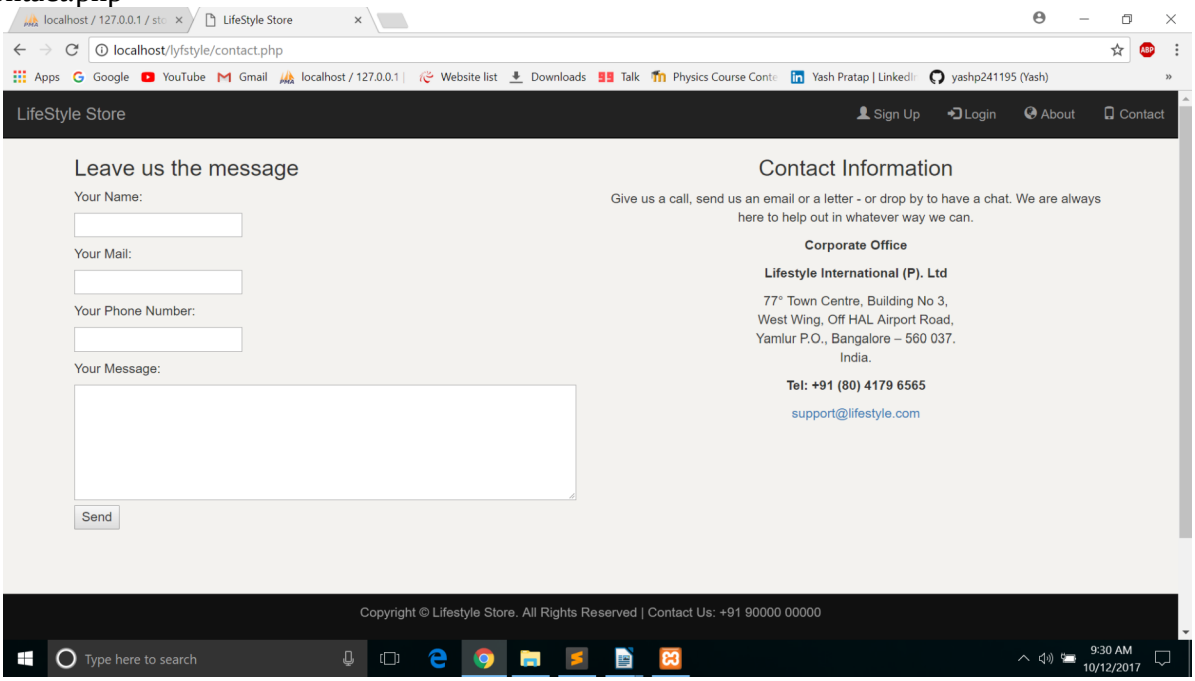


Activities and Screenshots

