**Computerized Systems**

A computerized system is a computer system with a purpose. When we talk about a computer system, we are simply referring to the hardware and software that comprise the computer system. But when we talk about a computerized system, we are referring to a function (process or operation) integrated with a computer system and performed by trained people.

There are two major components to a computerized system:

1. The computer system that controls the function (process or operation)
2. The function (process or operation) that is controlled by the computer system

The controlling computer system is comprised of hardware and software, but in the case of cloud computing the computer system is comprised of virtual hardware (the virtual machine) and software (system software and application software).

The controlled function is comprised of equipment to be controlled and operating procedures performed by trained people. In some cases, the controlled function may not require equipment other than the operation of the computer system in which case the controlled function consists entirely of operating procedures (of the computer system) performed by trained people. (https://www.ibm.com/developerworks/community/blogs/obidan/entry/what\_is\_a\_computerized\_system?lang=en)

**Scheduling**

Scheduling is the process of arranging, controlling and optimizing work and workloads in a production process. Companies use backward and forward scheduling to allocate plant and machinery resources, plan human resources, plan production processes and purchase materials.

* Forward scheduling is planning the tasks from the date resources become available to determine the shipping date or the due date.
* Backward scheduling is planning the tasks from the due date or required-by date to determine the start date and/or any changes in capacity required.

The benefits of production scheduling include:

* Process change-over reduction
* Inventory reduction, leveling
* Reduced scheduling effort
* Increased production efficiency
* Labor load leveling
* Accurate delivery date quotes
* Real time information

Production scheduling tools greatly outperform older manual scheduling methods. These provide the production scheduler with powerful graphical interfaces which can be used to visually optimize real-time workloads in various stages of production, and pattern recognition allows the software to [automatically create scheduling opportunities](https://en.wikipedia.org/wiki/Automated_planning_and_scheduling) which might not be apparent without this view into the data. For example, an airline might wish to minimize the number of airport gates required for its aircraft, in order to reduce costs, and scheduling software can allow the planners to see how this can be done, by analyzing time tables, aircraft usage, or the flow of passengers. (https://en.wikipedia.org/wiki/Scheduling\_(production\_processes))

**Java Programming**

Java programming language was originally developed by Sun Microsystems which was initiated by James Gosling and released in 1995 as core component of Sun Microsystems' Java platform (Java 1.0 [J2SE]).

The latest release of the Java Standard Edition is Java SE 8. With the advancement of Java and its widespread popularity, multiple configurations were built to suite various types of platforms. Ex: J2EE for Enterprise Applications, J2ME for Mobile Applications.

The new J2 versions were renamed as Java SE, Java EE and Java ME respectively. Java is guaranteed to be **Write Once, Run Anywhere.**

Java is:

* **Object Oriented:** In Java, everything is an Object. Java can be easily extended since it is based on the Object model.
* **Platform independent:** Unlike many other programming languages including C and C++, when Java is compiled, it is not compiled into platform specific machine, rather into platform independent byte code. This byte code is distributed over the web and interpreted by virtual Machine (JVM) on whichever platform it is being run.
* **Simple:** Java is designed to be easy to learn. If you understand the basic concept of OOP Java would be easy to master.
* **Secure:** With Java's secure feature it enables to develop virus-free, tamper-free systems. Authentication techniques are based on public-key encryption.
* **Architectural-neutral:**Java compiler generates an architecture-neutral object file format which makes the compiled code to be executable on many processors, with the presence of Java runtime system.
* **Portable:** Being architectural-neutral and having no implementation dependent aspects of the specification makes Java portable. Compiler in Java is written in ANSI C with a clean portability boundary which is a POSIX subset.
* **Robust:** Java makes an effort to eliminate error prone situations by emphasizing mainly on compile time error checking and runtime checking.
* **Multithreaded:** With Java's multithreaded feature it is possible to write programs that can do many tasks simultaneously. This design feature allows developers to construct smoothly running interactive applications.
* **Interpreted:** Java byte code is translated on the fly to native machine instructions and is not stored anywhere. The development process is more rapid and analytical since the linking is an incremental and light weight process.
* **High Performance:** With the use of Just-In-Time compilers, Java enables high performance.
* **Distributed:** Java is designed for the distributed environment of the internet.
* **Dynamic:** Java is considered to be more dynamic than C or C++ since it is designed to adapt to an evolving environment. Java programs can carry extensive amount of run-time information that can be used to verify and resolve accesses to objects on run-time.

