



Design of Online Portal for Community Assistance

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Abstract- A webpage (or website) that gives users access to a range of information, tools, links, and other resources is known as an online portal. These portals were originally referred to as link pages, but they now serve a number of roles. Online portals are often designed to give users a wide range of widely used information and services. For example, examples of portals are government portals that give critical civic information, private company sites for corporations, and consumer portals that allow customers to access aspects of the web service to which they subscribe. Logging into an online portal gives users access to all settings, features, tools, etc. End users with this access can tailor their portal by changing settings and preferences.

I. INTRODUCTION

A portal is a website that provides a single point of entry to information and applications.

A portal is a website that has pages that are organised by tabs or another sort of navigation from the end user's perspective. Each page has subpages or one or more portlets, which are small windows that can display everything from simple web services to static HTML content.

In technical terms, a portal is a collection of tools and functions that may be made available to users. These portal views, which WebLogic Portal refers to as desktops, give the universal resource location (URL) that clients access. A portal provides users with a variety of materials and apps via a consistent, unified web-based interface.

II. NEED OF COMMUNITY ASSISTANCE

You will never be sorry for volunteering your time to help a cause that you care about. It will improve your quality of life, help you get to know your community, and introduce you to concepts and people who will have a long-term positive impact on how you see the world. Giving back to your

community allows you to grow as an individual and have a better understanding of your place in society. Of course, your community requires it as well! Many of the services and activities we enjoy in our communities would be inaccessible without the help of volunteers.

Volunteering at a food bank or shelter in your town aids your less fortunate neighbours. Giving back to your community can help bridge some social, economic, and political gaps.



III. WEB DEVELOPMENT

Web development encompasses website design, development, and maintenance. Web publishing, web programming, database management, and web design are all covered. It refers to the creation of an online application, such as a website.

The term Web Development is build up of two words:

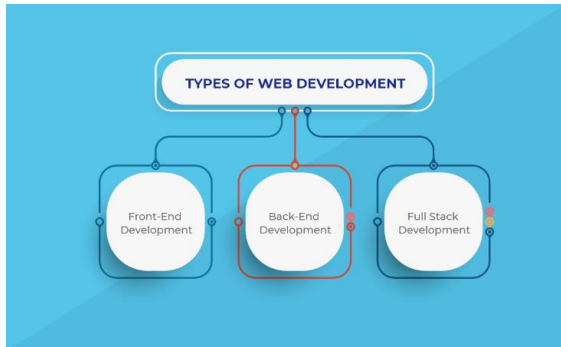
- Web: It is usually referred to websites, web pages, or anything else that operates over the internet.
- Development: The process of creating an application from the ground up.

There are three types of web development:

- Full-Stack Development



- Frontend Development
- Backend Development



A. Frontend Development

The front end of a website is the area with which the user interacts directly. Another term for it is the 'client side' of the application.

- HTML is an abbreviation for HyperText Markup Language. It is used with a markup language to produce the front end of web pages. It functions as a skeleton because it is utilised to construct the framework of a website.
- CSS: Cascading Style Sheets, or CSS, is a basic language designed to make web pages more appealing and smoother. It appears in the design of our website.
- JavaScript: JavaScript is a scripting language that enables dynamic behaviour on our website.
- Bootstrap: Bootstrap is a collection of open-source tools for creating responsive websites and online applications. It is the most extensively used CSS framework for developing responsive, mobile-first websites. Websites are now optimised for all browsers (Internet Explorer, Firefox, and Chrome) and screen sizes (Desktop, Tablets, Phablets, and Phones).

B. Backend Development

The backend of a website refers to the server side. It is a portion of the website that people are not permitted to view or interact with. It is the part of the software that does not have any direct contact with the users. It is used to organise and store information.

- PHP is a server-side programming language largely used for web development.
- Java: Java is a well-known and widely used programming language. It is very scalable.

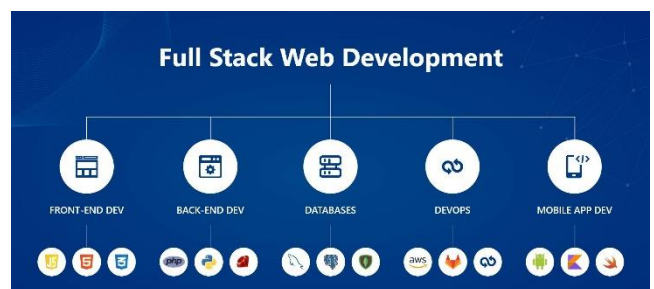
- Python: Python is a programming language that allows you to integrate systems quickly and efficiently.
- Node.js: Node.js is a cross-platform open source runtime environment that allows JavaScript code to be executed outside of a browser.

