





A

## **Project Report**

on

## Website Builder

submitted as partial fulfillment for the award of

# BACHELOR OF TECHNOLOGY DEGREE

**SESSION 2022-23** 

in

## **Computer Science and Engineering**

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May, 2024

## **DECLARATION**

We hereby declare that this submission is our own work and that, to the best of our knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma of the university or other institute of higher learning, except where due acknowledgment has been made in the text.

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## **CERTIFICATE**

This is to certify that Project Report entitled "Website Builder" which is submitted by Student name in partial fulfillment of the requirement for the award of degree B. Tech. in Department of Computer Science & Engineering of Dr. A.P.J. Abdul Kalam Technical University, Lucknow is a record of the candidates own work carried out by them under my supervision. The matter embodied in this report is original and has not been submitted for the award of any other degree.

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#### **ABSTRACT**

You can design and develop websites with this project without having to touch the code. Without designers and engineers, the user can handle everything themselves. Users can obtain a personalized website based on their requirements and description without having to worry about maintaining the backend and database. Small business owners, entrepreneurs, bloggers, and anybody else looking to quickly and simply establish a website will find website builders to be quite helpful. They also save money because you don't have to pay a web developer to start from zero when creating a website. By offering templates and readily integrated pre-designed features, it streamlines the process of designing and developing a website.

The goal of website builders is to make website creation simple and accessible to everyone, without the need for advanced web development or programming skills. Website builders include pre-built templates, design elements, and drag-and-drop capability to streamline the process of creating a website.

This project focus on easy usage and customer satisfaction because a website builder needs to be simple to use in order for the typical person to be able to create and publish a website as quickly and easily as feasible. You should hunt for another website builder if this one is hard to use or if the interface is unclear and difficult to understand. Because of a cumbersome or absent feature, you shouldn't have to waste hours of additional time attempting to navigate a website builder or coming up with workarounds and substitutes.

This tool focus on templates design and themes for websites because no matter how easy a website builder is to use, if the templates are of poor quality, it is useless. You should pick templates with designs that are simple, contemporary, adaptable, and mobile-friendly.

It provide user an option of template customization, it is possible for customer to alter the appearance and feel of his website. Most website builders have an editor that makes it simple to alter the colour, and font of their website; some even enable you access the codes of the template for more sophisticated adjustments.

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## LIST OF ABBREVIATIONS

NAM Network Animator

W dev web development

#### **CHAPTER 1**

#### INTRODUCTION

#### 1.1 INTRODUCTION

Website builders are a fantastic solution for those who want to create a website without diving into code. These tools empower users to take full control of their online presence, whether they're small business owners, bloggers, or aspiring entrepreneurs. By eliminating the need for designers and engineers, website builders streamline the process and save both time and money.

With drag-and-drop functionality and customizable templates, website builders offer a user-friendly experience. You can effortlessly arrange elements, tweak designs, and personalize your site to suit your brand or vision. These pre-designed elements simplify the creative process, allowing users to focus on content and functionality rather than technical intricacies.

Overall, website builders democratize web development, making it accessible to anyone with an internet connection and a vision. Whether you're launching a new venture or simply want to establish an online presence, these tools provide an efficient and cost-effective solution.

In the tech world it is very important to have a website to run a business faster Regardless of the industry, a company's internet presence can have a significant effect on its performance. Even in this day and age, some companies still fail to recognize that the bulk of their clients will look over their website before completing a transaction.

Having a good internet presence—especially a website—can make all the difference in getting more business. While it's true that results are impacted by the quality of your website, the main goal of this post is to emphasize how crucial it is to have a website.

I've worked with many kinds of businesses to build their online identities. Sometimes, companies are reluctant to get online because they believe they lack the necessary technological know-how and website management skills. At other times, pricing worries businesses.

With the help of the website builder, creating your ideal website has never been easier. The best part is that you don't need to write a single line of code—building and modifying your website is a breeze thanks to an easy-to-use drag-and-drop interface.

Regardless of your skill level, our platform caters to your needs with two intuitive editors to choose from. Whether you're a beginner just dipping your toes into website design or an experienced user seeking advanced customization options, we've got you covered.

For those well-versed in web design, our advanced editor provides the flexibility to incorporate intricate design elements and complex features seamlessly. It's the perfect choice for website designers and experts who crave total control over every aspect of their site's aesthetics and functionality.

On the other hand, if simplicity is your preference, our user-friendly editor offers a seamless experience tailored to individuals who prioritize ease of use. With this editor, you can effortlessly create stunning websites without grappling with technical complexities, making it ideal for novices and those who prefer a straightforward approach to website building.

No matter which editor you choose, our platform ensures a user-friendly experience tailored to your specific needs and expertise level. Since the primary function of a website builder is to create websites, not blogs, it makes sense that its blogging features are inferior to those of builder or other blogging systems.

Many website builders include all the essential tools and features you need to start a blog, such as the ability to add posts, manage comments, create categories, and integrate social media.

With our extensive library of well created templates, you can quickly begin developing a website for any sector or objective. Our collection of templates is extensive and includes everything from portfolios to personal blogs, from online businesses to consulting firms. In-depth market research was used to build each template, which also includes the newest styles and the most practical built-in features for the subject at hand.

Although this project's primary application may seem to be simply a blogging platform, it has further uses. Actually, almost any kind of website, including intricate eCommerce sites, may be created with the builder.

By building an online store and using the appropriate plugins and themes, you may reach a wider audience with your product sales.

With a ton of addons to help with customer support, retail administration, and marketing, it is quite configurable. A large selection of themes created especially for eCommerce websites are available to users.

#### 1.2 PROJECT DESCRIPTION

A website builder allows you to design webpages without having to manually alter the code. It includes a user-friendly interface, pre-designed templates, and drag-and-drop functionality. This makes it accessible to non-technical people, allowing them to create own websites with relative simplicity.

In addition to simplifying website construction, popular website builders like Wix, Weebly, Squarespace, and WordPress.com offer comprehensive hosting solutions. This means you can manage your website and hosting all in one place, eliminating the need to hunt for separate hosting providers. This streamlines the entire website creation process, saving you time and hassle.