(http://www.tutorialspoint.com/java/java\_overview.htm)

**JavaScript**

JavaScript is a [programming language](http://techterms.com/definition/programming_language) commonly used in [web development](http://techterms.com/definition/web_development). It was originally developed by Netscape as a means to add dynamic and interactive elements to websites. While JavaScript is influenced by [Java](http://techterms.com/definition/java), the [syntax](http://techterms.com/definition/syntax) is more similar to [C](http://techterms.com/definition/cplusplus) and is based on ECMAScript, a scripting language developed by Sun Microsystems.

JavaScript is a client-side scripting language, which means the [source code](http://techterms.com/definition/sourcecode) is processed by the client's [web browser](http://techterms.com/definition/web_browser) rather than on the [web server](http://techterms.com/definition/web_server). This means JavaScript [functions](http://techterms.com/definition/function) can run after a webpage has loaded without communicating with the server. For example, a JavaScript function may check a web form before it is submitted to make sure all the required [fields](http://techterms.com/definition/field) have been filled out.

The JavaScript code can produce an error message before any information is actually transmitted to the server. Like server-side scripting languages, such as [PHP](http://techterms.com/definition/php) and [ASP](http://techterms.com/definition/asp), JavaScript code can be inserted anywhere within the [HTML](http://techterms.com/definition/html) of a [webpage](http://techterms.com/definition/webpage). However, only the [output](http://techterms.com/definition/output) of server-side code is displayed in the HTML, while JavaScript code remains fully visible in the source of the webpage. It can also be referenced in a separate [.JS](http://fileinfo.com/extension/js) file, which may also be viewed in a browser. (http://techterms.com/definition/javascript)

**PHP**

PHP (recursive acronym for PHP: Hypertext Preprocessor) is a widely-used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML. Instead of lots of commands to output HTML (as seen in C or Perl), PHP pages contain HTML with embedded code that does "something" (in this case, output "Hi, I'm a PHP script!"). The PHP code is enclosed in special [start and end processing instructions <?php and ?>](http://php.net/manual/en/language.basic-syntax.phpmode.php) that allow you to jump into and out of "PHP mode."

What distinguishes PHP from something like client-side JavaScript is that the code is executed on the server, generating HTML which is then sent to the client. The client would receive the results of running that script, but would not know what the underlying code was. You can even configure your web server to process all your HTML files with PHP, and then there's really no way that users can tell what you have up your sleeve.

The best things in using PHP are that it is extremely simple for a newcomer, but offers many advanced features for a professional programmer. Don't be afraid reading the long list of PHP's features. You can jump in, in a short time, and start writing simple scripts in a few hours.

Although PHP's development is focused on server-side scripting, you can do much more with it. Read on, and see more in the [What can PHP do?](http://php.net/manual/en/intro-whatcando.php) section, or go right to the [introductory tutorial](http://php.net/manual/en/tutorial.php) if you are only interested in web programming. (http://php.net/manual/en/intro-whatis.php)

**HTML**

HTML or HyperText Markup Language is the language of the web. All web pages are written in HTML. HTML defines the way that [images](http://webdesign.about.com/od/graphics/ht/image_code.htm), [multimedia](http://webdesign.about.com/od/multimedia/bb/multimedia-tips-for-web-pages.htm), and [text](http://webdesign.about.com/od/beginningtutorials/a/aa090800a.htm) are displayed in [web browsers](http://webdesign.about.com/od/browsers/p/bl_browsers.htm). It includes [elements](http://webdesign.about.com/od/htmltags/a/bl_index.htm) to connect your documents ([hypertext](http://webdesign.about.com/od/xhtml/g/bldefhypertext.htm)) and make your web documents interactive (such as with [forms](http://webdesign.about.com/od/forms/ss/html-forms-tutorial.htm)).

HTML is a defined standard markup language. That standard was developed by the [World Wide Web Consortium](http://webdesign.about.com/od/w3c/a/what_is_w3c.htm) (W3C). It is based upon [SGML](http://webdesign.about.com/od/xml/g/bldefsgml.htm) (Standard Generalized Markup Language). It is a language that uses [tags](http://webdesign.about.com/od/htmltags/g/bldeftag.htm) to define the structure of your text. Elements and tags are defined by the < and > characters.

But HTML is no longer the only [standard](http://webdesign.about.com/cs/html40/a/aa030303a.htm) for web development. As HTML was developed it got more and more complicated and the style and content tags combined into one language. Eventually, the W3C decided that there was a need for a separation between the style of a web page and the content.

