AMRITSAR GROUP OF COLLAGE

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SIX WEEKS TRAINING SYNOPSIS

On

Web Development

B.TECH (CSE) – V

SEMESTER BATCH (2020-2024)

Project Report On

"SNAKE CANDY"

Submitted to HOD(CSE)

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DECLARATION

I the undersigned solemnly declare that the synopsis on project SNAKE CANDY is based on my own work carried out during the course of our study.

I assert the statements made and conclusions drawn are an outcome of my research work. I further certify that

- The work contained in the report is original and has been done by me.
- The work has not been submitted to any other Institution for any other degree/diploma/certificate in this collage or any other of India and abroad.
- I have followed the guidelines provided by the collage in writing the report.
- Whenever I have used materials (data, theoretical analysis and text) from other sources, I have given due credit to them in the text of the report and giving their details in the references.

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❖ INTRODUCTION TO THE PROJECT

We will produce a snake game with the ease of HTML, CSS, and Javascript. Building this game will push you to boost your web development skills. It's very easy to make this game just by using the right tools at the right time. We will use sounds, animations, user input like upward, downward keys , etc. So let's begin with some starter files that I have downloaded in the folder from the internet .

❖ Objective of Project

This game aims to change the way people think of traditional snake game. It will offer the experience of commercial multilayer games to the player retaining the simplicity of traditionl snake game.The major objectives of this project are:

● Create a snake game that will have all the functionality of traditional snake games.

● Introduce multilayer functionality in the game that will allow several players to play a game simultaneously. It should be able to give the experience of a real time multiplayer game to the players.

● Introduce computer controlled intelligent opponent (unique feature of this game) to make the game more challenging and interesting. The movement and action of these intelligent opponents will be controlled by computer whose aim will be to eat the food before human players capture it.

❖ Features of Project

➢ The Six Main Feauters of Good Game Design

1) Game Controls. Controls are the rudiments of a game. ...

2) Payoff. Games are largely enjoyable because they're rewarding. ...

3) Graphics. Humans just can't help it. ...

4) Storyline. ...

5) Strategy and Surprise. ...

6) Rising Challenges.

❖ ABOUT WEB DEVELOPMENT

Web development refers to building, creating, and maintaining websites. It includes aspects such as web design, web publishing, web programming, and database management.

While the terms "web developer" and "web designer" are often used synonymously, they do not mean the same thing. Technically, a web designer only designs website interfaces using HTML and CSS. A web developer may be involved in designing a website, but may also write web scripts in languages such as PHP and ASP. Additionally, a web developer may help maintain and update a database used by a dynamic website.

Web development includes many types of web content creation. Some examples include hand coding web pages in a text editor, building a website in a program like Dreamweaver, and updating a blog via a blogging website. In recent years, content management systems like WordPress, Drupal, and Joomla have also become popular means of web development. These tools make it easy for anyone to create and edit their own website using a web-based interface.

While there are several methods of creating websites, there is often a trade-off between simplicity and customization. Therefore, most large businesses do not use content management systems, but instead have a dedicated Web development team that designs and maintains the company's website(s). Small organizations and individuals are more likely to choose a solution like Wordpress that provides a basic website template and simplified editing tools. **NOTE:** JavaScript programming is a type of web development that is generally not considered part of web design. However, a web designer may reference JavaScript libraries like jQuery to incorporate dynamic elements into a site's design.

This blog covers some of the crucial and most important information in the field of Web Development. Here, you will get a basic idea of what Web Development is and how it works. Once you understand the meaning of Web Development, you will come across various platforms, tools, technologies, and languages used in this field. Later, you will read about the types of Web Development.

Technology plays an integral part in our day-to-day lives. It surrounds us in the simplest of places to perform ordinary tasks and make room for great inventions. All the web pages and software that we use to make our lives easier are developed by Web Developers. However, the Web Development meaning is still not clear to many of us, so let's start there and learn more about what Web Development is.

