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Web Development of Automatic Cow Feeding Machine

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Abstract: A website is a collection of web pages and related content that is identified by a common domain name and published on at least one web server. Examples of notable websites are Google, Facebook, Amazon, and Wikipedia.

All publicly accessible websites collectively constitute the World Wide Web. There are also private websites that can only be accessed on a private network, such as a company's internal website for its employees.

Websites are typically dedicated to a particular topic or purpose, such as news, education, commerce, entertainment, or social networking. Hyperlinking between web pages guides the navigation of the site, which often starts with a home page.

Users can access websites on a range of devices, including desktops, laptops, tablets, and smartphones. The app used on these devices is called a web browser. With the help of this information, we create a website for providing all of the information to the reader.

I. INTRODUCTION

Websites primarily act as a bridge between one who wants to share information and those who want to consume it. A website is an online brochure where you can advertise your business offers. It gives you a platform to reach out to a far-and-wide global customer base. If you are a blogger, you have the possibility to influence your readers. You can show all your ideas and publish them on a website. If you have a business idea, then you don't have to wait. You can straightaway open an online shop and sell your products or services online. An added advantage is that the online shop will be open 24/7 for your clients, throughout the year.

You can communicate with your customers, giving them an opportunity to express themselves. You can provide valuable customer support by having a trouble-ticket system. In our website that gives information about the project called "AUTOMIC COW FEEEDING MACHINE". In which shows all of the information related to the topic in which contains like Introduction, Analysis, Design, Outcomes, Literature Review, Preferences. which will helpful for those whose actually need this. We done this website with the help of a Html and CSS framework.

II. METHODOLOGY

We used HTML5, CSS and JAVASCRIPT for designing web page with the help of a html we give the structure part of website and also used a CSS framework for a website for looking good as well as the giving the aesthetics looks. Also used JavaScript to create dynamic and interactive web content like applications and browsers

A. HTML

HTML5 is a markup language used for structuring and presenting content on the World Wide Web. It is the fifth and Fina major HTML version that is a World Wide Web Consortium (W3C) recommendation.



The current specification is known as the HTML Living Standard. It is maintained by the Web Hypertext Application Technology Working Group (WHATWG), a consortium of the major browser vendors (Apple, Google, Mozilla, and Microsoft). HTML5 was first released in a public-facing form on 22 January 2008, with a major update and "W3C Recommendation" status in October 2014. Its goals were to improve the language with support for the latest multimedia and other new features; to keep the language both easily readable by humans and consistently understood by computers and devices such as web browsers, parsers, etc., without XHTML's rigidity; and to remain backward-compatible with older software.

HTML5 is intended to subsume not only HTML 4 but also XHTML 1 and DOM Level 2 HTML. HTML5 includes detailed processing models to encourage more interoperable implementations; it extends, improves, and rationalizes the markup available for documents and introduces markup and application programming interfaces (APIs) for complex web applications. For the same reasons, HTML5 is also a candidate for cross-platform mobile applications because it includes features designed with low-powered devices in mind. Many new syntactic features are included. To natively include and handle multimedia and graphical content, the new <video>, <audio> and <canvas> elements were added, expandable sections are natively implemented through <summary>...</summary> and <details>...</details> rather than depending on CSS or JavaScript, and support for scalable vector graphics (SVG) content and MathML for mathematical formulas was also added.

To enrich the semantic content of documents, new page structure elements such as <main>, <section>, <article>, <header>, <footer>, <aside>, <nav>, and <figure> are added. New attributes were introduced, some elements and attributes were removed, and others such as <a>, <cite>, and <menu> were changed, redefined, or standardized. The APIs and Document Object Model (DOM) are now fundamental parts of the HTML5 specification. And HTML5 also better defines the processing for any invalid documents.

B. CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language such as HTML or XML (including XML dialects such as SVG, MathML or XHTML). CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.

CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility; provide more flexibility and control in the specification of presentation characteristics; enable multiple web pages to share formatting by specifying the relevant CSS in a separate.

