

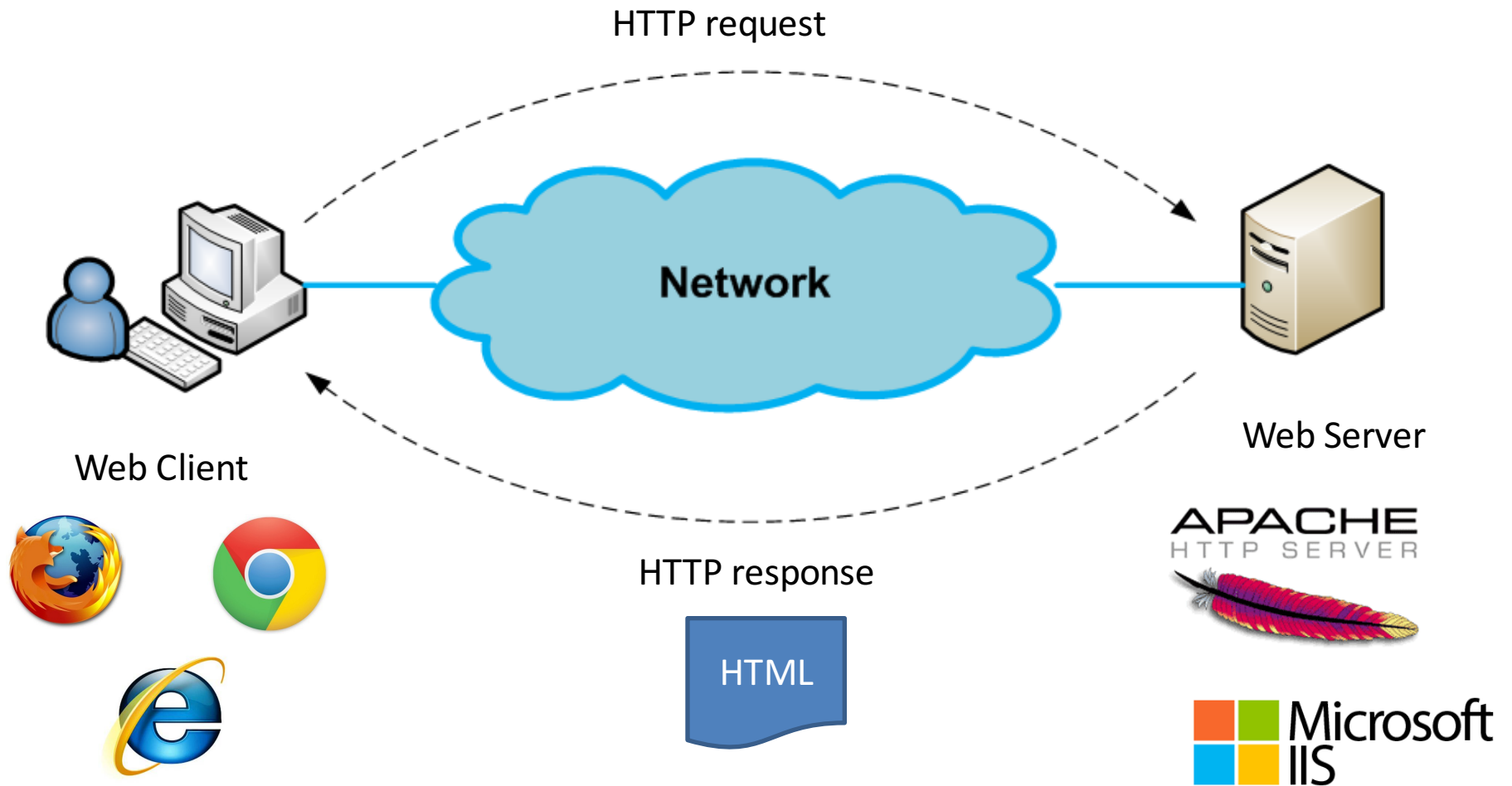
Web Application Development

Introduction to the World Wide Web (WWW)