A tag that defines the content alone, such as [H1](http://webdesign.about.com/od/htmltags/p/bltags_headings.htm), would remain in HTML while, tags that define style, such as [FONT](http://webdesign.about.com/od/htmltags/p/bltags_font.htm), are [deprecated](http://webdesign.about.com/od/htmltags/a/bltags_deprctag.htm) in HTML 4.01 [in favor of style sheets](http://webdesign.about.com/od/css/a/aa101706.htm). And the newest version of [HTML](http://webdesign.about.com/od/html5/qt/what_is_html5.htm) is [HTML5](http://webdesign.about.com/od/html5/qt/html-5-information.htm). HTML5 adds more features into HTML and removes some of the strictness that was imposed by XHTML. But HTML5 is still a markup language. (http://webdesign.about.com/od/htmlxhtmltutorials/p/what-are-markup-languages.htm)

**CSS**

CSS stands for Cascading Style Sheets. CSS describes how HTML elements are to be displayed on screen, paper, or in other media. CSS saves a lot of work. It can control the layout of multiple web pages all at once. (www.w3schools.com/css/css\_intro.asp)

**Markup language**

A markup language is a language that annotates text so that the computer can manipulate the text. Most markup languages are human readable because the annotations are written in a way to distinguish them from the text. For example, with HTML, XML, and XHTML, the markup tags are < and >. Any text that appears within one of those characters is considered part of the markup language and not part of the annotated text. The markup is the instructions for displaying or printing the text.

Markup doesn’t have to be computer readable. Annotations done in print or in a book are also markup. For example, many students in school will highlight certain phrases in their text books. This indicates that the highlighted text is more important than the surrounding text. The highlight color is markup.

Markup becomes a language when rules are codified around how to write and use the markup. That same student could have their own “note taking markup language” if they codified rules like “purple highlighter is for definitions, yellow highlighter is for exam details, and pencil notes in the margins are for additional resources.” But most markup languages are defined by an outside authority for use by many different people. (http://webdesign.about.com/od/htmlxhtmltutorials/p/what-are-markup-languages.htm)

**Web browser (Browser)**

Short for Web browser, a browser is a [software application](http://www.webopedia.com/TERM/A/application.html) used to locate, retrieve and display content on the [World Wide Web](http://www.webopedia.com/TERM/W/World_Wide_Web.html), including [Web pages](http://www.webopedia.com/TERM/W/web_page.html), images, video and other files. As a [client/server model](http://www.webopedia.com/TERM/C/client_server_architecture.html), the browser is the [client](http://www.webopedia.com/TERM/C/client.html) run on a computer that contacts the Web [server](http://www.webopedia.com/TERM/S/server.html) and requests information. The [Web server](http://www.webopedia.com/TERM/W/Web_server.html)s ends the information back to the Web browser which displays the results on the computer or other Internet-enabled device that supports a browser. (http://www.webopedia.com/TERM/B/browser.html)

**Local Area Network**

A **local area network (LAN)** supplies networking capability to a group of computers in close proximity to each other such as in an office building, a school, or a home. LANs are built to enable sharing of resources - like files, printers, games or other applications - and services - like email or Internet access.

Each of these local networks may stand alone (disconnected from any other network) or may connect to other LANs and additionally a [WAN](http://compnetworking.about.com/library/glossary/bldef-wan.htm) (such as the Internet). Traditional home networks are individual LANs, although it is also possible to have multiple LANs within a home (such as in homes that [set up a guest network](http://compnetworking.about.com/od/wifihomenetworking/fl/Setting-Up-and-Using-a-Guest-Network-for-Home.htm)). (http://compnetworking.about.com/cs/lanvlanwan/g/bldef\_lan.htm)

**Wide Area Network**

A wide area network (WAN) is a network that exists over a large-scale geographical area. A WAN connects different smaller networks, including local area networks (LAN) and metro area networks (MAN). This ensures that computers and users in one location can communicate with computers and users in other locations. WAN implementation can be done either with the help of the public transmission system or a private network. (https://www.techopedia.com/definition/5409/wide-area-network-wan)

**WAMP**

WAMP is sometimes used as an abbreviated name for the software stack Windows, Apache, MySQL, PHP. It is derived from LAMP which stands for Linux, Apache, MySQL, and PHP. As the name implies, while LAMP is used on Linux servers, WAMP is used on Windows servers. Because WordPress isn’t usually installed on Windows Servers, WAMP has become popular among developers as a method of [installing WordPress on their personal computers](http://www.wpbeginner.com/wp-tutorials/how-to-install-wordpress-on-your-windows-computer-using-wamp/).