C. Database Management System

The most important decision when selecting a database is whether to use a relational (SQL) or non-relational (NoSQL) data structure. While both databases are solid choices, there are several major differences that clients should consider before making a decision.

D. Full-stack web development

Front-end and back-end duties are included in full-stack web development. A full-stack developer may be in control of all aspects of a website's development, from the server side to the user interface, depending on its complexity. Many full-stack engineers may continue to specialise in one area of web development, but their breadth of experience might help with debugging or speeding up a build or redesign. Full-stack developers are frequently in charge of finding cutting-edge technologies, such as enhanced programming languages (or possibly no- or low-code trends) and blockchain, that can be leveraged to improve the business capabilities of websites.



IV. WEB TECHNOLOGIES EMPLOYED IN BUILDING THE PROJECT

A. PYTHON

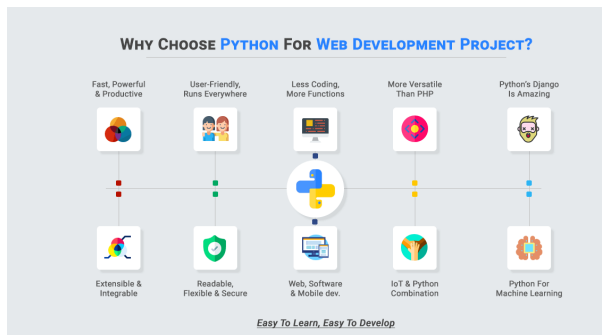
Python is a well-known general-purpose programming language that has gained traction in recent years. Its concise and straightforward syntax makes it the preferred programming language. Python has many applications in many industries, including data science. Python is also used in software development, artificial intelligence (AI),



web development, mobile game development, and other areas. Knowing Python well brings up a variety of job opportunities in a variety of fields. It is undoubtedly an excellent return on investment, thus many people start learning Python. Furthermore, there is a vast and active Python community; chances are, whatever question you have can be answered quickly. In web development, the frontend refers to the objects that users interact with on a website.

Consider a commonly visited website. Frontend development includes the use of colours, shapes, graphics, charts, navigation menus, and page design. Its primary emphasis is on visual features. If you want to undertake frontend development, you should have some design skills.

Backend development, on the other hand, is what happens behind the scenes. It entails creating the infrastructure that supports the frontend parts and manages server and database duties. Python is also useful for frontend web development. HTML, CSS, and JavaScript are the most important frontend languages. Anaconda unveiled PYSCRIPT, a new Python frontend framework, at PyCon 2022. PyScript enables the development of Python applications in the browser via the HTML interface.



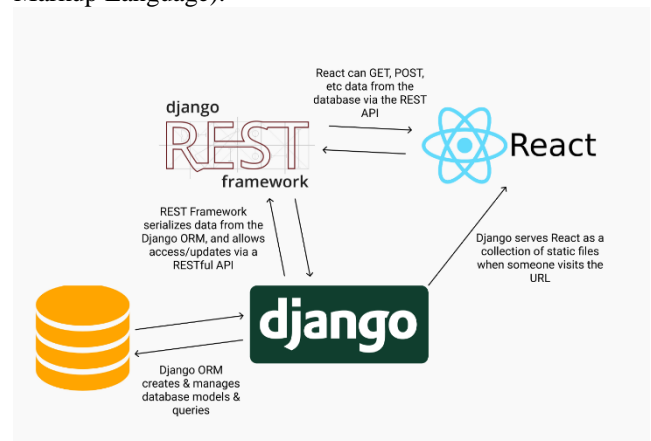
B. DJANGO

Django is a Python library that allows you to rapidly and efficiently create a high-quality Web application. It is appropriate for both frontend and backend development. However, Django is well-known for its "Django admin," an auto-generated backend that allows you to manage your website in a flash for a variety of easy use cases without requiring much coding. Django specifically assists you with data selection, formatting, and display on the front end. URL management, a template language, authentication systems, cache hooks, and other navigation tools like as paginators are all included. Django has an ORM that allows you to easily manipulate your data source, forms to process user input, and data and signal validation.

Django is a programming framework based on Python. It is a Python coding tool that enhances functionality and accelerates the process. Django includes pre-written Python code that is ready to be used in a project. Django is referred to as a "framework" because it contains a fully working set of classes, frameworks, and modules that enable developers to accomplish practically everything they need to construct sophisticated websites and apps. Python is the foundation, and because it is written in Python, Django is built on top of it. Django serves as the foundation for your website or application.

