# What is the Internet?

**Internet** is the interconnected network of computers and network devices

* TCP: handles the messages.
* IP: handles the delivery

## How information travels over Internet

Internet protocol suite: is the networking model and a set of communication protocols used for the Internet and similar networks.

Most commonly known as TCP/IP (Tranmission Control Protocol and Internet Protocol)

Internet has 4 abstraction layers (used to sort all Internet protocols according to the scope of networking provided):

* Application (DNS, FTP, HTTP, SSH, TLS/SSL, …)
* Transport (TCP, UDP, DCCP, …)
* Internet (IP, ICMP, …)
* Link (ARP,

Domain Name System (DNS)

# What is the World Wide Web?

## History

* Web 1.0: presentation
* 2.0: communication

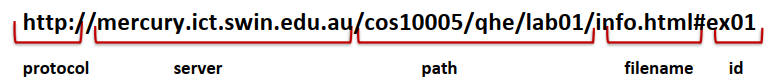
## Terminology

Website: collections of related Web documents

Web pages (web documents): are files created using:

* HTML (to mark-up page structure and content)
* CSS (to mark-up page presentation)
* JS (to enhance web user interaction)

Uniform Resource Locaters (URL): are strings used to identify the locations of unique resources on the web (ex: web pages, image files)



Web Browser

Web Servers/ HTTP servers

Hypertext Transfer Protocol (HTTP)

Hypertext Transfer Protocol Secure (HTTPS)

## Application

* Search engine
* Social applications
* Media streaming
* Web services

# What else is there apart from the Web?

## Email

## Online Storage

## Remote Access

# Understanding Web Development

## The People

Web developers

Web Designers

## The Hardware

Server (“back end”)

Client (“front end”)

2-tier system: system consisting of a client and a server

3-tier system: client tier, processing tier, data storage tier

## The Software

Client software: refers to the software the runs on the client machines to communicates with a server:

* Operation system (Windows, Linux, OSX)
* Web browsers: Internet Explorer, Firefox, Chrome, Safari

Server software: run on server machines:

* OS
* Web: Apache, Microsoft Internet Information Services
* Database: MSSQL, Oracle
* Script Support: NodeJS (JS), PHP, Python, Ruby

## The Languages

* HTML
* CSS
* JS

# Language versions

# Getting Started