

# 040103205/CS205 - Lecture 2

## 1 Web hosting

(1.1) Web hosting is a service that allows organizations and individuals to post a website onto the Internet. (1.2) Websites are hosted, or stored, on special computers called servers.

(2) To publish your website on the internet, you need:

2.1 Domain

2.2 Webhosting package: which allows you to upload your website to the domain, edit your website ... etc

### 1.1 Free webhosting

(3) Some hosting companies introduces webhosting for free. They allow users to have a subdomain (NOT a domain) and webhosting package.

#### 1.1.1 Advantages of Free Webhosting

1. No money required
2. Suitable for learning purposes
3. Suitable for those users who are beginners in the webhosting field
4. *Usually* supports PHP and MySQL (you can write PHP code, run, and publish it in a free domain)

#### 1.1.2 Disadvantages of Free Webhosting

1. *Usually* contains Advertisements
2. The user will have a subdomain NOT a domain. The user will NOT have control on the second level domain.

For example, 000webhost (<https://www.000webhost.com/>) is one of the hosting companies that offers free webhosting.

With free webhosting you can name your subdomain, say, "*cs.000webhostapp.com*". You can NOT name it *cs.com*.

The second level domain *000webhostapp* is fixed and you can NOT change it, you can choose the third-level domain.

Again "*cs.000webhostapp.com*" is a subdomain and NOT a domain.

3. *Usually* limited in bandwidth (explained later), this simply means that your website may be NOT available for some users in some time periods.

## 1.2 Shared webhosting

(3) Non-free web hosting where **many** websites reside on **one** server; each website has a space (domain) on the server. This is generally the most economical (cheap) option for hosting especially for normal users, as many people share the overall cost of the server.

### 1.2.1 Advantages of shared webhosting comparing to Free Webhosting

1. NO Advertisements
2. The user will have domain (NOT subdomain). The user will have control over the second level domain. You can name your domain, say *cs.com*.
3. *Usually* unlimited in bandwidth, this simply means that your website will always be available for all users all time.

### 1.2.2 Disadvantages (limitations) of shared webhosting

The user has a domain (server space) and NOT an entire server.

Therefore, the user will NOT be able to perform some operations such as running code of programming languages such as C on the server side.

## Notes

(4.1) Shared hosting usually supports PHP and MySQL

(4.2) Some webhosting companies provide "Java Hosting", this allows users to publish their "Web Java Applications" on the internet.

Examples: **dailyrazor.com**

(4.3) Some webhosting companies provide "ASP.NET Hosting", this allows users to publish their "ASP.NET Applications" on the internet.

Examples: **dailyrazor.com** and **mochahost.com**

### Note

If you are beginner in the webhosting field, you should start with free webhosting. You should NOT buy shared-hosting domains until you have good experience about webhosting.

## 1.3 Virtual Private Server (VPS)/ Virtual Dedicated Server (VDS)

In VPS/VDS environment, the provider may allow different users to share the same server, however each user is treated as if he/she has his own server.

### 1.3.1 Disadvantages (limitations)

- 1 Expensive
- 2 Needs experience about Server administration and configuration

**Note**

Do NOT buy VPS/VDS unless you have a good experience about server administration and configuration

### **1.3.2 Advantages of VPS/VDS comparing to shared webhosting**

The user *virtually* has a server. Therefore, the user will be able to perform some operations such as running code of programming languages such as C on the server side.

## **1.4 Dedicated webhosting**

Non-free web hosting in which a single user (usually an organization) owns an entire server not shared with anyone else.

