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Student declaration

I certify that the assignment submission is entirely my own work and I fully understand the consequences of plagiarism. I understand that false declaration is a form of malpractice.

	Student's signature	Duc Bui Trung Duc

Grading grid

P1	P2	P3	P4	M1	M2	M4	D1	D2

☐ **Summative Feedback:**	☐ **Resubmission Feedback:**
Date:	
Signature & Date:	

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I.   Introduction

-   Wireless, public hotspots, mobile broadband, and unlimited network connections mean that accessing and using the internet to request, use and post information has never been so easy, or so important. As a public, organisational and business demand increases, so do user expectation. Designers need to successfully use technology to deliver high quality and consistent User Experiences (UX) through friendly and functional User Interfaces (UI). However, as the software and hardware evolve, so does the challenge of design.

-   This unit introduces students to the underpinning services required to host, manage and access a secure website before introducing and exploring the methods used by designers and developers to blend back-end technologies (server-side) with front-end technologies (client-side). To help ensure new designers are able to design and deliver a site that offers an outstanding User Experience (UX) supported by an innovative User Interface (UI) this unit also discusses the reasons, requirements, relationships, capabilities and features of the systems they will be using and gives them an opportunity to explore various tools, techniques and technologies with 'good design' principles to plan, design and review a multipage website.

-   Among the topics included in this unit are: domain structure, domain name systems, web protocols, database servers, development frameworks, website publishing, content management, search engine optimisation, web browsers, HTML standards, CSS and CSS pre-processing (LESS, SASS), presentation models, responsive design, integrated development environments, user requirements, interface design, user experience, branding, navigation, optimisation and validation.

-   On successful completion of this unit students will be able to explain server technologies and management services associated with the hosting and management of secure websites, categorise website technologies, tools and software used to develop websites, utilise website technologies, tools and techniques with good design principles to create a multipage website and create and use a Test Plan to review the performance and design of a multipage website.

-   As a result, they will develop skills such as communication literacy, critical thinking, analysis, reasoning and interpretation, which are crucial for gaining employment and developing academic competence.

2.1 Description:

⬚ Any member can register and view available products.

⬚ Only registered member can purchase multiple products regardless of quantity.

⬚ ContactUs page is available to contact Admin for queries.

⬚ There are three roles available: Visitor, User and Admin.

• Visitor can view available products.

• User can view and purchase products.

• An Admin has some extra privilege including all privilege of visitor and user.

⬚ Admin can add products, edit product information and add/remove
product.

⬚ Admin can add user, edit user information and can remove user.

⬚ Admin can ship order to user based on order placed by sending
confirmation mail.

2.2 Using the code:

1. Attach the database in your "SQL Server Management Studio Express".
2. Run the application on Microsoft Visual Studio as web site.
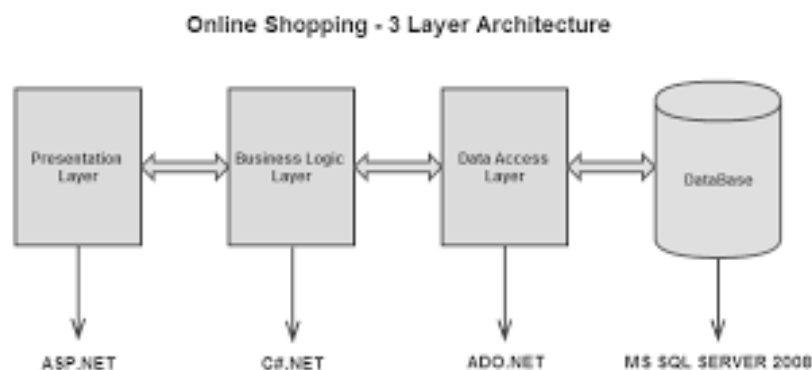3. Locate the database.

2.3 MasterPage details:

⬚ OnlineShopping Master Page (Similar MasterPage for Visitor, User and Admin)

