

# Content Management System and Automation of Model Cloning Scalable EAV Model in GNEISYS Framework

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**Abstract**-The objective of this paper is to development of website based on content management system and to automate the array creation GNEISYS framework using new custom add-ons. The proposed work contains static pages and dynamic pages like news and events, gallery and enquiry form .It is about managing the website content, pages and menus dynamically by the framework and delivering output as Bootstrap based webpages. In this framework the processes are mainly handled by two primary engine files called Desk (D series) to Display Table Series and Form needs by F series. This is to provide the user scalable input types for getting inputs. This approach is for meeting the needs of multiple table information storage like parent-child table in EAV model

**Keywords** - Content management (CM), Content Management System – CMS, D-Desk/table,F- Form, GNEISYS, Automate, Array creation,D series, F series, EAV model

## 1 Introduction

CMS helps to dynamically add the contents pages menus to the website.CMS in turn uses D Series and F series to load the contents.The input is been given in F series which will be processed and stored in database and the output is display as D series .CM is the set of processes and technologies that support the collection, managing, and publishing of information in any form or medium. Content may take the form of text (such as documents), multimedia files (such as audio or video files), or any other file type that follows a content lifecycle requiring management. Content management is an inherently collaborative process. The need for this paper is to avoid the duplication of the existing code infrastructure and also to standardize the structure of a data in terms of arrays. This will avoid the confusions of adding or modifying the existing functionalities and to avoid overlapping by cloning those data while creation and with some standard templates and regenerates that data in a structured array.

## 2 About Gneisys Framework

Gneisys is a information system framework that facilitates the BREAD (Browse, Read, Edit, Add, Delete) functionality. This framework is based on continuous improvement for real time problems and feedback. This framework gives the facility to build desk form based on definitions in Array structure. It is also a content management framework that facilitates the use of reusable components or customized software for

managing web content. It continuously improving to deliver scalable, reliable and effective solutions to changing needs. It shares aspects of a web application framework and a content management system (CMS).

### 3 Cloning

In computer science, cloning refers to the making of an exact copy of an object, frequently under the paradigm of instance-based programming, or object-oriented programming (OOP). The process of actually making another exact replica of the object instead of just its reference is called cloning. In most languages, the language or libraries can facilitate some sort of cloning. In Java, the Object class contains the clone() method, which copies the object and returns a reference to that copied object. Since it is in the Object class, all classes defined in Java will have a clone method available to the programmer (although to function correctly it needs to be overridden at each level it is used). To manage the database, it should be configured initially. The configuration of the database should be standardized to general format. The general format is managed by using the array structures. It is implemented by using PHP. It is also easily portable to other languages. The form is built using the array structures which is the input file. The output will be generated from the forms in the input file. Both the input as well as the output file resides in the same file.

### 4 EAV MODEL

Entity-attribute-value model (EAV) is a data model to describe entities where the number of attributes (properties, parameters) that can be used to describe them is potentially vast, but the number that will actually apply to a given entity is relatively modest. In mathematics, this model is known as a sparse matrix. EAV is also known as object-attribute-value model, vertical database model and open schema.

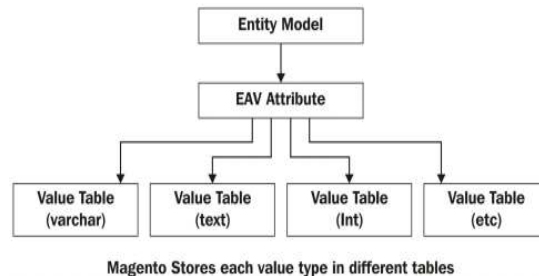


Fig 1.Entity Model

Figure 1 exemplifies how magento stores each value type in different tables using EAV model.

### 5 Content Management System

CMS is a computer system or an application that allows publishing, editing, or modification of content, as well as site maintenance, from a central page. The content on the World Wide Web consists of HTML, XML, and other documents and media files. This content can be published manually by editing and organizing files on a file system exposed to the web through a web server, requiring much technical expertise and tedious work. Content management systems store the actual content which can be text or images in a database.

The system then automatically pulls the content out and shows it on appropriate pages based on the rules. Content management systems were created to help people publish documents and media with less technical intervention and in a more consistent and automated fashion. Anything from a document management system, to a media asset management system, to a portal, to a blog system could be considered a CMS. CMS speeds up the content updating process and makes it easy for a non-technical user. This helps in

keeping the content up-to-date and timely. They are frequently used for editing, controlling, versioning and publishing specific documentation.

