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RESPONSIVE E-COMMERCE WEBSITE

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Abstract: Building a website and learning The main goal of this internship is to learn HTML. There are several programming languages that can be used to make a web-based app. Some of them are only used for the software's front-end and back-end design. For example, HTML3, HTML4, HTML5, CSS, Bootstrap, JavaScript etc. There are also a few other programming languages that are used to make software or apps with dynamic features. For example- PHP, Java etc. There are also some frameworks that are used a lot these days. Using Model, View, and Controller to structure programming is what frameworks are all about. MVC is another name for it. If we make web-based applications, we can use them from anywhere in the world, which is very helpful. It helps us a lot in our daily lives. So, I chose "WEB DESIGN" as the subject of my report. Training in Universal Informatics gave me a lot of useful skills for my future career. It was also important to find solutions to real-life problems. This report tells us everything we need to know about the WEBSITE DESIGN skills and experience gained during this internship.

KEYWORDS: Website Design, JavaScript , Artists, Model, View ,Controller.

I. INTRODUCTION

Building, making, and taking care of websites are all part of web development. It includes things like web design, publishing on the web, programming for the web, and managing databases.

People often use the terms "web developer" and "web designer" interchangeably, but they don't mean the same thing. Technically, a web designer only uses HTML and CSS to make the interfaces of websites. A web developer might help make a website's design, but they might also write web scripts in languages like PHP and ASP. A web developer may also help keep a database used by a dynamic website up-to-date and in good shape.

Creating content for the web is a big part of web development. Some examples are hand-coding web pages in a text editor, building a website in a programme like Dreamweaver, and updating a blog on a blogging website. In recent years, content management systems like WordPress, Drupal, and Joomla have also become popular ways to build websites. Using a web-based interface, these tools make it easy for anyone to make and change their own website. There are many ways to make a website, but often you have to choose between how easy it is to use and how much you can change it. So, most big companies don't use content management systems. Instead, they have a team of Web developers who build and maintain the company's website (s). Small businesses and people are more likely to choose a service like WordPress that offers a simple website template and easy-to-use editing tools.



II. CLASSIFICATION OF WEB DEVELOPMENT

Front-end web development

Front-end web development, also called client-side development, is the process of making HTML, CSS, and JavaScript for a website or Web Application so that a user can see and interact with them directly. The problem with front end development is that the tools and methods used to make a website's front end change all the time. This means that the developer needs to be aware of how the field is changing all the time.

The goal of designing a site is to make sure that when users open the site, the information is easy to read and makes sense. This is made even more difficult by the fact that people now use a wide range of devices with different screen sizes and resolutions. This means that the designer has to take these things into account when making the site. They have to make sure that their site works on different browsers (cross-browser), different operating systems (cross-platform), and different devices (cross-device). This takes careful planning on the part of the developer.

Back-end web development

Back-end Development refers to the work that is done on the server side. It is mostly about databases, scripting, and the structure of websites. It shows the things that happen behind the scenes when you do anything on a website. It could be logging into an account or buying something from an online store. Back-end developers write code that makes it possible for browsers to talk to databases.

The back-end of a website is where the data are stored, retrieved, and changed. A back-end developer is a programmer who is in charge of making and maintaining the whole back end of a system, which includes applications and databases. Most of the time, back-end developers work on websites that are dynamic.

Backend programming is most often seen when you are reading an article on a blog. The frontend of this page is made up of the fonts, colours, designs, etc. Even though the article's content comes from a server and a database,

Types of Websites

Websites can be put into one of the following categories:

1 Static

Static websites use server-side rendering to send HTML, CSS, and JavaScript files that have already been built to a web browser. This is different from traditional dynamic sites, which work by building the page when it is requested.

Static sites let you separate your content repository from your front-end interface, which gives you more control over how your content is served. Another reason companies move to a static site is that it saves them money. Static files are small and often faster and cheaper to serve.

Static sites have become a lot more popular in the last few years. This increase is mostly due to changes in developer tools (languages and libraries) and a stronger desire among businesses to improve website performance beyond what a database-driven site can do.

Dynamic

Web scripting languages like ASP and PHP are used on the dynamic web pages. When a user visits a dynamic web page, the code on that page is analysed, and HTML is then sent to the client's Web browser. To make the changing content, a dynamic website can use either client-side scripting or server-side scripting, or both. HTML programming is also used to set up the basic structure of dynamic websites. Any scripting language, like JavaScript, can be used with client-side HTML scripting to change the page's content. With server-side scripting, scripts are run on the server that hosts the page.