CSS file, which reduces complexity and repetition in the structural content; and enable the .CSS file to be cached to improve the page load speed between the pages that share the file and its formatting. Separation of formatting and content also makes it feasible to present the same markup page in different styles for different rendering methods, such as on-screen, in print, by voice (via speech-based browser or screen reader), and on Braille-based tactile devices.

Cascading Style Sheets (CSS)	
<p>The official logo of the latest version, CSS 3</p>	
Filename extension	.css
Internet media type	text/css
Uniform Type Identifier (UTI)	public.css
Developed by	World Wide Web Consortium (W3C)
Initial release	17 December 1996; 25 years ago
Latest release	CSS 2.1 : Level 2 Revision 1 12 April 2016; 6 years ago
Type of format	Style sheet language
Container for	Style rules for HTML elements (tags)
Contained by	HTML Documents
Open format?	Yes
Website	www.w3.org/TR/CSS/#css

CSS also has rules for alternate formatting if the content is accessed on a mobile device. The name cascading comes from the specified priority scheme to determine which style rule applies if more than one rule matches a particular element. This cascading priority scheme is predictable. The CSS specifications are maintained by the World Wide Web Consortium (W3C). Internet media type (MIME type) text/CSS is registered for use with CSS by RFC 2318 (March 1998).

The W3C operates a free CSS validation service for CSS documents. In addition to HTML, other markup languages support the use of CSS including XHTML, plain XML, SVG, and XUL.

C. JAVASCRIPT

JavaScript often abbreviated JS, is a programming language that is one of the core technologies of the World Wide Web, alongside HTML and CSS. As of 2022, 98% of websites use JavaScript on the client side for webpage behavior, often incorporating third-party libraries.

All major web browsers have a dedicated JavaScript engine to execute the code on users' devices. JavaScript is a high-level, often just-in-time compiled language that conforms to the ECMAScript standard. It has dynamic typing, prototype-based object-orientation, and first-class functions.

It is multi-paradigm, supporting event-driven, functional, and imperative programming styles. It has application programming interfaces (APIs) for working with text, dates, regular expressions, standard data structures, and the Document Object Model (DOM).

The ECMAScript standard does not include any input/output (I/O), such as networking, storage, or graphics facilities. In practice, the web browser or other runtime system provides JavaScript APIs for I/JavaScript engines were originally used only in web browsers, but are now core components of some servers and a variety of applications. The most popular runtime system for this usage is Node.js.

Although Java and JavaScript are similar in name, syntax, and respective standard libraries, the two languages are distinct and differ greatly in design.

III. CONCLUSION

With the help of a html, CSS and JavaScript we create a website which will be shows the all information about project name called "AUTOMATIC COW FEEDING MACHINE." which will be helpful for the farmers to feed his cows.