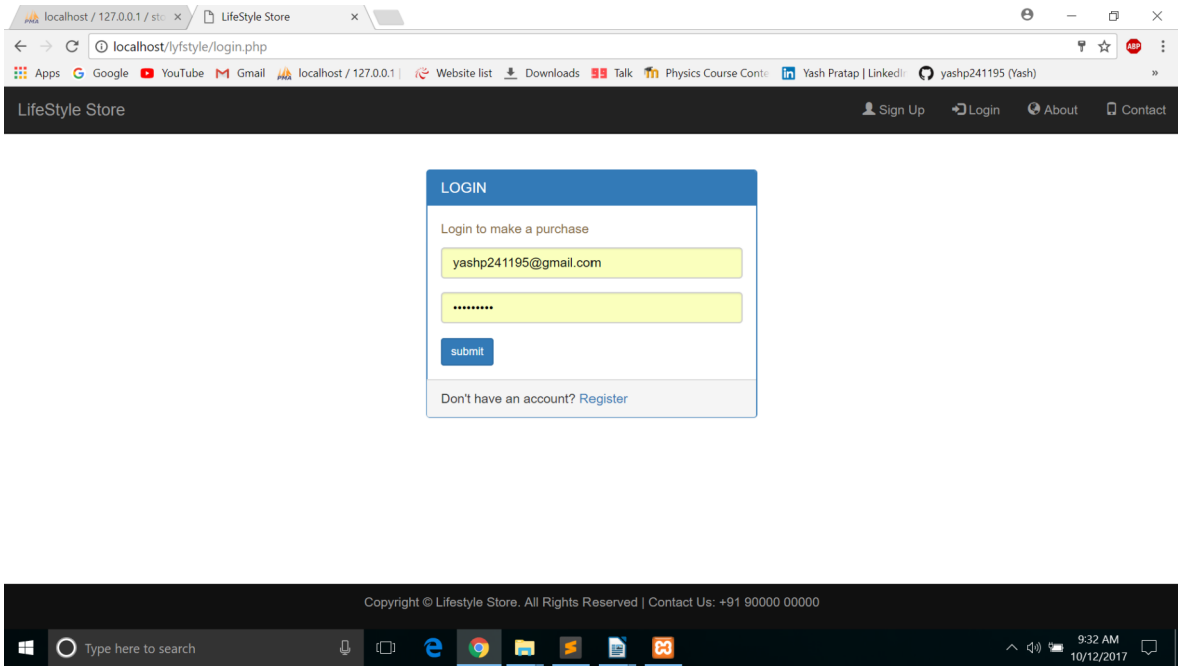
1) index.php



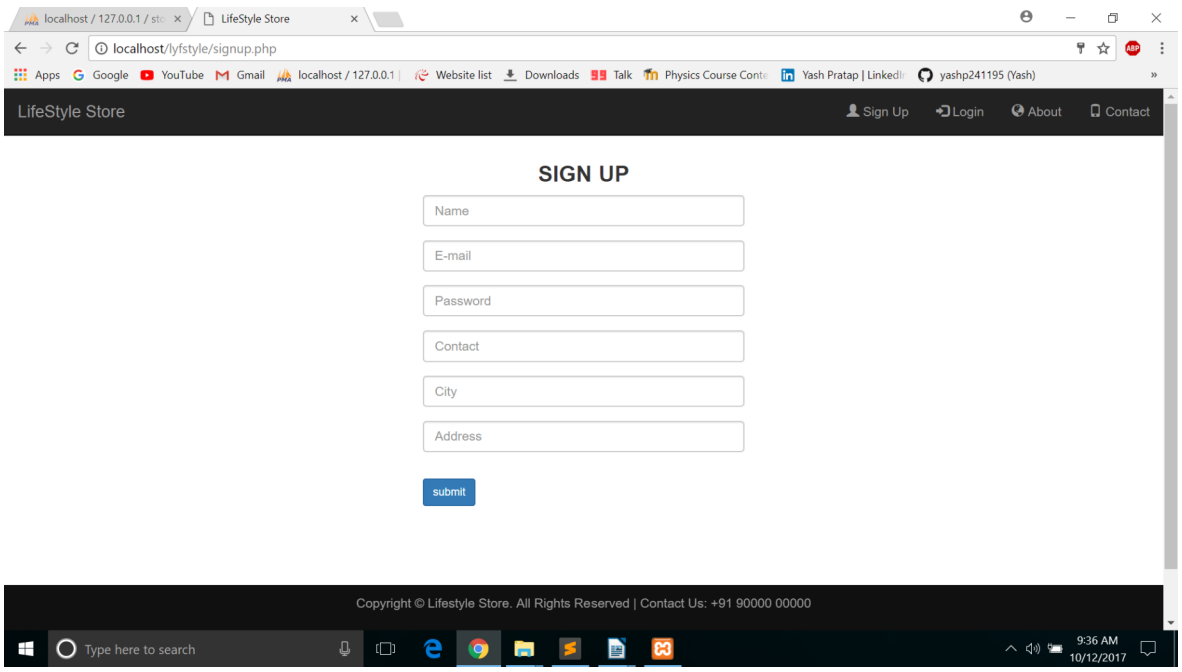