Languages based on web development

HTML

Hyper Text Mark-up Language is what HTML stands for. Using mark-up language, it is used to make web pages. HTML comes from the words "Hypertext" and "Mark-up language." Hypertext shows how the web pages are linked to each other. Markup language is used to define the text document within a tag, which defines the structure of web pages. HTML5 is the fifth version of HTML and the most recent one. It has made markup for documents better and added application programming interfaces (API) and the Document Object Model (DOM).

CSS

CSS, which stands for "Cascading Style Sheets," is a simple language that makes it easier to make web pages look good. You can add styles to web pages with CSS. More importantly, CSS lets you do this without using HTML, which is what each web page is made of.

JavaScript

JavaScript is a scripting language that is small, can be used on different platforms, and is interpreted. It is well-known for making web pages, but it is also used in many places other than browsers. JavaScript can be used to build things on both the client side and the server side.

System Design

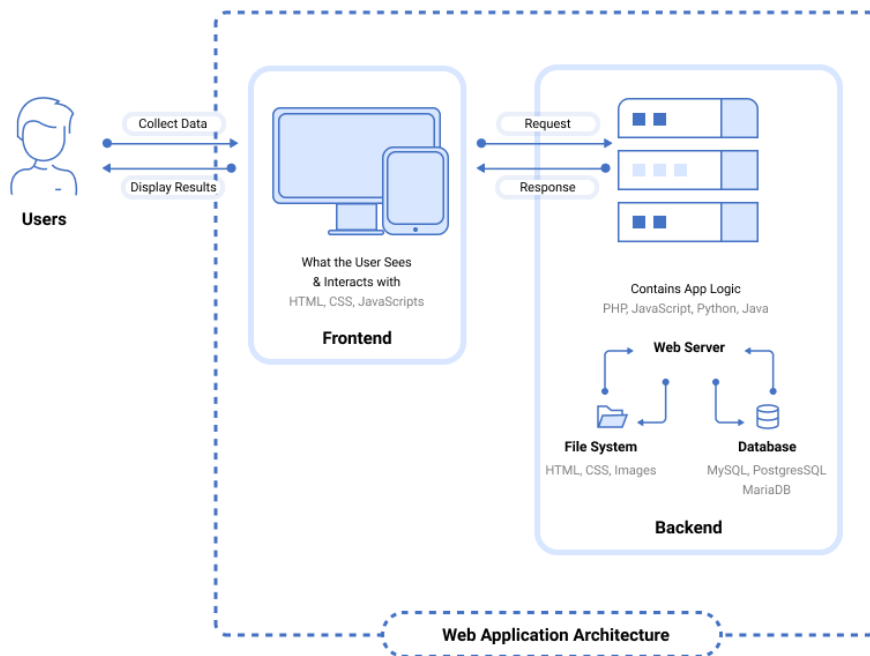


Fig: Web Architectural Diagram

With any typical web application, there are two different codes (sub-programs) running side-by-side. These are:

- Client-side Code - The code that is in the browser and responds to some user input
- Server-side Code - The code that is on the server and responds to the HTTP requests

A web developer (or team of web developers) makes decisions about what the code on the server will do in relation to the code in the browser. C#, Java, JavaScript, Python, PHP, Ruby, and other languages are used to write code that runs on the server.

Any code that can respond to HTTP requests can run on a server. The server-side code is what makes the page the user asked for and stores different kinds of data, like user profiles and what the user types in. The end user never sees it.

The client-side code is written with a mix of CSS, HTML, and JavaScript. The web browser reads and understands this code. Client-side code is different from server-side code in that the user can see it and change it. It responds to what a user does. The code on the client side only talks to the server through HTTP requests. It can't read files directly from the server.

Web Application Components

When we say web application components, we can mean any of the following two:

- **UI/UX Web Application Components** – This includes activity logs, dashboards, notifications, settings, statistics, etc. These components have nothing to do with the operation of a web application architecture. Instead, they are part of the interface layout plan of a web app.
- **Structural Components** – The two major structural components of a web app are client and server sides.
- **Client Component** - The client component is developed in CSS, HTML, and JS. As it exists within the user's web browser, there is no need for operating system or device-related adjustments. The client component is a representation of a web application's functionality that the end-user interacts with.
 - **Server Component** - The server component can be build using one or a combination of several programming languages and frameworks, including Java, .Net, NodeJS, PHP, Python, and Ruby on Rails. The server component has at least two parts; app logic and database. The former is the main control center of the web application while the latter is where all the persistent data is stored.