## 6 Bootstrap

Bootstrap is a free front-end framework for faster and easier web development. Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels and many other, as well as optional JavaScript plug-ins. Bootstrap also gives you the ability to easily create responsive designs. Most web developers are pretty familiar with Responsive web design by now. Basically, it uses a combination of a fluid layout and media queries to alter the design and layout of a website to fit different screen sizes. There are other considerations, too. For example, a lot of work has been done on responsive images, ensuring not only that images fit in a small-screen layout, but that the files downloaded to mobile devices are smaller, too.

By responsive menus, designers mean quite simply **navigation menus whose presentation or behavior is altered on different devices and screen widths**. One of the approaches to achieving this is by using CSS. This can be done with CSS media queries.

There are a few ways in which a menu could change on different devices:

- i) It could have different styling, fitting differently in the browser window, or possibly looking like a menu from website.
- ii) It could have different content, with the links adapting to the device being viewed on.
- iii) It could appear in a different location on the page or screen.

## 7 Existing Work

The existing system there is no responsive web designs and it always take Lots of time and money are spent managing static content: especially with sites that have hundreds or thousands of pages. Sites are growing and increasingly have lots of content. Successful sites rapidly accumulate large amounts of content and Keeping the Content Consistent: The design of pages and the style of these are inextricably linked with the content itself - updating content must use people with HTML experience or risk errors and style problems. And maintaining the content also very difficult.

## 8 Proposed Work

In proposed system the web pages can be managed dynamically by CMS with the help D and F series. The System gives features to add new pages, new menu and galleries. It has defined users and roles for users to add, delete or update content within the website. Each user can modify data according to his access rights. Only administrator can assign roles to users and has full control over each user and their activity.

- i. Quick and easy page management – Any approved user can quickly and easily publish online without complicated software or programming.
- ii. Flexibility for developers – Because it enables non-technical users to easily publish content, this frees up technical developers to focus on functionality and enhanced features.
- iii. Design is separate from content – easy to manipulate content without fear of accidentally changing the design.
- iv. Database-driven – need to change data once for it to be updated throughout your site.
- v. Mobile ready – It automatically scales your site to fit tablets, mobile devices and smaller browser windows.

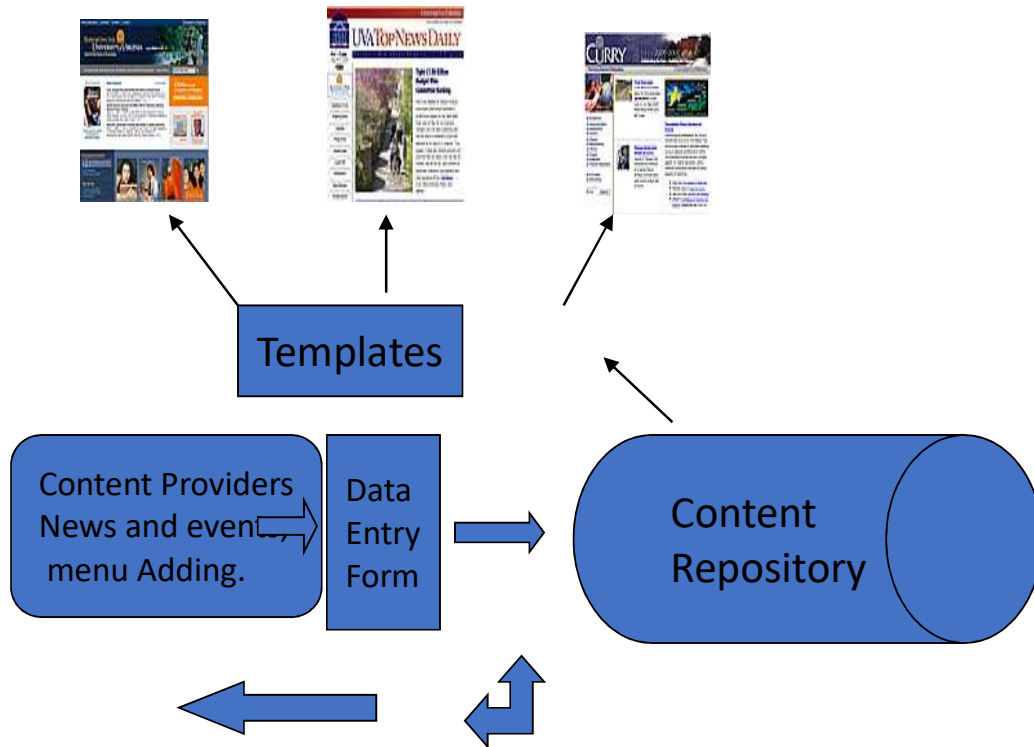


Fig 2Block Diagram

Figure 2 depicts the overall flow of the system. A CMS usually consists of a front-end editor for inputting content and a back end system for storing the content (usually a database). This content can then be formatted by a template and displayed in a variety of ways.