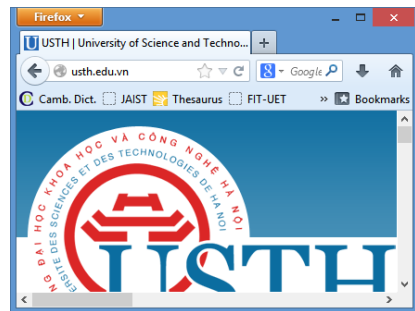
Introduction to the WWW

- Three main concepts: the web, a web page and a web site
 - The World Wide Web, also called **the Web**, is a worldwide collection of electronic documents
 - A web page is a document on the WWW
 - A web site is a collection of related Web pages

Web Client – Server System



Web Client – Server System



HTTP request

```
<html>
...
  
...
</html>
```



Web Client



Network



Web Server



HTTP response



Web Client – Server System

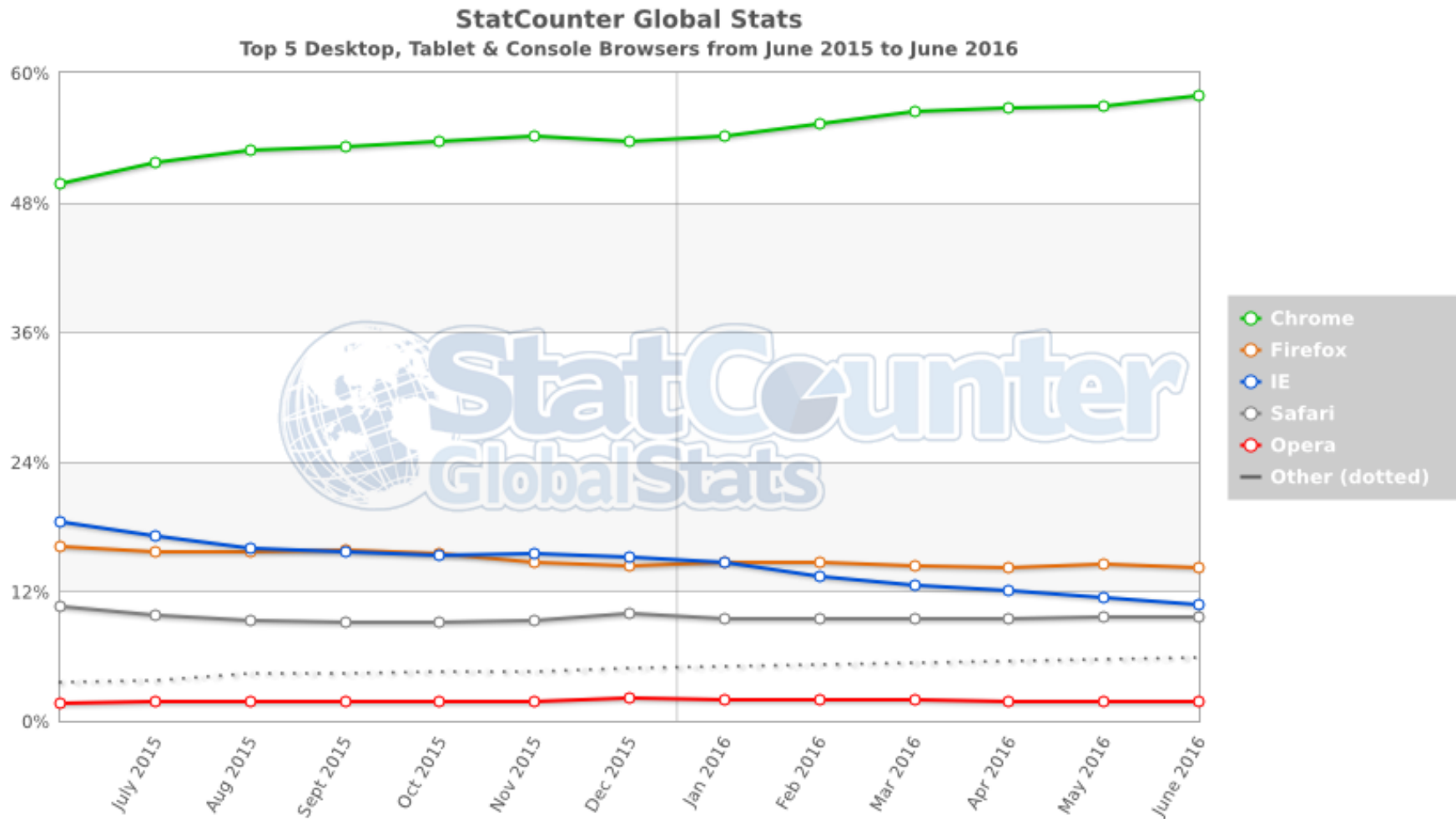
- A web client-server system contains a web client and a web server:
 - A **Web client** sends HTTP requests to a web server, then reads HTML documents and display
 - A **Web server** receives requests from a web client and sends HTTP responses (usually an html document) to a web client

