Developing an E-Commerce Website

CSE-0318 Summer 2021

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***Abstract*—- In this era of internet, e-commerce is growing by leaps and bounds keeping the growth of brick-and-mortar businesses in the dust. This paper outlines different aspects of developing an e commerce website and the optimum solution to the challenges involved in developing one. It consists of the planning process, determining the use case, domain modelling and pattern of the web application. The entire process is primarily divided into two parts: the front-end development and the back end development.**

***Index Terms*—- domain modeling; e-commerce; model view controller; object oriented programming; online shop**

I. Introduction

Electronic commerce or e-commerce refers to a wide range of online business activities for products and services. It is usually associated with online buying and selling over the internet or conducting any transaction involving the transfer of ownership or rights to use goods or services through a computer mediated network. In our eyes we see it as a new dimension to the varied use of the internet and our purpose is to make it trendy in our country where its use is particularly very low. Because of the high context culture it is very important to develop trust among the people interested in a transaction. E-commerce in Bangladesh actually started in the year of 1999 based in USA with some non-resident Bangladeshis. Our motto is to develop an enriched ecommerce website in our country that should be largely accepted by the customers.

II. Literature Review

Ullah, Syed Emdad, Tania Alauddin, and Hasan U. Zaman. ”Developing an E-commerce website.” 2016 International Conference on Microelectronics, Computing and Communications (MicroCom). IEEE, 2016.

III. Proposed Methodology

The entire development process has been subdivided into two: the front end development and the backend development. The front end comprises of the visually visible parts such as the home page, admin panel, contact page, shopping cart page. The back end contains the database and its interaction with the front-end.

A. Front End Development

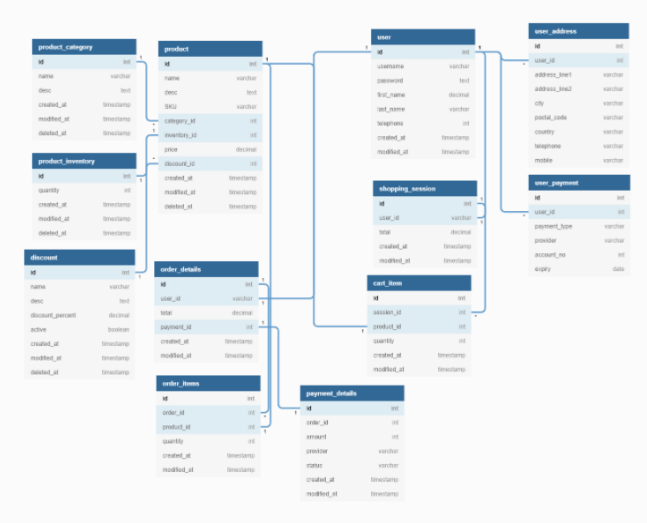
The front end of our website was initially raw coded using JavaScript. This is a client side scripting language which is a dedicated language for web development. The code was mixed with the Hypertext Mark-up Language (HTML) to create a style sheet(CSS) language used for describing the look and formatting a document written in a mark-up language. We also introduced bootstrap program in our application which supports creation of animations.

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="Width=device-width, intial-scale=1.0">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>CSE-0318_LAB</title>
    <link rel="stylesheet" href="css/style.css">
    <link rel="preconnect" href="https://fonts.gstatic.com">
    <link href="https://fonts.googleapis.com/css2?family=Cormorant+Garamond:ital,wght@0,500;0,
    <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/font-awesome/4.7.0/css/fon

