Hello, Ubaldo Acosta greets you. Welcome again to this course of Servets and JSPs (JavaServer Pages).

In this first lesson we will review an introduction to WWW (World Wide Web), as well as the basic elements that will allow us to understand the role of Web applications to date.

So if you're ready, we will too. Let's start immediately.

In this first lesson, we are going to review an Introduction to Web technology.

A website contains static information, and we must change it manually if we want to see changes in it. Instead a Web application information can be recovered dynamically.

In a website we usually have several elements such as HTML pages, images, CSS style sheets, files with JavaScript code among several other elements.

JavaScript allows us to add some dynamism to our page, but the information can not come from a database nor can it come from stored files or information that is deposited in other sources of information. In contrast, a Web application dynamically handles this information.

Thus, the objective of a Web application is to process a request from a client and once this request is processed on a web server, the result is shown again to the client who requested certain information. This is the flow that we will commonly see in a Web application.

Internet or what is the same WWW (World Wide Web) allows you to create web sites and applications, and these can be accessed from the Internet or from an intranet. Today there are a variety of applications that can cover different business areas such as virtual stores, news on the Internet, social networks, among other types of web applications.
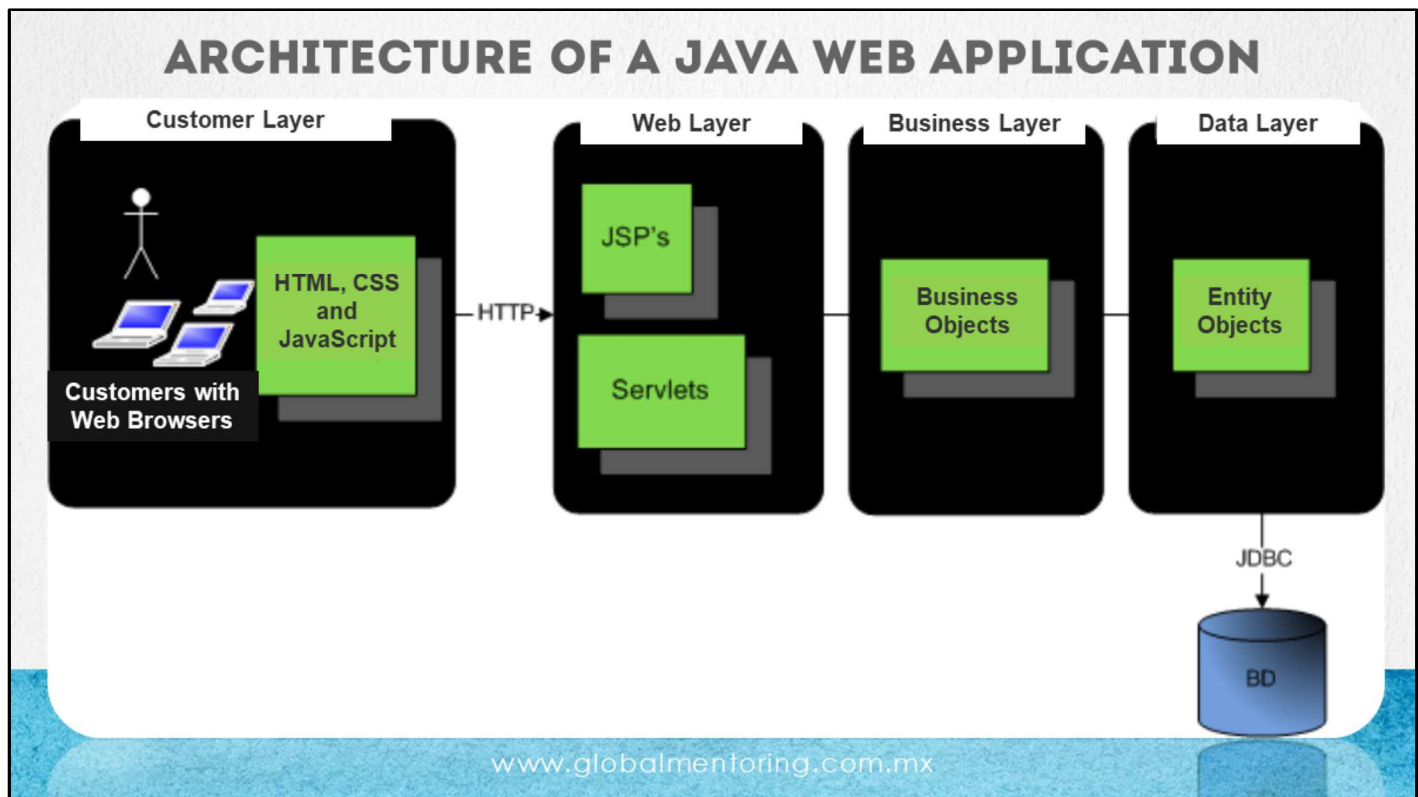
We will review the architecture of a Web application with Java, as we can see we have different logical layers that are responsible for certain functionality in our Web application.

