WEBSITE BUILDER

PROJECT SYNOPSIS

OF MAJOR PROJECT

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SUBMITTED BY

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Introduction

A website builder tool allows you to design and create websites without having to edit code. User can do everything himself, without designers and developers. Without taking care of necessary backend and database user can get a customized website according to their needs and description.
Website builders are great for small business owners, entrepreneurs, bloggers, or anyone who wants to create a website quickly and easily. They are also cost-effective, as they eliminate the need to hire a professional web developer to build a website from scratch.
It simplifies the process of designing and building a website by providing drag-and-drop functionality, templates, and pre-designed elements that can be easily customized.

Reason for designing a website builder –

Website builders are necessary because they make it easy, affordable, and fast for anyone to create a website, while also offering flexibility and mobile responsiveness. They are particularly useful for small businesses and individuals who may not have the technical expertise or budget to hire a web developer.

1. Accessibility: Website builders make it easy for anyone to create a website, regardless of their technical expertise.
2. Affordability: Website builders are cost-effective, as they eliminate the need to hire a professional web developer to build a website from scratch.
3. Speed: Website builders provide pre-built templates and design elements that can be easily customized, allowing users to create a website quickly.
4. Flexibility: Website builders offer a wide range of customization options, allowing users to create a website that reflects their brand and meets their specific needs.

Objective

The objective of website builders is to make it easy and accessible for anyone to create a website without requiring technical knowledge in programming or web development. Website builders aim to simplify the process of building a website by providing pre-built templates, design elements, and drag-and-drop functionality.

The main objectives of website builders are:

1. Simplify website creation: Website builders aim to simplify the process of creating a website, making it accessible to individuals and businesses without technical expertise.

2. Provide pre-built templates and design elements: Website builders provide pre-built templates and design elements that can be easily customized, eliminating the need for users to design their website from scratch.

3. Allow for customization: Website builders allow users to customize their website, ensuring that it reflects their brand and meets their specific needs.

4. Offer mobile responsiveness: Website builders ensure that websites are accessible and usable on any device, including smartphones and tablets.

5. Provide cost-effective solutions: Website builders provide cost-effective solutions for building a website, eliminating the need for businesses to hire a professional web developer.

Technology Implementation

The technologies needed to create a website builder can vary depending on the specific implementation, but some common technologies used are:

1. Programming languages: Programming languages are the foundation of website builders. Languages like JavaScript, PHP, Ruby, and Python are commonly used in website builder development.

2. Front-end frameworks and libraries: Website builders require user interfaces that are easy to use and visually appealing. Front-end frameworks and libraries like React, Vue.js, and AngularJS provide a structure and pre-built UI components that can be used to build user interfaces quickly.

3. Database management systems: Website builders need a way to store user data, templates, and other resources. Database management systems like MySQL, MongoDB, and PostgreSQL are commonly used to store data in a structured manner.

4. Cloud computing platforms: Cloud computing platforms like Amazon Web Services (AWS) and Google Cloud Platform (GCP) can be used to host website builder applications, as they offer scalable and reliable infrastructure that can handle user traffic and data storage.

5. API integrations: Website builders often integrate with third-party applications and services, such as payment gateways, email marketing tools, and social media platforms. APIs (Application Programming Interfaces) are used to enable these integrations.

6. DevOps tools: DevOps tools like Git, Jenkins, and Docker are used to automate the website builder development and deployment processes, ensuring faster and more efficient development cycles.

Literature Review

Attribute and factors affecting the design of an effective website

This study examines the relationships among perceived usability before actual use, task-completion time, and preference, and the effects of design attributes on user preference for web sites. It is not easy to clearly explain what a successful web site is, because its nature and characteristics depend on what kind of system it uses, what field it is in, what its purpose for use is, and so on. These features are strongly connected to who the target users are.

Organizational structure and layout had a greater effect on user preference than aesthetic aspects, such as color and typography. These findings can be used to construct a conceptual framework for understanding user preferences and to develop design guidelines to yield more highly preferred e-commerce web sites. Also, the methodology in this study can be applied to other computerized-application.

A good web design is expected to guide user's eyes from one element to another, helping them determine what to look at next in order to make their final decisions efficiently.