</head>
```

a) HTML Code Sample

: B. Backend Development

The Database Management System (DBMS) provides support for the back end. The database management system is essentially software where we can create the database, add, drop, alter and update tables. The tables can hold different types of data for example: integer, variable characters etc. in our application we have chosen the MySQL DBMS to hold the database. MySQL is a relational database management system. The main reason is MySQL development project has made its source code available under the terms of the General Public License (GNU) which is an open source web application.



b) Database

:

IV. Conclusion and Future Work

E-Commerce has changed our life styles entirely because we do not have to spend time and money travelling to the market. One can pick up the pace of his online business with the help of e-commerce application development and web development solutions. It is one of the cheapest means of doing business as it is e-commerce development that has made it possible to reduce cost of promotion of products and services. There is no time barriers in selling the products. One can log on the internet even at midnight and can sell products at a single click of mouse. An interactive user friendly and focused website in the form of online shop can generate good business. So we are of the opinion that big companies should invest more on research and development for e-commerce.

Acknowledgment

I would like to thank my honourable **Khan Md. Hasib Sir** for his time, generosity and critical insights into this project.

References

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Table	Action	Rows	Type	Collation	Size	Overhead
optiongroups	Browse Structure Search Insert Empty Drop	2	MyISAM	latin1_german2_ci	2.0 KiB	-
options	Browse Structure Search Insert Empty Drop	8	MyISAM	latin1_german2_ci	2.2 KiB	-
orderdetails	Browse Structure Search Insert Empty Drop	0	MyISAM	latin1_german2_ci	1.0 KiB	-
orders	Browse Structure Search Insert Empty Drop	0	MyISAM	latin1_german2_ci	1.0 KiB	-
productcategories	Browse Structure Search Insert Empty Drop	6	MyISAM	latin1_german2_ci	2.1 KiB	-
productoptions	Browse Structure Search Insert Empty Drop	11	MyISAM	latin1_german2_ci	2.3 KiB	-
products	Browse Structure Search Insert Empty Drop	2	MyISAM	latin1_german2_ci	2.4 KiB	-
users	Browse Structure Search Insert Empty Drop	0	MyISAM	latin1_german2_ci	1.0 KiB	-
8 tables	Sum	29	InnoDB	utf8mb4_general_ci	14.0 KiB	0 B

Fig. 1. Data Table

+ Options

	ProductOptionID	ProductID	OptionID	OptionPriceIncrement	OptionGroupID
Edit Copy Delete	1	1	1	0	1
Edit Copy Delete	2	1	2	0	1
Edit Copy Delete	3	1	3	0	1
Edit Copy Delete	4	1	4	0	2
Edit Copy Delete	5	1	5	0	2
Edit Copy Delete	6	1	6	0	2
Edit Copy Delete	7	1	7	2	2
Edit Copy Delete	8	1	8	2	2
Edit Copy Delete	21	22	23	12	12
Edit Copy Delete	12	2	21	33.44	121
Edit Copy Delete	222	22	23	12	12

Fig. 2. Data Table

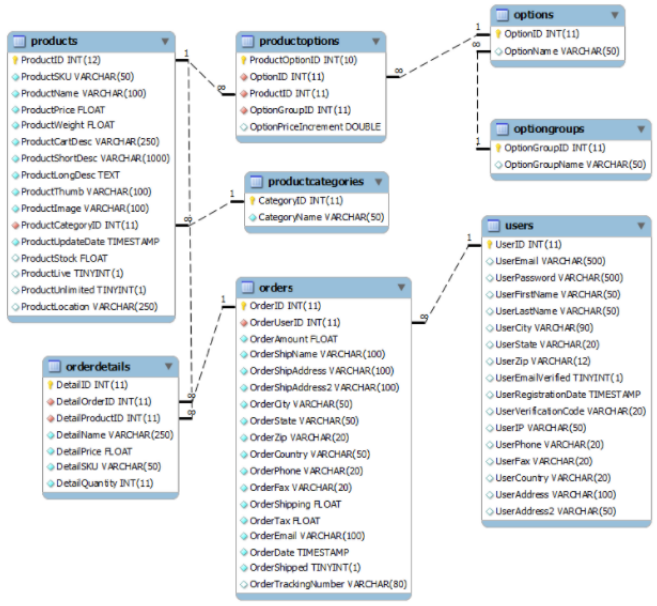

Fig. 3. Entity Relationship Table