Server Side Languages.

these languages are commonly used to create web pages. They enable execution of some or all programming statements that allow applications to process information

Code is executed by Web servers and is stored in files called applications. Web servers are responsible for assigning execute permissions to the applications

In some situations HTML and XHTML pages contain code.
Server side programming languages support the installation and activation of an interpreter on the web server. The interpreter is used to execute the code.

Server side scripts are used for browser detection, database connectivity and Cookie creation
In addition, these scripts can be used for logon scripts, hit counters, file uploads and downloads
Common server side languages are PHP, PERL, ASP, C, C++, C# and Java

PHP

This is a server side language used to create dynamic web pages.
Although PHP is embedded in HTML pages, it is executed on a web server.
An example of PHP CGI application code is displayed on screen

* The code used to display the message 'Hello, world' in XHTML creates a report that identifies the browser used to access the web page.
You can place the PHP script in the CGI bin directory of a web server

* When the PHP CGI application is executed, the PHP server side code detects and reports the user agent used for accessing it. This information can then be used to customize a user's experience, based on the browser being used.

PERL

* PERL is a cross-platform language used for web server processes. Using PERL, you can write customized CGI and Sys. mgmt programs.

* The first line in the PERL program code begins with a #! character called the Shebang

```
#!/usr/bin/PERL
```

This is used to specify the location of the PERL interpreter. If the shebang line is not created properly, problems occur with the PERL scripts

* ASP

ASP is a server side scripting language that has largely been replaced by .Net.
ASP applications can be created using VBScript.
An alternative to ASP is PHP.

* C

C is a compiled language used for the development of standalone applications
C is known as a procedural language, because it uses subprograms to accomplish tasks in an application.
Depending on the language used, subprograms stored with in an application are called by various terms.
In C subprograms are called functions.

* Standard libraries used by C are designed for the purpose of reducing coding time. These libraries eliminate the tedious task of writing out hundreds of lines of code each time an application is created.
C has many library files that are standardized and easily accessible.

* The library stdio.h is the standard input/output library, and it is used to enter information into applications

* C++ is an object orientated language, based on C However it is non procedural in nature. C++ uses objects that can be manipulated within the program to create powerful and efficient code

* You need to compile all C++ programs on specific computer types, such as IBM compatible computers that run windows.
When a C++ program is compiled to a specific computer type, you need to use an emulator to run the program on other computer types.
Some common object orientated languages terms used by C++, C# and VB are
  - object
  - abstraction
  - polymorphism
  - inheritance

* **object**
This is a distinct part of an application. It has specific states and behaviours that can be customized to perform specific tasks.
An object is also called an instance because it can be duplicated and then manipulated in a program.

* **abstraction**
This concept is what distinguishes an object from all other instances of an object

* **Class**
This is a group of objects that have similar characteristics

* Polymorphism
This is the ability of an object to respond according to its place in an application.

* Inheritance
This is the mechanism by which a class can share its characteristics with another class.
Characteristics that can be inherited include state, structure or behaviour of an object.

* Java is an object orientated compiled language that runs on the OSs that have a Java interpreter installed.
Using Java, you can create powerful applications. Instead of compiling Java applications to specific systems, you can compile it to a specific Java interpreter

* Java is a programming language used to create Java server pages, Application program interfaces (APIs) and Java servlets.
JSP is a technology based on java commands embedded into XHTML and HTML code
a Java servlet is a program that is stored and executed from a remote server

* When using Java servlets, you need to compile the servlets and place it on a server that can manage it.
Apache Tomcat is the most popular web server that supports JSP and servlets. Before compiling a Java application, the text file containing the Java code has the '.java' extension. After the compilation, it has the '.jar' extension

* C# is a powerful and compiled object-orientated programming language. It is also called Visual C#
C# has attributes that enable easier application and interface development for the windows OS

* Server Side Includes (SSIs) are special command codes within XHTML or HTML pages that instruct the web server to perform an action.
SSI instructions are written in SGML
SSI is an effective alternative to CGI because its instructions do not use languages such as JavaScript, VB or Java

* SSI instructions are used to dynamically add content to a web page before it is downloaded to a user.
Using SSI is a convenient way to store the results of a database query in a single page.
You can also use SSI to specify the last Modification time of the displayed document.

* SSI can be used to insert a footer at the bottom of all pages.
The footer can include text, such as the current date or a customized message.
Also, you can use SSI to add the current date as a timestamp to a page

* Before processing SSI instructions for individual users requests, the web server that supports SSI first reads each HTML page for SSI directives.
The file name extensions for XHTML or HTML files that use SSI instructions are '.shtml' or '.shtm'

* The SSI feature may be disabled in some servers. To enable SSI in an apache server, you must edit the httpd.conf file.
This file contains ~~an~~ the instructions needed for the server to process SSI instructions contained in HTML pages.
To enable SSI in MS-IIS, you need to select the features in GUI

* At times, a web server may have SSI capability, but may not be able to detect the standard '.shtml' or '.shtm' extensions. In such a situation, you need to locate the supported SSI extension type. Alternatively, you can define a Multipurpose Internet Mail Extension (MIME) for the supported SSI extension types for the web server