

SYSTEMS ENGINEERING

Enterprise Architectures

## **Laboratory 3**

Luis Daniel Benavides Navarro

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Author:  
Angie Daniela Ruiz Alfonso

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# 1 Introduction

This laboratory presents different challenges that will help to explore the concepts of naming schemes and clients and services. Additionally, will help to explore the architecture of applications distributed over the internet.

## 2 Architecture

The architecture used is the Client-server and we can see the physical design in the figure 1. This architecture consist in a computer network, in which many clients (remote processors) request and receive services from a centralized server (host). The client computer provides an interface to allow computer users to request the server's services and display the results returned by the server. The server waits for requests from clients and then responds to them. Ideally, the server provides a standardized transparent interface to the client, so that the client does not need to know the details (ie, hardware and software) of the system that is providing the service. Clients are usually located on workstations or personal computers, while servers are usually located elsewhere on the network on more powerful computers.

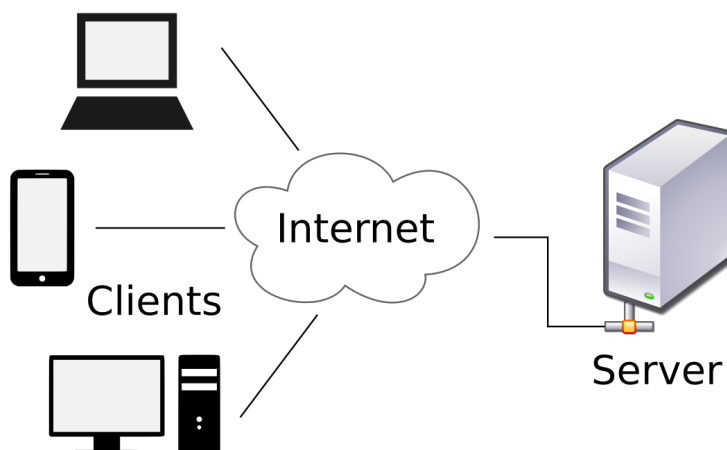


Figure 1: The architecture used

This calculation model is particularly effective when the client and the server each perform routine tasks. For example, in hospital data processing, the client computer may be running an application program for inputting patient information, while the server computer is running another program that manages a database that permanently stores information. Many clients can access server information at the same time, and client computers can perform other tasks at the same time, such as sending emails. Because both client computers and server computers are considered smart devices, the client-server model is completely different from the old "mainframe" model. In the old "mainframe" model, the centralized mainframe is its associated "dumb" model. "The terminal performs all tasks.[1]"

### 3 Results

In this laboratory, I'm implemented a client-server architecture, which allows us to Understand how the server handles and manages requests from the different clients. These request can be about services or about resources such as web pages or images, how we can see in the figure 2.

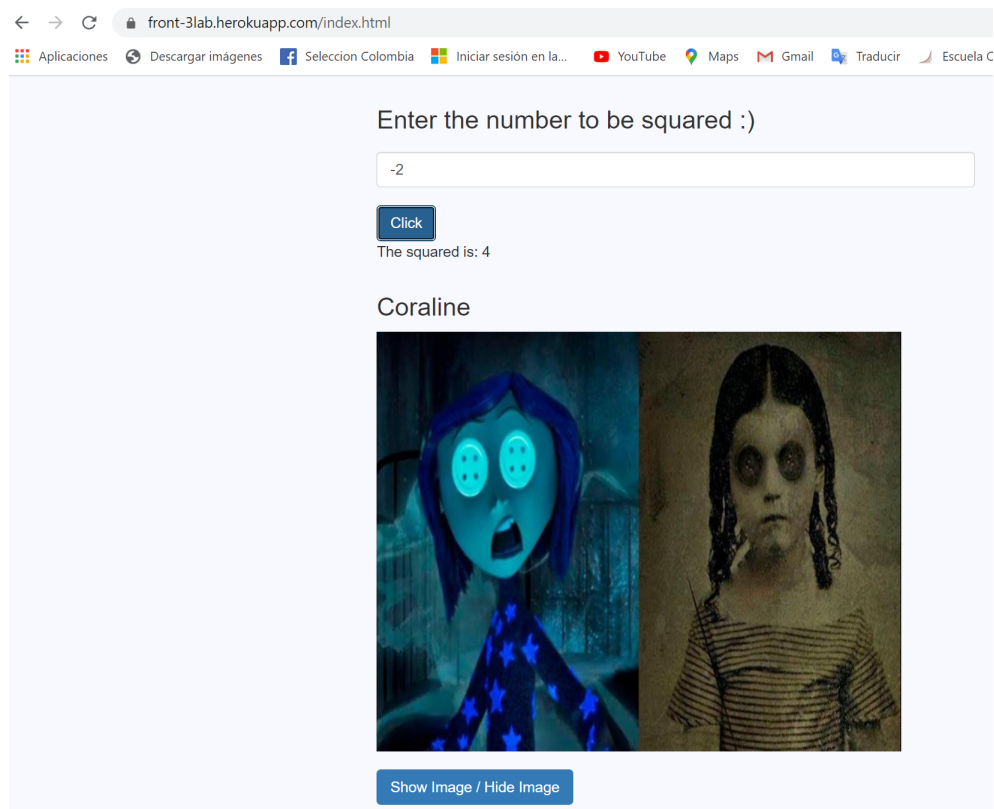


Figure 2: The results obtained

## 4 References

- [1] I. Encyclopædia Britannica, *Client-server architecture*, <https://www.britannica.com/technology/P2P>, Accessed on 2021-02-07, 2020.