

Quizlet

IB Computer Science - Option C - Web Science ^{31 terms} | yvettalinn

Internet	The Internet is a massive network of networks, a networking infrastructure. It connects millions of computers together globally, forming a network in which any computer can communicate with any other computer as long as they are both connected to the Internet. Information that travels over the Internet does so via a variety of standards known as protocols.	☆
World Wide Web	A global system of hypertext documents, created using the Hypertext Markup Language and accessed over the internet, containing internal links and/or links to other documents	☆
Difference between the internet and the World Wide Web	Internet is the infrastructure which enables computers, servers, and other devices to establish communication by means of cables and satellite connection. Whereas, World Wide Web is the use of the internet to access data and enable data exchange between users all over the globe.	☆
Evolving web	The web was first a platform of data exchange	☆

	<p>with a limited number of users with applications. Then commercial applications were added to the web. With web 2.0, users demand for social aspects has been added to help computers understand the meaning behind the webpages and the interaction between the computer and the users. Due to the progress of technology and availability of high speed internet, mobile devices and connected things such as fridges, houses, cars will play a bigger role.</p>	<p>Advertisement Upgrade to remove ads</p>
<p>Hypertext Transfer Protocol (HTTP)</p>	<p>(HTTP) A protocol that is a communications standard for sending and receiving documents on the Web; it transfers files from a web server to a web browser and interprets hyperlinks in order to navigate to a specific location. It describes the data exchange in the World Wide Web, which port to use and how the data should be formatted.</p>	<p>☆</p>
<p>Hypertext Transfer Protocol Secure (HTTPS)</p>	<p>A layering of the Hypertext Transfer Protocol (HTTP) on top of the SSL/TLS protocol, thus adding the security capabilities of SSL/TLS to standard HTTP communications. (It is similar with HTTP but is extended with a security component that encrypts that data exchange between sender and receiver)</p>	<p>☆</p>
<p>Hypertext Markup Language (HTML)</p>	<p>A language that is the standard markup language used to create web pages. (standards for formatting content that is to be displayed in computer browsers)</p>	<p>☆</p>

	Can be rendered提供 by all internet browsers; use of tags to delimit劃界 statements	
Extensible Markup Language (XML)	<p>A meta-language used to represent and manipulate data elements. Unlike other mark-up languages, XML permits the manipulation of a document's data elements. XML facilitates the exchange of structured documents such as orders and invoices over the internet.</p> <p>It does not contain a fixed set of tags, therefore, new ones can be added</p>	☆
Cascading Style Sheet (CSS)	A style sheet language used for describing the look and formatting of a document written in a markup language.	☆
Extensible Style Sheet Language Transformations (XSLT)	A language for transforming XML documents into other XML documents, or other objects such as HTML for web pages, plain text or into XSL Formatting Objects which can then be converted to PDF, PostScript and PNG.	☆
Javascript	A web-scripting code that interacts with HTML code to create dynamic content, such as rollovers or interactive forms on a web page.	☆
Uniform Resource Identifier (URI)	A string of characters used to identify a resource. Such identification enables interaction with representations of the resource over a network, typically the World Wide Web, using specific protocols.	☆
Uniform Resource Locator (URL)	An address that can be used to locate a resource on the web. URLs usually have the form, <code>http://www.example.com/index.html</code> ,	☆

	<p>which indicates the protocol (http), a hostname (ww.example.com), and a file name (index.html).</p> <p>All URLs are URIs, but not all URIs are URLs.</p>	
Uniform Resource Name	<p>A unique identifier, that refers to a specific resource. It is the historical name for URI which uses the urn scheme, such as <URN> ::= "urn:" <NID> ":" <NSS>. It is required to remain globally unique and persistent even when the resource ceases to exist or becomes unavailable, and to any other URI with the properties of a name.</p>	☆
Difference Between URI, URL, URN	<p>All of them relate to the some network based resource.</p> <p>URI: contain the form of URN or URL, it is a generic identifier</p> <p>URL: typical web page (name host, resource name, location on the web)</p> <p>URN: need to have global uniqueness</p>	☆
Common Gateway Interface	<p>A program designed to accept and return data that conforms to the CGI specification. CGI programs are typically written in scripting pages such as Perl and are the most common way for Web servers to interact dynamically with users. Webpages that contain forms typically use a CGI program to process performs data once it is submitted.</p>	☆
Cloud computing	<p>A type of internet-based computing that</p>	☆