Django Framework:

The MVT framework underpins Django's architecture, which stands for MODEL, VIEW, and TEMPLATE. MVT is a framework alternative to MVC that consists of three components: Model, View, and Controller. The primary distinction between MVT and MVC is that the Django architecture handles the tasks that the controller element of the MVC architecture does. Django's templates handle all of the controller-related activities. To put it another way, the contents of the template are a hybrid of Django Template Language (commonly known as DTL) and HTML (HyperText Markup Language).



C. JAVASCRIPT

A JavaScript framework is a collection of JavaScript code libraries that give a web developer with pre-written code for routine programming tasks. Frameworks are structures that have a certain context and help you create web applications inside that context.

Although it is possible to develop powerful web applications without utilising JavaScript frameworks, frameworks provide a template for dealing with common programming patterns. Every time you build an application, you don't have to

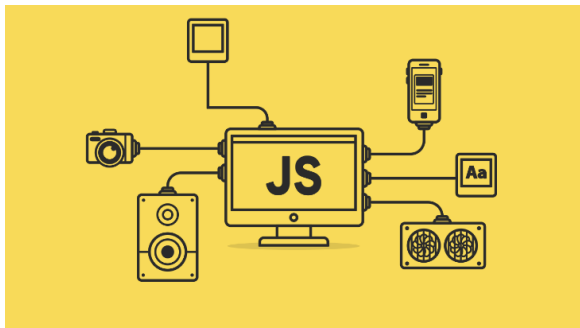


develop code from start for every single feature. Instead, you can add to an existing feature set. JavaScript frameworks, like the vast majority of other frameworks, provide some guidelines and standards. Using these rules and guidelines, any developer may design complex programmes faster and more efficiently than if they began from zero.

Consider a potter's wheel, which allows you to create pots. The potter's wheel is your framework; it has particular consistencies with which you must operate. The wheel spins, and you may use that movement to make pots of various shapes and sizes.

Pots, plates, cups, bowls, and even cylindrical sculptures can be created. But you can't use it to build a house; you'll need to find a different framework for that.

JavaScript frameworks are an important aspect of modern front-end web development because they provide developers with tried-and-true tools for creating scalable, dynamic web applications. Many current firms employ frameworks as a fundamental element of their tooling, therefore framework familiarity is now required for many front-end development jobs.



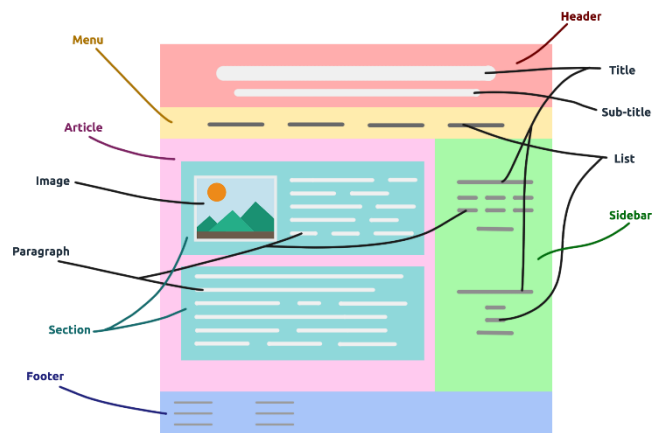
D. HTML

HTML The coding language used to build a web page and its content is HTML (HyperText Markup Language). Material could be organised into paragraphs, a list of bulleted points, graphics, and data tables, for example. This course will teach you the essentials of HTML and its applications, as the title suggests.

HTML is a markup language that defines how your material is structured. HTML is made up of components that can be used to enclose or wrap specified parts of a document to make it appear or function in a specific way. The surrounding tags can link to another website, italicise text, change the font size, and so on.

Consider the following information:

HTML, or Hypertext Markup Language, is a programming language used to describe how content on a webpage is organised. HTML, CSS, and JavaScript are the primary building blocks of websites around the world, with CSS controlling the appearance of a page and JavaScript scripting its functionality. The HTML document is the bones of a webpage, whereas CSS is the skin and JavaScript is the brains.



```
<!DOCTYPE html> ← Tells the document type
<html> ← The Root Element
  <head> ← Contains the header information
    <title>Title of the Page</title> ← Defines Title of the Page
  </head>
  <body> ← Holds the Content of the Page
    Tags related to layout and formatting
  </body>
</html>
```

HTML5 is HTML's fifth version. HTML5 has many components that have been removed or updated.