2.4 Web Pages details:

⬚ Home Page

⬚ AboutUs Page

⬚ Computer Page

⬚ OrderUs Page

⬚ ContactUs Page

⬚ Admin Page

⬚ Login Page

⬚ Register Page

⬚ Track

2.5 Project Detail:

Online Shopping - 3 Layer Architecture

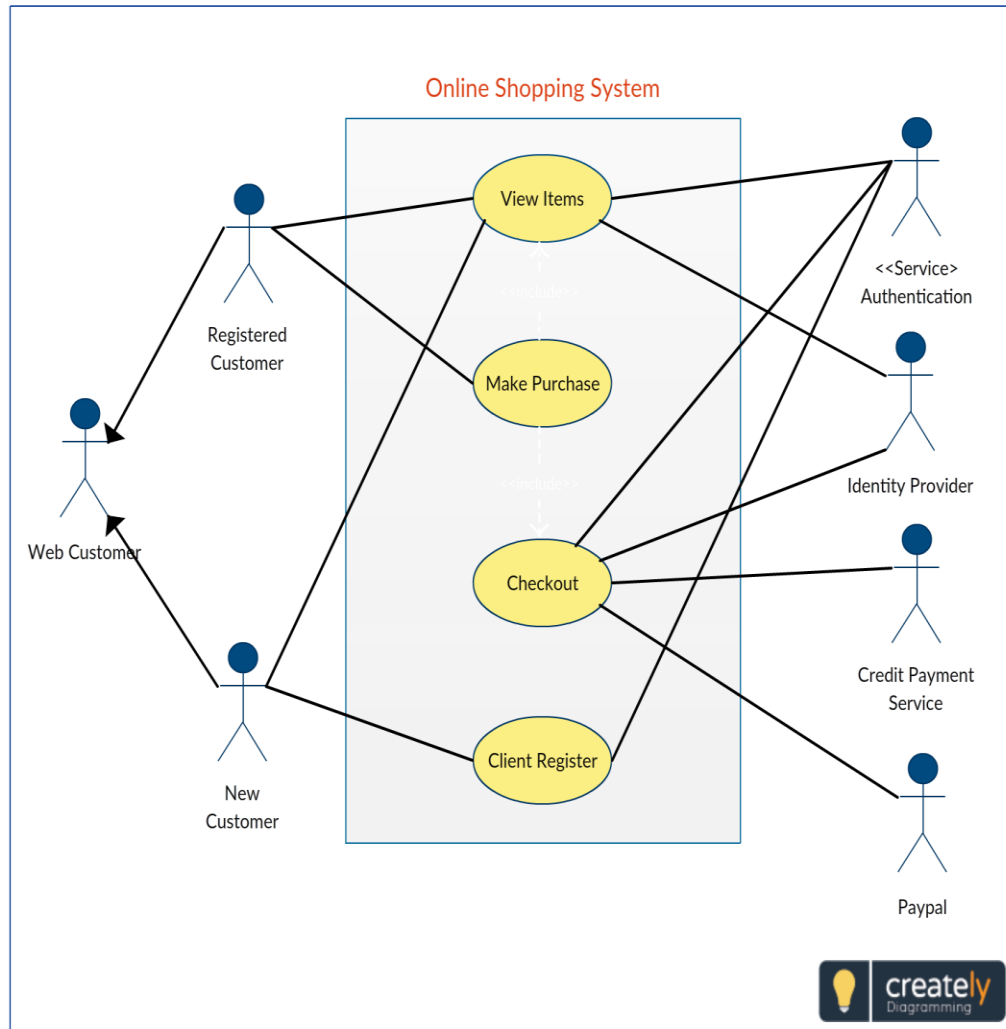| Presentation Layer	Business Logic Layer	Data Access Layer	DataBase
ASP.NET	C#.NET	ADO.NET	MS SQL SERVER 2008

Design and Implementation of E-Commerce Site for Online Shopping

3.0 SYSTEM REQUREMENTS:
3.1 USE-CASE DIAGRAM:

4.0 ONLINE SHOPPING APPLICATION:
Anyone can view Online Shopping portal and available products, but every user must login
by
his/her Username and password in order to purchase or order products. Unregistered
members
can register by navigating to registration page. Only Admin will have access to modify roles,
by
default developer can only be an 'Admin'. Once user register site, his default role will be
'User'.

4.1 HOMEPAGE:

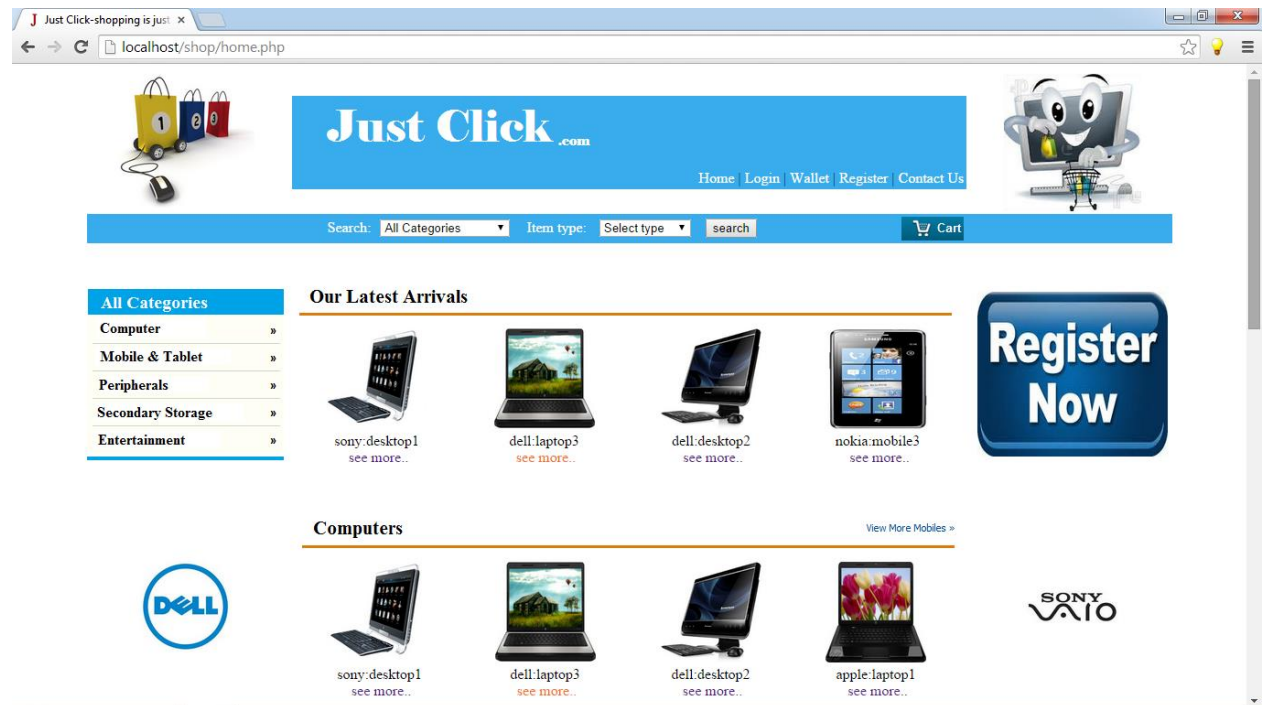The Home Screen will consist of screen were one can browse through the products which we have on our website.