In the process of Web Development, Developers build web pages and applications for either the Intranet, a private network, or the Internet. It does not necessarily focus on a website's design; rather, it is majorly concerned with the programming and coding part, which is the main reason for the functioning of the website.

It refers to developing and maintaining web pages, including bits and pieces of concepts like web design, web programming, web publishing, and database management. Further, it includes various types of web development tools and techniques such as text editors for manually coding the websites, Dreamweaver for developing a web page, using a blogging website to update blogs, and more.

From basic and simple websites to complex web applications and social media platforms and from numerous online shopping web pages to even content management systems (CMS), all the online tools and websites that we use regularly are part of Web Development. Besides, all these tools and websites are built by Web Developers.

This blog includes the topics mentioned below:

- 3 Layers of Web Development
- Future Scope of Web Development
- Conclusion

Web Development Platforms

In the world we live in today, rather than being a trend, a website is a necessity. No matter how small or how big an organization is, to survive and succeed in this era of digitization, making a website and reaching out to the crowd using online methods are necessary. These days, people are also building their web pages to share information or their personal experience with others. Some of the most popular website development platforms include:

- WordPress
- Wix
- Weebly
- Jimdo

Most Popular Web Development Tools

To build functioning websites efficiently and easily, there are various tools that Web Developers can use. These tools allow them to build well-functioning websites with friendly user interfaces. Some of the widely used Web Development tools are as follows:

GitHub

- Sass
- CodePen
- AngularJS
- TypeScript
- Sketch
- JQuery
- Sublime Text
- Bootstrap

- Grunt
- Chrome DevTools
- NPM
- Visual Studio Code

Web Development Technologies

To learn ‘What is Web Development?’ in-depth, you need to understand and have knowledge of the technologies used in Web Development. Below are some of the most common Web Development technologies that every Web Developer should learn to work with:

- HTML
- Browsers
- Programming languages
- CSS
- Frameworks
- Databases
- Libraries
- Servers
- Clients

- Frontend Development
- Backend Development
- Protocols
- Data formats
- API

Web Development Frameworks

Web Development frameworks are created by Developers to make it easier to develop and work with various programming languages. These frameworks remove all the redundant and difficult tasks that are involved in the process of setting up a web page. The frameworks either do the tasks themselves or make it easier for Developers to complete those tasks.

Below are a few frameworks that Web Developers generally use:

- **Node.js**: A JavaScript framework for server-side
- **Ruby on Rails**: A full-stack framework developed with the help of Ruby
- **Ionic**: A mobile framework
- **Django**: A full-stack framework developed in Python
- **Bootstrap**: A user interface (UI) framework to develop using CSS/HTML/JavaScript
- **Cordova/PhoneGap**: A mobile framework used to expose native Android and iOS APIs to use while writing JavaScript
- **WordPress**: A CMS developed on PHP
- **.NET**: A full-stack framework developed by Microsoft
- **Foundation**: A UI framework used to build with JavaScript/CSS/HTML
- **Angular.js**, **Backbone.js, and Ember.js**: Front-end JavaScript frameworks
- **Drupal**: A CMS framework developed using PHP

Web Development Languages

Programming languages are used to communicate with other systems and computers and give them necessary instructions. Developers have a plethora of languages to choose from to do the same. Some of these languages are given below:

- Python
- Java
- Ruby
- JavaScript
- Go
- Coffee Script
- PHP
- Swift
- Objective-C

Among these, Java Web Development and PHP Web Development are the most frequently used when compared to the others.

❖ TECHNOLOGY AND TOOLS USED

- HTML
- CSS
- JAVASCRIPT

- **HTML**

HTML stands for Hypertext Markup Language, and it is the most widely used language to write Web Pages.

• Hypertext refers to the way in which Web pages (HTML documents) are linked together. Thus, the link available on a webpage is called Hypertext.
• As its name suggests, HTML is a Markup Language which means you use HTML to simply "mark-up" a text document with tags that tell a Web browser how to structure it to display.