On the one hand we have the client's layer. In this layer, the Web browser is responsible for making requests to the Java server, as well as displaying the information to the client. In this layer we have technologies such as HTML, CSS style sheets and JavaScript.

And on the server side we have the following layers used in a Web application. Commonly we have the web layer, the business layer and the data layer. This communication is established through the HTTP protocol (Hypertext Transfer Protocol), which is the protocol used on the Internet.
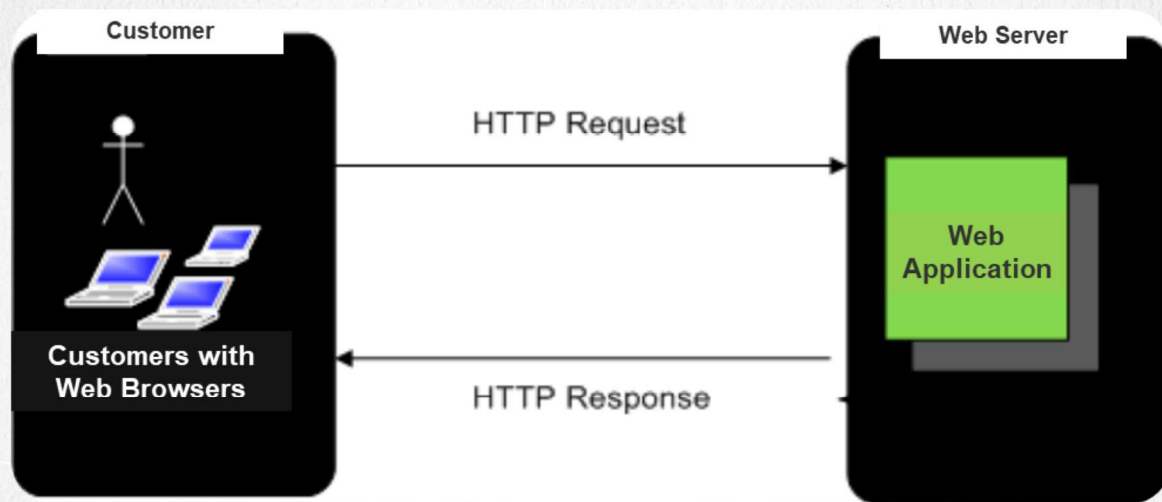
On the server side there may be one or more servers, since each layer on the server side could be on a single or multiple servers. On the Java server side we can have the following layers:

Web layer: In the case of the web layer we can have technologies such as JSPs and Servlets and it is precisely the objective of this course to study the technology that will allow us to process the web layer.
In the layers that follow the web layer we can have business layers and data access layers, this layer of data and its design patterns are analyzed in the course of JDBC and there are other types of courses in which we can learn to handle Frameworks such as Hibernate, JPA (Java Persistence API) among other Frameworks type of data layer management. The business layer we have used so far Java objects known as Java Beans or POJOs and these objects will allow us to establish the business rules for our web application. In the same way there are technologies for the business layer, such as EJBs (Enterprise JavaBeans) or Frameworks such as Spring, which one of its main objectives is to provide the characteristics that the business layer must possess, such as security, transactionality, among many more features.

In this course we will focus on creating the web layer applying the best practices and design patterns that will allow us to create robust, extensible, scalable and easier to maintain web applications, among several other features.

We are going to review the process of an HTTP request. In the previous image we had commented that we have a client (Web browser) and we have a web server. In the case of our web application, the server can be the server of Tomcat, Glassfish, JBoss, among others, and what happens is that normally a user makes a request to our web server. This is known as HTTP Request, that is, the request made by the user of the client to the server.

Once the server obtains the information that the client has requested or saves the information that the client has provided, then the server sends a response (HTTP Response) to our client. The answer is displayed in web browsers such as Internet Explorer, Firefox, Google Chrome, among others. This is the process of an HTTP request in the creation of our web application.

It is important to highlight the importance of the HTTP protocol, since this protocol will allow us to establish communication between our web browser and our web server and through these requests and responses is that we will establish the communication between client-server between our different applications Web.

One of the great advantages of using this type of Web applications, that is, client-server, is that it is possible to use practically any computer to emulate this client-server environment, or as we have said, we can separate both the client and each one of the server layers as needed. In this way the applications we develop do not need very powerful equipment, but the vast majority of applications can be emulated in the comfort of our computer, laptop or desktop computer.

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