Figure1: Home Page

4.2. LAPTOP PAGE (PRODUCTS):

This page consists of product details. This page appears same for both visitors and users

Figure 2: LAPTOP PAGE

4.3 Order Us Page:

Registered users can order desired products from here.

Contact us

Contact us about anything related to our company or services.

We'll do our best to get back to you as soon as possible.

Your Name *	
Phone Number	
Email *	
Your Company *	
Subject *	
Your Question *	

Send

Figure 4: Contact Us Page

4.5 ABOUT US PAGE:

This page describes about website and owners

Figure 5: About us Page

4.6 Track For Admin Page:

Website Administrators can track and ship orders here.
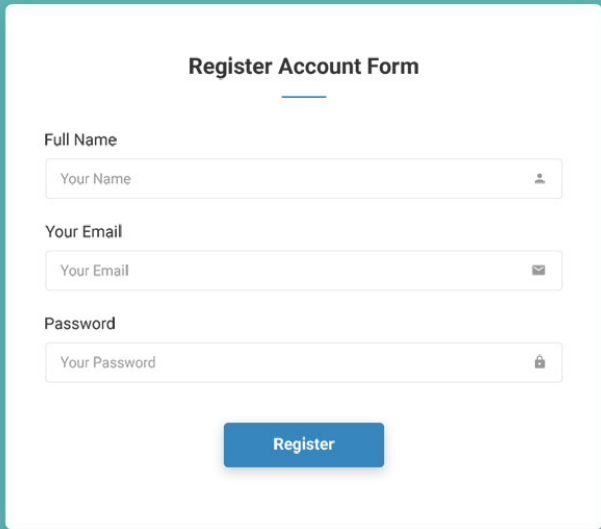
Figure 6: Tracking Page for Admin

4.7 REGISTER PAGE:

New users can register here
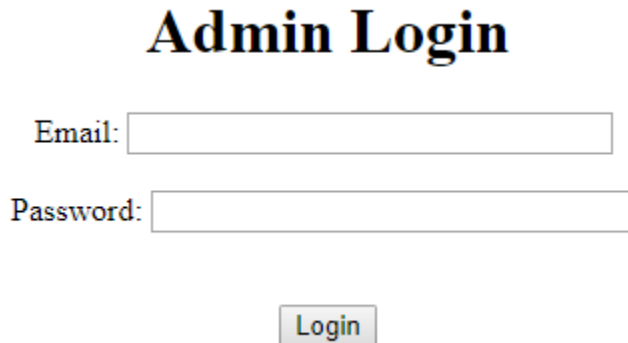
Figure 7: Register Page

4.8 LOGIN PAGE:

Login page for both users and administrators.

Admin Login
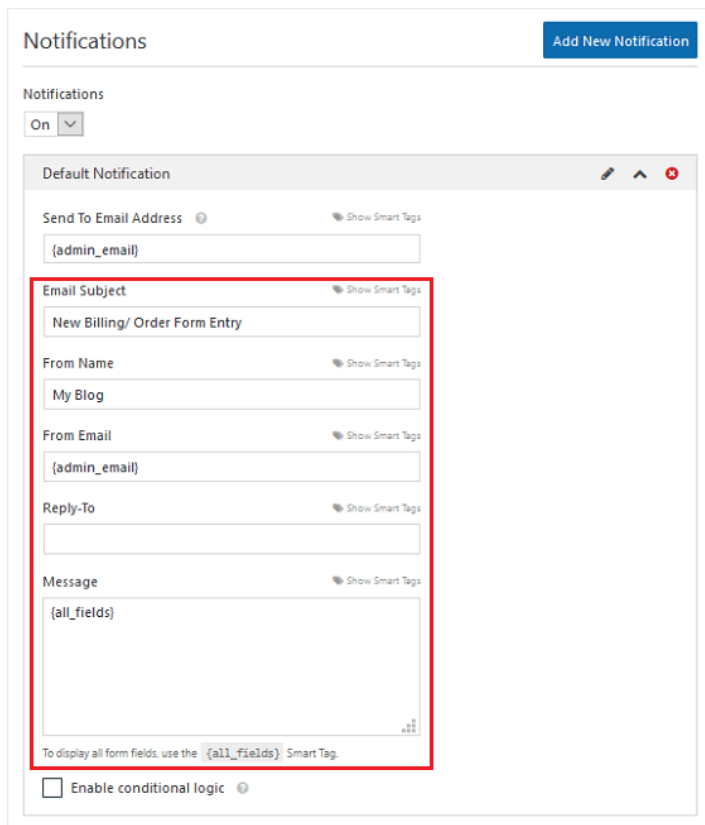
Email: [   ]