2) Contact.php



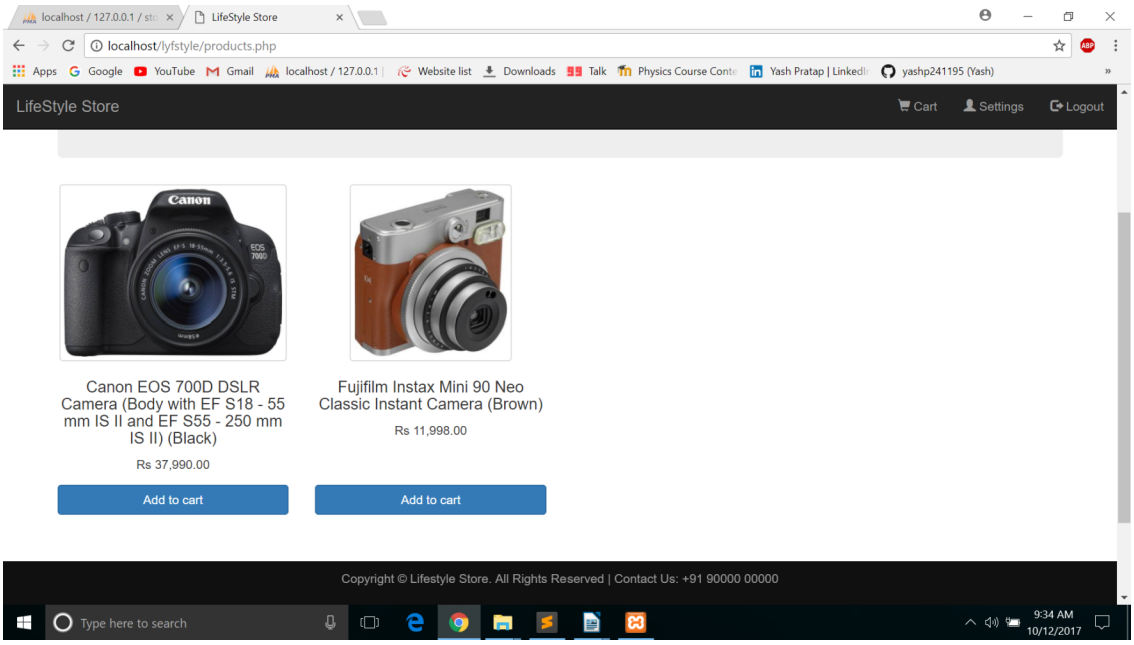
3) Login.php