III. METHODOLOGY

Steps involved in Web Development

Project Definition

The first step in the website development process is to define the goals for your project. These typically include:

Business details: Define your offering, purpose, unique value proposition, mission, vision, etc.

- **Business goals: Set clear, measurable goals for your website to develop the most effective strategy, including the KPIs you'll use to measure performance.**
- **Target audience: Define your target audience and research their preferences, likes and dislikes, study their online habits and more to get to know them and their expectations.**
- **Competition: Research your competition, analyze strengths and weaknesses, and develop a plan to position your brand on the market.**



Planning of Website

Define your website's layout, from landing pages to product pages, key conversion points and more. Create:

- **A sitemap:** A sitemap is a bird's eye view of your site that determines the list of pages, their placement and relationship to each other on the website. It includes both user-facing elements and those intended for web crawlers (such as Google). A site map helps define and organize your web content, allowing your strategist and designer to go deeper into planning the look, feel and functionality for each page.
- **A wireframe:** A wireframe is the layout of each individual page of your site. It outlines the elements and content, from headlines to CTAs and subscription boxes. The wireframe should cover both desktop and mobile versions.

Design the Website

Define every part of your brand, from the colours you'll use to the images and videos you'll use. These elements of your brand should be the same everywhere, including your website, social media pages, marketing materials, newsletters, and more.

Consistent branding helps create a unique look for your brand, which makes it easier to recognise and builds trust.

Content Creation

Make your content for the people you want to reach. Find out where they spend most of their time and what kind of content they are most likely to engage with.

Use strategic keyword optimization in all of your content to answer the questions your potential customers are asking when they search for you and encourage them to buy.

Developing the website

Once you've figured out your goals, planned your design, made your brand elements, and made a plan for your content, it's time to start building. To build your website, you'll need both backend and frontend developers to use best practises in the industry and detailed specification documents. From the platform you choose to the different features and functions on your site, everything should be made so that it can grow as you do.

Our Digital Silk developers and other experts in this field use research-backed insights to build your website based on a number of factors, such as your industry, your offering, your target audience, and more.



Testing the Website

Don't forget to test your site before you make it public. Your developers should make sure that everything on your website works. The goal is to find problems like broken links and devices that don't work well together so that everything works right. Use validators to see if the code follows the rules, test the speed of the site, and make sure it works on all devices. Once both manual and automated testing are done, your website is ready to go live.