Password: [   ]

[Login]

Figure 8: login Page

4.9 Admin Page:

Only difference you see in this page is Role: Admin. User and Admin role will
be checked once the page was login and Session ["role"] will be either Admin or User. If
credentials belong to Admin then role will be Admin and if credentials belong to User then
role will be User.
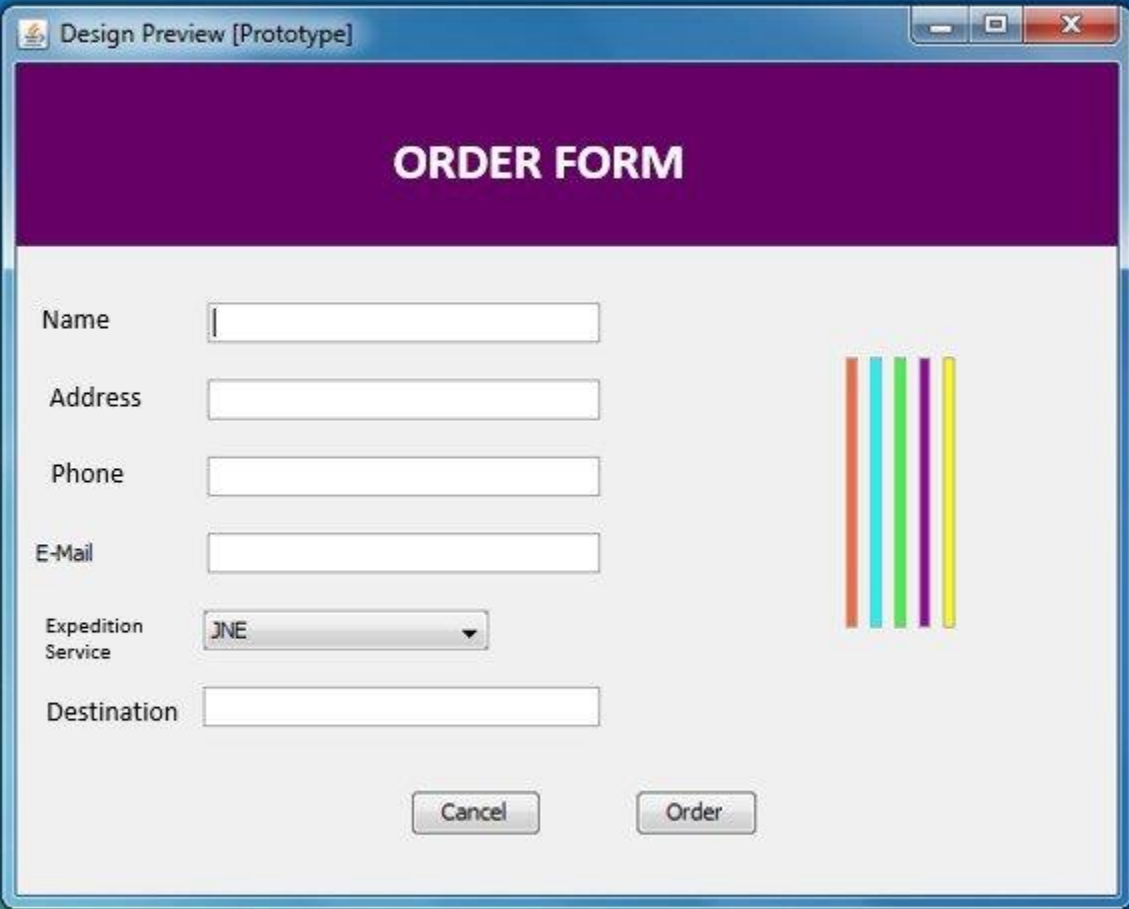
Figure 9: Admin Page

4.10 ORDER VIEW FOR USER:

Once users order item they are able to see ordered products
and grand total
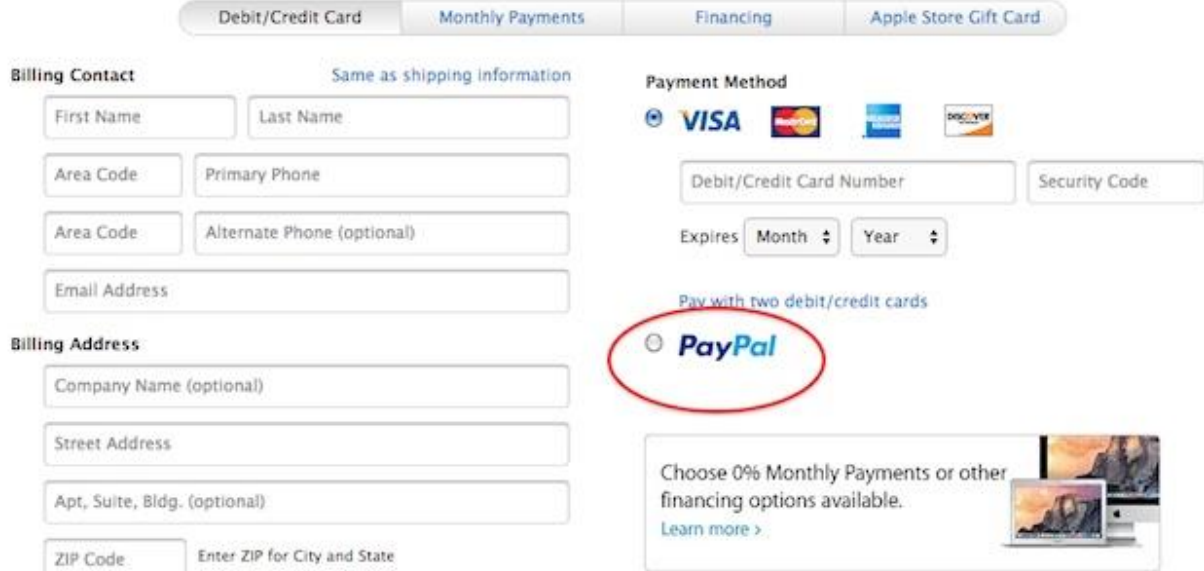
Figure 10: Order View for User