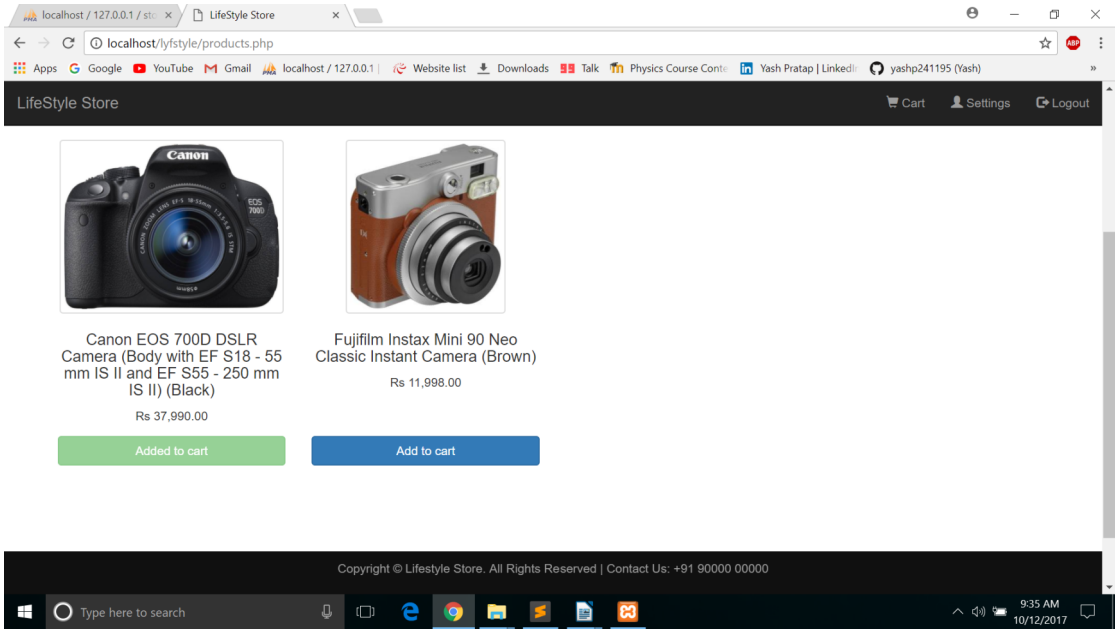


4) signup.php

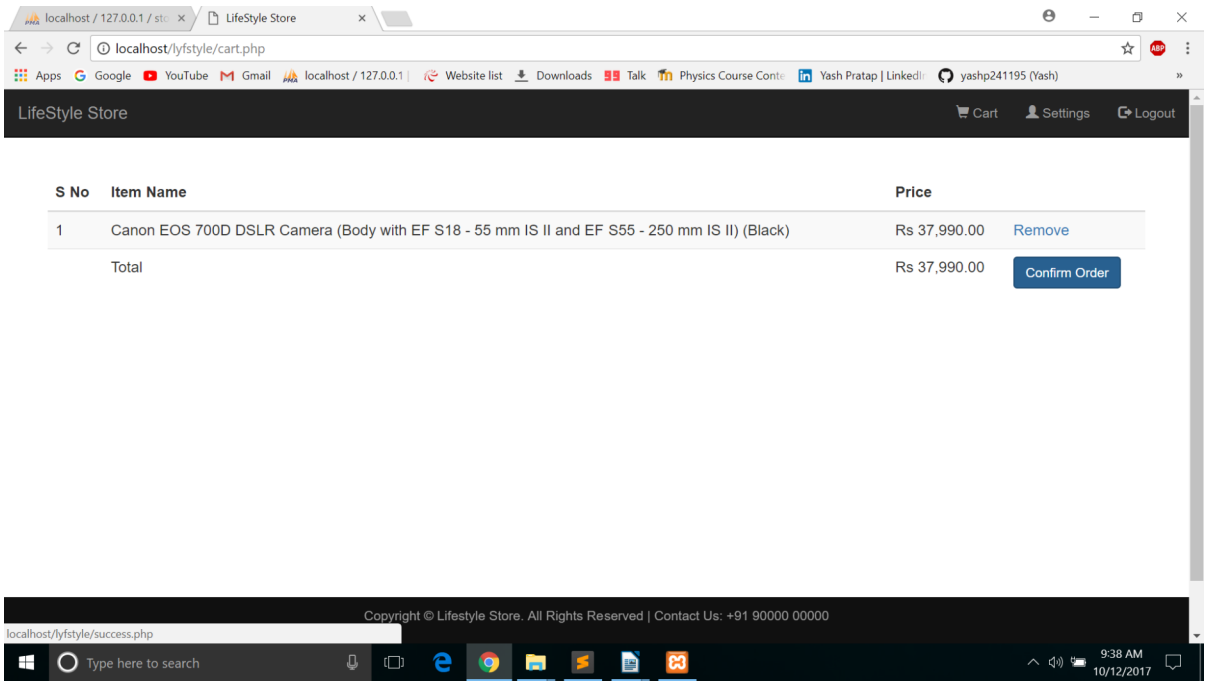