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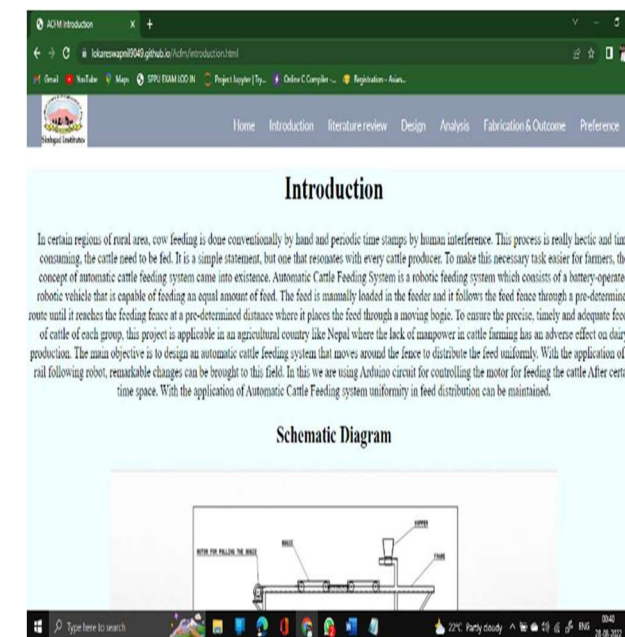
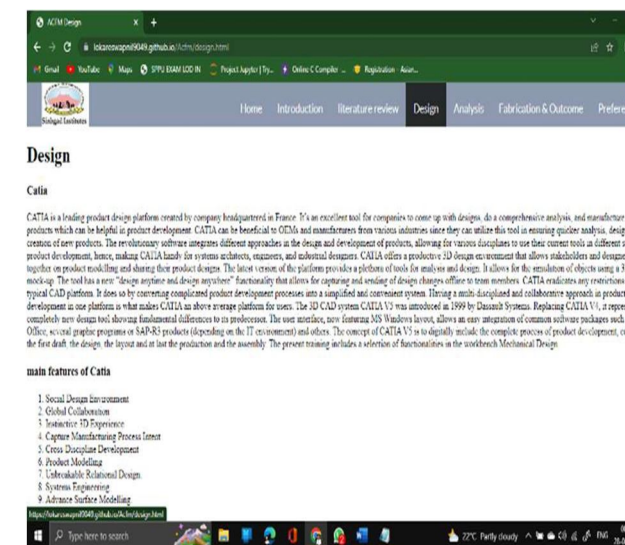
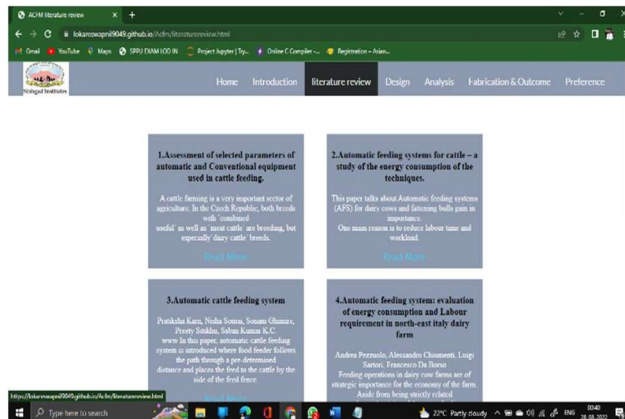
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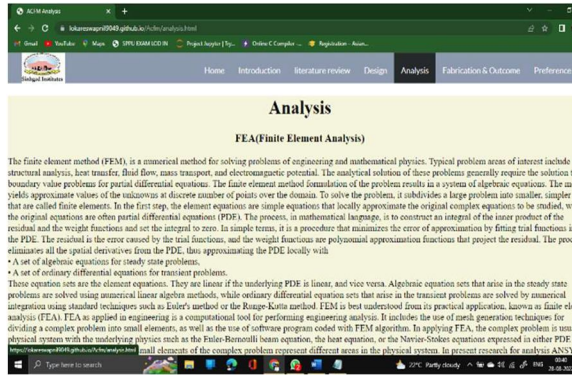
LINK FOR WEBSITE:

https://github.com/Lokareswapni9049/A_cfm.git

INTERFACE OF WEBSITE:







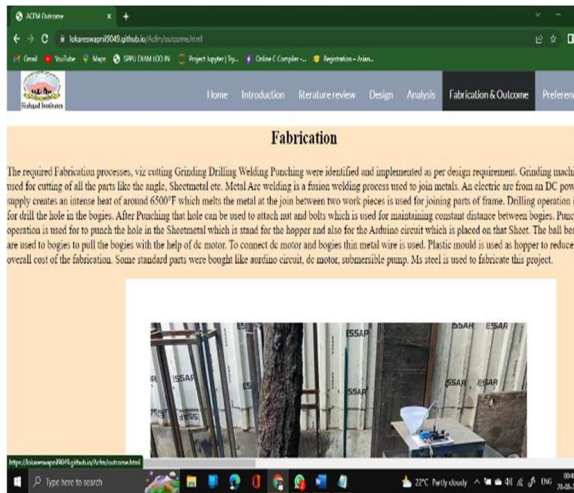
Analysis

FEA(Finite Element Analysis)