# **2 Home pages**

## **2.1 The homepage of a web browser**

The home page of a web browser is the Web page that loads when you start up your browser. Example, in Internet Explorer the homepage is specified by selecting

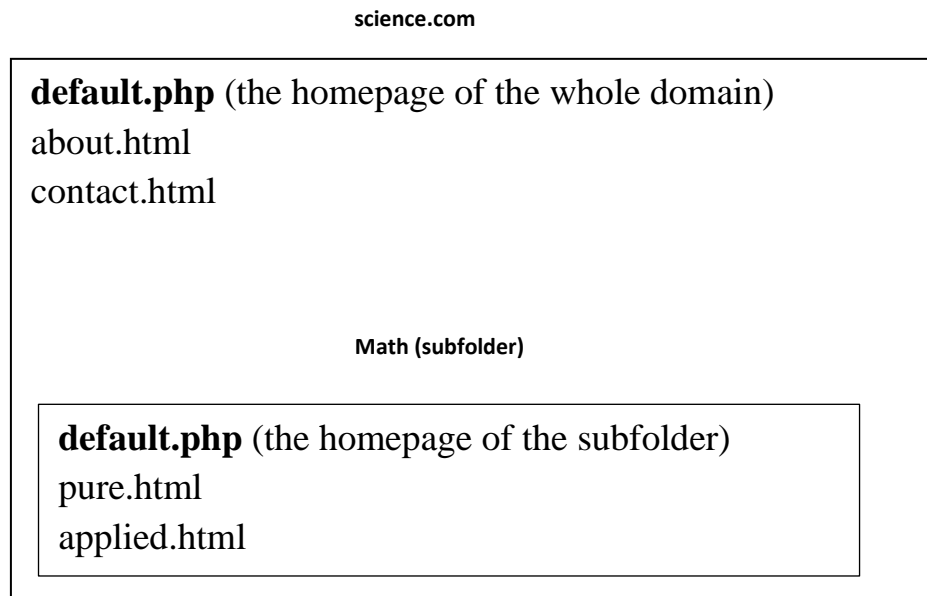
**Tools → Internet Options → General → Home page**

## **2.2 The homepage of a website**

The home page of a website is the entry (start) page of that web site (also called default document), which links to other pages on the web site.

## Exercise 2

Assume that you have a website stored in a domain whose name is "**science.com**" and assume that the website looks like below:



Complete the following table by writing the address of each webpage:

Webpage	Address
default.php (in the main domain)	
about.html	
contact.html	
Math subfolder	
default.php (in Math)	
pure.html	

### Notes

When you publish your website using webhosting server, you are required to save the home page of your website using a specific name and specific extension.

### Example

When you publish your website using **000webhost.com**, you are required to save the home page as "**index.html**"

## 3 Bandwidth

- To view (browse) a webpage on your computer, the contents of the web page must be downloaded from the server to your computer.
- Bandwidth is the amount of data downloaded from your server to the visitor's computer. If your website contains large files and many visitors, then you will need a great amount of bandwidth.
- The less bandwidth you have, the slower it takes your website to load, regardless of visitor's connection type.
- The bandwidth determines how many users can visit your website every month (and hence every day) without any problems.

### 3.1 Calculating Bandwidth

The amount of Bandwidth needed every month =  $x * y * z * 30$  (number of days)

$x$  = Number of visitors every day

$y$  = the average page size of your website

$z$  = Number of pages that will be visited by the user

The amount of data that the user will download =  $y * z$

#### Exercise 3

Calculate the monthly bandwidth needed of a website that consists of five pages if the average page size is 40 KB, fifty visitors are expected every day, and each of these visitors will view all pages.

#### Exercise 4

A website that consists of ten pages, the average page size is 50 MB, the monthly bandwidth is 500 GB. How many visitors can visit this website every day if each visitor will view all pages?

## 4 HTML (*continued*)

### 4.1 Displaying Images in a webpage

To display an image in a webpage, you can use the `<img>` tag

The `<img>` tag is empty, it contains attributes only, and does not have a closing tag.

The `<img>` tag has the following general form:

```
<img src='url' border='weight' alt = 'text' />
```

**Notes**

- The *src* attribute specifies the URL (the address) of the image
- The *border* attribute draws a border with the specified weight around the image
- The *alt* attribute provides an alternate text for an image, if the user for some reason cannot view it (because of slow connection, an error in the *src* attribute)

**Exercise 5**

Write HTML code that displays an image stored in a file called "book.jpg"