5) products.php

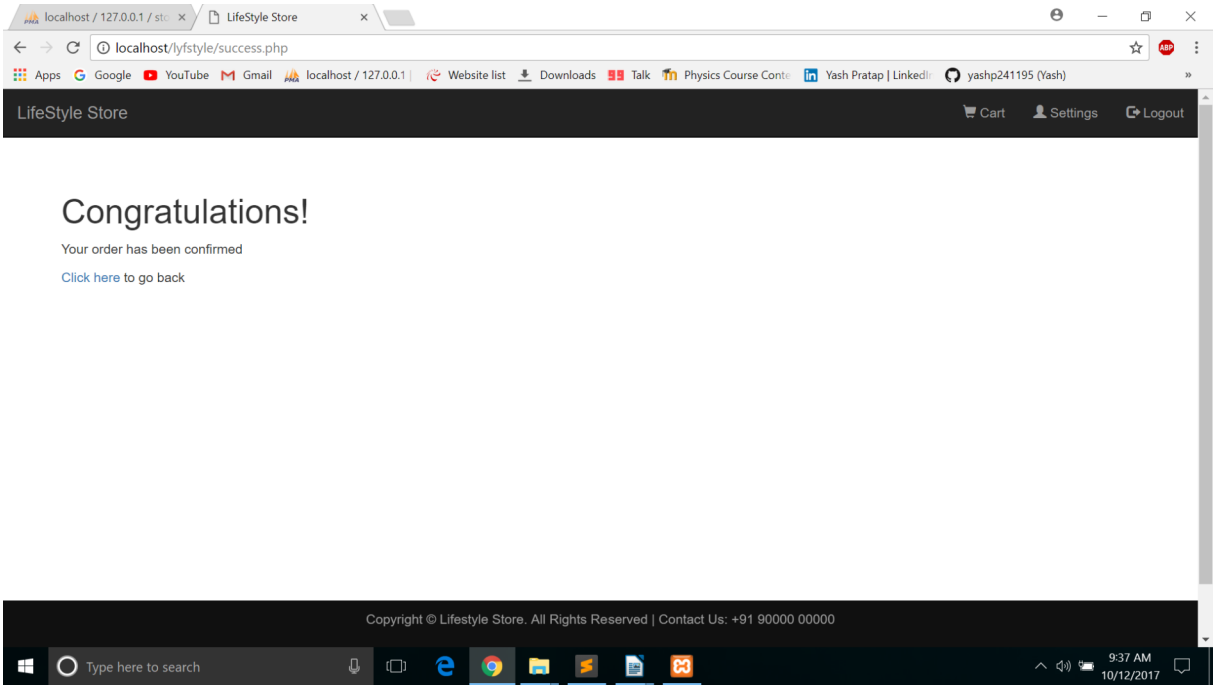




6) cart.php

