Hypertext Transfer Protocol (HTTP)
The most commonly used kind of URI starts with ***http:*** and identifies a resource to be retrieved over the Hypertext Transfer Protocol.

Finding Information Online

To **surf** or **navigate** the World Wide Web, access and retrieve web pages or websites, you need a computer with an Internet connection and a **web browser**, a software application used to locate, retrieve and display content on the World Wide Web.

The major web browsers are Internet Explorer, Opera, Firefox, Safari and Chrome. **Internet Explorer** is one of the oldest browsers predominantly used on Windows computers. **Opera** is a web browser developed by Opera Software. The latest version is available for Microsoft Windows, OS X, and Linux operating systems, and uses the Blink layout engine. **Firefox** is a free and open source web browser developed in 2002 for Microsoft Windows, Mac OS X, and Linux coordinated by Mozilla Corporation and Mozilla Foundation. **Safari** is a web browser that was created in 2003 by Apple Inc. included with the OS X and iOS operating systems but is also available for Windows computers. The most recent major entrant to the browser market is **Chrome**, a freeware web browser developed by Google in 2008.

The web browser stores **cookies** – small pieces of data sent from a website. Cookies were designed to be a reliable mechanism for websites to remember information (such as items added in the shopping cart in an online store) or to record the user's browsing activity.

The most common way to find information online is with a software system designed to search for information on the World Wide Web – a **web search engine** (e.g. Google, Yahoo, Bing), where the website information is compiled by **spiders**, computer-robot programs that collect information from sites by using keywords, or through **web indexes**, subject directories that are selected by people and organized into hierarchical subject categories. Some **web portals** – websites that offer all types of services, e.g. email, forums, search engines, etc. – are also good starting points.

The **search results** are generally presented in a line of results often referred to as **search engine result pages** (**SERPs**). The information may be a mix of web pages, images, and other types of files. For understanding SERPs, we need to see that it falls into two categories. There are **paid text ads** off to the side and at the top. In the middle of the page, there are a search engine's unpaid results often referred to as **organic results**, natural, or earned results.

The most relevant website addresses can be stored in your computer using the **bookmarks** or **favourites** function in your browser. Websites usually have a beginning page or **home page**. From this starting point you can navigate by clicking your mouse on hyperlinks in texts or images.

LIVEWORKSHEETS

World Wide Web

While the Internet is the physical network of computers all over the world, the World Wide Web is a **virtual network** of **websites** connected by **hyperlinks** (or **links**). Websites are stored on **servers** on the Internet, so the World Wide Web is a part of the Internet.

HTML

The backbone of the World Wide Web is made of **HTML files**, which are specially formatted documents that can contain links, as well as images and other media. All web browsers can read HTML files. HTML is an abbreviation of **Hypertext Markup Language**, which, among other things, allows hyperlinks to be created.

A **hyperlink** is a reference to data that the readers can directly follow either by clicking or by hovering, thus enabling them easily to navigate their browsers to related resources. Texts containing hyperlinks are called **hypertexts**. The hyperlinks allow and support non-linear visits to websites. If such links refer to multimedia, i.e. audio-visual elements, then we speak of **hypermedia**.

In addition to HTML, it is common for websites to use technologies like **CSS** (**Cascading Style Sheets**) and **JavaScript** to do more advanced things.

Uniform Resource Locator (URL)

The primary purpose of a **web browser** is to bring information resources to the user. This process begins when the user inputs a URL into the browser to get to a website, for example *http://www.computerworld.com/*. The URL, also known as the **web address**, is a unique identifier for any document on the Internet, which tells the browser exactly where to find the page. All browsers work with URLs. A web address, like *http://www.pcworld.co.uk/gbuk/index.html* follows these syntax rules:

Scheme	Host	Domain	Directory Path	Filename
http://	www.	pcworld.co.uk	/gbuk/	index.html

- **Scheme** - defines the type of Internet service (most common is http)
- **Host** - defines the domain host (default host for http is www)
- **Domain** - defines the Internet domain name of the web server that hosts the website (pcworld.co.uk)
- **Directory path** - defines a path at the server; the place where a web page is located (If omitted: the root directory of the site)
- **Filename** - defines the name of a single web page

The table below lists some common schemes:

Scheme	Full Form	Usage
http	HyperText Transfer Protocol	common web pages; not encrypted
https	Secure HyperText Transfer Protocol	secure web pages; encrypted
ftp	File Transfer Protocol	downloading or uploading files
file	File	a file on your computer

Uniform Resource Identifier (URI)

URI is a string of characters used to identify a name of a resource.

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Vocabulary Practice

Task 1: Fill in the words from the text according to these definitions.

1 ..... – a program that is used to feed pages to search engines (another term for these programs is webcrawler)
2 ..... – element in an electronic document that links to another place in the same document or to an entirely different document
3 ..... – an example of this is *microsoft.com*
4 ..... – listings on search engine results pages that appear because of their relevance to the search terms
5 ..... – website or service that offers a broad array of resources and services, such as e-mail, forums, search engines, and online shopping malls
6 ..... – the page displayed by a search engine in response to a query by a searcher
7 ..... – is synonym for bookmark
8 ..... – the global address of documents and other resources on the World Wide Web
9 ..... – the underlying protocol used by the World Wide Web to define how messages are formatted and transmitted.
10 ..... – subject directories that are selected by people and organized into hierarchical subject categories
11 ..... – the place where a web page is located
12 ..... – an extension to hypertext that supports linking graphics, sound, and video elements in addition to text elements

Task 2: Complete the instructions about how to navigate with the words A – H below.

A client
B web page
C surf
D web browser
E search engine
F web server
G website
H URL

- Start up your computer and connect to the Internet.
- Open your ..... (**1**).
- Type the ..... (**2**) to access a website.
- Your web browser sends the request to the correct ..... (**3**).
- The server looks for the document and sends it to the ..... (**4**) computer.
- Your web browser displays the selected ..... (**5**) on the screen.
- From the home page of the ..... (**6**) you can ..... (**7**) to the other pages by clicking on hyperlinks.
- If you want to find more websites, use a ..... (**8**).

Task 3: Match the browser toolbar button 1 – 12 with the function A – K.

1 ..... Back
2 ..... Forward
3 ..... Stop
4 ..... Refresh/Reload
5 ..... Home
6 ..... Search
7 ..... Favourites/Bookmarks
8 ..... Media
9 ..... History
10 ..... Mail
11 ..... Print

A Shows a list of the websites you have visited recently.
B Opens the media bar, accessing internet radio, music, video etc.
C Displays the page you were on before.
D Shows the latest version of the page.
E Opens the search panel.
F Displays the page you were on before using the Back button.
G Displays the page you have set as your home page.
H Prints the current page.
I Stops a page from downloading.
J Displays the web addresses you have chosen as your favourites.

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