4.11 PAYPAL FOR PAYMENT:

Once users orders products they are redirected to payment
page.

Figure 11: PayPal Page

Figure 4.12: Success URL

Figure 12: Success URL

FIGURE 4.12: Failed URL

Figure 12: Failed URL

5.1 Data Description

This database consists of
⬚ Users: User and Admin information is added to database with Unique ID based
on their roles.
⬚ Shopping: Complete products information is stored in this table.
⬚ Orders: Customer ordered products, status and delivery information is stored in
this table.

5.2 Data Objects

⬚ User: ID, UserName, Password, Email, Role
⬚ Shopping: ID, Product, Product ID, Cost, Category, Image, Description
⬚ Orders: ID, Client, Product, Quantity, Price, Date, OrderShipped

5.3 Database Table Diagram

5.4 Relationships:
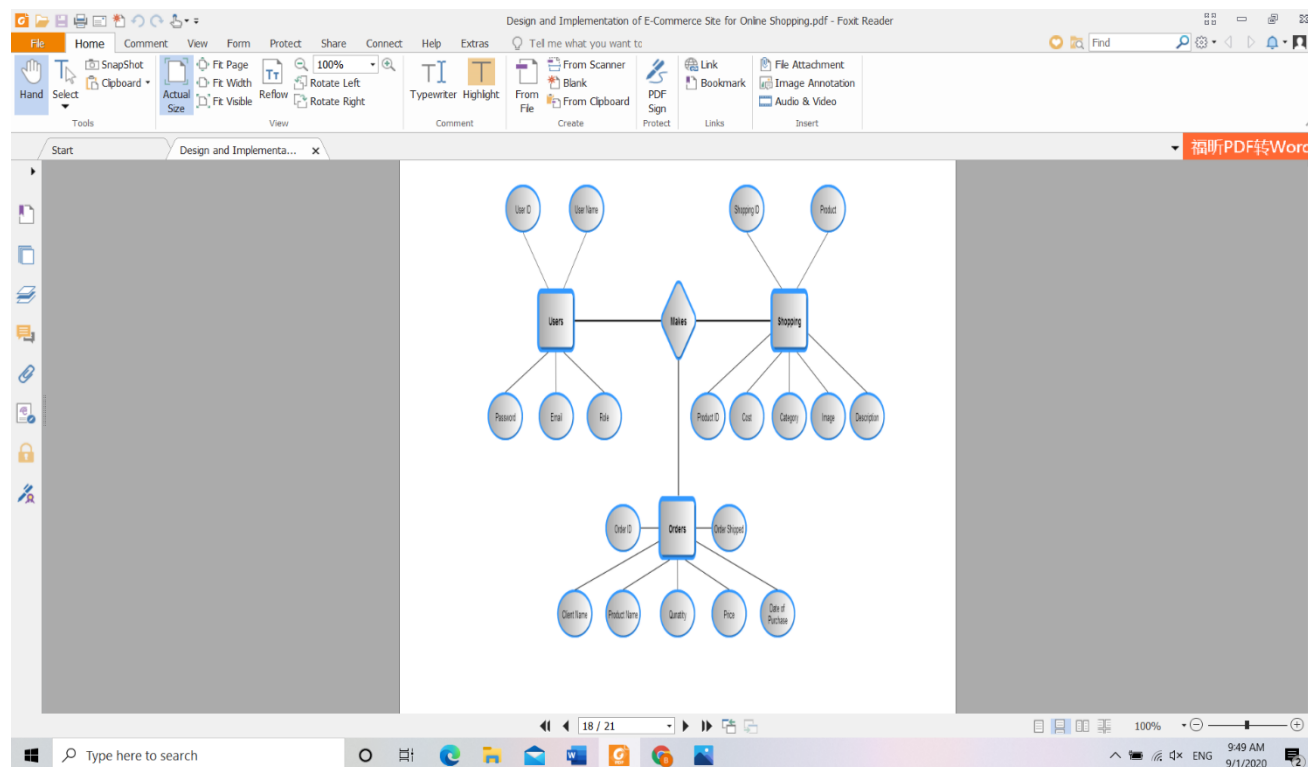
6.0 Non-Functional / Operational Requirements

6.1 Security

▫ Pages of the website must be access in the way they were intended to be accessed. Included files shall not be accessed outside of their parent file.