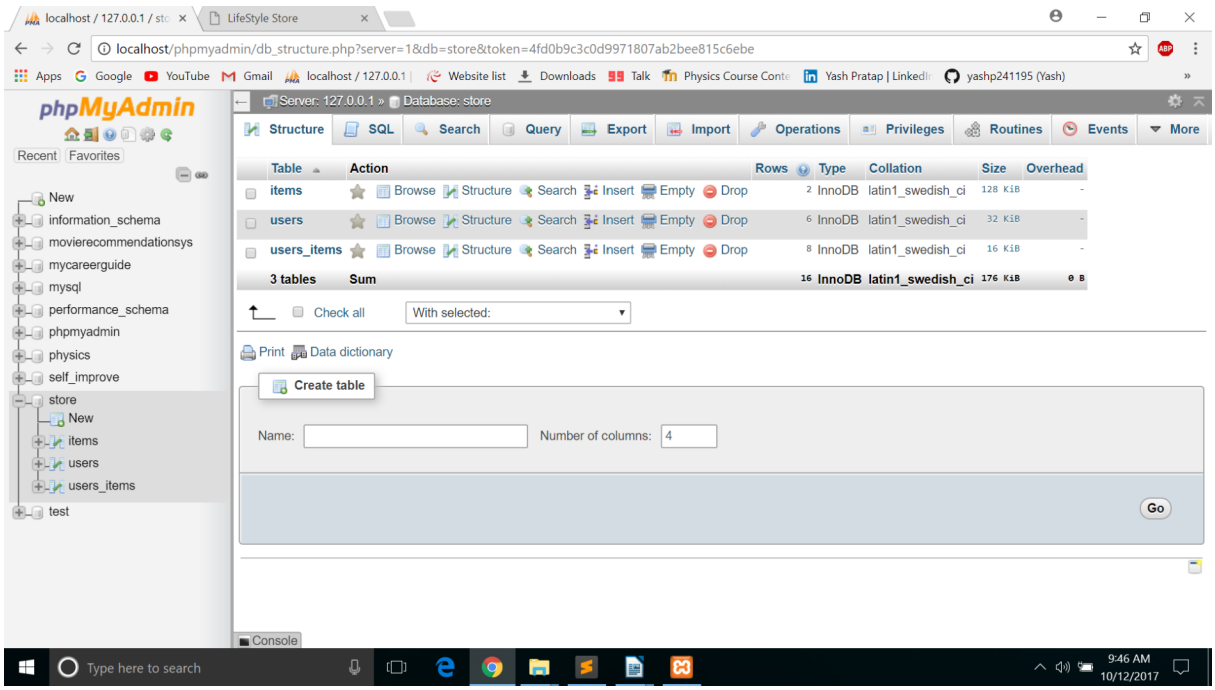


7) success.php

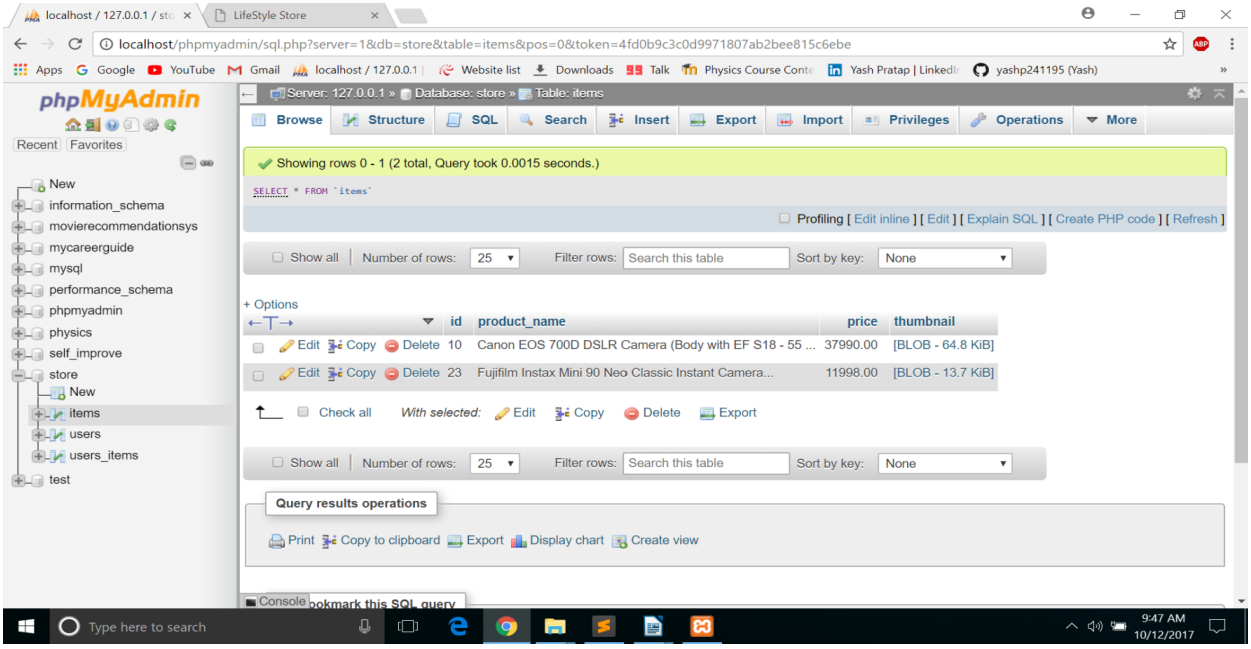