E. CSS

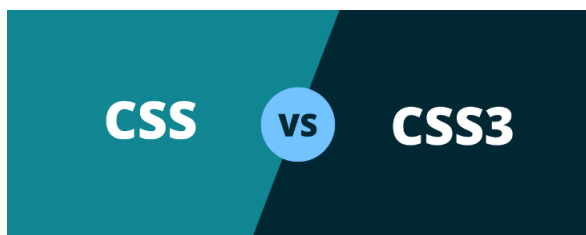
CSS, or Cascading Style Sheets, is a basic language designed to make the process of designing visually appealing web pages easier. CSS can be used to apply styles to web pages. More importantly, CSS enables you to do so without relying on the HTML that creates each web page. It specifies the appearance of a webpage, including colours, fonts, spacing, and other features. In summary, you have complete control over the look of your website. CSS allows developers and designers to specify how items should behave in the browser, including how they should be positioned.



CSS, unlike HTML, makes use of rulesets. CSS is simple to learn and understand, but it provides you a lot of control over the appearance of an HTML document.

- CSS saves time since you can code CSS once and reuse it in different HTML pages.
- Simple Maintenance: To make a global change, simply modify the style, and all elements in all webpages will be automatically updated.
- Search Engines: Because CSS is a clean coding style, search engines will not have to fight to "read" its material.
- CSS has a lot greater array of properties than HTML, therefore you can give your HTML page a far nicer look when compared to HTML attributes.
- Offline Browsing: CSS can use an offline cache to store web apps locally. We can visit offline websites with this.

CSS3 is an abbreviation for Cascading Style Sheet level 3, the most advanced version of CSS. It's used to structure, style, and format web pages. CSS3 has several new capabilities and is supported by all modern web browsers. CSS3's most essential feature is the division of CSS standards into discrete modules that are easier to learn and use.



F. MYSQL

Oracle Corporation develops, distributes, and supports MySQL, the most popular Open-Source SQL database management system.



The most recent MySQL software information can be found on the MySQL website (<http://www.mysql.com/>).

MySQL is a database administration system.

A database is a well-organized collection of data. A simple grocery list, a photo gallery, or the massive volumes of data in a business network are all examples. A database management system, such as MySQL Server, is required to add, access, and process data in a computer database. Database management systems play an important part in computing, either as standalone utilities or as components of other programmes, because computers are very adept at processing enormous volumes of data.

In today's big data era, MySQL is one of the most well-known technologies. Because MySQL is sometimes referred to as the most popular database and is currently in widespread, effective use across industries, it is obvious that anyone dealing with enterprise data or general IT should strive for a fundamental understanding of it.

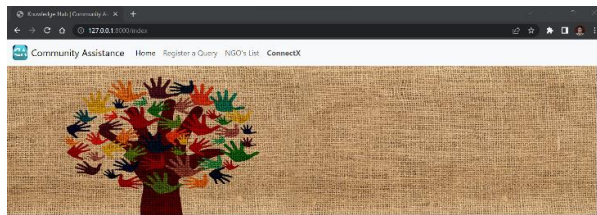
MySQL allows even those who are unfamiliar with relational systems to swiftly construct fast, powerful, and secure data storage solutions. MySQL's programmable syntax and interfaces are also ideal starting places for exploring the enormous world of other popular query languages and structured data stores. A database is a structured collection of data. It might be anything from a simple grocery list to a picture gallery or a spot in a business network to store enormous amounts of data.

A relational database, in particular, is a sort of digital storage that collects and organises data using the relational paradigm. Tables are formed up of rows and columns under this paradigm, and all relationships between data items follow a precise logical structure. An RDBMS is simply a collection



of software tools for creating, managing, and querying databases.

V. GLIMPSE OF THE ONGOING PROJECT



Why Community Assistance is essential to students?

- **The Utilization of Time:** Most of the time, the students are found wasting their time. They are either sitting and gossiping or roaming the streets with their friends. This is a sheer wastage of time. These tasks do not bear any fruit to them. The power of the youth of the country is also being wasted like this. It is better to do some fruitful task instead of wasting time. In this case, nothing can be better than doing social work or social services. While doing work for the social benefit of the people, they are utilizing their

time in a very efficient manner. They are helping others. While doing social work, the students feel contented. It gives them a very nice feeling.

- **It gives Satisfaction to the Students:** The students feel satisfied when they help in social services or participate in social work. The students feel that they have some role in the society. They feel that the society needs them and they feel satisfied with it. It is very common to hear from the students that the country is corrupt, there is no system in the country, and the country is not worth living. But when the students participate in social, they will think that they are working for the benefit of the country. They think that they are working for the bright future of the country. They will feel satisfied that at least they have taken a step which will improve the country's future. It will fill their mind and heart with satisfaction.