Moreover, these platforms boast a plethora of customization options, ensuring your website reflects your unique style and brand identity. From customizable templates to drag-and-drop editors, you have the freedom to tailor every aspect of your site to suit your preferences.

Furthermore, built-in SEO tools empower you to optimize your website for search engines, enhancing its visibility and helping you attract more visitors. Whether it's optimizing meta tags, creating SEO-friendly URLs, or generating sitemaps, these tools make it easier to improve your website's search engine rankings.

Additionally, many of these website builders offer robust e-commerce capabilities, allowing you to set up an online store and sell products or services directly from your website. With features like inventory management, secure payment gateways, and customizable storefronts, you can create a professional and efficient online shopping experience for your customers.

In summary, popular website builders not only simplify the website construction process but also provide a wide range of features and tools to help you create a professional, functional, and visually appealing website.

With the help of the website builder, creating your ideal website has never been easier. The best part is that you don't need to write a single line of code—building and modifying your website is a breeze thanks to an easy-to-use drag-and-drop interface.

Whether you're a novice or an expert user, we have two user-friendly editors for you to select from. While this website builder is better suited to website designers and other experts who want to add complicated design aspects, the project offers a user-friendly experience for individuals who prefer simplicity.

Lets get a overview how this website builder works it works on customer requirements where customer can choose their website templates that are pre-built for their website(for any industry), and perform some customization on their website template and add useful information on their website.

But before that they have to sign up for their account to be created, after that they login their account and choose templates for different websites. It covers blogging websites, e-commerce websites and many more.

#### 1.2.1 Project overview

With this website builder user can design and develop websites with this project without having to touch the code. Without designers and engineers, the user can handle everything themselves. Users can obtain a personalized website based on their requirements and description without having to worry about maintaining the backend and database. Small business owners, entrepreneurs, bloggers, and anybody else looking to quickly and simply establish a website will find website builders to be quite helpful. They also save money because you don't have to pay a web developer to start from zero when creating a website. By offering templates and readily integrated pre-designed features, it streamlines the process of designing and developing a website.

#### 1.2.2 Problem statement

AS the entire globe harnesses the power of the internet, every organization aspires to create leads through an effective online presence. When it comes to any company's online presence, website development is the first and primary thought that comes to mind. It broadens your reach and propels your firm forward enough to stay ahead of the competition.

You're probably wondering how you can build a website without knowing how to code. It is also pricey, and your firm may not have expanded sufficiently to warrant such an investment in developing an internet presence. But wait, read this article first, and then abandon your plans to start an online business.

Hence, it is not an easy job to build your own website and run it fluently ,it requires a lot of knowledge about websites, their function ,their objectives.

#### 1.2.3 Project objectives

The goal of website builders is to make website creation simple and accessible to everyone, without the need for advanced web development or programming skills. Website builders include pre-built templates, design elements, and drag-and-drop capability in an effort to streamline the process of creating a website.

The main objectives of website builders are:

- Simplify the process of constructing a website: Website builders are designed to make the process of creating a website as easy as possible for people and businesses who lack technical skills.
- Offer pre-built templates and design components: Users can create websites without having to start from scratch by using website builders, which offer pre-built templates and easily customizable design elements.
- **Permit customization**: Users of website builders can make changes to their website to make sure it matches their demands and represents their business.
- **Provide mobile responsiveness**: Website builders guarantee that their creations work and are viewable on all types of devices, including tablets and smartphones.
- Offer affordable solutions: By removing the requirement for companies to engage a
  professional web developer, website builders offer affordable options for creating a
  website.

• **Help in boosting business**: creating your own website could be costly for your business so it help to reduce that creation and maintenance cost of website.

#### **1.2.4 Proposed solution**

The solution for the above problem statement is our project website builder, that helps in building websites easily in a short amount of time. It is easy to work with it got a user-friendly interface, user just have to sign up and create their account and start build their website and with the help of that account user can keep check on its website without any problem. It is cost effective as well For freelancers and small enterprises, time efficiency is frequently just as crucial as cost efficiency. Naturally, there is an inherent connection between the two: longer tasks will inevitably result in higher expenses. Using a website builder also usually saves you a ton of time compared to hiring a designer or developer or creating it from scratch.

#### 1.2.5 Key features

- It provides intuitive navigation.
- It creates responsive websites.
- It is accessible for everyone.
- Its interface is mobile friendly.
- It provides attractive designs.
- It provides security and privacy features.
- It provides high quality templates and website designs.
- It provides customization options for websites templates.
- It provides solutions for E-commerce.
- It also acts as a blogging tool.
- Custom domain name.

#### **CHAPTER 2**

#### LITERATURE REVIEW

#### 2.1. Web Design: A Key Factor for Website Success.

One of the most important factors in the adoption and success of websites and electronic commerce has been identified as web design. This study aims to analyse the key factors that may impact online consumers' perceptions and behaviours from a marketing perspective in order to create a successful e-commerce website. Design, technique, and approach: A thorough literature analysis was conducted, highlighting the unique role that web design may play in user-interface interaction. Additionally, the benchmarking technique teaches businesses important lessons and best practices for growing their online enterprises. Results: The literature study confirms that site design plays a crucial role in achieving favourable results by influencing the attitudes and actions of users and online shoppers.

In this sense, website design serves as a great foundation for online businesses to cultivate customer happiness, trust, and favourable intentions. Specifically, we have highlighted the connection between usability and web design to facilitate users' movement of the website, providing them autonomy over their activities and a sense of freedom while they explore. Furthermore, it has been demonstrated that web atmospherics are important for drawing consumers to the website, enhancing their understanding of the product or service, and influencing their desire to make a purchase. Consequently, the success of a website greatly depends on the function that web design plays.

A website with a design that prioritizes ease of use and simplicity of navigation offers consumers access to timely, accurate, and clear information across all of its contents, as well as an attention-grabbing appearance. Research limitations and implications: The research provides a Decalogue of recommendations that could enhance the e-commerce websites' design in terms of their visual

appeal, ease of navigation, information and contents, and features related to the shopping experience. Analysing empirically how each of the important characteristics affects users' perceptions and actions may be interesting. Originality/value: This study is among the first to demonstrate how a website should be developed with the needs of the user in mind. The Internet's rapid growth in recent years has been correlated with a highly competitive environment. This study has concentrated on the specialist literature and empirical data regarding the primary determinants of the success levels of e-commerce enterprises. To be more precise, it is feasible to highlight the elements associated with website design. Finding the primary variables influencing e-commerce websites' success from the perspective of the customer was the first research topic posed in this study. The review of the literature enables us to confirm that web design plays a crucial role in achieving favourable results by influencing users' and online consumers' perceptions and behaviours.