phpMyAdmin

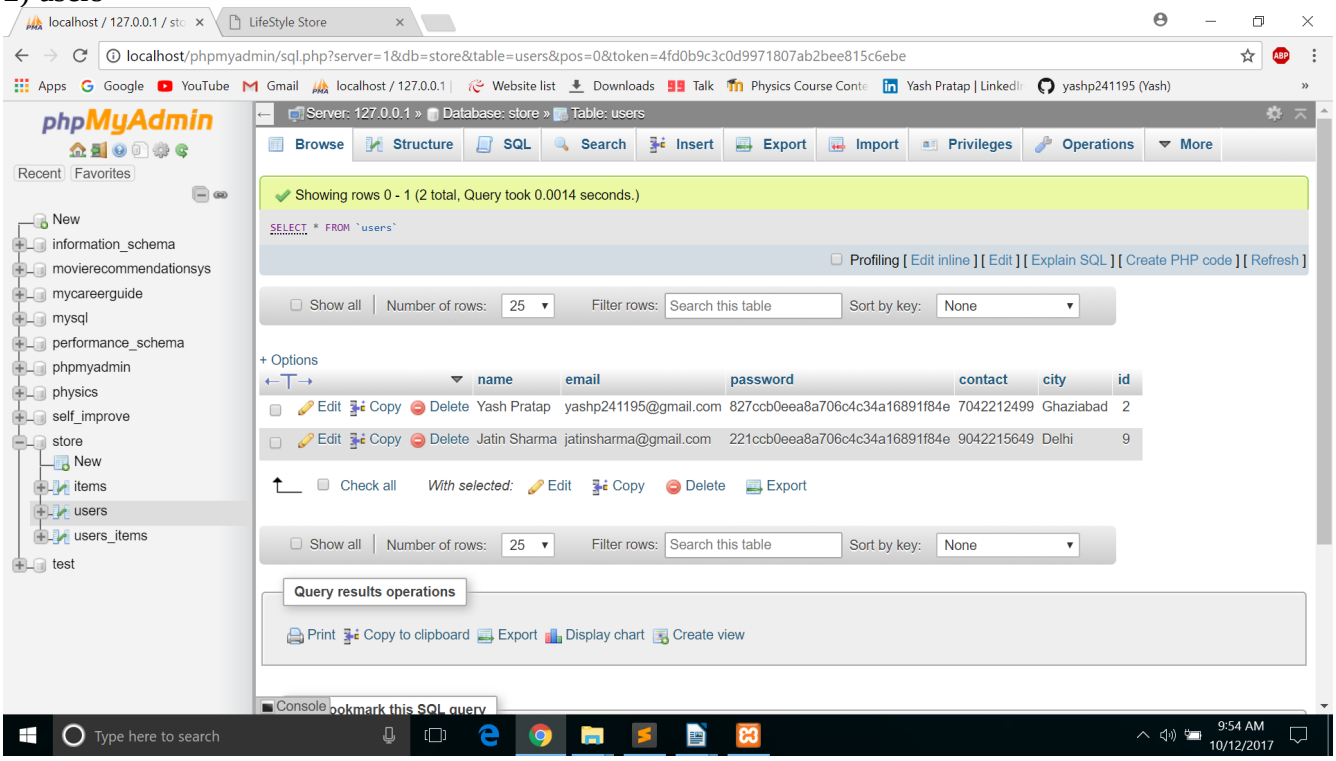
Database: “store”