	<p>provides shared computer processing resources and data to computers and other devices on demand. It is a model for enabling ubiquitous無處不在的, on-demand access to a shared pool of configurable可配置的 computing resources, which can be rapidly provisioned and released with minimal management effort.</p>	
<p>Distinguish between a cloud computing model and a conventional client server model in providing computing services.</p>	<p>Traditional client-server model: Servers on the one of the premises前提 of the company; Connected to a Local Area Network (LAN); Maintained by IT team of that organization;</p> <p>Cloud computing: Servers outsourced to third party; Maintained by third party technical support team; Based on Internet connectivity; Connected to a WAN;</p>	☆
<p>Protocol</p>	<p>It is a rule that must be followed for a certain successful process to take place</p>	☆
<p>Standard</p>	<p>It is a set of technical specifications that should be followed to allow for functionality</p>	☆
<p>Internet Protocol (IP)</p>	<p>It has the task of delivering packets from the source host to the destination host solely based on the IP addresses in the packet headers. For this purpose, IP defines packet structures that encapsulate總結 the data to be delivered. It also defines addressing methods that are used to label the datagram with source and destination information.</p>	☆
<p>Transmission Control Protocol (TCP)</p>	<p>It provides reliable, ordered and error-checked delivery of a stream of octets八位字節 between</p>	☆

	applications running on hosts communicating over an IP network	
File Transfer Protocol (FTP)	It is built on a client-server model architecture and uses separate control and data connections between the client and the server	☆
Static web page	They remain with the same content any layout until the web designer changes them	☆
Dynamic web page	The content and appearance of the web page change design on the user's input	☆
Client-side script	<p>(Javascript)</p> <p>The client is the system on which the Web browser is running. Client-side scripts are interpreted by the browser. The process is:</p> <ol style="list-style-type: none"> 1. User requests a Web page from the server 2. Server finds the page and sends it to the user 3. Page is displayed on the browser with any scripts running during or after display <p>It is used to make Web pages change after they arrive at the browser. It is useful for making pages a bit more interesting and user-friendly. It can also provide useful gadgets/小器具. On the whole, it is used for appearance and interaction.</p> <p>Client-side scripts rely on the user's computer. If computer is slow they may run slowly. They may not run at all if the browser does not understand the scripting language. As they have to run on the user's system the code which makes up the</p>	☆

	script is there in the HTML for the user to look at (and copy or change).	
Server-side script	<p>(PHP and ASP net)</p> <p>The server is where the Web page and other content lives. The server sends pages to the user/client on request. The process is:</p> <ol style="list-style-type: none"> 1. User requests a Web page from the server 2. Script in the page is interpreted by the server creating or changing the page content to suit the user and the occasion and/or passing data around 3. Page in its final form is sent to the user and then cannot be changed using server-side scripting <p>It allows a level of privacy, personalisation and provision of information that is very powerful.</p> <p>The script is interpreted by the server meaning that it will always work the same way. Server-side scripts are never seen by the user (so they can't copy your code). They run on the server and generate results which are sent to the user. Running all these scripts puts a lot of load onto a server but none on the user's system.</p>	☆
Web indexing	It allows to quickly give the user search results based on the subpages meta data, content or other sources	☆
White hat search engine	It refers to the usage of optimisation strategies, techniques, and tactics that focus on a human	☆

optimisation	audience opposed to search engines and completely follows search engines rules and policies. Technique used: keywords, and keyword analysis, doing research, rewriting meta tags in order for them to be more relevant.	
Black hat search engine optimisation	It refers to the use of aggressive search engine optimisation strategies, techniques, and tactics that focus only on search engines and not a human audience, and usually does not obey search engines guidelines. Technique used: keyword stuffing, link farming, hidden texts and links, and blog content spamming.	☆
Damian Name Server (DNS)	It is a system that computers use to get the IP addresses of servers. For example, it can be used to get the IP address of www.google.com, and then use it to get the page.	☆