Fig 1: presentation of Nokia product

#### 2.2. A Survey on Current Technologies for Web Development.

Even though we live in a mobile age, no app can yet replace web-based programs in terms of effectiveness. On top of this, progressive web apps—which behave just like mobile apps—are becoming more and more common. Thus, it seems quite obvious that web applications will be around for a very long time.

The employment of cutting-edge quality stack technology, or more simply put, the creation of high-end scalable technologies, is what makes these web apps worthwhile investments. Additionally, the best technological stack helps maximize the application's performance and business penetration. The project as a whole could fail if a subpar technological stack is used. Consequently, it's critical to have a look on web development.

Developers of web applications are faced with an overwhelming array of languages, frameworks, choice formats, and technological objects. We list, categorize, and contrast technologies that facilitate the development of Web applications. We draw the conclusion that, despite the fact that the most of the Web's connectivity issues have been resolved, the deluge of Web-based application technologies is a sign of the absence of a reliable model designed specifically for this field.

MongoDB, a document-oriented NoSQL database that primarily employs JSON data, is examined in order to explore the benefits of NoSQL databases. In the research to assess the MongoDB database scheme, an administrative tool has been created. A local analysis algorithm and an aggregate analysis algorithm are present. The developed solution was tested by both real users and automated testing. It was calculated that the answer would be faster than the ones that were currently out there.

By combining hierarchical, semi-structural, and unstructured data, it tackles the challenge of the scalability, adaptability, and processing capabilities of conventional relational database

management systems (RDBMS). The databases must be stretched horizontally in order to function with the new frameworks. Unstructured data must be handled and stored in a variety of formats within the databases. NoSQL techniques provide answers to these queries. The traditional relational and objective-driven database management system (DBMS) strategy is unable flexible to provide the scaling required today's systems. Large datasets have also been produced. However, dedicated solutions have not yet surfaced to enable these databases. It is impossible to store these enormous repositories on a single physical device. For this, a cooperative system is advised.

#### 2.3. Creating websites using website builder – A practical approach.

Several libraries nowadays struggle with maintaining the most recent content on their websites. Content management systems (CMS) such as WordPress, Joomla, Drupal, and others make it simple to create and manage websites even for those without extensive technical expertise or experience with HTML and web design. Additionally, updating the website's content is simple and doesn't require assistance from IT staff.

WordPress was used in the design and management of Knowledge Resource Division's (KRD) new CSIR-SERC web portal. This essay explains the WordPress architecture, benefits, Windows platform installation, WordPress website design, and our experiences creating and running the KRD portal.

A content management system, or CMS, facilitates the presentation of information on websites and offers content management and control. An infinite number of pages and a comprehensive site search engine are possible. It is not necessary to have prior HTML or programming skills. By using the administrator login and password, editing can be done from any location using any regular web browser.

Keeping their website content current is a realistic issue that many libraries encounter nowadays. Without requiring the services of outside web developers or designers, content

management systems (CMS) enable us to create and manage our own websites without the need for technical expertise or experience with HTML or web design.

After selecting a theme, the user can begin creating web pages. The admin page has options for Posts, Events, Media, Links, Pages, Plugins, Settings, and more in the left corner. Prior to beginning website design, it's crucial to decide how you want your menus, pages, posts, plugins, and other elements to look. We decided on our theme based on the design need, which called for a horizontal menu bar at the top of the website with articles on the left and a quick connections menu, event information, and archival information on the right side of the body area.

### 2.4. Analysis of Utilizing Website in Designing Online Store Site.

Without a doubt, knowledge and technology are expanding quickly in the modern day. In certain professional domains, information technology might be advantageous. It requires all people to be current with technology. Utilizing information technology to improve productivity and efficiency across the board, all on one website. A website is crucial to the process of producing material for submission. Because technology is developing so quickly, everyone expects information to be accessible promptly, correctly, and without regard to the size or nature of the business. By utilizing it, one of them E-business is the automatic completion of commercial transactions, such as purchasing and selling, by electronic means.

When creating company activities, assistance is essential. This is particularly true for the growth of electronic-based businesses, or E-Businesses, where the website is the primary driver of success for online consumers. The part that customer impressions of site design, financial security, product offerings and information, and online ease play in e-satisfaction evaluations. The primary elements influencing consumers' evaluations of e-satisfaction are convenience, site design, and financial security, according to their findings. The authors offer suggestions for further research as well as a discussion of the ramifications of these findings. In both product and service situations, Mary and Mary clarified that quality is linked to customer pleasure, retention, and loyalty.

Quality is therefore anticipated to have a role in determining the success of online retailers. Based on a sorting assignment, an online survey of a customer panel, and both online and offline focus groups, the authors determine the elements of the detail experience and create a valid and trustworthy scale for measuring detail quality. According to the investigation, client loyalty, satisfaction ratings, and views toward the website are all highly predicted by four factors: website design, fulfilment/reliability, privacy/security, and customer service. In addition, Carlos et al. conducted research to ascertain the impact that users' perceived usability has on their fidelity to websites they visit.

Even while business-to-consumer e-commerce appears to be growing at an exponential rate, a lot of studies indicate that people are very concerned about their privacy when using the Internet, and that gaining the public's trust is the main obstacle to e-commerce's continued expansion. This study examined the relative significance of four popular trust indices—privacy statements, third party security seals, security features, and third party privacy seals—when making purchases online. The findings show that compared to the other three trust indices, consumers placed a far higher value on security characteristics. We also looked into the connection between these trust indices and consumers' opinions about how trustworthy a marketer.

The results show that customers' assessments of online retailers' dependability did not align with experts' assessments of the sites' application of trust indices. The degree to which customers are willing to divulge personal information to land-based and online retailers was also investigated in this study. The findings showed that regardless of whether a retailer is entirely online or both online and offline, customers base their decision to divulge personal information on their impressions of the merchant's credibility. Lastly, we looked into the relative weights of three categories of Web attributes: privacy, security, and enjoyment features (beauty, comfort, and ease of use).

