

rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

CSS is designed primarily to enable the separation of presentation and content, including aspects such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

5.3 PHP LANGUAGE:

PHP is a server-side scripting language designed primarily for web development but also used as a general-purpose programming language. Originally created by Rasmus Lerdorf in 1994, the PHP reference implementation is now produced by The PHP Development Team. PHP originally stood for Personal Home Page, but it now stands for the recursive acronym PHP: Hypertext Preprocessor.

PHP code may be embedded into HTML or HTML5 markup, or it can be used in combination with various web template systems, web content management systems and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server software combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications.

The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP License. PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge.

The PHP language evolved without a written formal specification or standard until 2014, leaving the canonical PHP interpreter as a de facto standard. Since 2014 work has gone on to create a formal PHP specification.

HP development began in 1995 when Rasmus Lerdorf wrote several Common Gateway Interface (CGI) programs in C, which he used to maintain his personal homepage. He extended them to work with web forms and to communicate with databases, and called this implementation "Personal Home Page/Forms Interpreter" or PHP/FI.

PHP/FI could help to build simple, dynamic web applications. To accelerate bug reporting and to improve the code, Lerdorf initially announced the release of PHP/FI as "Personal Home Page Tools (PHP Tools) version 1.0" on the Usenet discussion group on June 8, 1995. This release already had the basic functionality that PHP has as of 2013. This included Perl-like variables, form handling, and the ability to embed HTML. The syntax resembled that of Perl but was simpler, more limited and less consistent.

5.4 DATABASE:

A Database Management System (DBMS) is computer software designed for the purpose of managing databases, a large set of structured data, and run operations on the data requested by numerous users. Typical examples of DBMSs include Oracle, DB2, Microsoft Access, Microsoft SQL Server, Firebird, PostgreSQL, MySQL, SQLite, FileMaker and Sybase Adaptive Server Enterprise. DBMSs are typically used by Database administrators in the creation of Database systems. Typical examples of DBMS use include accounting, human resources and customer support systems. Originally found only in large companies with the computer hardware needed to support large data sets, DBMSs have more recently emerged as a fairly standard part of any company back office.

A DBMS is a complex set of software programs that controls the organization, storage, management, and retrieval of data in a database. A DBMS includes:

A modeling language to define the schema of each database hosted in the DBMS, according to the DBMS data model.

The dominant model in use today is the ad hoc one embedded in SQL, despite the objections of purists who believe this model is a corruption of the relational model, since it violates several of its fundamental principles for the sake of practicality and performance. Many DBMSs also support the Open Database Connectivity API that supports a standard way for programmers to access the DBMS.

Data structures (fields, records, files and objects) optimized to deal with very large amounts of data stored on a permanent data storage device (which implies relatively slow access compared to volatile main memory). A database query language and report Students Management System Dept. Of CSE, SVCE 2020-2021 7 writer to allow users to interactively interrogate the database, analyze its data and update it according to the users privileges on data.

Data security prevents unauthorized users from viewing or updating the database. Using passwords, users are allowed access to the entire database or subsets of it called sub schemas. For example, an employee database can contain all the data about an individual employee, but one group of users may be authorized to view only payroll data, while others are allowed access to only work history and student data.

If the DBMS provides a way to interactively enter and update the database, as well as interrogate it, this capability allows for managing personal databases. However, it may not leave an audit trail of actions or provide the kinds of controls necessary in a multi-user organization. These controls are only available when a set of application programs are customized for each data entry and updating function.

A transaction mechanism, that ideally would guarantee the ACID properties, in order to ensure data integrity, despite concurrent user accesses (concurrency control), and faults (fault tolerance). It also maintains the integrity of the data in the database. The DBMS can maintain the integrity of the database by not allowing more than one user to update the same record at the same time. The DBMS can help prevent duplicate records via unique index constraints; for example, no two customers with the same customer numbers (key fields) can be

entered into the database. See ACID properties for more information (Redundancy avoidance).

When a DBMS is used, information systems can be changed much more easily as the organization's information requirements change. Organizations may use one kind of DBMS for daily transaction processing and then move the detail onto another computer that uses another DBMS better suited for random inquiries and analysis. Overall systems design decisions are performed by data administrators and systems analysts. Detailed database design is performed by database administrators.

5.5 SQL:

Structured Query Language (SQL) is the language used to manipulate relational databases. SQL is tied very closely with the relational model. In the relational model, data is stored in structures called relations or tables.

Data definition: Defining tables and structures in the database (DDL used to create, alter and drop schema objects such as tables and indexes)

5.6 XAMPP SERVER:

Xampp server installs a complete and ready-to-use development environment. Xampp server allows you to fit your needs and allows you to setup a local server with the same characteristics as your production.

In case of setting up the server and PHP on your own, you have two choices for the method of connecting PHP to the server. For many servers PHP has a direct module interface (also called SAPI). These servers include Apache, Microsoft Internet Information Server, Netscape and iPlanet servers. Many other servers have support for ISAPI, the Microsoft module interface (OmniHTTPd for example). If PHP has no module support for your web server, you can always use it as a CGI or FastCGI processor. This means you set up your server to use the CGI executable of PHP to process all PHP file requests on the serve