▫ Administrator can only perform administrative task on pages they are privileged to access. Customers will not be allowed to access the administrator pages.

6.2 Efficiency and Maintainability

▫ Page loads should be returned and formatted in a timely fashion depending on the request being made.

▫ Administrators will have the ability to edit the aspects of the order forms, product descriptions, prices and website directly

6.3 Illustrate the structure and components of website (use Wireframe)

- Wireframe is a visual tool for web design at the structural level. A wireframe is typically used to arrange content and functionality on a page. Wireframe is also used in the process of setting up the basic structure of a website before visual design.

Header

- This element is located at the top of the web page and is displayed on all pages of the website.
- The header usually contains the following components:
- Site ID
- Home link
- Navigation menu
- Search box
- Cart

Site ID

- An identifier for a website, easier to understand than a website name.
- Site ID is usually located in the left-hand corner.
- You can easily see the logo or a short slogan for the website.

Home link

- Home link, also known as a link to the home page,
- when you click on this link will redirect to the homepage of the website.

* What is the homepage? the homepage is the first page you see when accessing a website such as Bigweb.com.vn ...
* What is a link? A link, also known as a link, can be placed within an image or text that when you click on it will be redirected to a different web page link.

Navigation menu

- This is the container for the collection of links to the main pages of the website. Usually the menu will be placed inside the header.
- The menu is designed with easy to see, helping users to quickly go to the main pages on the website.
- For example, you can see the menu can include the following links: Home, Product, Contact, Introduction ...

- Sometimes the menu is also placed at Scan columns or Footer, these elements you will see in the next section.

Search box (Search box)

- For websites with lots of articles or products, the search box helps users find information on the website quickly.

- In the header, the search box is usually placed in the right corner and made simple to not take up much space.

- It includes only one box to enter the search term and a search button.

- If you think of a search box with more functions such as product category search, color (usually called advanced search), think about setting it at Scan columns.)

Cart

- For shopping websites, you will notice a shopping cart icon located on the right corner.
- The shopping cart can display information such as: number of selected products, how much total? When the user clicks on it will be redirected to the cart page to see details of the products ordered.

Slider

- This element is usually located below the header. Common sliders are images, which contain many different images, but not all on the web page.
- The slider will have a navigation button, allowing you to scroll through other slides. Also slides can be videos.
- The well-designed slider will engage your customers on the first visit to the website. Today, you can see slides on a lot of different web pages.

Scan columns

- Why is called "scan columns", scan is like you use your eye to go through each part of the web page, which is specifically here are columns.
- The concept of scan columns has existed for a long time, before that, it was used in book publishing. Today scan columns are widely used in website design.
- The common types of column division you often come across are dividing 2 columns, 3 columns ...

Scan column usually takes up not too much width, it may contain the following components:

- Navigation menu
- Advanced search box
- Featured products, articles
- Contact information
- Advertising banner

Banner

- There are some cases of confusion between banner and header. Actually the banner and header are completely different.
- The word banner is used in advertising such as advertising products, advertising events Banner normally will be an image, eye-catching design to attract customers.
- Common banner placements like the top of the page (above the header) or in the scan
- Also you can see banner ads in video clips such as youtube.

Page footers

- Also known as footer, is located at the bottom of the web page and is displayed on all pages of your website.
- The footer typically contains the following elements:
- Website copyright information
- Link link
- Menu

Content area (the content of the website)

- This is the main body of the site and contains the most information.
- Good looking, informative content will keep your customers engaged for longer.
- The content section usually contains the following elements:
- Page title: usually placed at the top of the content. The title is usually in large and bold font to let the user know what the site is talking about.
- Breadcrumb navigation (Breadcrumb trails): is a hierarchical navigation bar that helps users know where they are on the web page and can move between sections on the website quickly.
- You will notice news sites often have this navigation bar and it is placed at the top of the page content. For example: News → Sports ...
- The main content: this section can contain any information, usually the website will have an administration section or CMS so you can enter this content.
- Paging navigation: for webpages that contain a lot of content such as a product listing or article list, the pagination helps to reduce the load on the web page so that it loads quickly. more, it also helps users to not have to scroll too much.
- The pagination navigation is usually placed at the beginning, the end, or both the beginning and the end of the page body.
- Information bar: usually placed at the top or bottom of the page content, the information bar usually includes information such as date of posting, who is the author, number of views ...
- Social sharing bar: including page sharing buttons through popular social networks such as Facebook, Google, Twitter ...

2. Implementation of website design

Describe how to create website (include IDE, language to develop website)

- Step 1: Set up a local working environment
- Step 2: Plan and design your Website with Adobe Photoshop
- Step 3: Codify designs using HTML and CSS
- Step 4: Make it dynamic using JavaScript and jQuery
- Step 5: Upload the local file to the server using an FTP clien
- For creating and organizing a website's source files, a good local work environment is important.
- You can create a web development environment on your desktop device by installing an IDE (Integrated Development Environment).
- An IDE essentially consists of a Text Editor, Build Automation, and Debugger.

- Subheading and Atomic are some of the basic IDEs for web development that support HTML, CSS, JS, PHP, Python, and similar web languages.