#### 2.5. NO-CODE WEB DEVELOPMENT.

Thanks to the quick advancement of technology, web applications may now be created by non-programmers thanks to no-code web development. The purpose of this study is to examine the effects and the ability for non-programmers to engage in web development tasks thanks to no-code web development. Using a mixed-methods approach, the study combines quantitative analysis of user satisfaction surveys with qualitative interviews with no-code developers. The results show that developing web apps with no-code web development is easier and less dependent on the need for traditional coding expertise. The study goes into more detail on the advantages and difficulties of nocode development, emphasizing how it may promote creativity and democratize web development.

Specialized software programs or toolkits known as website builders were created to help nontechnical individuals create and construct their own websites. With the help of these platforms' pre-configured code snippets, predefined features, and editable templates, users can put together the website they want without having to worry about the complexities of coding. For independent contractors, proprietors of small businesses, and others looking to create an internet presence fast and cheaply, this has shown to be practical This study paper's goal is to examine the importance and effects of website builders in the context of contemporary online development. We'll explore how they empower people without coding knowledge, how user-friendly their interfaces are, and how they benefit independent contractors, small business owners, and anyone in need of effective website development.

Recent years have seen a fast growth in technology, revolutionizing many parts of our life and bringing unparalleled convenience and accessibility. Web development is one prominent field that has been significantly impacted; the introduction of website builders has made the process of developing and designing web sites more accessible. In contrast to the conventional method, which needed in-depth programming skills, website builders make it simple for anyone without technical experience to create websites. In the past, building a website required deep knowledge of computer languages like HTML, CSS, and JavaScript or the use of intricate frameworks like

AngularJS. However, by providing user-friendly interfaces and a large selection of pre-designed themes, website builders have made this process simpler. People can now create websites by dragging and dropping thanks to website builders.

To sum up, this study has emphasized the significance and advantages of web creation without code.

Website builders that don't require any coding experience have become a useful option for people and companies want to easily and swiftly create an internet presence. These platforms make website production accessible to a wider audience by providing pre-built templates, drag-and-drop capability, and user-friendly interfaces. Technical, financial, and operational feasibility are all provided by no-code web development, according to the research findings. It is easy to use even for those with little experience with coding, low implementation costs, and little technical resources needed. The necessity for no-code solutions is highlighted by the shortcomings of the current system, which include high costs and time-consuming procedures when dealing with professional developers.

There are a number of potential improvements that could be made in the future to further expand the functionality of website builders. Creating a mobile application for the Website Builder that enables users to create and manage dynamic pages straight from their tablets or smartphones is one viable path. Users would have more ease and flexibility while creating and upgrading their websites as a result. The user experience can also be improved by adding a recommendation engine to the website builder. This engine makes recommendations for content, design elements, and templates based on user preferences and market trends. The process of creating a website can become even more streamlined and user-friendly by utilizing artificial intelligence (AI) technologies to automate operations like content development and optimization.

## 2.6. Web Page Builder.

In the current business environment, having a website has become essential. Businesses can make considerable money if they have their own webpage or website. Our subject has to do with this form of prerequisite. The process of creating a website is laborious in and of itself, but it can be made easier by hiring a firm to do it for you. This will increase the expense of the project, though. Building a website necessitates programming language skills, which not everyone possesses. We address these challenges in our themes and provide small businesses with a creative way to create their own website with minimal work.

In the twenty-first century, e-commence are at the center of global rivalry and economic globalization. An increasing number of businesses are understanding how crucial network marketing is to the growth of their firm. To present themselves and advertise their goods and services online, they set up web portals. Their websites also enable the realization of online trade and customer feedback. But small and medium-sized businesses (SMEs) typically cannot afford the high cost of a fully functional enterprise website solution. Additionally, they lack IT specialists for the creation and upkeep of websites.

India's small and medium-sized businesses are known for their large numbers and quick development. Establishing an e-commerce business through their online portals is a critical prerequisite. In their article, they present an easy-to-use and extensible template-based Ecommerce Webpage Builder. Multiple template pages with tags make up each template in the web page builder. Template engines are capable of intelligently creating template webpages by parsing pages and tags. The creation of a template's appearance is distinct from that of the data tags. A variety of actors are given certain responsibilities to complete simultaneously. An example case study demonstrates how effective using built-in tools for website creation and template development can be.

Web page builders are SMEs' go-to solution for creating e-commerce websites based on templates, as previously mentioned. Making templates is a simple and quick process. Extending tags can fulfill new business function requirements without requiring the template engine to be

rebuilt. The website building duties are assigned by TEB to several actors so they can work on them concurrently. Consequently, the web page builder demonstrated excellent effectiveness and efficiency in the test instance.

Our project's main goal is to build a new dynamic website that will raise product awareness for prospective buyers. Another goal of the project is to use an online website builder to develop a website that staff members with little to no technological expertise may update on a regular basis. Authors utilize an online website builder because the commissioner wanted a secure platform that allows staff to update the website from anywhere and didn't want anything installed on the computer.

#### 2.7. Has Website Design using Website Builder Fulfilled Usability Aspects.

For enterprises in particular, e-commerce is extremely important. E-commerce has the potential to contribute to an increase in sales. It is not necessary for SMEs to have their own e-commerce platforms in this day of digitalization. Alternatively, they can choose to use reasonably priced website builders to streamline their online business processes. Still, not much is known about how user-friendly website builders are for e-commerce. This study's objective is to evaluate e-commerce usability using three distinct website builders. Wix, Weebly, and Ecwid were used as website builders to create three e-commerce websites for various business types.

The creation of the internet altered how people interacted with information, opening up new avenues for vector web expansion, including the creation of large amounts of content. The internet is also essential in a number of other sectors, such as business, education, manufacturing, and pleasure. As a result, concerns about the techniques used in website construction and the quality of the information provided are becoming more widespread. Business and e-commerce are closely related. Electronic commerce is a development and strategy that has been around for a while.

