Final Project
Enterprise Network

Important instructions:

- **Prepare a report that includes figures from your project demonstrating all the steps and results.**
- **Prepare a (maximum) *three minutes* video demonstrating how your network is functioning (should be sent minimum three days before the presentation day).**
- **Prepare a (maximum) *one minute* presentation to briefly explain your work.**
- **Explain in a scheme the architecture of your network and include it in your report.**
- **The number of participants in one project (one report, one presentation and one video) is limited to three.**
- **The report, the video and the presentation are equally important criteria.**
- **The domain names (anywhere this applies) need to be a combination of the last names of the group members (this combination needs to be identified in the report). Example: TIGANI - MOUHTADI - BELCAID ➔ TIMOBE.**
- **Naming files (report, video and presentation) example:**
  - **TIGANI_S et MOUHTADI_M et BELCAID_A.pdf**

⇨ **Cheating will be penalized for both ends.**

Enterprise Networking:

An enterprise network is the backbone for facilitating an organization's communications and connecting computers and devices throughout departments. An enterprise network environment is usually configured to facilitate access to data.

Enterprise networking refers to the physical, virtual and logical design of a network, and how the various software, hardware and protocols work together to transmit data. When it comes to enterprise networking, every organization has different needs.

The enterprise description:

An enterprise desires to manage locally a number of services depending on the departments. It establishes a network that will allow it to provide services that:

- Deliver IP addresses to devices that connect to the network.
- Turn domain names into IP addresses (and vise-versa).
- Share files over a TCP/IP network.
- Allow the user to access web pages through a browser.
- Transfer email over the network.
- Manage directory services and authentication.

Project:

The task is to build a network divided into two subnets with:

- **One** DHCP server responsible for delivering addresses to devices connected on both subnets.
- Managing the domain names will be handled by the DNS server.
- The FTP server is used to share files in only one subnet (users on the other subnet are not allowed to access this service).
- An HTTP server managing two web pages. One is accessible to all hosts, and one with restricted access (user-password).
- A server managing the email exchange in the company.
- LDAP (Lightweight Directory Access Protocol) is used for directory services and authentication.

Grading:

- **The task is broad. Therefore, any additions will be rewarded.**
- **The most elaborate projects will get a full mark.**
- **The rest of the projects are compared and graded accordingly.**