The finite element method (FEM), is a numerical method for solving problems of engineering and mathematical physics. Typical problem areas of interest include structural analysis, heat transfer, fluid flow, mass transport, and electrostatics potential. The analytical solution of these problems generally require the solution to boundary value problems for partial differential equations. The finite element method formulation of the problem results in a system of algebraic equations. The method yields approximate values of the unknowns at discrete number of points over the domain. To solve the problem, it subdivides a large problem into smaller, simpler parts that are called finite elements. In the first step, the element equations are simple equations that locally approximate the original complex equations to be studied, where the original equations are often partial differential equations (PDE). The process, in mathematical language, is to construct an integral of the inner product of the residual and the weight functions and set the integral to zero. In simple terms, it is a procedure that minimizes the error of approximation by fitting trial functions into the PDE. The residual is the error caused by the trial functions, and the weight functions are polynomial approximation functions that project the residual. The process eliminates all the spatial derivatives from the PDE, thus approximating the PDE locally with:


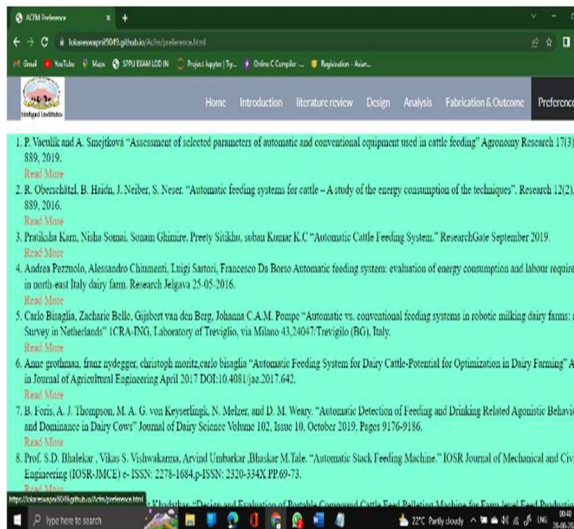
- A set of algebraic equations for steady state problems.
- A set of ordinary differential equations for transient problems.

These equations are the element equations. They are linear if the underlying PDE is linear, and vice versa. Algebraic equation sets that arise in the steady state problems are solved using numerical linear algebra methods, while ordinary differential equation sets that arise in the transient problems are solved by numerical integration using standard techniques such as Euler's method or the Runge-Kutta method. FEM is best understood from its practical application, known as finite element analysis (FEA). FEA is applied in engineering is a computational tool for performing engineering analysis. It includes the use of mesh generation techniques for dividing a complex problem into small elements, as well as the use of software program coded with FEM algorithm. In applying FEA, the complex problem is usually physical system with the underlying physics such as the Euler-Bernoulli beam equation, the heat equation, or the Navier-Stokes equations expressed in either PDF or <https://www.researchgate.net/publication/352929227> All elements of the complex problem represent different areas in the physical system. Its present research for analysis ANSYS.



Fabrication

The required Fabrication processes, viz cutting Grinding Drilling Welding Punching were identified and implemented as per design requirement. Grinding machine used for cutting of all the parts like the angle, Sheetmetal etc. Metal Arc welding is a fusion welding process used to join metals. An electric arc from an DC power supply creates an intense heat of around 6500°F which melts the metal at the join between two work pieces is used for joining parts of frame. Drilling operation is used to drill the hole in the bogies. After Punching that hole can be used to attach nut and bolts which is used for maintaining constant distance between bogies. Punching operation is used for to punch the hole in the Sheetmetal which is used for the hopper and also for the Arduino circuit which is placed on that Sheet. The ball bearings are used to bogies to pull the bogies with the help of dc motor. To connect dc motor and bogies that metal wire is used. Plastic mould is used as hopper to reduce the overall cost of the fabrication. Some standard parts were bought like Arduino circuit, dc motor, submersible pump, Ms steel is used to fabricate this project.

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