Websites are an essential part of e-commerce since they are a way to attract and keep potential online customers. Customer-seller communication channels are essential and can act as a company's main point of contact with both its clients and the larger community [8]. Many conditions must be met before beginning the process of constructing a website, especially when it comes to electronic commerce. A successful website's development involves consideration of more than simply its visual appeal. These consist of wise technological choices, efficient security measure management, and the choice of suitable payment systems.

You can use a variety of website builders, like wix.com, weebly.com, and ecwid.com. It is anticipated that there will be roughly 250 million, 27 million, and nearly 1.5 million registered users across the three aforementioned sites by 2022. One of the e-commerce platform designs used in the study is Wix.com. It is commonly acknowledged that Wix is an application with practical functionality that is easy to use and accessible. Professional website designers that are reasonably priced are seen to be appropriate for startups as well as existing companies that value usability, accessibility, and functionality. Weebly was used as a tool for developing websites, and its staff members had the ability to make changes to it. Everybody concerned found the Weebly-created website design to be satisfactory.

The website is very important in many different fields, especially e-commerce. As things stand right now, designing a website does not always require giving careful thought to all kinds of factors, such as choosing appropriate payment processors, putting strong security measures in place, and making wise technological decisions. To establish e-commerce websites, small and medium-sized businesses (SMEs) can use an affordable website builder. A company's sales can be greatly impacted by effective design, thus developing and evaluating the website thoroughly is essential.

This study used three different website builders to evaluate the websites of several company concepts. Whereas Weebly.com was used to produce the MyTree website design, Wix.com was used to create the MiPet website design. Furthermore, Ecwid.com was used in the construction of the Account Game Center website design.

## 2.8. The Role of Responsive Design in Web Development.

Software developers can create websites that dynamically adjust to the size of the devices by using responsive design. This approach to development makes it possible for Web pages to be rendered quickly and optimally, guaranteeing a positive user experience across desktop, tablet, and mobile platforms. Within the parameters of this research, we hope to investigate the primary benefits and drawbacks of responsive Web design. In order to overcome the restrictions experienced by software developers and determine the factors that drove their adoption of responsive design, we utilized a quantitative method based on a questionnaire completed by 180 industry professionals. According to the data, providing a positive user experience and making oneself more accessible stand out as the two main benefits. However, the primary drawbacks are the inability to optimize user experience, the longer loading times, and the incompatibility with outdated Web browsers. Ultimately, it was discovered that experts with greater knowledge in the sector and independent developers have different perspectives about the benefits and drawbacks of responsive design.

Web design sets itself apart from other conventional design formats. Because of the nature of the Web, designers are compelled to operate outside of their control. There are no guarantees that every user will view a web page in the same manner that it was created and developed, and elements like colors, shapes, and layouts can be changed by the user (or by the user's web browser). Thus, Web designers must conceptualize Web applications without having any prior knowledge of the Web browsers that will be utilized, the operating systems and other technical platforms on which the application will run, user preferences, access device resolution, or the features and speed of the Internet connection.

A key step in the construction of a website is website design. It entails organizing content into graphical models that serve as a foundation for website coding. There is a need to modify the content presented on each device due to the rise in Internet users and the popularity of mobile devices like tablets and smartphones. It would be impossible to create various versions of the

same website to accommodate different screen sizes and resolutions due to the high maintenance requirements and unfeasible prices.

A technical solution to this problem is responsive design, which allows a website to dynamically adjust its width to fit the screen of the device it is being viewed on. A website's content should restructure itself intelligently to maximize its effect and usability. This eliminates the need to create separate styles and allows the HTML and CSS code of a website to adjust to the screen resolution.

One of the most important considerations when creating a responsive design for a website is its loading speed. In order to guarantee that responsive websites load rapidly and provide the greatest experience for mobile users, attention to picture size is essential. According to a Trilibis survey, out of 156 responsive websites, 122 had subpar mobile performance. Using server-side image optimization is a smart way to cut down on pageload time and picture weight.

The survey's statistical data on all the advantages of responsive design is compiled in the table below. Good user experience (i), increased accessibility (ii), increased productivity (iii), and great flexibility (iv) are the factors with higher means. Conversely, the following advantages are seen less significant: (i) less maintenance time and expenses; and (ii) a reduced bounce rate. The means of the last two variables are all smaller than 2.

Benefits	Mean	Median	Mode	Std.	P25	P75
				dev.		
High flexibility	3,873	4	4	0,789	3	4
Good user experience	4,376	4	4	0,652	4	5
Low development time & costs	3,464	3	4	0,853	3	4
Low maintenance time & costs	2,669	3	3	0,789	2	3
Improved SEO	3,530	4	4	0,711	3	4
Lower bounce rate	2,972	3	3	0,741	2	3
Increases productivity	3,901	4	4	0,700	4	4
Increases accessibility	4,354	4	4	0,656	4	5

#### **CHAPTER 3**

#### PROPOSED METHODOLOGY

#### 3.1. Introduction and Background Information.

In the contemporary world, having a website has become essential for every kind of organization. Businesses may make considerable money if they have their own webpage or website. Our subject has to do with this form of prerequisite. The process of creating a website is laborious in and of itself, but it may be made easier by hiring a firm to do it for you. This will increase the expense of the project, though. Building a website necessitates programming language skills, which not everyone possesses. We address these challenges in our themes and provide small businesses with a creative way to create their own website with minimal work.

### 3.2. Project methodology.

There is a simple methodology that describes the whole process of website builder to build a website.

- \* Register and Choose a Template: Make an account to view pre-made templates for different categories. Select one that complements the look and feel of your website.
- \* Customize the Template: Drag-and-drop interfaces are available in most builders. To create the layout you want, drag and drop components like buttons, text boxes, and images onto the template.
- \* Add Content and Functionality: To improve the functionality of your website, add text to the appropriate areas, upload pictures and videos, and make use of built-in tools like galleries or contact forms.
- \* Optimize for Mobile: Make sure your website works well and looks fantastic across all

platforms, particularly mobile ones. Mobile-responsive alternatives are provided by several builders.

\* **Publish and Connect Your Domain**: Select "Publish" after you're done! You may buy a customized domain name or take

## 3.2.1. System architecture.

This architecture explains the internal functioning of the project.