Web Client

- Usually mentioned as Web browser:
 - Chrome
 - Firefox
 - Internet Explorer



Web Browsers



(source: <http://gs.statcounter.com>)

Web Server

APACHE
HTTP SERVER



Apache HTTP server

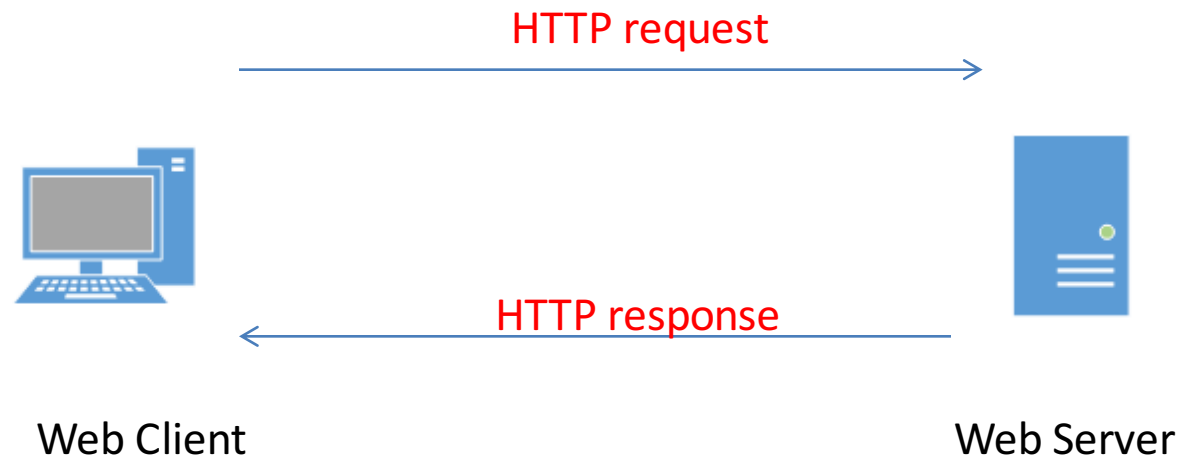


Internet Information Service (IIS)



Lighttpd

HTTP Request and Response



- HTTP (Hypertext Transfer Protocol): is a set of rules governing the format and content of the conversation between a web client and a web server

HTTP Request and Response

- Example of an HTTP request to fetch hello.html page from the web server running on tutorialspoint.com

- request

```
GET /hello.html HTTP/1.1
User-Agent: Mozilla/4.0
Host: www.tutorialspoint.com
```