The “A” in WAMP stands for Apache. [Apache](http://www.wpbeginner.com/glossary/apache/) is server software that is used to serve webpages. Whenever someone types in your WordPress website’s URL, Apache is the software that “serves” your WordPress site.

The “M” in WAMP stands for MySQL. [MySQL](http://www.wpbeginner.com/glossary/mysql/) is a database management system. It’s job in the software stack is to store all of your website’s content, user profiles, comments, etc.

The “P” in WAMP stands for PHP. PHP is the programming language that WordPress is written in. It is also the piece that holds the entire software stack together. It runs as a process in Apache and communicates with the MySQL database to dynamically build your webpages.

WAMP software stack can be downloaded from WAMP server project’s [download page](http://www.wampserver.com/en/). For Microsoft windows users, it comes in an easy installation package with a control panel. Launching the WAMP manager control panel starts Apache, PHP and MySQL web services on the local computer. WAMP and other software stacks with similar names and features are a good way to develop websites on a local machine without transferring the files to a live website. Theme designers and developers prefer to have this because it speeds up their development time. (http://www.wpbeginner.com/glossary/wamp/)

**Programming Language**

Programming Language is a coded language used by [programmers](http://www.businessdictionary.com/definition/programmer.html) to [write](http://www.businessdictionary.com/definition/write.html) [instructions](http://www.businessdictionary.com/definition/instructions.html) that a [computer](http://www.businessdictionary.com/definition/computer.html) can understand to do what the programmer (or the computer user) [wants](http://www.businessdictionary.com/definition/want.html). The most basic ([called](http://www.businessdictionary.com/definition/call.html) low-level) [computer language](http://www.businessdictionary.com/definition/computer-language.html) is the [machine language](http://www.businessdictionary.com/definition/machine-language.html) that [uses](http://www.businessdictionary.com/definition/use.html) binary ('1' and '0') [code](http://www.businessdictionary.com/definition/code.html) which a computer can run ([execute](http://www.businessdictionary.com/definition/execute.html)) very fast without [using](http://www.businessdictionary.com/definition/user.html) any [translator](http://www.businessdictionary.com/definition/translator.html) or [interpreter](http://www.businessdictionary.com/definition/interpreter.html) [program](http://www.businessdictionary.com/definition/program.html), but is tedious and [complex](http://www.businessdictionary.com/definition/complex.html). The high-level languages (such as Basic, C, [Java](http://www.businessdictionary.com/definition/Java.html)) are much simpler (more 'English-like') to use but [need](http://www.businessdictionary.com/definition/need.html) to use another program (a [compiler](http://www.businessdictionary.com/definition/compiler.html) or an interpreter) to convert the high-level code into the [machine code](http://www.businessdictionary.com/definition/machine-code.html), and are therefore slower. (http://www.businessdictionary.com/definition/programming-language.html)

**Database**

A database is a collection of [information](http://searchsqlserver.techtarget.com/definition/information) that is organized so that it can easily be accessed, managed, and updated. In one view, databases can be classified according to types of content: bibliographic, full-text, numeric, and images.

In computing, databases are sometimes classified according to their organizational approach. The most prevalent approach is the [relational database](http://searchsqlserver.techtarget.com/definition/relational-database), a tabular database in which data is defined so that it can be reorganized and accessed in a number of different ways. A distributed database is one that can be dispersed or replicated among different points in a network. An [object-oriented programming](http://searchsoa.techtarget.com/definition/object-oriented-programming) database is one that is congruent with the data defined in object classes and subclasses.

Computer databases typically contain aggregations of data records or files, such as sales transactions, product catalogs and inventories, and customer profiles. Typically, a database manager provides users the capabilities of controlling read/write access, specifying report generation, and analyzing usage. Databases and database managers are prevalent in large [mainframe](http://searchdatacenter.techtarget.com/definition/mainframe) systems, but are also present in smaller distributed [workstation](http://searchmobilecomputing.techtarget.com/definition/workstation) and mid-range systems such as the AS/400 and on personal computers. [SQL](http://searchsqlserver.techtarget.com/definition/SQL) (Structured Query Language) is a standard language for making interactive queries from and updating a database such as IBM's [DB2](http://searchdatacenter.techtarget.com/definition/DB2), Microsoft's [SQL Server](http://searchsqlserver.techtarget.com/definition/SQL-Server), and database products from [Oracle](http://searchoracle.techtarget.com/definition/Oracle), [Sybase](http://searchenterpriselinux.techtarget.com/definition/Sybase), and Computer Associates. (http://searchsqlserver.techtarget.com/definition/database)