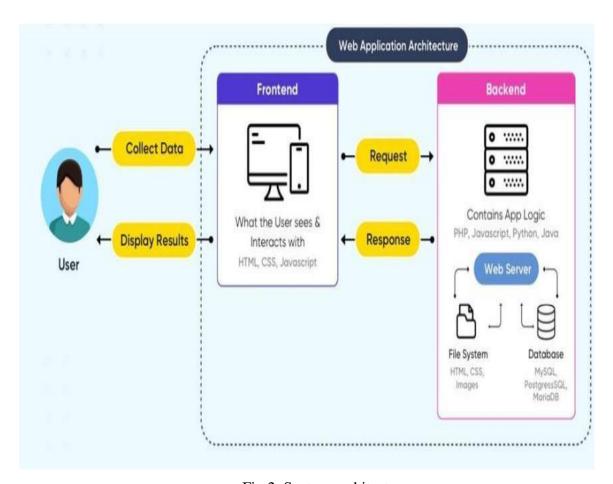


Fig 2. System architecture

#### 3.3. Technical Requirements.

#### 3.3.1. Front-end development

- HTML: The standard markup language for texts intended to be viewed in a web browser is called Hyper Text Markup Language, or HTML. It outlines the format and content of online material. Technologies like Cascading Style Sheets (CSS) and programming languages like JavaScript frequently help with it. Web browsers transform HTML documents into multimedia web pages after receiving them from a web server or local storage. Originally, HTML featured cues for a page's design and provided a semantic description of the page's structure.
- CSS: A style sheet language called Cascading Style Sheets (CSS) is used to determine how a document produced in a markup language, such HTML or XML (including XML dialects like SVG, MathML, or XHTML), will be presented and styled. A fundamental component of the World Wide Web, CSS is used in conjunction with HTML and JavaScript. The separation of display and content—including layout, color, and font—is made possible by CSS. This division can increase the accessibility of the text; [further explanation required] provide the specification of presentation characteristics greater freedom and control; this will allow numerous web pages to share formatting by having the required CSS specified in a separate document activate the CSS file, which simplifies and eliminates redundancy in the structure content.
- JavaScript: Along with HTML and CSS, JavaScript, or simply JS, is a computer language and essential Web technology. For webpage behavior, JavaScript is used on the client side by 99 percent of websites. The client code is run by a specific JavaScript engine found in web browsers. These engines are also used in many other apps and services. Node.js is the most widely used runtime system outside of browsers. JavaScript is an ECMAScript-compliant high-level language that is frequently compiled just in time. It has first-class functions, prototype-based object-orientation

and dynamic typing. It supports imperative, functional, and event-driven programming paradigms and is multi-paradigm.

#### 3.3.2. Server-side language.

- Django: Django is a Python framework that facilitates the use of Python in web site
  creation. Django handles the complex tasks, freeing you up to focus on developing your
  web applications. Django has a strong emphasis on component reuse, popularly known
  as DRY (Don't Repeat Yourself). It also includes pre-configured functionality including
  a database connection, login system, and CRUD (Create, Read, Update, Delete)
  activities.
- Node.js:- With Node.js, developers can construct server-side scripting and command line tools using JavaScript. Before the page is transmitted to the user's web browser, dynamic web page content is frequently generated using the server's capacity to run JavaScript code. Thus, Node.js embodies a "JavaScript everywhere" paradigm, bringing web application development together around a single programming language instead of dividing it into separate languages for client-side and server-side programming. The event-driven design of Node.js allows for asynchronous input and output. These design decisions are intended to maximize scalability and throughput in real-time online applications (such as browser games and real-time communication apps) as well as in online applications with numerous input/output activities.
- Java (spring boot):- With little effort, one may create independent, production-grade Spring-based apps using the open-source Spring Boot framework, which is built on Java. With the goal of reducing configuration issues while developing Spring-based applications, Spring Boot is an extension for the Spring Java platform that prioritizes convention over configuration. The majority of the application may be set using the "opinionated view" of the Spring team on the optimal way to use third-party libraries

and the Spring platform, or using various configurations based on the needs of the project and the experience of your team.

#### 3.3.3. Database

MongoDB: An open-source NoSQL database management system is called MongoDB. Conventional relational databases being replaced with NoSQL (not only SQL). NoSQL databases can be handy when handling big, dispersed data sets. MongoDB is a tool for managing, storing, and retrieving document-oriented data. Highvolume data storage is facilitated by MongoDB, which enables businesses to store vast volumes of data quickly. Ad hoc queries, indexing, load balancing, aggregation, serverside JavaScript execution, and other capabilities are some of the other reasons why businesses utilize MongoDB.

#### 3.3.4. Analytics

benefit from the free web analytics service Google Analytics, which provides fundamental statistical data and analytical tools. Google Analytics is used to track and analyze a website's performance as well as visitor data. Apart from ascertaining the most favored origins of user engagement, it can furnish significant insights into the efficacy of an organization's promotional endeavors and campaigns, monitor the manner in which clients accomplish tasks (like completing transactions or adding products to their virtual shopping carts), detect patterns and trends in their conduct, and collect demographic information. Marketing professionals may benefit from the free web analytics service Google Analytics, which provides fundamental statistical data and analytical tools. Google Analytics is used to track and analyze a website's performance as well as visitor data.

### 3.4. Implementation

## 3.4.1. Sign up

The client will create a new account with a secure password, his or her email address, and name. The customer will be sent to the website or app's registration page. Usually, this page will have the following fields:

- Name: Depending on the specifications of the system, this can be either a complete name or a username.
- Email Address: You must have a working email address. Both account verification and communication will utilize this.
- Password: The customer should come up with a solid password here.

### 3.4.2. System validates and create account.

The system checks if the email address is already registered and ensures the password meetscomplexity requirements. If valid, the system creates a new account for the client in a database.

## 3.4.3 The login process

- 1. Client Accesses Login Page: The client goes to a different area of the website or application, or login page.
- 2. Client Provides Credentials: The client provides the password they made and the email address they used to register.

- 3. System Authenticates Client: Using the email address supplied, the system pulls the client's account details from the database. Next, it verifies that the password supplied matches the one that is saved for that account (sometimes in an encrypted format).
- 4. Successful Login: The system verifies the client's identity as a legitimate user if the email address and password match. For the client, this usually entails opening a secure session and sometimes saving a session token (usually in the form of a cookie) in the client's browser.
- 5. Unsuccessful Login: If the email or password is incorrect, the system displays an error message informing the client of the failed login attempt. The client can then tryagain with the correct credentials.