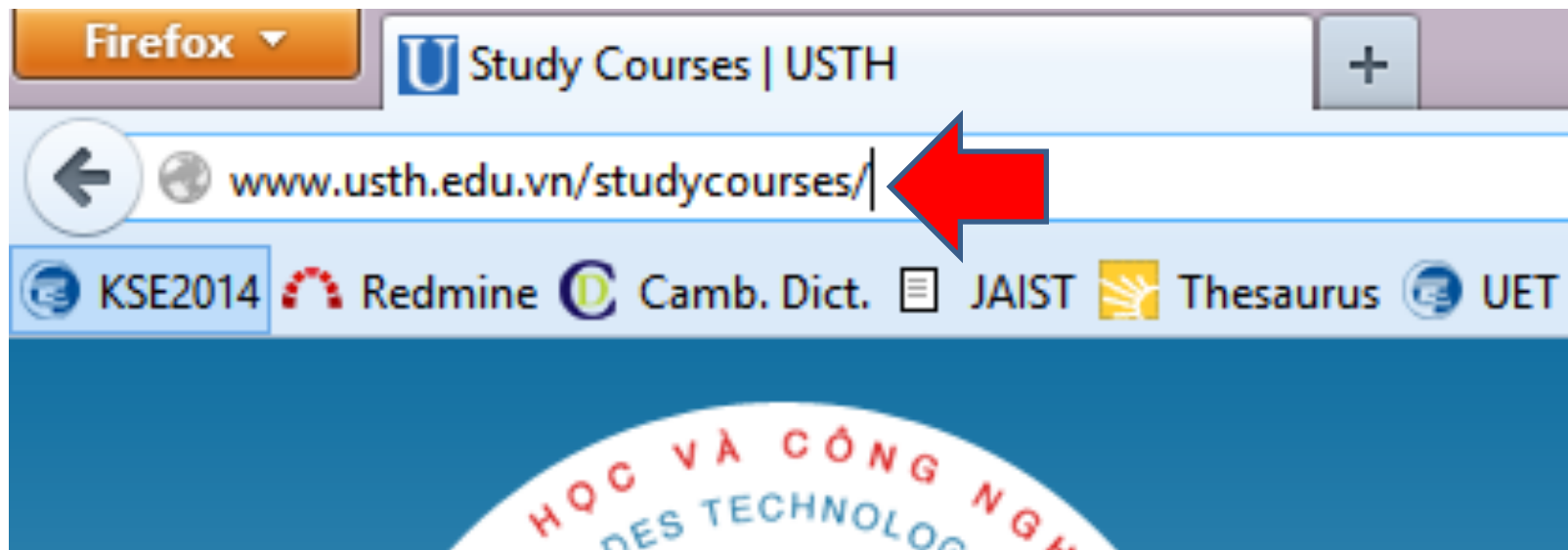
- response

```
HTTP/1.1 200 OK
Date: Mon, 27 Jul 2016 23:59:59 GMT
Content-Type: text/html
Content-Length: 1354
```

```
<html> <body>
<h1> <Hello World!</h1>
</body> </html>
```