- **It gives Motivation to the Students:** There are some students in the society who feel that they cannot do any work. They feel that they are not fit for any work. They lack motivation. Due to lack of motivation, the students leave a task in the middle of the performance. This motivation can be provided with social services. While participating in social services, the students have to complete their task. When they complete a whole task, they feel motivated. They think that they can help others very well. They feel motivated to manage a system of people. It also makes them feel that they are fit for all other works. It provides them with motivation.

- **It gives Inspiration to the Students:** Everyone needs some inspiration in their life. Inspiration is very necessary for life. As our country needs youth power, the youth power can be inspired from social services. Social work fills the students with enthusiasm to work for the country or to make it a better place for living. They will make their existence meaningful to the country.

Students can do What Government cannot!

The government of the country has to deal with the whole population of the country. It has to manage the whole country. In such a situation, it is very difficult for the government to check that each and every group in the country is happy and contented. So the students can do what the government cannot do. The students can work for the betterment of the groups of people residing in the area surrounding them. The government cannot personally see that each and every person in the society is educated. But the students can teach the illiterate people around them how to read, write and count. They may also teach them the basic arithmetic. Teaching the people in this way is beyond the scope of the government but it is very easy for the students. The students may also make the people aware of their basic human rights and duties. They can educate the women about the various laws which have been formulated for their safety and benefit. They should spread awareness for the right to education. They may spread awareness about sanitation. They can tell the people about the harms of using open lands or fields for sanitation and the health risk associated with it. They can motivate the people to build toilets and use them. They can tell the benefits of living in the clean environment. These small steps taken by the students will definitely help the country. It is very difficult for the government to take care of all these while the government can take care of all the people of the country on a personal level. **But, the students can do it.**

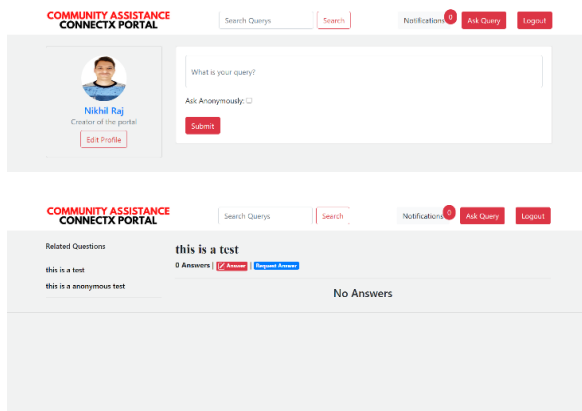
(a) Home-Page of the Web-Portal

(b) Query Registration

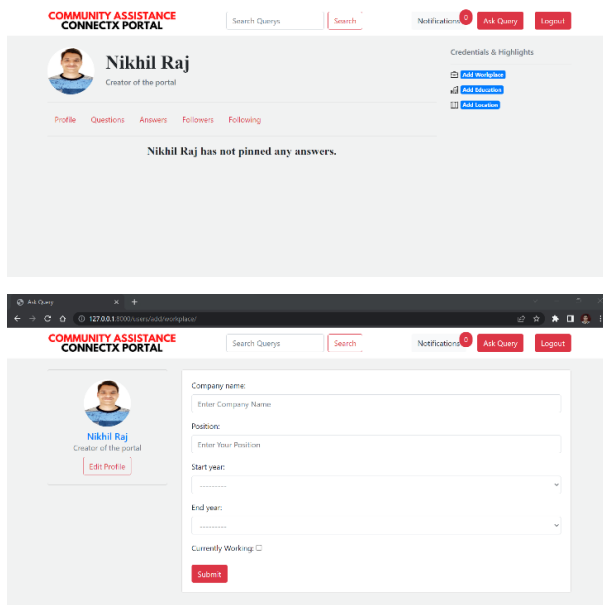
(c) Sign-Up Webpage

(d) Login Webpage

(e) Edit-Profile Webpage



(f) Ask-Query Webpage



(g) My-Profile Webpage

VI. CONCLUSION

In this research paper, we talked about web development and its various types and technologies.

The goal of this research paper is to present our concept of planning and building an interactive web portal for the support of people in need as well as aid givers. In such a circumstance, the entire linked community can be brought together on a single platform, and aid can be distributed more efficiently and effectively to those in need.

We've attached some photos of our ongoing project to give you a sense of the visual representation of what we're working on.

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