### 3.4.4. The Landing Page

After the login is successfully the user landed on the home page where user got the options to select the type of website user needs and further the themes and colour of websites. User also got the option to mark the templates as favourites.

This home page got many other options in scroll bar like (all sites) option that contains all the former sites created by the user with that account, it got (help) option to get help in building website.

It contains pre-built templates that user can choose on the basis of its industry and needs and starts its journey of website creation. This landing page contains all of users former work or website that he create or start but didn't finish everything is saved in the account in user's database.

# 3.5. Data flow diagram

Data flow diagram is used to represent the flow of process in the website builder tool, how it interacts with user in different situations.

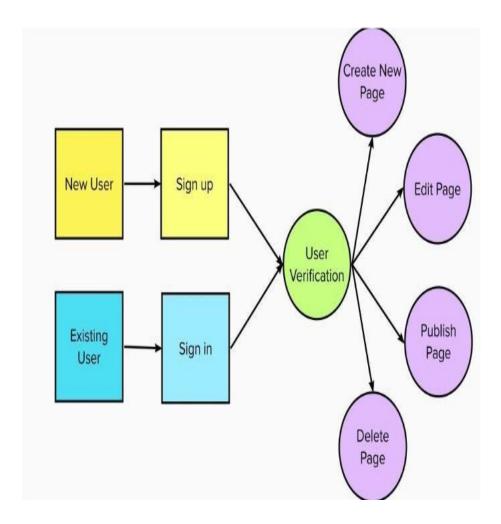


Fig 3. Data flow diagram

#### **CHAPTER 4**

#### **RESULTS AND DISCUSSION**

As a result of this project we got a Specialized software programs or toolkits known as website builders were created to help non-technical individuals create and construct their own websites. With the help of these platforms' pre-configured code snippets, preset features, and editable templates, users can put together the website they want without having to worry about the complexity of coding. This has shown to be a practical option for independent contractors, proprietors of small businesses, and others looking to swiftly and inexpensively build an internet presence.

Pros of this project (website builder ) are as follows:

- \* Pre-built Templates: Select from a sizable collection of expertly created templates to save time.
- \* Simplicity of Use: Drag-and-drop interfaces need little technical expertise, allowing even novices to create websites.
- \*Complete Solutions: Basic features like galleries and contact forms, as well as domain names and hosting, are frequently included with website builders.
- \* Cost-effective: A lot of builders provide inexpensive or free designs, which are ideal for small enterprises or hobby websites.

### 4.1. Sign up page

This website builder tool provide user with a sign up page to create its account. The client will create a new account with a secure password, his or her email address, and name. The customer will be sent to the website or app's registration page. Usually, this page will have the following fields: Name, Email address, password.

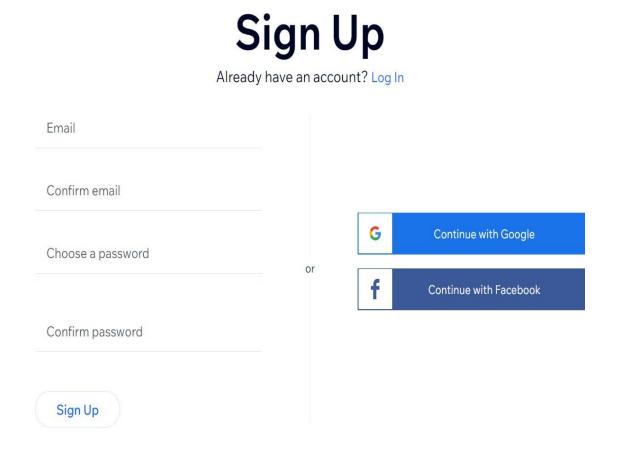


Fig 2: sign up page

# 4.2. Login page

If the user already have an account he/she don't have to create or register for an account again. User can access the account by entering the credentials like email id and password, system will check if the credentials are correct if the credentials are correct user will enter the account.

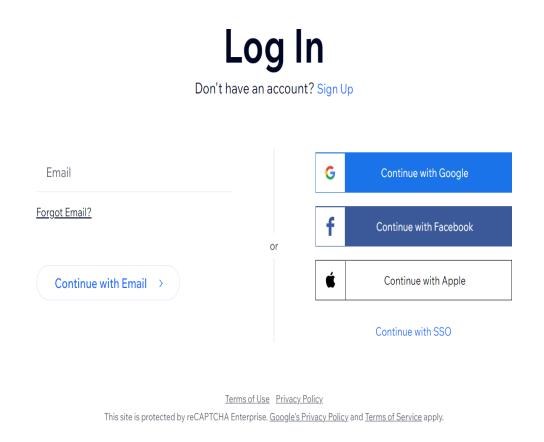


Fig 3: login page

# 4.3. Home page

After entering the account the user will be automatically send to the default home page, this page contains all the saved data and information of the user, like its previously created sites, data and facts about its running site. User can access and control its site from here, and from here the journey of website creation starts, it contains all the pre built templates that user can select on the basis of its interest and create the website.

It contains other options like Help and notification by which you can explore your site and get help from the system about any dysfunctionality.

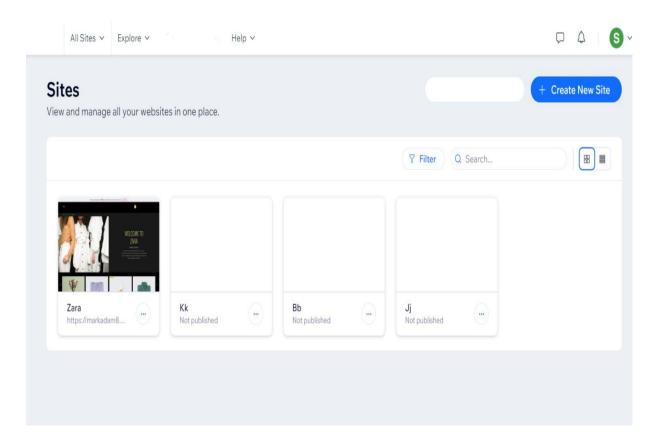


Fig 4: home page

## **CHAPTER 5**

#### CONCLUSION AND FUTURE SCOPE

Website builders that don't require coding expertise have become a viable option for people and companies trying to get online fast and simply. A larger audience may now create websites because to these platforms' user-friendly interfaces, drag-and-drop capability, and pre-built templates.

