



---

## Lab 1:

### JAVA EE - Servlets

---

#### Objectives :

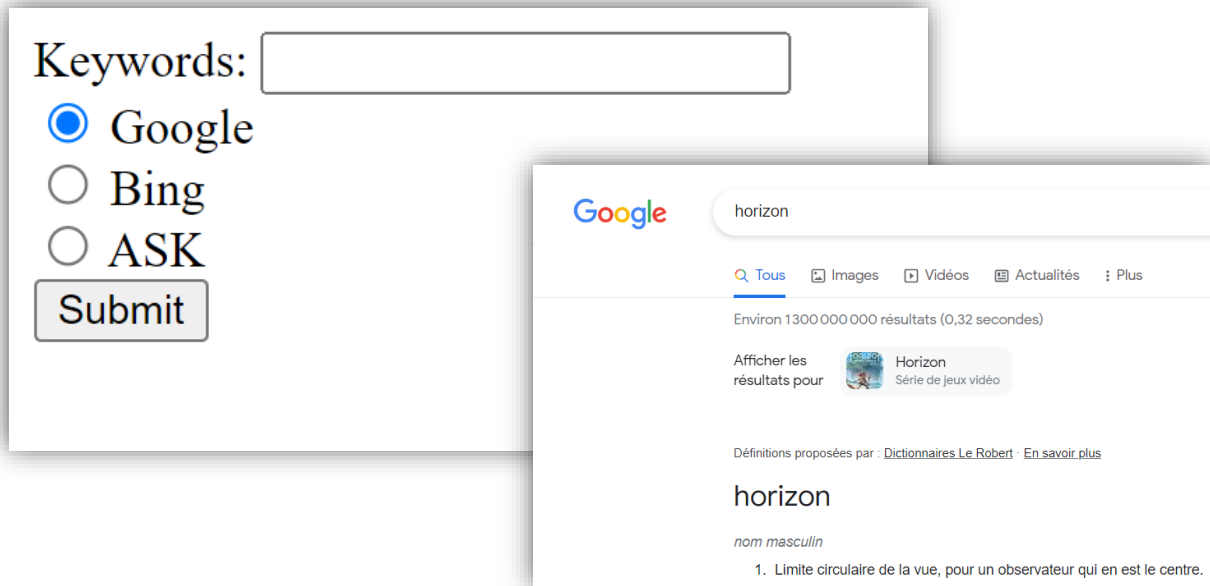
- ❖ Setup
- ❖ Servlets

#### Exercise 1

Create a web form containing a search field (of type search) to enter keywords, 3 radio buttons corresponding to the 3 search engines: Google (selected by default), Bing, and ASK, and a Submit button.

The form data will be sent to a servlet named **ServletSearch** with a URL pattern named Find. Depending on the selected search engine, the Servlet will initiate the search request on the corresponding engine by redirecting the request to one of the following URLs:

- <https://fr.ask.com/web?q=>
- <https://www.google.com/search?q=>
- <https://www.bing.com/search?q=>

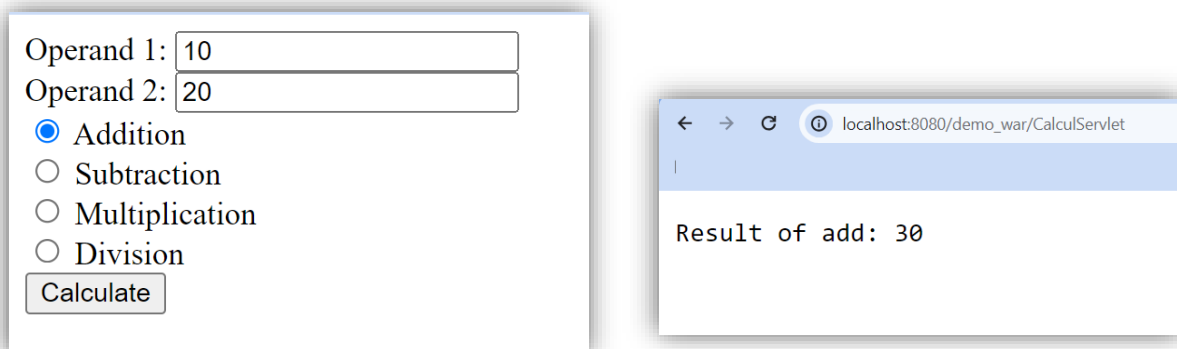


## Exercise 2

Create a web form that allows a user to enter two integer values (mandatory) and then choose one of the four arithmetic operations to perform on these values through radio buttons. These data will be sent to a servlet named "**CalculServlet**."

Create a Java class defining two private integer attributes and four methods, each returning the result of one of the four arithmetic operations performed on these attributes (this class is a **JavaBean**).

Utilize this **JavaBean** in the servlet to execute and display the requested processing.



## Exercise 3

Define a class **"Product"** containing 3 private attributes: name, priceExcludingTax (prixHT), and VAT (tva), along with their getters/setters and constructors.

Define a class **"ProductList"** that defines an ArrayList of type "Product" which will be initialized (in the constructor of this class) with some products.

Define in the same class a method named **"findByName"** that takes a string as a parameter and returns the **"Product"** object whose name corresponds to the parameter.

Create a **web page** that contains a form for entering the name of a product and the quantity ordered. This data will be sent to a **servlet** that will look for the product corresponding to the entered name, then calculate and display the total amount including taxes (TTC) according to the formula:

$$\text{totalAmountTTC} = \text{quantity} * \text{priceExcludingTax} * (1 + \text{VAT}).$$

The image shows two browser windows. The left window, titled 'localhost:8080/demo\_war/orderForm.html', contains a form with 'Product Name' (value: Product1), 'Quantity' (value: 3), and a 'Calculate Total Amount' button. The right window, titled 'localhost:8080/demo\_war/OrderServlet', displays the results: 'Product: Product1' and 'Total Amount TTC: 36.0'.