Web design should not result in information overload. The goal, rather, should be to give access to the information web surfers' desire in the most expedient way possible. Hence, the design goal should be accessing not abundance. Simplicity of design should be a major consideration as it not only makes the site more appealing; it also makes it far faster to load. Web surfers are not a patient group. Some web design experts have estimated that they have exactly 10 seconds to lure people into a site. It is not, therefore, surprising that slow loading sites are a major frustration and turnoff for web surfers. Another prerequisite is to make the website distinctive. A website with a distinct identity will appeal to web-weary surfers, differentiate the company and make the site more memorable.

Different kinds of tools are used to examine the components of website. These tools include: W3C Link Checker, W3C Markup Validation Service, Webpage Analyzer and Website Extractor. The W3C Link checker accepts URL address of Web page and parses each and every hyperlink to find broken links in the page. The W3C Markup Validation Service finds the errors regarding HTML tags' usage errors, properties of Web page and standards of the Web page mentioned by W3C Consortium. The Webpage Analyzer finds the number of objects used in each Web page, Web page size, downloading time etc., The Website Extractor extracts URL addresses of all Web pages of the Website. The errors of each web site are grouped into major and minor errors. A set of qualitative measures are identified based on these errors. The qualitative

measures are evaluated in 5-point scale. The area of the website which requires improvement in website design can be identified from the value of 5-point scale.

Due to the increasing popularity of Web, one can be very cautious in designing the Website. Poor and careless web design leads to hard ship to public utility and does not serve the purpose.

References –

1. “The effects of usability and web design attributes on user preference for e-commerce web sites”, S Lee, RJ Koubek - Computers in Industry, 2010 – Elsevier
2. “Directing user attention via visual flow on web designs”, X Pang, Y Cao, RWH Lau, AB Chan - ACM, 2016
3. “Website design: Viewing the web as a cognitive landscape”, DE Rosen, E Purinton - Journal of Business Research, 2004 – Elsevier
4. “Evaluating qualitative measures for effective website design”, G Sreedhar, AA Chari, VVV Ramana - International Journal on Computer, 2010

Feasibility Study

In the case of a website builder, a feasibility study would assess the potential of such a system to be successful in the market.:

1. Market demand: A website builder would need to meet a significant market demand in order to be successful. Market research should be conducted to determine the size of the market and the potential demand for a website builder.

2. Competition: The website builder market is highly competitive, with many established players. A feasibility study should assess the level of competition and the potential for a new website builder to differentiate itself from existing competitors.

3. Technical feasibility: A website builder must be technically feasible, meaning that it must be possible to develop and maintain the system within the available resources and technology. This includes assessing the availability of necessary hardware and software, as well as the skills and knowledge required to develop and maintain the system.

4. Financial feasibility: A website builder must be financially feasible, meaning that it must generate sufficient revenue to cover the costs of development, marketing, and ongoing maintenance. A financial analysis should be conducted to determine the potential revenue streams and costs associated with a website builder.

5. Legal and regulatory feasibility: A website builder must comply with relevant laws and regulations, including data privacy and security regulations. A feasibility study should assess the legal and regulatory requirements for a website builder and ensure that the system is compliant.

Methodology

The step wise procedure required to design this website builder include:

1. Define the project goals and requirements: This includes determining the target audience, features, functionality, and user interface design.

2. Design the user interface: The user interface design should be developed to ensure that it is intuitive and easy to use. This includes wireframing, prototyping, and testing to ensure that the user interface meets the needs of the target audience.

3. Develop the backend functionality: The backend functionality should be developed to support the website builder's features and functionality. This includes developing a database, server-side scripting, and APIs to enable communication between different components.

4. Develop the frontend functionality: The frontend functionality should be developed to enable users to customize their website. This includes designing and developing templates, widgets, and other design elements that can be easily customized by users.

5. Test and debug: Once the website builder is developed, it should be thoroughly tested and debugged to ensure that it meets the project requirements and is free of bugs and errors.

6. Launch and maintain: The website builder should be launched and maintained to ensure that it continues to meet the needs of the target audience. This includes ongoing development, bug fixes, and updates to keep up with changes in technology and user needs.

Outcome

The outcome of a website builder is a software application that simplifies the website creation process, making it accessible to a wider audience and enabling users to create custom websites that meet their specific needs. Website builders offer efficiency, cost-effectiveness, scalability, and customization options to users.

References

- Google Scholar
- W3Schools
- Wix (Website Builder)
- GeeksForGeeks