- On the other hand, there are extended IDEs like Adobe Dreamweaver that provide a few

3. Describle how your website works

- Dynamic website is understood in a direct way that the content on the website can be "dynamic". This type of website is also built and programmed by HTML5, CSS3 and Javascript but with the presence of a server programming language like ASP.NET, PHP, ... and a database like SQL Server, My. SQL, ...
-
- With a dynamic website, users will be provided with an administration tool that allows quick and simple changes to the external content.
-
- So basically we can distinguish between dynamic and static websites as follows:
-
- Same: Both built in HTML5, CSS3 and Javascript
- Various: (see detailed breakdown below)
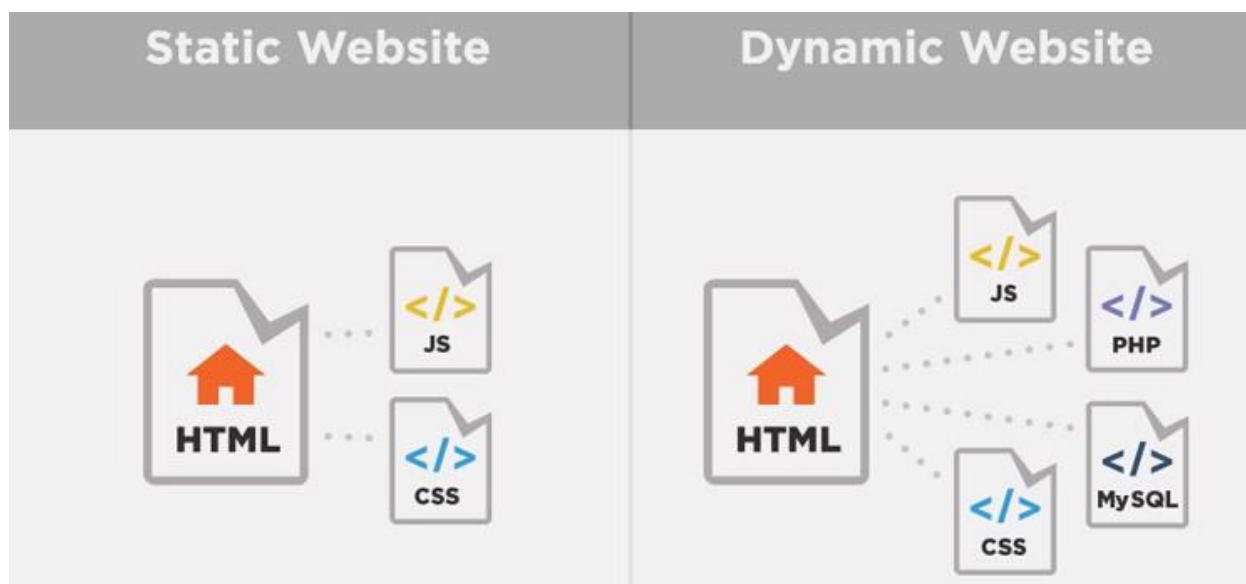
Figure 13: Distinguish static website and dynamic website

Website tĩnh

- Do not allow users to interact with the website, information that needs to be changed on the website needs direct intervention to edit on the HTML file.
- Difficulty in maintenance and upgrading
- Low cost of website design
- Beautiful interface

Website động

- There are more Server programming languages such as ASP.NET, PHP, ... and database SQL Server, MySQL, ...
- Allows users to interact with the website
- Easy to maintain and upgrade website
- High cost of website design
- High application: Design website for sales, design real estate website, design website for business

II. Create and use a Test Plan to review the performance and design of a multipage website

1. Test UI (include color, layout, font, image)

- Necessary
- Eliminate unimportant components: If the elements do not improve the quality of the customer experience, please remove them immediately or move on to another section, to avoid gathering more on the homepage.

- Simplified pull-out menu: Small selection items in the menu you should minimize to 7 items because if too many will still make the interface dense, lack of professionalism.

- Unnecessary
- Use slides: Many visual motion effects using slides on the homepage are easy to distract the user. Reasonable choices are still good quality and computational images. From there, users will focus on the content rather than on the unnecessary elements.
-
- Use of the sidebar: Sidebar is an element that many users when visiting the website will most not click on. So, you do not need to use the sidebar because it is not very efficient but it does not fit the screen when switching the web int

2. Test UX (when open the website on a variety of devices)

General features:
- Providing SaaS service, pay by hour or by month.
- Allows to run simultaneously on multiple real or virtual devices
- Test scripts can be in 3 forms: direct interaction on web browser (running slowly), automation (automatically creating test scripts and filling test data into forms) and programming (creating scripts according to test scripts).
- The results are returned in the form of: screenshot, screen recording video, results (pass or fail, in which the pass / fail condition is not clear, only fails when it crashes and cannot be configured).
- Tested for both Android and iOs, using apk or ipa export file

Strength:
- Inheriting the strengths of cloud, this approach can be used without any investment, on / off and on-demand payments.
- Environment parameters can be configured easily.
- Run a variety of devices, run automatically without a lot of human effort, resulting in visual videos and screenshots.
- No equipment purchases are required, thereby saving investment costs (Capex).

Weakness:
- Only supports big and popular brands, does not support testing on floating and weaker devices such as Oppo, Xaomi, Huawei, Pantech .. but now the proportion of these devices in Vietnam is very large. .
- The pass / fail result returned does not have much value because the fail condition cannot be configured, so the automatic running is ineffective, must be analyzed by itself on the video.
- Operating costs (Opex) are not small, up to from 100 USD / month.