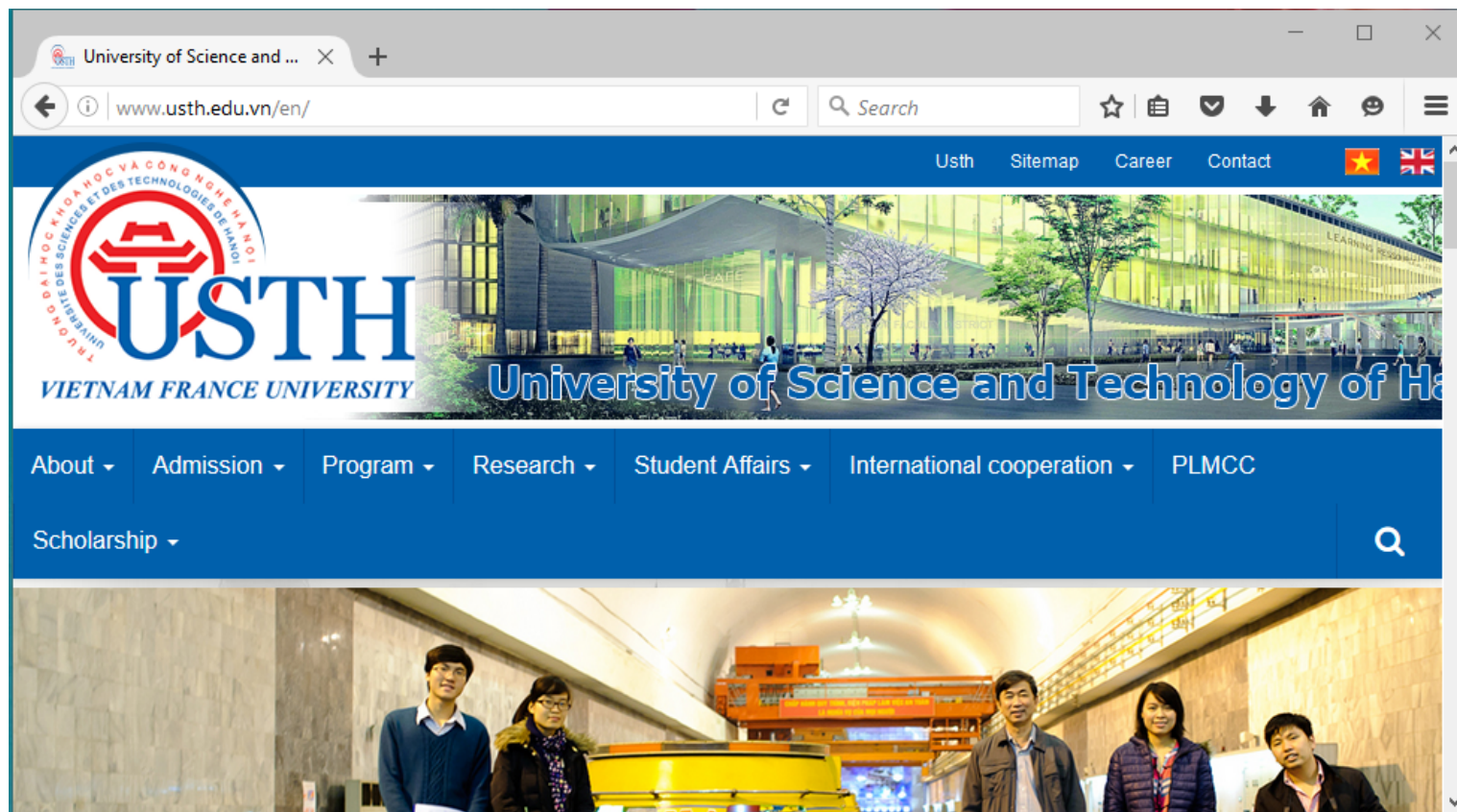
Some Concepts

URL (Uniform Resource Locator): a string representing the location of a Web page



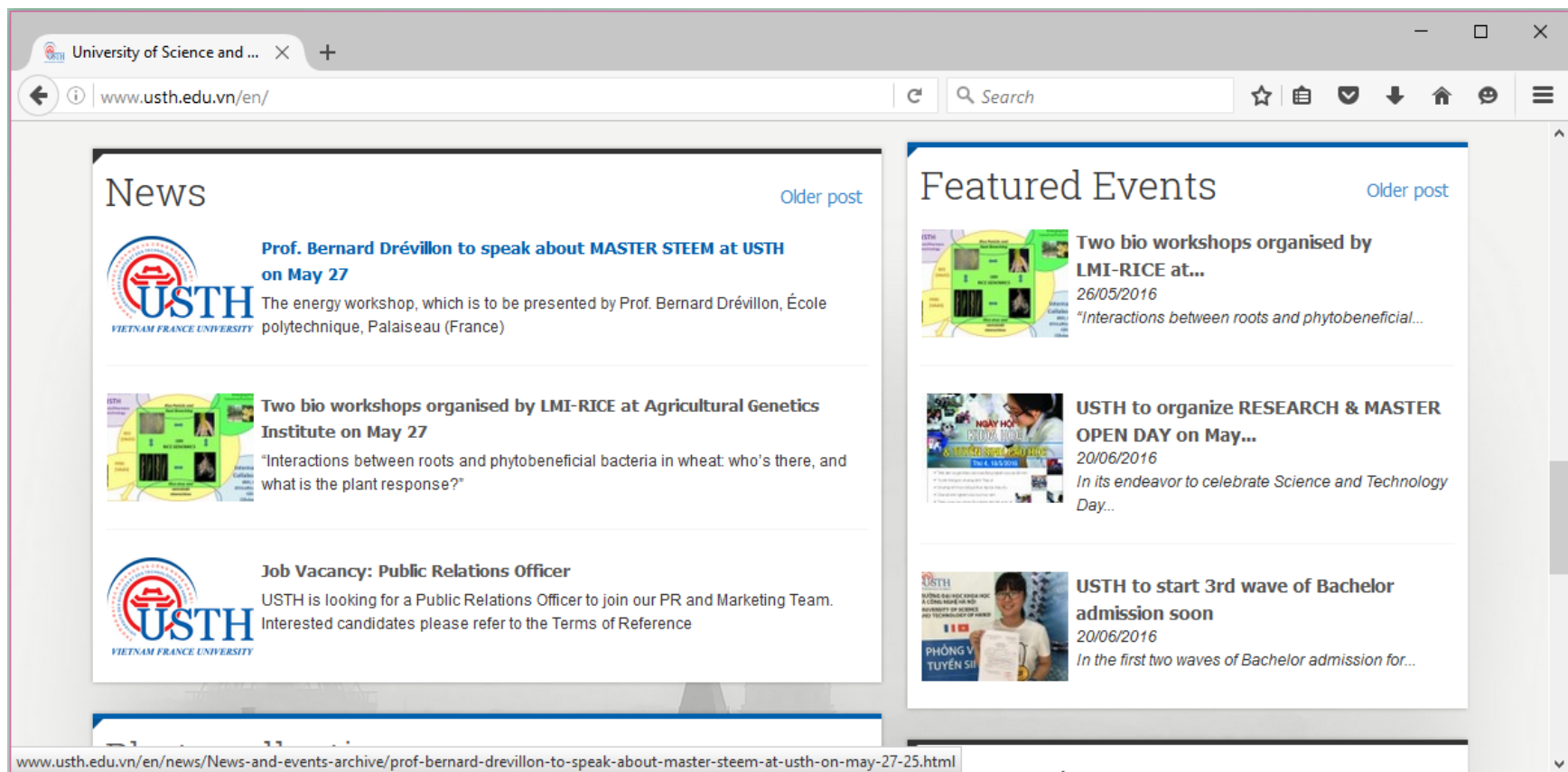
Some Concepts

- **Home page:** the Web page considered as the “start point” for a Web site



Some Concepts

- **Hyperlink**: the pointer from a Web page to another



The screenshot shows a web browser window displaying the USTH website. The address bar shows the URL www.usth.edu.vn/en/. The page is divided into two main sections: "News" and "Featured Events".

News Section:

- Prof. Bernard Drévilion to speak about MASTER STEEM at USTH on May 27**
The energy workshop, which is to be presented by Prof. Bernard Drévilion, École polytechnique, Palaiseau (France)
- Two bio workshops organised by LMI-RICE at Agricultural Genetics Institute on May 27**
"Interactions between roots and phyto-beneficial bacteria in wheat: who's there, and what is the plant response?"
- Job Vacancy: Public Relations Officer**
USTH is looking for a Public Relations Officer to join our PR and Marketing Team. Interested candidates please refer to the Terms of Reference