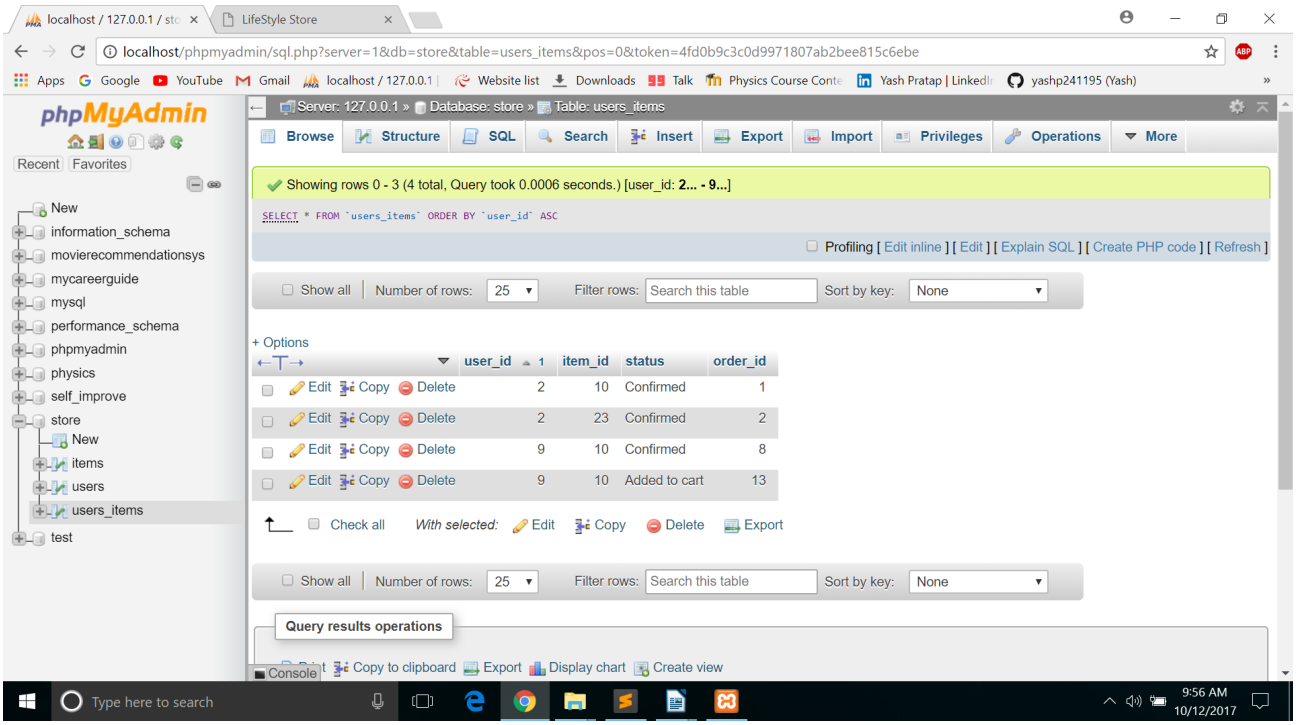
1) items



2) users



3) user_items



Future Scope

E-COMMERCE BUSINESS OPPORTUNITIES IN INDIA

Online business is a form where one can sell or buy product over internet. And country likes India which is second after china in terms of internet users, about 30 percent of its population uses internet and it is estimated to rise rapidly. This gigantic growth of had increased the ecommerce business opportunities in India. The reasons behind the growth in online shopping.

- Increasing internet users per year, this is due to increase in higher penetration of mobile penetration in India.
- Higher rate of usage of Smartphone's and higher purchase of smart phones.
- One more important aspect which helps this growth is that ease of doing shopping.
- Time and mobility is also a factor for it.
- And higher rate of discount rates attracted the customers a lot than off line stores.

At present the products which are getting high response are mobile and gadgets, fashion accessories and other electronic products. By their policies and payment methods encourage the buyer to go with them. Some of the eCommerce sites are most popular and some are becoming popular nowadays.

E-commerce business opportunities in India is higher than any other country in the world because of the fact that India is the fasting growing economy and youngest country of the world, purchasing capability of the population is increasing day by day.

Most of the population use Smartphone's, especially in small towns and cities, people are becoming more tech savvy and aspiration towards branded products are increasing. This increases the sales of the online stores. More people and existing business firms want to have their online store.

CONCLUSION

In general, today's businesses must always strive to create the next best thing that consumers will want because consumers continue to desire their products, services etc. to continuously be better, faster, and cheaper. In this world of new technology, businesses need to accommodate to the new types of consumer needs and trends because it will prove to be vital to their business' success and survival. E-commerce is continuously progressing and is becoming more and more important to businesses as technology continues to advance and is something that should be taken advantage of and implemented.

From the inception of the Internet and e-commerce, the possibilities have become endless for both businesses and consumers. Creating more opportunities for profit and advancements for businesses, while creating more options for consumers. However, just like anything else, e-commerce has its disadvantages including consumer uncertainties, but nothing that can not be resolved or avoided by good decision-making and business practices.

There are several factors and variables that need to be considered and decided upon when starting an e-commerce business. Some of these include: types of e-commerce, marketing strategies, and countless more. If the correct methods and practices are followed, a business will prosper in an e-commerce setting with much success and profitability.