3. Test log

Step 1: You go to Configuration> Activity Log

Step 2: Search manipulation by time, employee, function, action, ...

Step 3: Click on the employee's name to view details of operations and equipment used

III. User manual and Solution

How to open an online shop in just 6 steps

1. Online business planning
2. Register online business
3. Create a website for an online shop with an e-commerce platform
4. Customize online website design
5. Set up website online
6. Online shop promotion

Added: Customize online shop

5.1. Add product

- To create your first product, visit Products -> Add New on your WordPress dashboard. You will be redirected to a page like the default post edit screen. Here, you can insert product name and description as follows:

- On the right side of the page, select the tag and category for the product. You can also place a Product image or upload multiple images to the Products gallery to display products from different angles. Make sure to use high-quality photos.

5.2. Configure Product Page

The product page is where all of your items are displayed. Being organized and engaging can help you determine whether your visitors should explore your site further.

- With that, we'll show you a quick guide on how to set up a product page on WooCommerce.

- If you go through WooCommerce Setup Wizard, the plugin will create a Product page called Shop for you. However, if you skip the setup section, here's what you need to do:

- Go to the control panel and choose Pages -> Add New.

- Put the name of your page in the Title bar. You can call it 'Products,' 'Shop,' 'Store,' or other similar options.

- Click Publish.

- On the left menu, go to WooCommerce -> Settings and go to the Products tab.

- In the Shop page field, select the page you just created.

5.3. Payment processing setup

- One popular option is PayPal. Because it's so widely used, using PayPal will make your store accessible to many shoppers. Plus, it allows users without a PayPal account to pay with an alternative credit card.
- For online businesses, you will need a secure payment gateway to handle money from customers.

5.4. Epilogue

Thanks to the internet, an online shop business no longer needs retail space. Online services like web hosting and e-commerce platforms can make it easy to start any business.

In this article, we discussed how to start an online shop in 6 steps, which are:

1. Online business planning
2. Business Registration
3. Create a website with an ecommerce platform
4. Custom website design
5. Set up an online shop
6. Reach out to customers
➔ As long as you provide the best shopping experience to your customers, your online shop will be successful. So start your business today with Hostinger and wish you luck.

Where does the sales web design appeal to internet users:

+ Eye-catching interface, showing the professionalism in both appearance and quality of your products and services.

+ Website loading speed quickly, avoid customers waiting to see your product, they will not be patient enough, they will exit and go elsewhere. So make sure your website speed is no more than 3s.

+ Dividing categories and products clearly, let customers find what they want to buy easily.
+ Manipulation of purchases easily and quickly on both computers and mobile phones.

Website must be designed standard seo, friendly with google and search engines

+ Optimized interface displayed on all devices

+ Website is absolutely secure

+ The content management page, product administration is simple and easy to use

+ Especially, the website is easy to upgrade and add functions later

The advantages that we can do when designing a website to sell online to customers.

+ Designing an online business website will optimize a standard seo website.

+ Sales web service is also optimized for mobile standards, compatible with all devices.

+ Extremely fast page loading speed.

+ Cheap website design compared to the market today.

+ Website design is made with eye-catching interface, bringing the unique style of each business.

+ The security of the website is highly optimized.

+ Design a multi-language website to sell goods to foreign customers.

IV.   CONCLUSION

The Internet has become a major resource in modern business, thus electronic shopping has gained significance not only from the entrepreneur's but also from the customer's point of view. For the entrepreneur, electronic shopping generates new business opportunities and for the customer, it makes comparative shopping possible.

As per a survey, most consumers of online stores are impulsive and usually make a decision to stay on a site within the first few seconds. "Website design is like a shop interior. If the shop looks poor or like hundreds of other shops the customer is most likely to skip to the other site. Hence we have designed the project to provide the user with easy navigation, retrieval of data and necessary feedback as much as possible. In this project, the user is provided with an ecommerce web site that can be used to buy books online. To implement this as a web application we used ASP.NET as the Technology. ASP.NET has several advantages such as enhanced performance, scalability, built-in security and simplicity.

To build any web application using ASP.NET we need a programming language such as C#, VB.NET, J# and so on. C# was the language used to build this application. For the client browser to connect to the ASP.NET engine we used Microsoft's Internet Information Services (IIS) as the Web Server. ASP.NET uses ADO.NET to interact with the database as it provides in-memory caching that eliminates the need to contact the database server frequently and it can easily deploy and maintain an ASP.NET application. SQL was used as back-end database since it is one of the most popular databases, and it provides fast data access, easy installation and simplicity. A good shopping cart design must be accompanied with user-friendly shopping cart application logic. It should be convenient for the customer to view the contents of their cart and to be able to remove or add items to their cart. The shopping cart application described in this project provides a number of features that are designed to make the customer more comfortable. This project helps in understanding the creation of an interactive web page and the technologies used to implement it. The design of the project which includes Data Model and Process Model illustrates how the database is built with different tables, how the data is accessed and processed from the tables. The building of the project has given me a precise knowledge about how ASP.NET is used to develop a website, how it connects to the database to access the data and how the data and web pages are modified to provide the user with a shopping cart application.

V. References

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