Originally, HTML was developed with the intent of defining the structure of documents like headings, paragraphs, lists, and so forth to facilitate the sharing of scientific information between researchers.

Now, HTML is being widely used to format web pages with the help of different tags available in HTML language.

Advantages And Disadvantages Of HTML:

HTML(Hypertext Markup Language) is the language used to foster website pages. It's anything but a real programming language yet a markup language. Hypertext is the text that has a connection installed into it that focuses on an alternate page or site. Predominantly HTML is utilized for organizing a website page and making an establishment. Fundamentally, Html is the foundation of website pages. Every one of the sites you see on the web is utilizing HTML dependent to some degree.

- **CSS**

Cascading **S**tyle **S**heets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.

CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs,variations in display for different devices and screen sizes as well as a variety of other effects.

CSS is easy to learn and understand but it provides powerful control over the presentation of an HTML document. Most commonly, CSS is combined with the markup languages HTML or XHTML.

Advantages of CSS

- **CSS saves time** − You can write CSS once and then reuse same sheet in multiple HTML pages. You can define a style for each HTML element and apply it to as many Web pages as you want.
- **Pages load faster** − If you are using CSS, you do not need to write HTML tag attributes every time. Just write one CSS rule of a tag and apply it to all the occurrences of that tag. So less code means faster download times.
- **Easy maintenance** − To make a global change, simply change the style, and all elements in all the web pages will be updated automatically.
- **Superior styles to HTML** − CSS has a much wider array of attributes than HTML, so you can give a far better look to your HTML page in comparison to HTML attributes.
- **Multiple Device Compatibility** − Style sheets allow content to be optimized for more than one type of device. By using the same HTML document, different versions of a website can be presented for handheld devices such as PDAs and cell phones or for printing.
- **Global web standards** − Now HTML attributes are being deprecated and it is being recommended to use CSS. So its a good idea to start using CSS in all the HTML pages to make them compatible to future browsers.

CSS Versions

Cascading Style Sheets level 1 (CSS1) came out of W3C as a recommendation in December 1996. This version describes the CSS language as well as a simple visual formatting model for all the HTML tags.

CSS2 became a W3C recommendation in May 1998 and builds on CSS1. This version adds support for media-specific style sheets e.g. printers and aural devices, downloadable fonts, element positioning and tables.

- **JAVA SCRIPT**

JavaScript is a dynamic computer programming language. It is lightweight and most commonly used as a part of web pages, whose implementations allow client-side script to interact with the user and make dynamic pages. It is an interpreted programming language with object-oriented capabilities.

JavaScript was first known as **LiveScript,** but Netscape changed its name to JavaScript, possibly because of the excitement being generated by Java. JavaScript made its first appearance in Netscape 2.0 in 1995 with the name **LiveScript**. The general-purpose core of the language has been embedded in Netscape, Internet Explorer, and other web browsers.

The ECMA-262 Specification defined a standard version of the core JavaScript language.

- JavaScript is a lightweight, interpreted programming language.
- Designed for creating network-centric applications.
- Complementary to and integrated with Java.
- Complementary to and integrated with HTML.
- Open and cross-platform
-

Client-Side JavaScript

Client-side JavaScript is the most common form of the language. The script should be included in or referenced by an HTML document for the code to be interpreted by the browser.

It means that a web page need not be a static HTML, but can include programs that interact with the user, control the browser, and dynamically create HTML content.

The JavaScript client-side mechanism provides many advantages over traditional CGI server-side scripts. For example, you might use JavaScript to check if the user has entered a valid e-mail address in a form field.

The JavaScript code is executed when the user submits the form, and only if all the entries are valid, they would be submitted to the Web Server.

JavaScript can be used to trap user-initiated events such as button clicks, link navigation, and other actions that the user initiates explicitly or implicitly.