## 9 Technology Overview

### HTML

HTML stands for Hyper Text Markup Language. A markup language is a language that annotates text in a way that is syntactically distinguishable so that the computer can manipulate it. It is a set of markup tags used to describe web pages.

The tags are what separate normal text from HTML code. They are the words between the <angle-brackets>. Different tags will perform different functions, like rendering images or tables. It is a combination of words and symbols which give instructions on how the document will be presented. The tags themselves don't appear when you view your page through a browser, but their effects do.

Markup is what HTML tags do to the text inside them. HTML documents contain HTML tags and plain text. The content on a HTML page will be static. In order to change the content, the editor needs to have some knowledge about HTML and change the content accordingly.

## CSS

CSS stands for Cascading Style Sheets. It is used to control the style and layout of multiple web pages all at once. Styles define how to display HTML elements. CSS overrides the browser's default settings for interpreting how tags should be displayed, letting you use any HTML element indicated by an opening and closing tag to apply style attributes defined either locally or in a style sheet. External Style Sheets can save a lot of work. They are stored in CSS files. Style sheets contain rules, composed of selectors and declarations that define how styles will be applied. The selector (a redefined HTML element, class name, or ID name) is the link between the HTML document and the style.

## PHP

PHP is a [server-side scripting](#) language designed for [web development](#) but also used as a [general-purpose programming language](#). PHP code can be embedded with HTML, or it can be used in combination with web frameworks and various templating engines. PHP code is usually processed by a PHP interpreter, which is usually implemented as a web server's native [module](#). Since it is server-side scripting language, it helps to transmitted data to store in database.

## Javascript

JavaScript is a dynamic computer programming language. It is most commonly used as part of Web browsers, whose implementations allow the client side script to interact with the user, control the browser, communicate asynchronously, and alter the document content that is displayed. It is also used in server-side network programming with runtime environments such as Node.js, game development and the creation of desktop and mobile applications. With the rise of the single-page Web app and JavaScript-heavy sites, it is increasingly being used as a compile target for source-to-source compilers from both dynamic languages and static languages. JavaScript is classified as a prototype-based scripting language with dynamic typing and first-class functions. This mix of features makes it a multi-paradigm language, supporting object-oriented, imperative, and functional programming styles.

JavaScript is also used in environments that aren't Web-based, such as PDF documents, site-specific browsers, and desktop widgets. Newer and faster JavaScript virtual machines (VMs) and platforms built upon them have also increased the popularity of JavaScript for server-side Web applications. On the client side, JavaScript has been traditionally implemented as an interpreted language, but more recent browsers perform just-in-time compilation. JavaScript has become one of the most popular programming languages on the Web. The advent of Ajax returned JavaScript to the spotlight and brought more professional programming attention. The result was a proliferation of comprehensive frameworks and libraries, improved JavaScript programming practices, and increased usage of JavaScript outside Web browsers, as seen by the proliferation of server-side JavaScript platforms. The most common use of JavaScript is to add client-side behavior to HTML pages, a.k.a. Dynamic HTML (DHTML). Scripts are embedded in or included from HTML pages and interact with the Document Object Model (DOM) of the page. Some simple examples of this usage are: Loading new page content or submitting data to the server via AJAX without reloading the page (for example, a social network might allow the user to post status updates without leaving the page) Animation of page elements, fading them in and out, resizing them, moving them, etc. Validating input values of a Web form to make sure that they are acceptable before being submitted to the server.

## CONCLUSION

This proposed system helps to deal with the websites which maintains vast amount of data which handles the content dynamically. It has the important functions like separation of layout and content, editor and managing the workflow for the content. This model will help the developers to manage their code in a structured manner and also it will avoid the overlapping and the duplications of the software

## **ACKNOWLEDGEMENT**

We are thankful to Dr. K. Prakasan, Principal In-Charge, PSG College of Technology, Coimbatore for permitting us to take up this work. We extend our earnest gratitude to Dr A. Chitra, Professor and Head, Department of Computer Applications, PSG College of Technology, Coimbatore, for her support, encouragement and above all her ardent motivation.

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