**Netbeans**

NetBeans is an open-source project dedicated to providing rock solid software development products (the [NetBeans IDE](https://netbeans.org/features/ide/index.html) and the [NetBeans Platform](https://netbeans.org/features/platform/index.html)) that address the needs of developers, users and the businesses who rely on NetBeans as a basis for their products; particularly, to enable them to develop these products quickly, efficiently and easily by leveraging the strengths of the Java platform and other relevant industry standards. (https://netbeans.org/about/)

**MySQL**

MySQL is an open source relational database management system ([RDBMS](http://searchsqlserver.techtarget.com/definition/relational-database-management-system)) based on Structured Query Language ([SQL](http://searchsqlserver.techtarget.com/definition/SQL)).

MySQL runs on virtually all platforms, including [Linux](http://searchenterpriselinux.techtarget.com/definition/Linux), [UNIX](http://searchenterpriselinux.techtarget.com/definition/Unix), and [Windows](http://searchwindowsserver.techtarget.com/definition/Windows). Although it can be used in a wide range of applications, MySQL is most often associated with web-based applications and online publishing and is an important component of an [open source](http://searchenterpriselinux.techtarget.com/definition/open-source) enterprise stack called [LAMP](http://searchenterpriselinux.techtarget.com/definition/LAMP). LAMP is a Web development platform that uses [Linux](http://searchenterpriselinux.techtarget.com/definition/Linux) as the operating system, [Apache](http://searchcio-midmarket.techtarget.com/definition/Apache) as the Web server, [MySQL](http://searchenterpriselinux.techtarget.com/definition/MySQL) as the relational database management system and [PHP](http://searchenterpriselinux.techtarget.com/definition/PHP) as the object-oriented scripting language. (http://searchenterpriselinux.techtarget.com/definition/MySQL)

**Operating System**

The **o**perating **s**ystem (**OS**) is the most important program that runs on a computer. Every general-purpose computer must have an operating system to run other programs and [applications](http://www.webopedia.com/TERM/A/application.html).

Computer operating systems perform basic tasks, such as recognizing [input](http://www.webopedia.com/TERM/I/input.htm) from the [keyboard](http://www.webopedia.com/TERM/K/keyboard.htm), sending [output](http://www.webopedia.com/TERM/O/output.htm) to the [display screen](http://www.webopedia.com/TERM/D/display_screen.htm), keeping track of [files](http://www.webopedia.com/TERM/F/file.htm) and [directories](http://www.webopedia.com/TERM/D/directory.htm) on the [disk](http://www.webopedia.com/TERM/D/disk.htm), and controlling [peripheral devices](http://www.webopedia.com/TERM/P/peripheral_device.htm) such as [printers](http://www.webopedia.com/TERM/D/disk_drive.htm).

For large systems, the operating system has even greater responsibilities and powers. It is like a traffic cop -- it makes sure that different programs and [users](http://www.webopedia.com/TERM/U/user.htm) running at the same time do not interfere with each other. The operating system is also responsible for [security](http://www.webopedia.com/TERM/S/security.htm), ensuring that unauthorized users do not [access](http://www.webopedia.com/TERM/A/access.htm) the system. (http://www.webopedia.com/TERM/O/operating\_system.html)

**Pre-natal Care**

* Medical care especially for pregnant woman
* Important for a healthy pregnancy
* Includes regular checkups and prenatal testing
* Best to begin as soon as you know you are pregnant

The key to having a healthy baby is taking good care of your own health. The healthier you are, the stronger you and your baby are likely to be.

We all want to be healthy, but sometimes it is hard to know what we should do. If you are pregnant, or thinking about becoming pregnant, you may have some questions. Here are some of the most commons questions we hear women ask about prenatal care. (https://www.plannedparenthood.org/learn/pregnancy/prenatal-care)

**Clinic**

* A class of medical instruction in which patients are examined and discussed
* A group meeting devoted to the analysis and solution of concrete problems or to the acquiring of specific skills or knowledge
* Facility that offers professional services or consultation usually at discounted rates

(http://www.merriam-webster.com/dictionary/clinic)