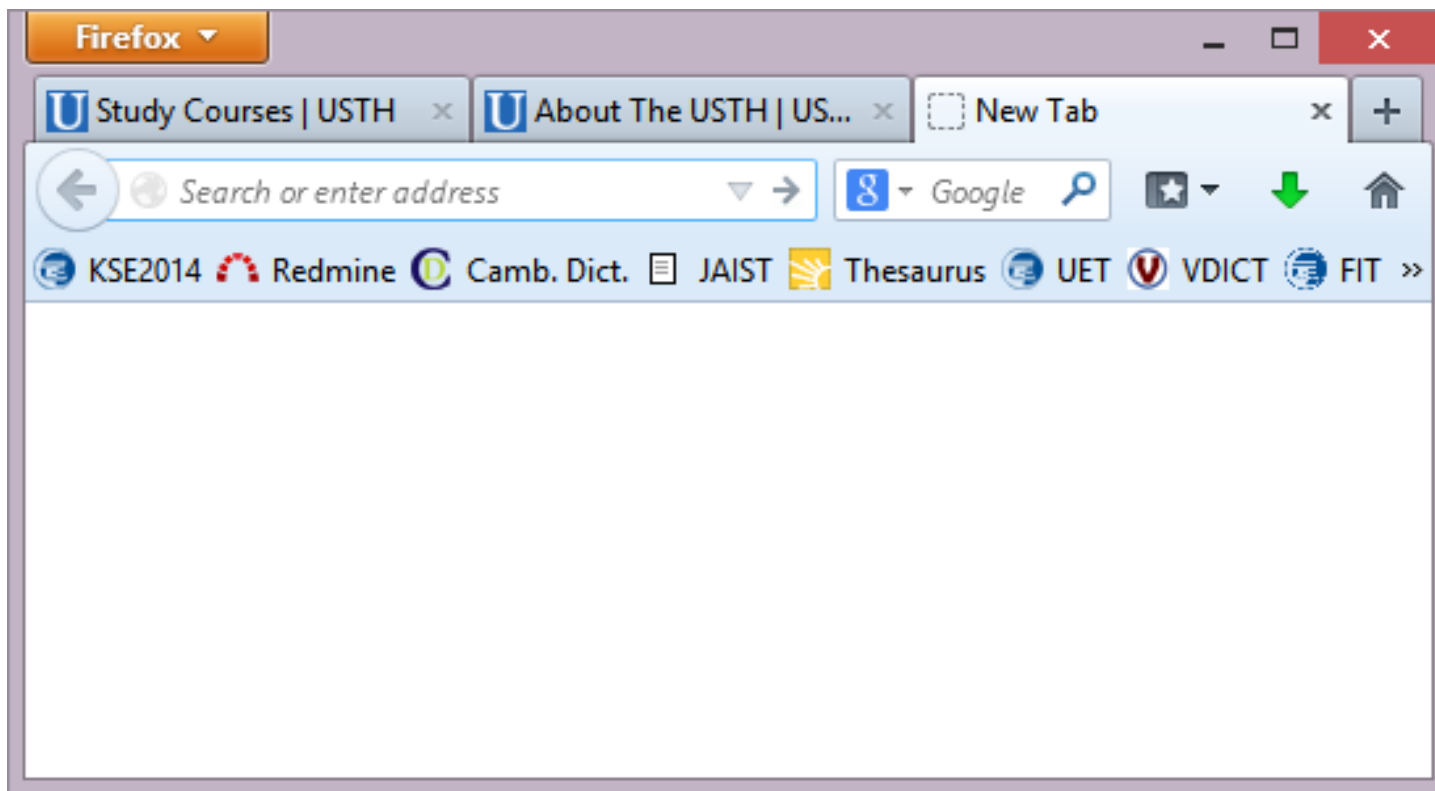
Featured Events Section:

- Two bio workshops organised by LMI-RICE at...**
26/05/2016
"Interactions between roots and phyto-beneficial..."
- USTH to organize RESEARCH & MASTER OPEN DAY on May...**
20/06/2016
In its endeavor to celebrate Science and Technology Day...
- USTH to start 3rd wave of Bachelor admission soon**
20/06/2016
In the first two waves of Bachelor admission for...

The browser's address bar at the bottom shows the specific page URL: www.usth.edu.vn/en/news/News-and-events-archive/prof-bernard-drevillon-to-speak-about-master-steem-at-usth-on-may-27-25.html

Some Concepts

- **Tab browsing:** allow users to surf and view multiple web pages on a single window



Some Concepts

- **A search engine**: is a system designed to search information on the WWW
- Popular search engines:
 - Google (<http://www.google.com>)
 - Bing (<http://www.bing.com>)
 - Yahoo (<http://www.yahoo.com>)

Search Engine Statistics