No-code web development offers a trifecta of feasibility: technical, financial, and operational. Its user-friendly interface makes it accessible to individuals with minimal coding experience, democratizing website creation and empowering a broader range of users to build their online presence.

From a technical perspective, no-code platforms simplify the website development process by eliminating the need for manual coding. Instead, users can leverage intuitive drag-and-drop interfaces and pre-built components to design and customize their websites effortlessly. This accessibility reduces the barrier to entry for aspiring website creators and enables them to bring their ideas to life without extensive technical expertise.

Financial feasibility is also a key advantage of no-code web development. Unlike traditional development methods that may require significant investment in hiring developers or purchasing expensive software licenses, no-code platforms typically offer subscription-based pricing models with affordable installation costs. This makes it a cost-effective option for individuals and businesses looking to establish an online presence without breaking the bank.

Furthermore, the operational feasibility of no-code web development is evident in its minimal resource requirements. Since no-code platforms handle the technical aspects of website hosting and maintenance, users can focus on creating content and managing their online presence

without the need for dedicated technical resources. This scalability allows businesses to scale their online operations efficiently without being burdened by infrastructure management tasks.

In summary, no-code web development offers a compelling blend of technical, financial, and operational feasibility. Its ease of use, affordability, and minimal resource requirements make it an attractive option for individuals and businesses looking to create websites quickly and efficiently, regardless of their level of technical expertise.

No-code solutions are essential given the shortcomings of the current system, which include expensive fees and labour-intensive procedures when collaborating with developers. No-code web creation is an economical and time-saving substitute since it gives customers the ability to freely design and manage their websites.

No-code web development makes the process of creating websites easier and makes it possible for people and companies to successfully build an online presence. More developments in this area may result in more sophisticated and approachable tools, increasing website development's accessibility for everybody.

#### **5.1.** Key achievements

Builders are revolutionary tools that empower users to craft websites without the need for coding expertise. Through intuitive visual editors, individuals can effortlessly drag and drop elements to design dynamic and interactive websites, all without touching a single line of code.

However, while using a builder streamlines the website creation process, building a site from scratch provides unparalleled flexibility. Each component of the website can be customized to the minutest detail, but this level of control requires manually writing the HTML and CSS code for each element.

In essence, builders offer a rapid and user-friendly approach to website development, ideal for those seeking quick results without delving into coding intricacies. Conversely, coding from scratch grants complete creative freedom, allowing for highly tailored and unique designs, albeit at the cost of additional time and technical proficiency.

To create a single page, you may need to write thousands of CSS and HTML lines which can take hours. A manually-coded website is also more likely to encounter errors as you may make minor mistakes like typos.

Additionally, the application cases for HTML and CSS are confined to creating static websites. To create a dynamic, interactive website, you need to be proficient in server-side coding languages like PHP and JavaScript.

#### **5.1.1.** Table

## Review of website builder with self-coding

	Self-coding	Website builder
Technical knowledge	High	None
requirement		
Time required	Months	Hours
Cost	High	Low
Maintenance	Required	None
Updating	Hard	Easy
Security	Less	More
Flexibility	More	Medium

Table 1

### **5.2. Future Scope**

The capabilities of Website Builders may be further advanced by implementing a number of potential additions. Creating a mobile application for the Website Builder that enables users to create and manage dynamic pages straight from their tablets or smartphones is one viable path. Users would have more ease and flexibility while creating and upgrading their websites as a result. The user experience may also be improved by adding a recommendation engine to the website builder. This engine makes recommendations for content, design components, and templates based on user preferences and market trends.

Continuous improvement is a fundamental aspect of technology, and the realm of no-code web development is no exception. While no-code platforms offer significant advantages over traditional coding methods, there is always room for enhancement and refinement.

As these website builders evolve and incorporate more advanced features, they have the potential to become even more powerful tools for website creation. By addressing usability issues, expanding customization options, and integrating cutting-edge technologies, these platforms can further streamline the website development process.

With continued enhancements, there is indeed a possibility that no-code web development platforms could eventually replace the need for manual coding by developers. As these applications become more sophisticated and capable of handling complex design and functionality requirements, they could empower users to create professional-grade websites entirely on their own.

However, it's important to recognize that while no-code platforms offer immense flexibility and convenience, there may still be scenarios where custom coding is necessary to achieve highly specialized or unique functionalities. Additionally, developers bring expertise in areas such as performance optimization, security, and scalability, which may remain valuable even as no-code tools advance.

In summary, while the future of website creation may indeed be increasingly dominated by no-code development platforms, it's likely that a symbiotic relationship between no-code tools and manual coding will persist, with each approach offering its own advantages and serving different needs within the web development ecosystem.

The future of website creation holds exciting possibilities, especially with the integration of artificial intelligence (AI) technologies. By harnessing AI, tasks such as content development and optimization can be automated, making the process even more efficient and user-friendly. Imagine AI-powered assistants helping users craft compelling content and optimize it for search engines, freeing up valuable time and resources.

Additionally, enhancing the database features of website builders would enable users to store and retrieve data more seamlessly. This would facilitate the creation of dynamic, data-driven websites, where content can be personalized based on user preferences or behavior, creating more engaging experiences for visitors.

Improvements in graphics and visual effects will also play a significant role in enhancing the appeal of websites. By offering users a wider range of design options and incorporating advanced visual effects, website builders can empower users to create visually stunning websites that capture attention and leave a lasting impression.

Furthermore, enabling collaboration features that allow multiple people to work on a project simultaneously would foster teamwork and streamline the development process. Real-time website editing and updating capabilities would ensure that changes are implemented instantly, facilitating efficient communication and iteration.

Overall, by leveraging AI, enhancing database features, improving graphics and visual effects, and enabling collaborative features, website builders can make the process of creating websites even more streamlined, user-friendly, and visually appealing, paving the way for a new era of web development.

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### **APPENDIX 1**

**RESEARCH PAPER Published.** 

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**Computer and Communication Engineering (IJIRCCE)** 

TITLE:

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