IV. RESULTS AND DISCUSSION

Snapshots

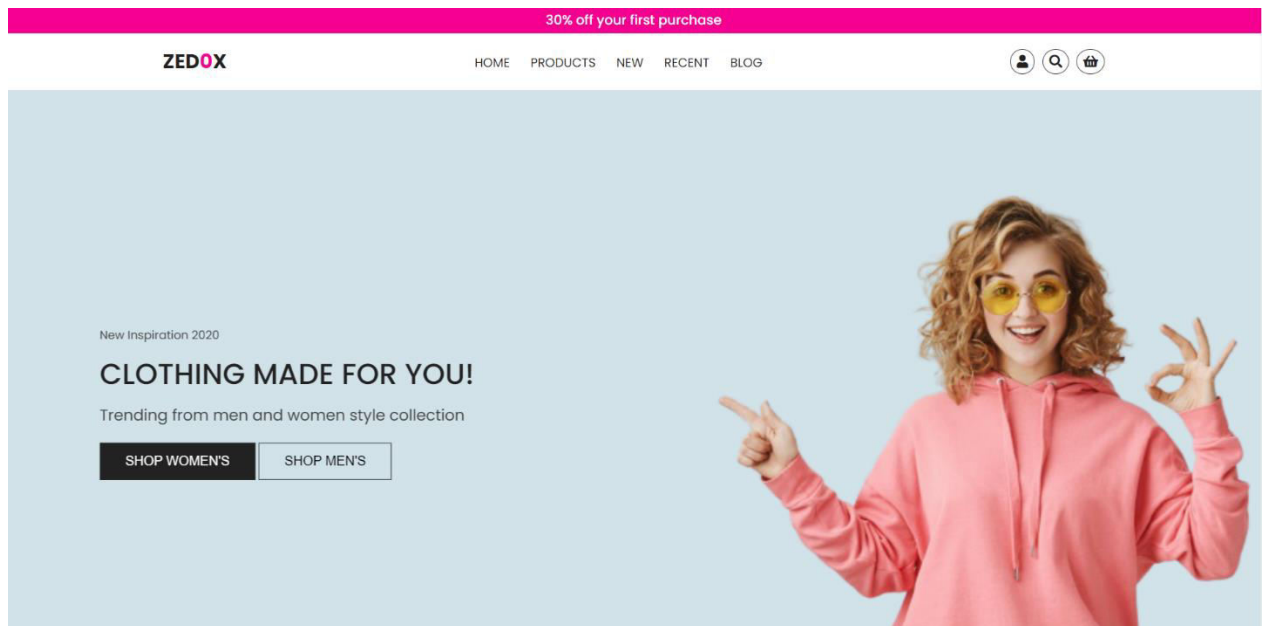


Fig: Home Page

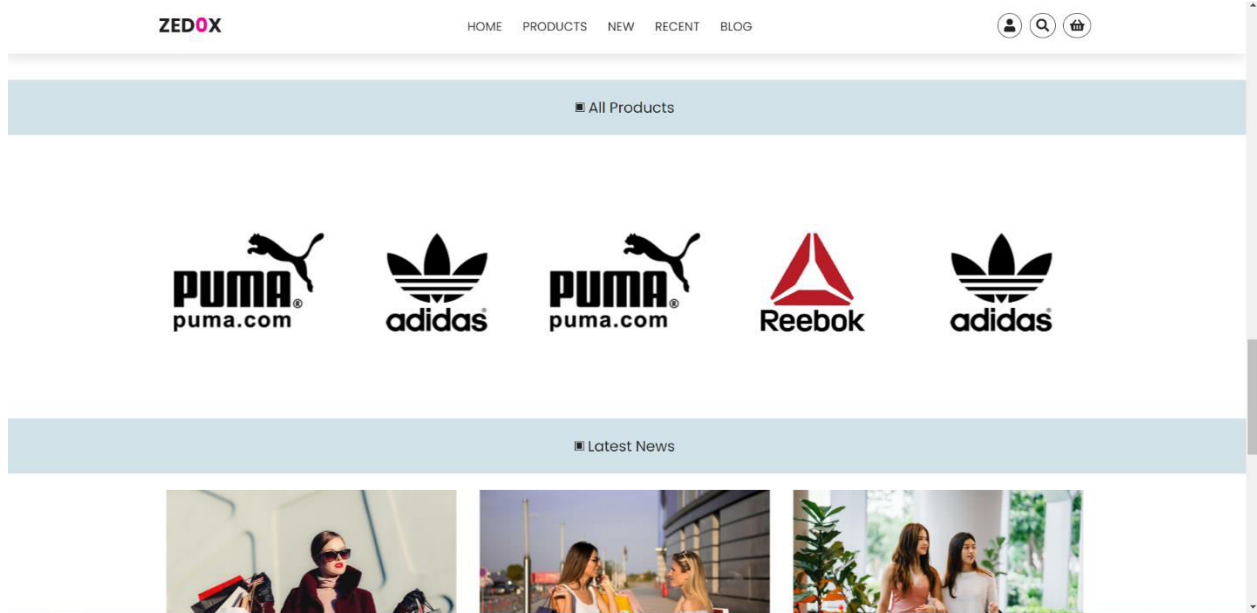


Fig: Products Page

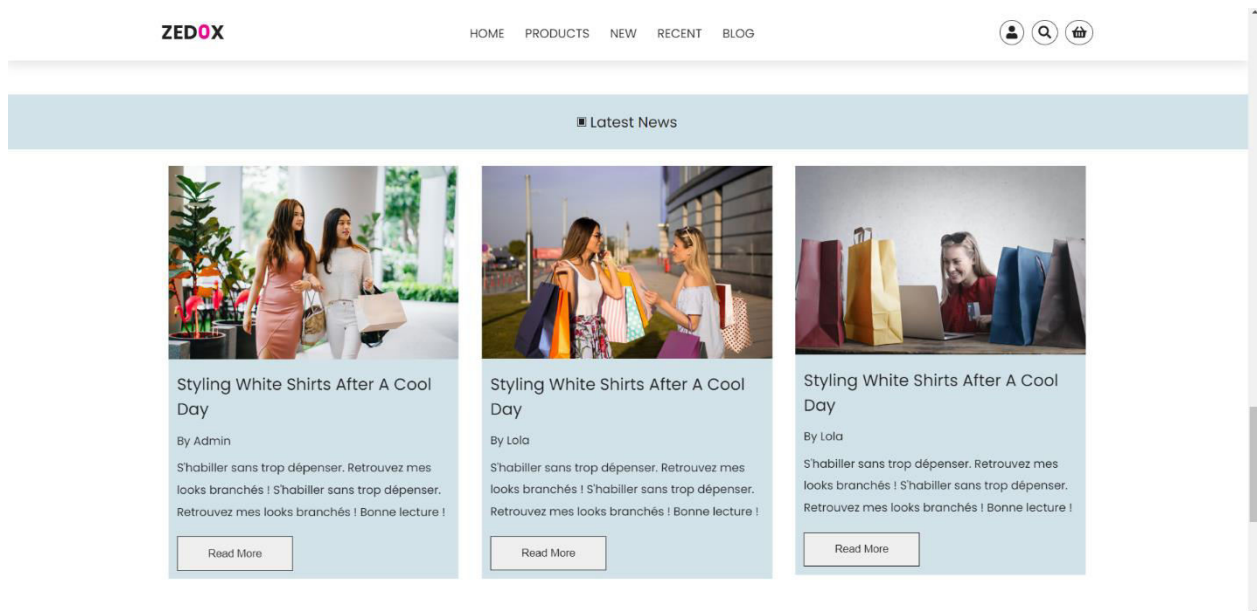


Fig: News Page

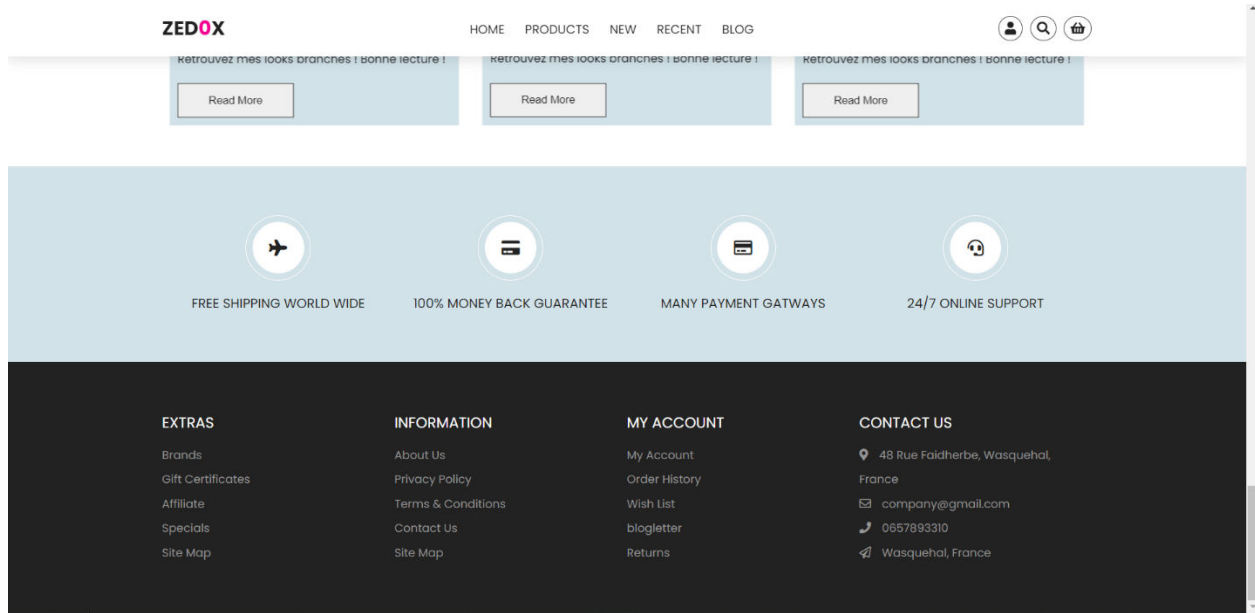


Fig: Contact Page

V. CONCLUSION

A good page design is important for Web development today. A bad design will make people not want to come to your site, which can hurt your business. In general, a good page layout needs to have the basic elements of a good page design. This includes the contrast between colours, the way text is organised, the choice of font, the style of a page, the size of a page, the graphics used, and consistency. To make a well-designed page for a certain group of people. I can say that this internship was a great experience in the end. Because of this project, I not only learned more about how to use my technical skills, but I also grew as a person. For students who want to work in this field, there are a lot of opportunities. There are a lot of private and public organisations that hire web designers to do their online work and build websites. With the online industry growing so quickly, there is a growing need for web developers. This has opened up a lot of job opportunities for people who want to work in this field. A person with experience in this field can also work as a freelancer. There are a lot of online companies that give freelancers online jobs.

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- **Links**



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- [3] <https://www.webdew.com/blog/web-design>



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